DRAFT

Vacaville Center Biotechnology and Science Building Mitigated Negative Declaration

Prepared for:

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1 INTRODUCTION

1.1 Project Overview

The Vacaville Center opened in 2010 as an extension of the District's main campus in Fairfield. The Center currently serves approximately 2000 students. SCCD estimates that student growth will occur at rate of 1% district-wide (SCCD 2014).

The proposed project is the construction of a new Biotechnology and Science Building. The one story 31,943 square-foot building would include academic laboratory and lecture spaces, offices, and student support services. The project would include the construction and/or relocation of utilities connections and landscaping.

1.2 California Environmental Quality Act Compliance

This initial study has been prepared in accordance with the requirements of the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code [PRC] Section 21000, et seq.), and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.).

1.3 Public Review Process

This initial study has been prepared in support of a proposed Mitigated Negative Declaration (MND). The MND is subject to a 30-day public review period. Approval of the MND will be considered at a public hearing of the Solano Community College District Governing Board. The public is encouraged to provide written comments during the 30-day review, and/or attend the Board hearing.

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2 SUMMARY OF FINDINGS

2.1 Environmental Factors Potentially Affected

This initial study considers the environmental issues identified in Appendix G of the CEQA Guidelines.

2.2 Environmental Determination

The lead agency finds that the initial study identifies potentially significant effects, but that revisions to the project (including revisions required by mitigation measures included in this Initial Study) would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur. There is no substantial evidence that the project as revised would have a significant effect on the environment.

Table 1-1
Mitigation Summary

Number	Measure
BIO-1	If construction is to occur during the nesting season (between February 1 and August 30 of each year), the project applicant shall provide for a pre-construction survey for tree-nesting and ground-nesting birds to be completed by a qualified biologist no more than 2 weeks prior to the start of construction. The survey shall include areas within 500 feet of the proposed disturbance (demolition, grading, and/or vegetation removal). Active raptor nests located within 300 feet of the project will be mapped. A determination will be made by a qualified biologist, in coordination with the California Department of Fish and Wildlife (CDFW), as to whether or not construction work would affect the active nest or disrupt reproductive behavior. Criteria used for this evaluation will include, but not be limited to, presence of visual screening between the nest and construction activities, and behavior of adult raptors in response to the surveyors or other ambient human activity. Alternatively, other appropriate avoidance measures approved by CDFW may be implemented to ensure that the nest is protected. If it is determined that construction will not affect an active nest or disrupt breeding behavior, construction may proceed without any restriction or mitigation measure. If it is determined that construction will affect an active raptor nest or disrupt reproductive behavior, then avoidance is the only mitigation available. Construction will not be permitted within 500 feet of such a nest until a qualified biologist determines that the subject nests are no longer active.
CUL-1	Should archaeological or paleontological material be identified in the area during earth-moving activities, work should be temporary halted in the vicinity, and the City consulted. A qualified archaeologist (or paleontologist) will be assigned to review the unanticipated find, and evaluation efforts of this resource for CRHR listing will be initiated in consultation with the City. Should human remains be discovered, work will halt in that area and procedures set forth in the California Public Resources Code (Section 5097.98) and State Health and Safety Code (Section 7050.5) will be followed, beginning with notification to the City and County Coroner. If Native American remains are present, the County Coroner will contact the Native American Heritage Commission to designate a Most Likely Descendent, who will arrange for the dignified disposition and treatment of the remains.
GEO-1	Construction shall be required to comply with the recommendations of the geotechnical report related to special construction measures to be implemented when building on expansive soils. These measures may include

Table 1-1
Mitigation Summary

Number	Measure
	construction of interior pad areas and exterior flatwork with granular materials or lime treatment of native soils. "Geotechnical report" refers to the Geotechnical Engineering Report, Solano Community College-Vacaville Campus prepared by Wallace Kuhl and Associates, 2006, or a newer geotechnical report that supersedes this report.
NOI-1	To avoid disruption to nearby residents, construction activities shall be limited to daytime hours between 7 AM to 7 PM Monday through Saturday. No exterior construction activities shall be permitted on Sundays.
TRA-1	I-505 Southbound Ramps/Vaca Valley Parkway is an unsignalized intersection that operates unacceptably in the AM and PM peak hours under Existing Conditions and Existing with Phase 1 Conditions. The intersection also meets the Peak Hour signal warrant in the AM and PM peak hours under Existing Conditions and Existing with Phase 1 Conditions. The mitigation measure is to fund (on a fair share basis) construction of the following improvements at the intersection: • Signalize intersection (westbound left turn protected phase), signal coordinated with East Monte Vista Avenue-Crocker Drive/Vaca Valley Parkway signal • Southbound approach: 1 left turn pocket (150 feet length), 1 through-right turn shared lane • Westbound approach: 1 left turn pocket (150 feet length), 1 through lane • Eastbound approach: 1 through lane, 1 right-turn lane Since the intersection operates unacceptably under Existing Conditions and meets the Peak Hour signal warrant under Existing Conditions, the District shall pay a fair share contribution towards the construction of a signal and other improvements at the intersection. Alternatively, improvements may be funded through payment into the City's Development Impact Fee (DIF) program. Constructing these improvements would result in acceptable traffic operations (LOS C or better) at the intersection (8 seconds of delay in the AM peak hour, 12 seconds of delay in the PM peak hour). It should also be noted that these mitigation measures will not preclude implementation of the Cumulative year I-505/Vaca Valley Parkway overcrossing improvements.

TRA-2	I-505 Northbound Ramps/Vaca Valley Parkway and New Horizons Way-North Village Parkway/Vaca Valley Parkway are signalized intersections that operate unacceptably before the addition of project trips under Cumulative with Phase 1 Conditions. The mitigation measures proposed below operate as a system, and should be implemented together as one package.
	
	• New Horizons Way-North Village Parkway/Vaca Valley Parkway
	  ○ Add new third westbound lane from Akerly Drive/Vaca Valley Parkway to New Horizons Way-North Village Parkway/Vaca Valley Parkway
	  ○ Stripe westbound approach as 1 left turn lane, 2 through lanes and 1 through-right turn shared lane
	  ○ Restripe southbound approach to 2 left turn lanes and 1 through-right turn shared lane
	  ○ Restripe northbound approach to 2 left turn lanes and 1 through-right turn shared lane
	• I-505 Northbound Ramps/Vaca Valley Parkway
	  ○ Carry new third westbound lane from New Horizons Way-North Village Parkway/Vaca Valley Parkway to I-505 Northbound Ramps/Vaca Valley Parkway
	  ○ Stripe westbound approach to 2 through lanes and 1 right turn only lane
	
	Since the two intersections along Vaca Valley Parkway operate deficiently before project trips are added, the project shall pay a fair share percentage of construction costs for improvements at New Horizons Way-North Village Parkway/Vaca Valley Parkway and I-505 Northbound Ramps/Vaca Valley Parkway. Alternatively, improvements may be funded through payment into the City's Development Impact Fee (DIF) program.

Table 1-1
Mitigation Summary

Number	Measure
	New Horizons Way-North Village Parkway/Vaca Valley Parkway would operate at 46 seconds of delay (LOS D); the operations are improved over Cumulative without Project Conditions, so the impact has been reduced to less than significant with mitigation. I-505 Northbound Ramps/Vaca Valley Parkway would operate at 40 seconds of delay (LOS D); the operations are improved over Cumulative without Project Conditions, so the impact has been reduced to less than significant with mitigation.

TRA-3	North Village Parkway/Vacaville Campus Main Driveways is a side-street stop-controlled intersection that operates acceptably before the addition of project trips under Cumulative with Phase 1 Conditions; the intersection does not meet signal warrants under Cumulative without Project or Cumulative with Phase 1 Conditions. The mitigation measure for this impact consists of the following items:
	• Monitor intersection operations at North Village Parkway/Vacaville Campus Main Driveways every five (5) years after occupancy of Phase 1. Monitoring consists of collecting new intersection turning movement counts and intersection LOS analysis using state-of-the-practice analysis methods.
	• If intersection operations degrade to an unacceptable level, construct one of the following improvements:
	  o If signal warrants are not met, roundabout or all-way stop-control
	  o If signal warrants are met, signalize or roundabout
	
	The District shall fully sponsor improvements related to mitigating the impact at the North Village Parkway/Vacaville Campus Main Driveways intersection as the intersection operated acceptably before the addition of project trips.
	
	Implementation of these improvements results in North Village Parkway/Vacaville Campus Main Driveways operating at 9 seconds of delay (LOS A) with a one lane roundabout or 13 seconds of delay (LOS B) with all-way stop-control. Signalizing the intersection would result in low levels of delay. The mitigation measures would result in the impact being reduced to less than significant with mitigation.

TRA-4	Kaiser Hospital Driveway-Crescent Drive/Vaca Valley Parkway is a signalized intersection that operates unacceptably before the addition of project trips under Cumulative with Phase 2 Conditions. The mitigation measure for this intersection is to add right turn overlap phases for the westbound right turn movement and northbound right turn movement. The project shall pay a fair share contribution towards the modification of the signals for the overlap phases. Alternatively, the improvements may be funded through payment into the City's Development Impact Fee (DIF) program. Implementing these improvements results in the intersection operating at 59 seconds of delay (LOS E); the operations are improved over Cumulative without Project Conditions, so the impact has been reduced to less than significant with mitigation.
TRA-5	The District shall install a crosswalk and appropriate warning signage to facilitate pedestrians crossing the north leg of the intersection at North Village Parkway/Vacaville Campus Main Driveways. The District shall coordinate with the City of Vacaville to install the crosswalk prior to the start of classes at the Biotechnology and Science Building.

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3 INITIAL STUDY CHECKLIST

1. Project title:

Vacaville Center Biotechnology and Science Building

2. Lead agency and project sponsor name and address:

Solano Community College District
360 Campus Lane, Suite 203
Fairfield, California 94534

3. Contact person and phone number:

Ines Zildzic
707.863.7189

4. Project location:

The Vacaville Center is an extension of the Solano Community College District's (SCCD) main campus in Fairfield (see Figure 1). The Center is located at the northeast corner of Vacaville Center Parkway and North Village Parkway, 2001 N Village Pkwy, Vacaville, CA 95688. The SCCD property is comprised of five parcels totaling approximately 54 acres (Assessor's Parcel Nos. 133-030-13, -14, -15, -16, -17). The site is partially developed and includes an existing 36,359-square-foot classroom building with associated parking and landscaping.

5. General plan designation:

The project site is designated Public/Institutional.

6. Zoning:

The project site is zoned Community Facilities. The City's Municipal Code (Section 14.09.100.010) defines a community facility as "a structure or a use, which is owned, managed, or maintained by a government entity for the purpose of providing services or benefit to the public, and may include facilities leased, operated, owned, or planned to be owned by private parties as part of a public facility." This includes public colleges and vocational schools.

7. Description of project:

The proposed project includes the construction of a proposed Biotechnology and Science Building and other building related site improvements at the Solano Community College District (SCCD) Vacaville Center campus. The project components include the following items:

- Construction of a Biotechnology and Science Building. The building is a 1-story, 31,943 square foot (SF) building that includes academic laboratory and lecture spaces, offices, and student support services;
- New utilities and connections, and minor relocation of existing utilities as needed; and
- Installation of new landscaping.

The existing campus and the proposed improvements are further described below.

SCCD

Solano Community College was founded in 1945 as part of the Vallejo Unified School District. In 1965, Solano County voters approved the development of a community college district, and two years later approved a bond to build SCCD's main Fairfield campus. Expansion of SCC continued with a 2002 voter-approved bond (Measure G), which funded construction of two permanent centers in Vacaville and Vallejo (SCCD, 2014).

SCCD serves approximately 9,700 students (as of Fall 2013) across its campus and centers at Fairfield, Vacaville, Vallejo, and Travis Air force Base. SCCD's service area includes 95% of Solano County residents as well as Winters, in neighboring Yolo County (SCCD, 2014).

Vacaville Center

The Vacaville Center opened in 2010 as an extension of the SCCD's main campus in Fairfield. The Center currently serves approximately 2000 students. SCCD estimates that student growth will occur at rate of 1% district-wide (SCCD, 2014).

The Center is located at the northeast corner of Vacaville Center Parkway and North Village Parkway (see Figure 2). The SCCD property is approximately 54 acres, excluding streets. The property is comprised of five parcels (Assessor's Parcel Nos. 133-030-13; 133-180-13, -14, -15, -16, -17). The site is only partially developed, and includes an existing 36,359-SF classroom building with associated parking and landscaping.

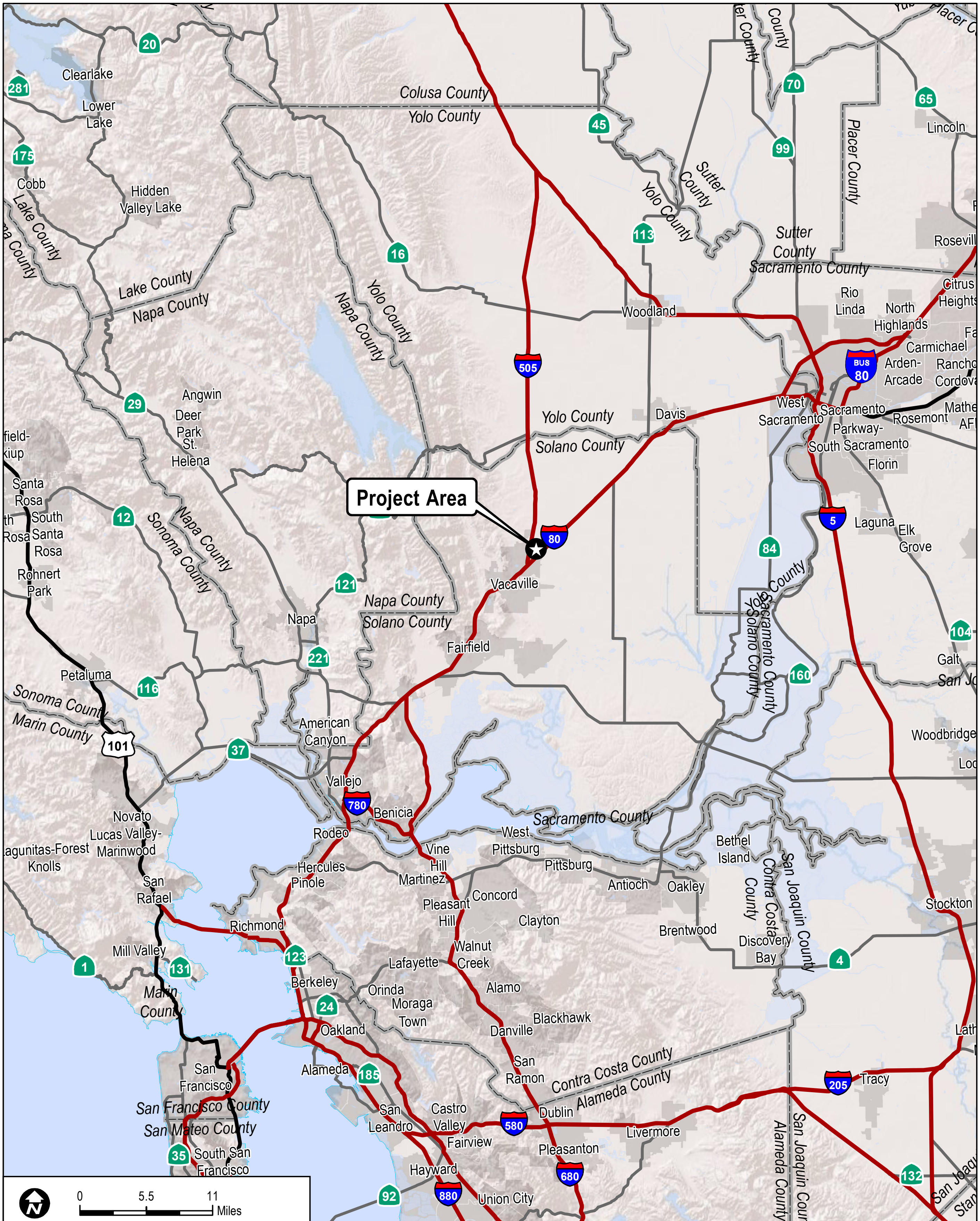

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FIGURE 1
Regional Map

Solano Community College Vacaville Center MND

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SOURCE: Google Imagery, 2015.

FIGURE 2
Vicinity Map

Solano Community College Vacaville Center MND

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SCCD also recently completed the purchase of the property on the west side of North Village Parkway. This property is approximately 4.32 acres (Assessor's Parcel No. 133-190-520) and includes an existing classroom building and associated parking and landscaping. This building is referred to as Vacaville Workforce Development (Vacaville Annex) and is 16,500 SFT.

Biotechnology Building

The proposed Biotechnology and Science Building is a one-story 31,943 gross SF building. The building would be located to the north of the existing classroom (see Figure 3). The following facilities (totaling 20,000 SF of occupied space) would be housed in the building:

- Biotechnology Lab and supporting spaces (8,000 SF)
- Anatomy Lab and support spaces (2,000 SF)
- Chemistry Lab and supporting spaces (2,00 SF)
- Biology Labs and supporting spaces (4,000)
- Offices (5 at 120 SF each)
- Student Support, including tutoring area, office suite, and café (2,500 SF)

The project would include connections to existing utilities (sewer, storm drain) and some minor relocation of existing utilities. A new joint trench will be required from North Village Parkway into the campus to provide primary and secondary electric service, gas and communication to the new building. The proposed building would be served by a new domestic water and fire water line. Approximately 400 linear feet of 6-inch sewer line would be connected to the existing 6 inch sewer line on site. The proposed building would connect to the existing storm drain system. The existing storm drain system transports runoff from the developed area via a 24-inch storm drain, which then daylights south of the existing Vacaville Center Building. The water then connects via surface flow, to the City storm drain system in Vaca Valley Parkway to the south, and Crescent Drive to the east.

Approximately 40,000 SF of new landscaping would be installed near the proposed building, including additional pedestrian areas and outdoor space. The proposed project would not change site access, internal vehicular circulation, or parking.

Future Phases

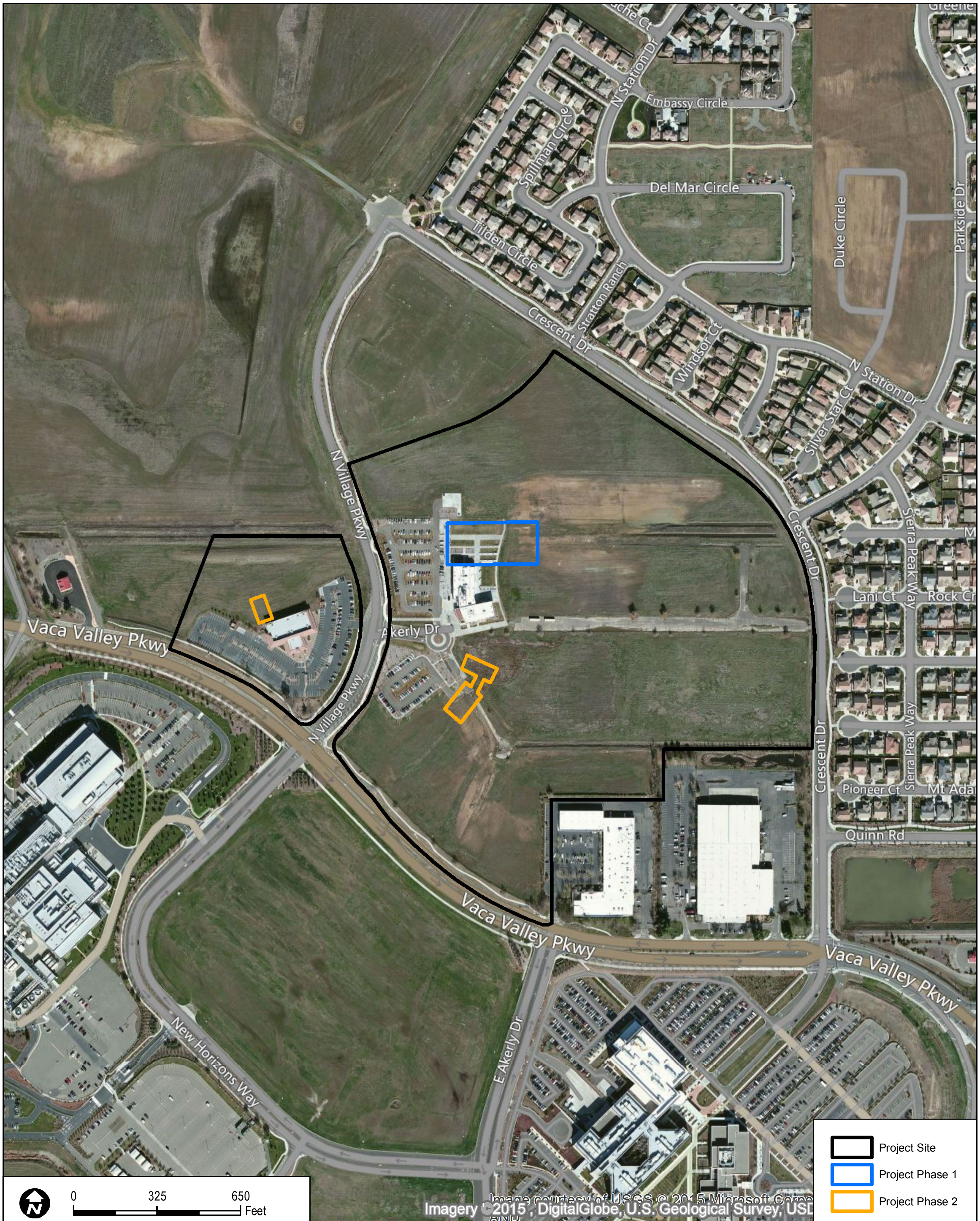
Future Measure Q bond releases would fund additional construction at the Vacaville Center. A 22,000 SF Student Success Center/Library Resource Center building would be constructed east of the existing classroom. A new classroom building would be constructed near the existing Workforce Development (Vacaville Annex) building on the west side of North Village Parkway. This building would be approximately 8,000, and would be served by existing utilities and parking.

8. Surrounding land uses and setting (Briefly describe the project's surroundings):

The project site is located between Interstate 80 and Interstate 505, approximately a half a mile from each freeway. The project site is immediately adjacent to the existing classroom building at the Center, northeast of the Genentech campus, and northwest of the Kaiser Permanente campus. The SCCD parcels are west of existing residential development in Vacaville's North Village Planning Area.

9. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

The project would be designed, funded, and built by SCCD. Improvements within the public right-of-way, including traffic mitigation measures at the site access on N. Village Parkway, would require an encroachment permit from the City of Vacaville.



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SOURCE: Google Imagery, 2015; Fehr & Peers, 2015.

FIGURE 3

Site Plan

Solano Community College Vacaville Center MND

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ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture and Forestry Resources	☐	Air Quality
☒	Biological Resources	☒	Cultural Resources	☒	Geology and Soils
☐	Greenhouse Gas Emissions	☐	Hazards and Hazardous Materials	☐	Hydrology and Water Quality
☐	Land Use and Planning	☐	Mineral Resources	☒	Noise
☐	Population and Housing	☐	Public Services	☐	Recreation
☒	Transportation and Traffic	☐	Utilities and Service Systems	☐	Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ 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 agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature Date

Signature Date

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
   a. Earlier Analysis Used. Identify and state where they are available for review.
   b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated

or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
   a. The significance criteria or threshold, if any, used to evaluate each question; and
   b. The mitigation measure identified, if any, to reduce the impact to less than significance.

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

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II.	**AGRICULTURE AND FORESTRY RESOURCES** – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐
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:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐
IV. BIOLOGICAL RESOURCES – Would the project:				
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?	☐	☒	☐	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐
V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐
VI. GEOLOGY AND SOILS – Would the project:				
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.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☒	☐	☐
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?	☐	☐	☐	☒
VII. GREENHOUSE GAS EMISSIONS – Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐
VIII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan 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?	☐	☐	☒	☐
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐
IX. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f)	Otherwise substantially degrade water quality?	☐	☐	☒	☐
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒
X.	**LAND USE AND PLANNING** – Would the project:				
a)	Physically divide an established community?	☐	☐	☒	☐
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
XI.	**MINERAL RESOURCES** – Would the project:				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐
XII. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
XIII. POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
XIV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐
XV. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒
XVI. TRANSPORTATION/TRAFFIC – Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☒	☐	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☒	☐	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

3.1 Aesthetics

a) Would the project have a substantial adverse effect on a scenic vista?

Views of the Vaca Mountains and nearby hills are considered scenic vistas in Vacaville (City of Vacaville General Plan and ECAS Draft EIR, 2013). The Coast Range runs from north to south along the western edge of Vacaville. As further discussed in item (c), below, the proposed biotechnology would add an additional manmade structure within existing views of the Vaca Mountains. The visual change, given the distance from receptors and the existing structures, would not have a substantial adverse effect (less than significant).

b) Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The project site is not visible from a state scenic highway. However, the Solano County General Plan designates the lengths of Interstate 80 and Interstate 505 within the County as scenic roadways. The project site is located between I-80 and I-505. Existing development precludes views of the project site from I-80. Views of the project from I-505 would be limited, as the project would be located approximately half a mile from the roadway, and most of the potential viewers would drive by the project site at high speeds. The existing view of the project site and surrounding uses from I-505 consists of vacant grazing land and commercial office complexes. The project would not affect a scenic resource within the viewshed of the highways. The primary scenic view from the highways is of the Vaca Mountains. As further discussed below, this view would not be substantially affected by the project. Therefore, the project would have a less-than-significant impact on scenic resources within a state scenic highway.

c) Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

The existing visual character of the site consists of administrative and classroom buildings and associated landscaping. Potential viewers of the proposed project include students and employees of SCC, travelers along the roadways adjacent to the project site, and residents in the neighborhood to the east of the project site (see Figures 4a and 4b). Of these viewers, the residences along Crescent Drive would be the most sensitive to visual changes to the project site. These viewers possess views of the Vaca Mountains to the west, which, as discussed under item (a), are identified as a scenic vista. These views currently consist of urban business park development in the midground (including the existing Vacaville Center buildings), with distinct views of the Vaca Mountain range in the background (see Figure 4b). The proposed biotechnology building would construct an additional manmade structure in the midground of these views. While the building would detract from the intactness of the existing views of the Vaca Mountains, the project would not block views of the ridgeline, which is the defining feature of the view from Crescent Drive. In addition, the project would be in keeping with the character of other buildings within the midground. The project would not significantly decrease the quality of the existing sensitive views from Crescent Drive.

While students and employees of Vacaville Center would notice a change in the campus, the biotechnology building would be in keeping with the existing mass and architectural style of existing campus buildings. Views from within the campus are generally limited to existing campus buildings, the adjacent residential neighborhood, and open space adjacent to the right-of-way (see Figures 4a and 4b).

Views from the west of the project site (facing east) include existing Vacaville Center campus buildings, residences along Crescent Drive, and other business park development. There are no sensitive viewsheds identified to the east of the project site and few sensitive viewers to the west of the project site (see a discussion of travelers along I-505 under item (b) above).

The proposed project would have a less-than-significant impact on the visual character or quality of the project site and its surroundings.

Proposed Building Site (looking NE from existing building)

Existing Vacaville Center Building (west elevation)

INTENTIONALLY LEFT BLANK

Vacaville Center Campus (looking south from north parking lot)

View of Vacaville Center from Crescent Drive (looking west)

INTENTIONALLY LEFT BLANK

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The proposed project does not include the installation of outdoor lighting except what is necessary to safely light building entrances and adjoining pedestrian walkways. The proposed project would comply with the SCCD Facilities Master Plan (FMP), which states that exterior lighting must meet LEED uplight and trespass requirements to increase night sky views (SCCD 2014). The SCCD property is adjacent to residential uses, but as the project site is on the opposite (west) end of the property from the residential boundary, and additional lighting would be minor (no additional parking lights, for example), additional light sources would not affect residential areas.

3.2 Agriculture and Forestry Resources

a) Would the project 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 (FMMP) of the California Resources Agency, to non-agricultural use?

The project would be located on Urban and Built-Up Land, per the FMMP (California Department of Conservation, 2011). The project would not convert farmland to non-agricultural use.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

The project site is designated in the General Plan for Public/Institutional uses and is zoned Community Facilities. The proposed project would not change the designated zoning.

The project would not conflict with a Williamson Act contract (California Department of Conservation, 2013).

c) Would the project 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))?

The project site is designated in the General Plan for Public/Institutional uses and is zoned Community Facilities. The proposed project would not change the designated zoning.

d) Would the project result in the loss of forestland or conversion of forestland to non-forest use?

The project site does not contain forestland (see Appendix B, Biological Resources). In addition to the developed area of the existing campus, the site is primarily comprised of ruderal/disturbed habitat (non-native grasslands), with some ornamental trees and drainage ditches. Therefore, the project would have no impact on forestland.

e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

The project would not result in indirect or direct loss of forestry resources. The project site is located in the vicinity of grazing land as designated on the FMMP map for Solano County (California Department of Conservation, 2011). However, the project and the future buildout of two additional classroom buildings would not impact the potential for nearby land to support grazing. Therefore, the project would have no impact on forestry or agricultural resources.

3.3 Air Quality

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

The proposed project is located in Solano County within the Sacramento Valley Air Basin (SVAB). The emissions that would result from construction and operation of the proposed project are subject to the rules and regulations of the Yolo-Solano Air Quality Management District (YSAQMD). The YSAQMD is responsible for developing and implementing the clean air plans for attainment and maintenance of the national and California ambient air quality standards in the SVAB. Attainment plans must be prepared for a specific air pollutant when a region is designated as being in non-attainment with the standards for that pollutant. These attainment plans, which are also referred to as State Implementation Plans (SIPs) with respect to attainment of the National Ambient Air Quality Standards (NAAQS), are submitted to the California Air Resources Board (CARB) for approval. Once approved by CARB, the plans are then submitted to the EPA for approval (YSAQMD 2010). As discussed below, within the project area there are two air quality attainment plans – one for ozone (O_3) and one for particulate matter equal to or less than 2.5 microns in aerodynamic diameter ($PM_{2.5}$).

Applicable Air Quality Plans

Ozone Attainment and Reasonable Further Progress Plan: The greater Sacramento metropolitan area, including the portion of Solano County within the SVAB, is designated as nonattainment areas for the NAAQS for 8-hour ozone. The nonattainment area, which is referred to as the Sacramento Federal Nonattainment Area (SFNA) for ozone, consists of all of Yolo and Sacramento counties, the eastern portion of Solano County, the southern portion of Sutter County, and the portions of Placer and El Dorado counties outside of the Lake Tahoe Air Basin. To meet federal planning requirements, the YSAQMD, in conjunction with other air districts in the SFNA for ozone, has contributed to the 2009 Sacramento Regional 8-hour Ozone Attainment and Reasonable Further Progress Plan (Revision) that is pending approval from EPA and CARB. This plan documents that the region is meeting requirements of the Clean Air Act for the 1997 8-hour ozone standard including meeting minimum emission reduction progress and is expected to reach attainment with the air quality standard no later than 2018. Additionally, in 2006 the YSAQMD submitted the Reasonably Available Control Technology SIP that demonstrates that the YSAQMD's current rules meet the Reasonable Available Control Technology requirements for all sources subject to Control Technique Guidelines and all major non-Control Technique Guidelines sources in accordance with the EPA's Final Rule to Implement the 8-Hour Ozone NAAQS.

Particulate Matter Attainment Plan: Solano County is also designated unclassified for state standards for PM_{10} and $PM_{2.5}$, unclassified for federal PM_{10} standards, and nonattainment for federal $PM_{2.5}$ standards. The central and eastern portions of the county, including Vacaville, are included in the SFNA for fine particulate pollution. In order to demonstrate attainment of the 24-hour fine particulate standard, an area must meet the standard during three consecutive years. The Sacramento region was able to show that the standard had been achieved during the 2010-2012 period. The YSAQMD and the other air districts of the region subsequently submitted a request to the U.S. EPA for a re-designation to attainment of the standard. The districts also developed and submitted a "clean data finding" and a maintenance plan to EPA. The clean data finding demonstrates that the standard has been met during a given three-year period, and the maintenance plan demonstrates how the standard will continue to be met in future year and the YSAQMD is also in the process of completing the attainment plan for the 24-hour NAAQS for particulate matter.

Triennial Assessment and Plan Update: State law also requires annual and triennial progress reports regarding progress and control measures for bringing the subject area into attainment with the federal NAAQS and state California Ambient Air Quality

Standards (CAAQS). In 2010, CARB approved the YSAQMD's updated Triennial Assessment and Plan Update that documents the progress YSAQMD has made towards improving the air quality in its jurisdiction since its 2003 Triennial Plan.

The YSAQMD does not regulate motor vehicle emissions within the SVAB; however, the air quality attainment plans account for on-road mobile emissions and other emissions associated with mobile sources in its emission inventory. The emission inventory is an assessment of ozone precursor emission sources and an estimate of these precursor emissions including volatile organic compounds (VOCs, also referred to as reactive organic gases or ROGs) and oxides of nitrogen (NO_x). Mobile sources are responsible for the majority of ozone precursors emitted in the SFNA, and the associated emissions are directly related to the regional population and total vehicle miles traveled (YSAQMD 2010). The plans outline strategies to reduce mobile emissions through mobile source control measures (e.g., incentive programs), transportation and land use programs and projects, and transportation control measures including collaborative programs between the Yolo County Transportation District, Solano Transportation Authority, and Sacramento Area Council of Governments.

A project could conflict with these plans if it would result in a level of development and mobile source emissions greater than the development and motor vehicle emissions anticipated in these plans. Should this conflict occur, a project may contribute to a potentially significant cumulative impact on air quality.

The proposed project would not change the land use designation or use of the project site, which is currently designated as Institutional/Public Facilities and supports the existing Solano Community College Vacaville Center. While the project would increase and intensify the educational use of the site, buildout of the Vacaville Center campus is anticipated in the regional development and air quality management plans. The project would be consistent with existing and planned educational uses of the site and would not conflict with or propose to change existing land uses or conflict with applicable policies in the City of Vacaville's General Plan. The proposed project is consistent with the emissions estimates in the air quality attainment plans described above. As a result, the project would have no impacts related to conflicts with applicable air quality plans or potential obstruction of air quality plan implementation.

b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

The proposed project is located in Solano County within the SVAB. As discussed above, the EPA has designated Solano County as nonattainment for federal $PM_{2.5}$ standards and for the 8-hour ozone and unclassified for federal PM_{10} standards. CARB has designated the Solano County portion of the SVAB as unclassified for state standards for PM_{10} and $PM_{2.5}$. CARB has also designated the SVAB as a nonattainment area for the 1-hour and 8-hour ozone CAAQS and 24-hour and annual PM_{10} CAAQS. Solano County is designated as unclassified or attainment for all other criteria air pollutants. Table 3.3-1 summarizes Solano County's attainment status.

Table 3.3-1
Solano County (SVAB) Attainment Status

Pollutant	Averaging Time/Standard	Designation/Classification
	National[a]	
O_3	8-hour (1997) – 0.08 parts per million (ppm) 8-hour (2008) – 0.075 ppm	Nonattainment (Severe 15) Nonattainment (Severe 15)
NO_2	Annual arithmetic mean – 0.053 ppm	Attainment
CO	1-hour – 35 ppm, 8-hour – 9 ppm	Attainment
SO_2	Annual arithmetic mean – 0.03 ppm 24-hour – 0.14 ppm	Attainment Attainment
PM_{10}	24-hour – 150 micrograms per cubic meter (μg/m^3)	Unclassifiable
$PM_{2.5}$	24-hour – 12.0 μg/m^3 Annual arithmetic mean (2006) – 35 μg/m^3	Unclassifiable
Lead	Calendar quarter – 1.5 μg/m^3	Attainment
	State[b]	
O_3	1-hour – 0.09 ppm 8-hour – 0.070 ppm	Nonattainment[1]
NO_2	24-hour – 0.18 ppm Annual arithmetic mean – 0.030 ppm	Attainment
CO	1-hour – 20 ppm 8-hour – 9 ppm	Attainment
SO_2	1-hour – 0.25 ppm 24-hour – 0.04 ppm	Attainment
PM_{10}	24-hour – 20 μg/m^3, Annual arithmetic mean - 50 μg/m^3	Nonattainment
$PM_{2.5}$	Annual arithmetic mean – 12 μg/m^3	Unclassified
Lead	30-day average – 1.5 μg/m^3	Attainment
Sulfates (SO_4)	24-hour	Attainment
Hydrogen sulfide (H_2S)	1-hour	Unclassified
Vinyl chloride[2]	24-hour	Unclassified
Visibility-reducing particles	8-hour (10:00 a.m.–6:00 p.m.)	Unclassified

Sources: [a] EPA 2012; [b] CARB 2012.
Notes:
1 CARB has not issued area classification based on the new state 8-hour standard. The previous classification for the 1-hour O_3 standard was serious.
2 CARB has identified lead and vinyl chloride as toxic air contaminants (TACs) but has not established a threshold level of exposure for adverse health effects.

The YSAQMD has established project-level quantitative thresholds for determining the significance of both construction and operational impacts. For CEQA purposes, project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 3.3-2, YSAQMD Air Quality Significance Thresholds, are exceeded during construction or operation.

Table 3.3-2
YSAQMD Air Quality Significance Thresholds

Pollutant	Threshold
ROG	10 tons/year
NO_x	10 tons/year
CO	Violation of a state ambient air quality standard[1]
SO_x	N/A
PM_{10}	80 pounds/day
$PM_{2.5}$	N/A

Source: YSAQMD 2007.
Note:
1 This threshold is applied to projects that generate large numbers of motor vehicle trips that would contribute to congestion at local intersections.

Project Impacts

The proposed project consists of two phases – Phase 1 involves construction of a 31,943 square-foot Biotechnology and Science Building and Phase 2 includes a 22,000 square-foot Student Success Center and an 8,000 square-foot classroom building. Phase 1 is expected to be constructed in the near-term, while Phase 2 is expected to be constructed as funding from previously approved bond measures become available. Operational emissions from Phase 2 are included in this analysis to support evaluation of cumulative impacts. For this analysis, Phase 2 is assumed to be operational starting in 2035. As construction would not occur in an overlapping year (and is unlikely to occur within the same five year period), Phase 2 is not considered for purposes of cumulative construction impacts.

Construction Emissions

Construction of the proposed project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site personal vehicles and trucks hauling construction materials. NO_x and CO emissions would result primarily from the use of construction equipment and motor vehicles. Fugitive dust (PM_{10} and $PM_{2.5}$) emissions would primarily result from grading and site preparation activities. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions.

Construction is expected to include the following activities: site preparation, grading, trenching, paving, building construction, and architectural coatings (painting). Construction is assumed to require approximately 7 months to complete. The construction emissions were estimated using the California Emissions Estimator Model (CalEEMod) Version 2013.2.2, available online (http://www.caleemod.com).

Table 3.3-3, Biotechnology and Science Building Construction Emissions, presents the estimated maximum unmitigated daily and annual emissions generated during project construction. To determine whether a significant impact would occur, the daily PM_{10} emissions and the annual ROG and NOx emissions are compared to the YSAQMD significance threshold; the emissions of other pollutants are presented for full disclosure.

Table 3.3-3
Biotechnology and Science Building Construction Emissions
(unmitigated)

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions (lbs/day)	97.44	25.90	18.16	0.03	19.89	5.14
Annual Emissions (tons/year)	0.45	1.44	1.10	0.00016	1.04	0.19
YSAQMD Threshold	10 tons/year	10 tons/year	N/A	N/A	80 lbs/day	N/A
Threshold Exceeded?	**No**	**No**	**N/A**	**N/A**	**No**	**N/A**

Notes: See Appendix A for detailed results.

Table 3.3-3 shows that the daily PM10 emissions and the annual ROG and NOx emissions will remain below the YSAQMD criteria air pollutant thresholds. Therefore, impacts during construction of the Biotechnology and Science Building and associated site improvements would be less than significant.

Operational Emissions

Project operation would generate long-term pollutant emissions primarily associated with the vehicle trips to and from the facility. Energy consumption within the building, generation of solid waste and wastewater (and subsequent disposal or treatment of the waste) as well as landscape and building maintenance activities would also contribute to local and regional air pollutant emissions. These emissions were also estimated using CalEEMod, and the results are provided in Table 3.3-4 Biotechnology and Science Building Operation Emissions. To determine whether a significant impact would occur, the daily PM_{10} emissions and the annual ROG and NOx emissions are compared to the YSAQMD significance threshold; the emissions of other pollutants are presented for full disclosure.

Table 3.3-4
Biotechnology and Science Building Operation Emissions
(unmitigated)

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions (lbs/day)	7.36	16.99	68.65	0.13	8.03	2.31
Annual Emissions (tons/year)	1.00	2.50	9.65	0.017	1.07	0.31
YSAQMD Threshold	10 tons/year	10 tons/year	N/A	N/A	80 lbs/day	N/A
Threshold Exceeded?	**No**	**No**	**N/A**	**N/A**	**No**	**N/A**

Notes: See Appendix A for detailed results.

Table 3.3-4 shows that the daily PM10 emissions and the annual ROG and NOx emissions will remain below the YSAQMD criteria air pollutant thresholds. Therefore, impacts during operation of the Biotechnology and Science Building and associated site improvements would be less than significant.

c) ***Would the project 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)?***

As summarized above in Table 3.3-1, Solano County is designated as nonattainment for federal $PM_{2.5}$ standards and for the 8-hour ozone and unclassified for federal PM_{10} standards. CARB has designated the Solano County portion of the SVAB as unclassified for state standards for PM_{10} and $PM_{2.5}$. CARB has also designated the SVAB as a nonattainment area for the 1-hour and 8-hour ozone CAAQS and 24-hour and annual PM_{10} CAAQS. Solano County is designated as unclassified or attainment for all other criteria air pollutants. Table 3.3-1 summarizes Solano County's attainment status.

To support the region in developing a SIP for attainment with ozone standards, an emission inventory that assesses ozone precursor emission sources in the region and estimates the associated precursor emissions including ROGs and NO_x. Mobile sources are responsible for the majority of ozone precursors emitted in the SFNA and associated emissions are directly related to the regional population and total vehicle miles traveled (YSAQMD 2010b). Projects that emit these pollutants or their precursors potentially contribute to poor air quality. As discussed above, the construction and operational emissions from the proposed project would not exceed the YSAQMD significant thresholds. In addition, operational emissions from anticipated future development at the Vacaville Center campus were estimated using CalEEMod for the purposes of this cumulative impact analysis. Table 3.3-5 presents the daily and annual emissions associated with operation of the future 22,000 square-foot Student Success Center and an 8,000 square-foot classroom building, and provides the total emissions associated with the site for the year 2035. Table 3.3-5 also compares the cumulative operational emissions with the YSAQMD significance thresholds to identify whether the project would result in a cumulatively considerable net increase of ozone or PM10.

Table 3.3-5
Vacaville Center Year 2035 Operational Emissions
(unmitigated)

		ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions (lbs/day)	Phase 1	7.36	16.99	68.65	0.13	8.03	2.31
	Phase 2	4.32	7.78	36.68	0.13	7.53	2.15
	Total	*11.68*	*24.77*	*105.33*	*0.26*	*15.56*	*4.46*
Annual Emissions (tons/year)	Phase 1	1.00	2.50	9.65	0.017	1.07	0.31
	Phase 2	0.60	1.14	5.28	0.016	1.00	0.29
	Total	*1.60*	*3.64*	*14.93*	*0.033*	*2.07*	*0.60*
YSAQMD Threshold		10 tons/year	10 tons/year	N/A	N/A	80 lbs/day	N/A
Threshold Exceeded?		**No**	**No**	**N/A**	**N/A**	**No**	**N/A**

Notes: See Appendix A for detailed results.

Table 3.3-5 shows that the daily PM10 emissions and the annual ROG and NOx emissions from the Biotechnology and Science Building, the future Student Success Center, and the future classroom will remain below the YSAQMD criteria air pollutant thresholds. The proposed project would also not conflict with the applicable air quality plans, which addresses the cumulative emissions in the SVAB. Accordingly, the proposed project would not result in a cumulatively considerable increase in emissions of nonattainment pollutants. Impacts would be less than significant.

d) Would the project expose sensitive receptors to substantial pollutant concentrations?

The greatest potential for exposing sensitive receptors to substantial pollutant concentrations would occur during construction, due to diesel particulate emissions from heavy equipment operations and heavy-duty trucks. Residences are sensitive receptors that could be exposed to substantial diesel particulate concentrations during construction. However, the residences nearest to the Vacaville Center are located more than 0.5 mile away and would not likely exposed to substantial pollutant concentrations. Additionally, construction of the Biotechnology and Science Building and related site improvements would occur over an approximately 7-month period, and would not be a long-term source of construction pollutants in the region.

e) ***Would the project create objectionable odors affecting a substantial number of people?***

Odors are a form of air pollution that is most obvious to the public. Odors can present significant problems for both the source and surrounding community. Although offensive odors seldom cause physical harm, they can be annoying and cause concern.

Potential sources that may emit odors during construction activities include diesel equipment and gasoline-powered engines. Odors from these sources would be localized and generally confined to the Vacaville Center project site. Additionally, odors associated with construction equipment would be temporary. Therefore, proposed project construction would not cause an odor nuisance.

Operation of the proposed project would involve vehicle trips to and from the site and typical building and landscaping maintenance. These activities do not generate substantial objectionable odors and the operation of the project would not cause an odor nuisance.

3.4 Biological Resources

Information in this section is based on the "Biological Technical Report for the Vacaville Campus Site, City of Vacaville, California," prepared by Dudek, March 2015, and included as Appendix B of this Initial Study.

a) ***Would the project 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?***

The proposed project is located on an approximately 48.75-acre property that is moderately flat with elevations on the site ranging from approximately 84 feet above mean sea level (AMSL) on the east side of the property, to approximately 99 feet AMSL on the northern side of the property. The project site is currently vacant and contains a fallow field dominated by non-native grasses and scattered trees and shrubs. Regular disking occurs which creates low quality habitat for most species due to the disturbed nature of the site. Two paved (and unmaintained) roads, a classroom, a raised sewer manhole, and three ditches running west to east also occur on the site.

The California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB), U.S. Fish and Wildlife Service (USFWS) Endangered Species List and California Native Plant Society (CNPS) Rare Plant Inventory was queried for any reported occurrences of special-status species in the nine quadrangle area centered on the

Allendale Quadrangle, within which the site is located (CDFW, USFWS, CNPS 2015). A search of existing biology reports for adjacent properties, soils reports, aerial photos, California Environmental Quality Act (CEQA) documents, and online resources also contributed to development of the list of special-status species with the potential to occur on or immediately adjacent to the site.

The CNDDB, USFWS and CNPS search revealed occurrences for 35 special-status plant species and 55 special-status wildlife species known to occur within the search area. The nine quadrangle search area included some species that require very specialized habitats that do not occur near the project area (e.g., vernal pools, salt marsh, serpentine soils, etc.), and were thus eliminated from further consideration. One special-status plant species, Baker's navarretia (*Navarretia leucocephala ssp. bakeri*), had an occurrence record immediately adjacent to the project site. Baker's navarretia is a vernal pool species that requires specific vernal pool habitat not found on the project site, and was therefore eliminated from consideration. No occurrences of special-status animal species were recorded within the project footprint, although burrowing owl (*Athene cunicularia*) occurrences were recorded just to the southwest of the project site. Due to the suitable habitat available and the disturbed nature of the project site, burrowing owl is expected to be found on the project site. Additionally, other protected raptor species such as white-tailed kite (*Elanus leucocephalus*) and Swainson's hawk (*Buteo swainsonii*) are likely to use the site for foraging, and potentially nesting in the scattered trees along the paved unnamed road that runs through the middle of the project. Mitigation Measure BIO-1, which would require pre-construction surveys for burrowing owl and other raptors prior to project construction, will ensure impacts to these species are less than significant.

b) Would the project 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?

The majority of the site consists of ruderal/disturbed habitat (non-native annual grass species and non-native forbs and/or bare dirt) that is annually mowed and disked. Developed land (e.g., abandoned roads), ornamental tree plantings and three ditches running east to west, one of which was wet during field surveys and two that were dry, dominate other areas within the Vacaville Center (see Figure 5). Developed land on this property includes the existing Solano Community College buildings, parking lots, roads, sidewalks, and two unused roads that are in disrepair. This land cover has little to no habitat value for native flora and fauna.

No riparian habitat exists on the project site, but a wet ditch in the southern portion of the property supports a narrow strip of emergent wetland vegetation along its length until it enters a culvert under Crescent Drive. While it does not provide important habitat for special status species, it is considered a waters of the United States and is most likely also jurisdictional pursuant to Section 1600 of the California Fish and Game Code. Prior to filling the ditch applications should be files with the applicable natural resource agencies. Refer to 3.4c below for more details on the jurisdictional status of the wet ditch.

c) Would the project 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?

A jurisdictional delineation for the Vacaville Campus site was not conducted as part of the biological assessment. However, the property does have two dry ditches and one wet ditch that all run parallel from west to east. The two dry ditches appear to be inactive and excavated in uplands, and they do not support a dominance of hydrophytic vegetation; therefore, they are most likely not ACOE or CDFW jurisdictional features. The wet ditch has running water, hydrophytic vegetation, and hydric soils. The wet ditch originates from the existing campus, facilities' stormwater and irrigation runoff, and daylights in the center of the property. It then flows to the east before entering a concrete culvert at Crescent Drive. Preliminary reviews of aerial photographs indicate that the storm water ditch appears to flow under Crescent Drive to the southeast toward a detention basin at the corner of Crescent Drive and Quinn Road. The detention basin appears to have an eventual connection to Prospect Slough, which flows to the Sacramento River, Suisun Bay and then San Pablo Bay. The direct hydrologic connection (significant nexus) of a relatively permanent water (wet ditch) to a traditional navigable water (Sacramento River, Suisun Bay, San Pablo Bay) indicates the wet ditch is a waters of the U.S. Future development on the Vacaville Center property affecting the wet ditch could require a Section 404 Permit. The proposed project, would not fill or alter this ditch. The impact is therefore less than significant.

DUDEK

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SOURCE: Bing 2015

FIGURE 5

Vegetation Communities

Solano Community College Vacaville Center MND

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d) ***Would the project 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?***

A wildlife corridor is a linkage of several areas of similar wildlife habitat, generally composed of native vegetation. Corridors are critical for the maintenance of ecological processes including allowing for the movement of animals and the continuation of viable, genetically distinct populations. No wildlife corridors or native wildlife nursery sites exist on the project site.

The animal species observed (as well as those likely to occur) on the project site are generally common species that are adapted to life in proximity to human activity and the urban/suburban environment. Consequently, there will be no impact to native wildlife corridors or nursery sites.

e) ***Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?***

According to the Vacaville Municipal Code Chapter 14.09.131 Supplemental Standards, Tree Preservation, "tree" means any live woody plant having one or more well defined perennial stems with an aggregate circumference of 31 inches or more, when measured at 4-1/2 feet above ground level. No trees matching this description are planned for removal during either phase of the project.

f) ***Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?***

The Solano County Habitat Conservation Plan (HCP) is currently under review but has not yet been adopted. Therefore, the project would not conflict with any HCP, natural community conservation plan (NCCP) or other approved local, regional or state HCP.

Mitigation Measure

BIO-1 If construction is to occur during the nesting season (between February 1 and August 30 of each year), the project applicant shall provide for a pre-construction survey for tree-nesting and ground-nesting birds to be completed by a qualified biologist no more than 2 weeks prior to the start of construction. The survey shall include areas within 500 feet of the proposed disturbance (demolition, grading, and/or vegetation removal). Active raptor nests located within 300 feet of the project will be mapped. A determination will be made by a qualified biologist, in coordination with the California Department of Fish and Wildlife (CDFW), as to whether or not construction work would affect the active nest or disrupt reproductive behavior. Criteria used for this evaluation will include, but not be limited to, presence of visual screening between the nest and construction activities, and behavior of adult raptors in response to the surveyors or other ambient human activity. Alternatively, other appropriate avoidance measures approved by CDFW may be implemented to ensure that the nest is protected.

If it is determined that construction will not affect an active nest or disrupt breeding behavior, construction may proceed without any restriction or mitigation measure.

If it is determined that construction will affect an active raptor nest or disrupt reproductive behavior, then avoidance is the only mitigation available. Construction will not be permitted within 500 feet of such a nest until a qualified biologist determines that the subject nests are no longer active.

3.5 Cultural Resources

Information in this section is based on the "Negative Cultural Resources Inventory for the Vacaville Center Campus Project, City of Vacaville, California," prepared March 10, 2015 and included as Appendix C of this Initial Study.

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

NWIC Records Search

Staff of the North Central Information Center (NWIC) conducted a records search for the project area and a one mile radius surrounding the project area on January 26, 2015. These records indicate that no cultural (including archaeological and built-environment) resources have been previously recorded within the project area. The results of this search are summarized below.

Previously Conducted Investigations

Twenty-seven cultural resources technical studies have been conducted within one mile of the project area, four of which have covered at least a portion of the current area of potential effects (APE) (Table 1). The entirety of the APE appears to have been subject to previous investigation.

Table 3.5-1
Previous technical investigations that have included the APE

Report No.	Year	Author	Title
5156	1966	Adan Treganza, Robert L. Edwards, and Thomas F. King	Archeological Survey and Excavation Along the Tehama-Colusa Canal. Report Location Approximated.
7675	1985	Dana McGowen Seldner	A Preliminary Archeological Study of the Northeast Sector, Vacaville, Solano County, California.
19521	1996	Micheal Corbett and William Kostura	Historic Architectural Survey Report, Interstate I-80 and Leisure Town Road Project, City of Vacaville, Solano County, California Department of Transportation District 10, 10-SOL-80, KP 47.48/49.08
19562	1996	Micheal Corbett and William Kostura	Historic Property Survey Report, 10-SOL-I-80 KP47.48-49.08 EA 325400, Improvements to I-80 (Caltrans)

Previously Recorded Resources

No previously recorded cultural resources were identified within the project APE; three historical-era archaeological sites have been recorded within the one-mile record search radius (Table 2). None of these resources will be impacted by proposed project activities.

Table 3.5-1
Previously recorded cultural resources

Primary No.	Trinomial	Age	Description	Distance from APE
P-48-000177	CA-SOL-000382H	Historic	Demolished late 1800s-mid 1900s structure.	3,300 feet
P-48-000178	CA-SOL-000383H	Historic	North Gate Road. Determined not NRHP eligible.	870 feet
P-48-000409	CA-SOL-000362H	Historic	Historic structure	1,300 feet

Dudek reviewed available historical topographic maps for the presence of structures or other features that may have been in the project area. Map series from to the following years were inspected: 1994, 1988, 1975, 1969, 1967, 1959, 1954, 1947, 1944, 1922, 1917, and 1908. The nearest symbolized resources, consisting of a structure and dirt road (observed to be present on the 1908-1947 map series), were located approximately 850 feet south of the project APE. These features would have likely been associated with previously recorded resource P-48-000409. No historical roads or features have been recorded on these maps for areas within the project area.

The record search also provided documentation relating to the NRHP and Office of Historic Preservation (OHP) Archaeological Determinations of Eligibility (ADOE) and Historic Property Directory (HPD) lists. No sites listed as eligible for listing have been recorded within the project APE, or a surrounding one-mile area. Historical route P-48-000178, located 870 feet east of the project, has been classified 6Y; determined ineligible for listing in the National Register through a consensus determination of a federal agency and the State Historic Preservation Officer.

NAHC Sacred Lands File Search

On March 1, 2015, a request was submitted to the State of California NAHC to review the Sacred Lands File for information on Native American cultural resources that might be impacted by the proposed project. A response was received on March 11, 2015 indicating that the NAHC search failed to indicate the presence of Native American cultural resources in the proposed Project area.

Tribal Outreach

The NAHC response further enclosed a list of Native American individuals/organizations that may have knowledge of cultural resources in the proposed Project area. Outreach letters were sent to these individual with a project description, location maps, and a request for any additional information that might be provided relating to Native American resources in the vicinity. As requested by the NAHC in their response, follow up outreach attempts were made by e-mail and telephone on March 20, 2015 (Table 3). To date, no responses to these outreach attempts have been received.

Table 3.5-2
Record of tribal information request outreach

Tribal Representative	Tribe / Organization	E-mail	Phone	Letters	Comments
Ms. Cynthia Clarke	Yocha Dehe Wintun Nation	No contact available	3/20/2015	3/11/2015	No response received.
Mr. Kesner Flores	Maidu / Miwok	3/20/2015	3/20/2015	3/11/2015	No response received.
Mr. Leland Kinter	Yocha Dehe Wintun Nation	No contact available	3/20/2015	3/11/2015	No response received.
Native Cultural Renewal Committee	Yocha Dehe Wintun Nation	No contact available	3/20/2015	3/11/2015	No response received.

Table 3.5-2
Record of tribal information request outreach

Tribal Representative	Tribe / Organization	E-mail	Phone	Letters	Comments
Mr. Charlie Wright	Cortina Band of Indians	No contact available	3/20/2015	3/11/2015	No response received.

Intensive Pedestrian Survey

An intensive pedestrian survey of the project area was conducted by Dudek archaeologist Nicholas Hanten on February 2, 2015 using standard archaeological procedures and techniques that meet the Secretary of Interior's standards and guidelines for cultural resources inventory. No artifacts or features were identified during the survey of the project area.

The project APE was subject to a 100% survey with transects spaced no more than 10 meters apart and oriented in cardinal directions. Survey was aided through the use of a 3rd Generation Apple IPad and georeferenced maps and a Trimble GeoExplorer 6000 series Global Positioning System (GPS) receiver with sub-decimeter accuracy.

Opportunistic inspection of natural and artificial subsurface erosional exposures suggests that this area has a low potential to contain intact subsurface cultural deposits. Less than one-third of the ground surface was directly visible due to the presence of low-laying non-native grasses throughout the area. The entirety of the project area has been severely disturbed by agricultural activities, with disking visible in aerial imagery dating to 1968. Additional past disturbances to the area have included installation of a number of utilities and water drainages, as well as construction of adjacent roads and the existing Solano Community College campus.

Conclusion

No cultural resources, including historical resources as defined in Section15064.5 (CEQA Guidelines) would be impacted by the proposed project. The project impact would be less than significant.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

A Phase I Inventory conducted for the proposed project has indicated that no archaeological or built-environment resources have been identified within the project APE, and that there is a very low potential for the inadvertent discovery of cultural resources during project-related activities. Based on these negative results and the highly disturbed nature of the project setting, no further cultural efforts or mitigation, including cultural construction monitoring, are recommended to be required in support of implementation of the current project.

In the unlikely event that archaeological material be identified in the area during earth moving activities, Mitigation Measure CUL-1 would be implemented. With implementation of Mitigation Measure CUL-1, the project impact would be less than significant.

c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The Cultural Resources Inventory prepared for the project site provides no evidence that the project would affect a unique paleontological resource site or unique geologic feature. In the unlikely event that paleontological resources are discovered during construction, implementation of Mitigation Measure CUL-1 would ensure that the project impacts are less than significant.

d) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Per the discussion above, there is no evidence of human remains within the project area. In the unlikely event that human remains are discovered during project construction, implementation of Mitigation Measure CUL-1 would ensure the project impacts are less than significant.

Mitigation Measure

CUL-1 Should archaeological or paleontological material be identified in the area during earth-moving activities, work should be temporary halted in the vicinity, and the City consulted. A qualified archaeologist (or paleontologist) will be assigned to review the unanticipated find, and evaluation efforts of this resource for CRHR listing will be initiated in consultation with the City. Should human remains be discovered, work will halt in that area and procedures set forth in the California Public Resources Code (Section 5097.98) and State Health and Safety Code (Section 7050.5) will be followed, beginning with notification to the City and County Coroner. If Native American remains are present, the County Coroner will contact the Native American Heritage Commission to designate a Most Likely Descendent, who will arrange for the dignified disposition and treatment of the remains.

3.6 Geology and Soils

The Geotechnical Engineering Report, Solano Community College-Vacaville Campus, prepared by Wallace Kuhl and Associates, 2006, is included as Appendix D of this Initial Study.

a) Would the project 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.

The Vaca-Kirby Hills Fault system is the only fault system that passes through the project area. This fault system has a very low risk of rupture (City of Vacaville 2013). The project site is not located within an Alquist-Priolo Earthquake Fault Zone (Department of Conservation 2007). The project site does not show any indication of surface rupture or fault-related surface disturbance (Wallace and Kuhl 2006). The SCCD’s Incident Response Plan includes procedures required or recommended by SCCD to minimize health and property risks in the event of an earthquake. The building would be subject to the Uniform Building Code requirements for seismic safety. This potential impact would be less than significant.

ii) Strong seismic ground shaking?

Seismic ground-shaking could occur as the result of an earthquake in the area. As discussed above, the project site is in the vicinity of several fault lines but would not be substantially at risk of potentially damaging earthquakes. The Geotechnical Engineering Report prepared for the project site (Wallace and Kuhl 2006) predicts that the maximum seismic event that could occur at the project site is a magnitude 6.6 less than 1.2 miles from the site. The project would result in a less-than-significant impact.

iii) Seismic-related ground failure, including liquefaction?

The Vacaville Draft General Plan categorizes the project site as being at low risk for liquefaction (see General Plan Figure SAF-2). The Geotechnical Report (Wallace and Kuhl 2006) also classifies the site as being at low risk of liquefaction. A factor of safety of 1.3 or greater against liquefaction potential is generally considered acceptable. The Geotechnical Report calculated a factor of safety of 0.52 for the soils located approximately 10.5 to 13 feet below grade and a factor of safety of 0.83 for soils approximately 16 to 19.5 feet below grade. The remaining soils within approximately 51.5 feet of the ground surface are considered nonliquefiable (greater than 1.3). This composition generally results in minimal or no ground damage. Due to the flat ground level of the project site and the absence of significant slopes, basins, or canyons in the site vicinity, the project is at low risk of damage due to lateral spreading.

iv) Landslides?

The project site is flat (less than 5% grade, according to the Vacaville Draft General Plan Figure SAF-4) and as such would not be susceptible to landslides. The project site is outside of landslide damage areas as mapped on the Vacaville Draft General Plan Figure SAF-3.

b) Would the project result in substantial soil erosion or the loss of topsoil?

The project would be located on an area partially developed (paved and landscaped). The project would not disturb sensitive areas such as drainages or permanently remove ground cover from areas prone to erosion. Erosion and topsoil loss could potentially occur during construction. has the potential to occur during construction. However, standard best management practices required (by both the RWQCB and City grading requirements) would ensure no substantial erosion would occur.

c) Would the project 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?

The Geotechnical Report prepared for the project site (Wallace and Kuhl 2006) indicates that the upper 12 inches of surface soils at the site have been disturbed during previous site uses and are not capable of supporting building foundations in their present condition. However, the native undisturbed soils combined with engineered fills composed of native soils or approved imported soils would be able to support the proposed project.

Please refer to item (a)(iii) for more information on lateral spreading and liquefaction.

d) Would the project 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?

The sandy silts and silty clays identified across the surface of the site possess a medium expansion potential (Wallace and Kuhl 2006). Construction of the proposed project on these soils could pose potentially significant structural issues. Mitigation Measure GEO-1 would require construction to follow the recommendations of the Geotechnical Report prepared to the project, which may include construction of interior pad areas and exterior flatwork with granular materials or lime treatment of native soils. Implementation of Mitigation Measure GEO-1 would ensure potential impacts related to expansive soils would be less than significant.

e) Would the project 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?

The project would not require the installation of septic tanks or alternative waste water disposal systems. The project would connect to the existing sewer system. This impact would be less than significant.

Mitigation Measures

GEO-1 Construction shall be required to comply with the recommendations of the geotechnical report related to special construction measures to be implemented when building on expansive soils. These measures may include construction of interior pad areas and exterior flatwork with granular materials or lime treatment of native soils. “Geotechnical report” refers to the Geotechnical Engineering Report, Solano Community College-Vacaville Campus prepared by Wallace Kuhl and Associates, 2006, or a newer geotechnical report that supersedes this report.

3.7 Greenhouse Gas Emissions

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Global climate change is a cumulative impact; a project's individual GHG emissions combined with the cumulative increase of all other sources of greenhouse gas (GHGs) may contribute to the ongoing global changes in climate attributed to GHG concentrations. Thus, GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA 2008).

Neither the State of California nor the YSAQMD has established CEQA significance thresholds for GHG emissions. The Governor's Office of Planning and Research (OPR) advises, "Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact" (OPR 2008). Furthermore, the OPR advisory indicates, "In the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR 2008). In addition, CEQA Guidelines Section 15064.4, state that a lead agency has discretion in determining the most appropriate method for assessing the significance of impacts from GHG emissions. Therefore, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations.

Neither SCCD nor YSAQMD has adopted a GHG threshold of significance. In October 2014, the Sacramento Metropolitan AQMD Board of Directors adopted a resolution recommending a threshold of 1,100 metric tons annually. The SMAQMD recommends that this threshold be applied to both construction and operational impacts. Because YSAQMD has not recommended a specific threshold, and the project site is within the SVAB, this analysis relies on the threshold to determine the significance of project impacts.

With respect to GHG emissions, CEQA Guidelines Section 15064.4(a) states that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. Section 15064.4(a) further notes that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance based standards."

Section 15064.4(b) provides that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment:

- The extent a project may increase or reduce GHG emissions as compared to the environmental setting
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

Construction GHG Emissions

Construction of the proposed project would result in GHG emissions that are primarily associated with the use of construction equipment as well as the operation of worker vehicles and haul trucks. As previously stated in Section 3.3, Air Quality, construction of the Biotechnology and Science Center is expected to include the following activities: site preparation, grading, trenching, paving, building construction, and architectural coatings (painting), which would occur over a 7-month period. CalEEMod was used to estimate the total GHG emissions from this construction, as summarized in Table 3.7-1. The emissions in that table include emissions from on-site (off-road equipment) and off-site (on-road haul trucks, delivery trucks, and worker vehicles) sources during construction. Details of the construction emission assumptions and calculations are included in Appendix A.

GHG emissions are measured in carbon dioxide equivalents, or CO_2E. This measurement converts the most common GHGs to an equivalent amount of CO_2, in consideration of the different levels of global warming potential of each individual GHG. The global warming potential has been determined based on the specific characteristics of each GHG – such as how much heat the particular GHG traps in the atmosphere and the decay rate of the gas (how long the molecules of that gas persist in our atmosphere).

Table 3.7-1
Proposed Project Estimated Construction Greenhouse Gas Emissions

Source	MT CO2E
Site Preparation	0.85
Grading	4.96
Utilities (Trenching)	2.38

Table 3.7-1
Proposed Project Estimated Construction Greenhouse Gas Emissions

Source	MT CO2E
Building Construction	126.94
Paving	3.36
Architectural Coating	0.70
Total	**139.19**

Note: See Appendix A for complete results.
MT CO2E = metric tons carbon dioxide equivalent

As shown in Table 3.7-1, the maximum estimated construction GHG emissions for the proposed project would be approximately 139 MT CO_2E, with all construction anticipated to occur in a single year. As this amount is substantially below the 1,100 MT CO_2E threshold, the project's construction GHG emissions would be less than significant.

Operational GHG Emissions

Project operation would generate long-term GHG emissions primarily associated with the vehicle trips to and from the facility, energy consumption within the building, water consumption, generation of solid waste and wastewater (and subsequent disposal or treatment of the waste), and landscape and building maintenance activities. Table 3.7-2 Operational GHG Emissions reflects the GHG emissions associated with operation of the Biotechnology and Science Center as estimated using CalEEMod.

Table 3.7-2
Operational GHG Emissions

GHG Source	MT CO_2E
Area	0.000066
Energy	102.70
Mobile	966.17
Waste	13.21
Water	5.36
Total	**1,087.44**

Notes: See Appendix A for detailed results.

Table 3.7-2 shows the total annual GHG emissions expected to be generated by the proposed project. The majority of GHG emissions come from mobile sources – the vehicle trips to and from the campus. Specifically, mobile sources would be responsible for 89% of the project's CO_2E emissions. As shown in Appendix A, CalEEMod operational emissions modeling was completed specifically to evaluate GHG emissions. The GHG analysis modeling uses a reduced trip generation rate to reflect that there would be few or no vehicle trips to the site during school vacation periods and reduced trips during summer session. Specifically, the campus is in regular session for 8 months of the year, summer session (at approximately 50% capacity) for 2 months and on vacation for 2 months.

The project would be constructed to meet the LEED Silver standard requirements. LEED is a program that assigns points to a proposed building based on the energy efficiency and environmental sustainability features incorporated into its construction. Since the LEED points can be achieved through a variety of improvements, it is not known at this time exactly which energy efficiency and environmental sustainability features will be selected. The CalEEMod modeling uses a 10% improvement in energy efficiency compared to the base efficiency standards under California's Title 24 requirements to reflect achievement of the LEED Silver standard. The modeling also reflects that there would be a slight decrease in vehicle trips to and from the site due to the use of transit and carpooling. These trip reduction measures are not reflected in the traffic modeling for the project to ensure that all peak hour trips are accounted for in the impact analysis. However there is existing transit service to the site, and the modeling assumes a 2.5% reduction in total weekday vehicle trips based on transit use and informal carpooling. The modeling also assumes that high efficiency lighting would be used to reduce lighting energy demands by 5%, recycling would be used to reduce solid waste disposal by 30%, water efficient toilets would be installed, and a water efficient irrigation system would be installed.

There are no GHG emissions associated with the project site currently; therefore, the proposed project would increase GHG emissions compared to existing conditions. However, emissions would remain below 1,100 MT CO2E and impacts would be less than significant.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The Climate Change Scoping Plan, approved by CARB on December 12, 2008, provides an outline for actions to reduce California's GHG emissions. The Scoping Plan provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. As such, the Scoping Plan is not directly applicable to specific projects. Moreover, the Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects … because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009). There are several federal and state regulatory measures aimed at the identification and reduction of GHG emissions; most of these measures focus on area source emissions (e.g., energy usage) and changes to the vehicle fleet (increased use of hybrid, electric, and more fuel-efficient vehicles). While federal and state legislation would ultimately reduce GHG emissions associated with the project, no specific plan, policy, or regulation would be directly applicable to the proposed project.

To date, neither SCCD nor the City of Vacaville has not adopted a Climate Action Plan or GHG reduction plan. No local mandatory GHG regulations, plans, or policies would apply to implementation of the proposed project, and no conflict would occur. Additionally, as demonstrated in Table 3.7-1 and 3.7-2, the proposed project would not exceed the SMAQMD GHG threshold of 1,100 MT CO_2E/year. Therefore, impacts from a potential conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be less than significant.

3.8 Hazards and Hazardous Materials

Information in this section is from the "Hazards Assessment for Solano Community College Vacaville Center" prepared by Dudek, March 26, 2015, and included as Appendix E of this Initial Study.

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The project proposes to construct a biotechnology laboratory and classroom building on the SCCD Vacaville campus and would routinely use chemicals for instructional and laboratory purposes. Some of these chemicals are considered hazardous materials and would need to be stored, managed, and disposed in compliance with federal, state, and local regulations pertaining to hazardous materials. Any hazardous materials used for building operation and classroom instruction would be handled according to product label specifications and the appropriate Safety Data Sheets (SDSs). State law requires businesses to prepare an inventory of hazardous materials they use and store. The Solano County Department of Environmental Management receives this information from businesses and distributes it to local fire protection agencies. SCCD maintains a Hazardous Materials Business Plan that states practices to follow in case of a hazardous materials-related emergency. The project would also comply with federal, State, and local regulations pertaining to hazardous material disposal. Therefore, the project would not create a significant hazard to the public or the environment through use or disposal of hazardous material. Transport of hazardous materials in Vacaville is discussed in greater detail under item (b) below.

b) Would the project 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?

The City of Vacaville Draft General Plan's Policy SAF-P6.6 includes implementation measures to ensure safe transport of hazardous materials through Vacaville, including the maintenance of formally-designated hazardous material carrier routes, prohibition of vehicles transporting hazardous materials from parking on City streets, and construction of new pipelines and other channels carrying hazardous materials so that they avoid residential areas and other immobile populations to a reasonable extent. Local and State regulations require a release-reporting program if a release of hazardous materials should occur. Because the proposed project would comply with these regulations, it would not pose a significant hazard to the public or environment.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The project is not within a one-quarter mile radius of any other existing or proposed schools. The proposed project includes the construction of a biotechnology laboratory and classroom building on the SCCD Vacaville campus. Students would be trained in proper chemical handling as part of laboratory education. The project would not result in hazardous emissions or waste release.

d) Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The proposed project would not be located on site included on this list of hazardous materials sites.

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?

The proposed project is located within the sphere of influence for the Nut Tree Airport Land Use Compatibility Plan (ALUCP) (Solano County Airport Land Use Commission 1988). The Nut Tree ALUCP specifies land use compatibility "Safety Zones," which range from A to F, with Safety Zone A including the most sensitive land uses to airport-related safety and noise impacts and Safety Zone F the least sensitive land uses. The proposed project would be located in Safety Zone F, which allows any land use. The impact would therefore be less than significant.

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?

The project is not in the vicinity of a private airstrip.

g) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The project would not affect any of the major entrances to or exits from the project site that would be used during emergency evacuation. The project would have no impact on any adopted emergency response or evacuation plans (SCCD 2009).

h) Would the project 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?

According to the map prepared by the California Department of Forestry and Fire Protection and shown as Figure SAF-9 of the Vacaville General Plan, the project site and immediate vicinity is not at substantial risk of wildland fires.

3.9 Hydrology and Water Quality

a) Would the project violate any water quality standards or waste discharge requirements?

The City of Vacaville and the District are permitted under the Phase II Waste Discharge Requirements for Small Municipal Separate Storm Sewer Systems (MS4), which also serves as a National Pollutant Discharge Elimination System (NPDES) permit. Permittees of the MS4 are required to prepare a Storm Water Management Plan (SWMP) that contains detailed Best Management Practices (BMPs) and implementation measures to minimize pollutant discharge and maintain stormwater quality. The District's draft SWMP is in the process of developing implementation measures and goals for stormwater BMPs that would be enacted on site, which include campus community involvement, illicit discharge detection and elimination, construction site stormwater runoff control, post-construction storm water management, and pollution prevention and good housekeeping for facilities maintenance and operation.

The proposed project will disturb more than one acre of land is therefore subject to the General Permit for Discharges of Storm Water Associated with Construction Activity Construction, General Permit Order 2009-0009-DWQ. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must list BMPs the discharger will use to protect storm water runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment (which is not the case for the Vacaville Center drainage).

Stormwater drainage on site runs generally to the east and south, where it connects to the City's stormdrain system. The closest receiving water is Ulatis Creek, which runs along the southern side of I-80. Ulatis Creek then feeds into Cache Slough. Ulatis Creek and waterways of the Delta (including Cache Slough) are currently considered impaired waters under Clean Water Act Section 303(d) due to unacceptable levels of agricultural pesticides. The proposed project does not propose agricultural uses on site. Therefore, the project would not contribute to these impairments.

The project's implementation and compliance with the BMPs set forth in the District's SWMP would ensure that stormwater quality would be regulated from its source until discharge into the City's stormwater system. These practices would ensure the project would have a less-than-significant impact on water quality.

b) ***Would the project 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 (i.e., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?***

The project does not propose wells for its water supply; rather, the project would connect to the City's water system. The City's water system does draw approximately 5,000 acre-feet per year of groundwater from the City's wells, most of which withdraw water from the deep aquifer in the basal zone of the Tehama Formation. The City has prepared a Groundwater Management Plan Update (Luhdorff & Scalmanini 2011), which includes basin management objectives (BMOs) intended to sustain the availability and quality of Vacaville's groundwater source, the Solano Subbasin. These BMOs include regular monitoring of groundwater basin conditions, avoidance of groundwater level declines, preservation of groundwater quality, and increased conjunctive use of surface water and groundwater resources. The Groundwater Management Plan also contains actionable recommendations for meeting these BMOs. The project would not interfere with implementation of these groundwater monitoring and conservation activities. While the project would result in the addition of 31,943 square feet of impervious surface to the project area, this amount of impervious surface would not result in a substantial decrease in the acreage available for regional groundwater recharge. Therefore, the project would have a less-than-significant impact on groundwater supplies.

c) ***Would the project 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?***

The project site has a relatively flat ground surface, which would be maintained with construction of the proposed biotechnology building. The general drainage patterns and flow directions would remain consistent with existing conditions. In compliance with the Phase II MS4 Permit and the District's SWMP, the project would implement Low Impact Development (LID) designs, which, among other measures, incorporate runoff retention and treatment infrastructure into building design and landscaping. BMPs would be incorporated during project construction and operation, per the City SWMP and the SWPPP submitted to the Regional Water Quality Control Board, that would minimize erosion and siltation, ensuring compliance with water quality laws and the City's.

d) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

As discussed under item (c) above, the project would not substantially alter the existing drainage pattern of the site. Addition of 31,943 square-feet of impervious surface (building) and associated landscaping to the project site would incrementally increase runoff rates and volumes, but these increases would be localized to the project site and would be unlikely to result in flooding. The project would connect to the existing 24-inch storm drain line that serves the Vacaville Center. As discussed above, the incorporation of LID designs into the project would minimize the amount of surface runoff exiting the project site into the City's stormdrain system. The City's Storm Drain Design Standards provide criteria for storm drain design within the City that ensure compliance with watercourse and surface water laws, including the protection of public and private improvements from flood hazards.

e) Would the project 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?

The proposed building would connect to the existing storm drain system. The existing storm drain system transports runoff from the developed area via a 24-inch storm drain, which then daylights south of the existing Vacaville Center Building. The water then connects via surface flow, to the City storm drain system in Vaca Valley Parkway to the south, and Crescent Drive to the east. As discussed under item (d) above, the project site is partially developed, and addition of the biotechnology building would not result in a substantial increase in surface runoff volumes. The stormwater drainage improvements that the project proposes would be sized to convey the 10-year rain event and would meet the requirements of the District's draft SWMP, including the provision of stormwater treatment facilities on site and the prevention of pollutant discharge. As the proposed project consists of a building and associated landscaping, no major sources of additional storm water pollutants would be created. Impacts to stormwater quality and management would be less than significant.

f) Would the project otherwise substantially degrade water quality?

The project proposes to construct a biotechnology classroom building, including on-site teaching laboratories. Operation of the project would involve handling and disposal of chemicals and other hazardous laboratory materials. Any hazardous materials used for building operation and classroom instruction would be handled according to product label specifications and the appropriate Safety Data Sheets (SDSs). These specifications would ensure proper handling of these materials, including appropriate storage techniques. These hazardous materials would not be stored outdoors or in a manner that would allow contact with stormwater.

g) Would the project 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?

The proposed project would not include housing, and the project site is not within a 100- or 500-year flood zone as mapped on Vacaville Draft General Plan Figure SAF-6 (Vacaville Draft General Plan, 2013).

h) Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

The project site is not located within a 100-year or 500-year flood hazard zone (Vacaville Draft General Plan, 2013).

i) Would the project 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?

The project is not located within the potential dam failure inundation zone for the Monticello Dam, located northeast of Vacaville (see Figure SAF-7 of the Vacaville Draft General Plan), or an "Awareness Floodplain Area" as marked on Figure SAF-8 of the General Plan.

j) Inundation by seiche, tsunami, or mudflow?

The project area is not susceptible to these events. The project is not near the ocean (and thus potential tsunami hazards), not near a large body of water potentially subject to seiche, and not near a hillside which could experience mudflow.

3.10 Land Use and Planning

a) Would the project physically divide an established community?

The proposed project would be located adjacent to the existing Vacaville SCCD campus building and would not include the construction of any roads or other circulation elements. An existing residential neighborhood is located to the east and north of the project site. The area west of the site is currently vacant, and zoned for Business Park and Medium-Density Residential. Existing and planned development to the south of the project is commercial and industrial. The proposed project would not physically divide an established community.

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

The project would not conflict with the City of Vacaville's General Plan or Zoning Ordinance. The project site is designated in Vacaville's General Plan for Public/Institutional uses and is zoned Community Facilities. School facilities are an allowed use in the Community Facilities zone. The Vacaville Annex, owned by SCCD and located on the west side of N. Village Parkway, is designated as Commercial in the General Plan. A small portion of the Vacaville Center campus, in the northwest corner of the SSCD property, is also designated Commercial in the General Plan. However, neither of these Commercial areas would be affected by the proposed project.

c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

The project would not conflict with an HCP or NCCP (see Section 3.4, Biological Resources).

3.11 Mineral Resources

a) Would the project 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?

The Vacaville Planning Area contains limited mineral resources that are being extracted (Vacaville Draft General Plan, 2013). The project site is surrounded by existing development, including right of way, and has very low potential to support mineral resources.

b) Would the project 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?

Please refer to item (a).

3.12 Noise

Information in this section is based on the "Noise Assessment for Solano Community College Vacaville Center" prepared by Dudek, March 31, 2015, and included as Appendix F of this Initial Study.

a) Would the project result in 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?

Transportation facilities, including major roadways and airports, typically are the principle sources of noise that dictate the ambient noise environment in urban areas. The project site is generally located between Interstate 505 (I-505) on the west and Interstate 80 (I-80) on the south and east. The Vacaville General Plan Update Noise Element (Draft, 2014) indicates the Vacaville Center campus is located outside of the *existing* and *future* 60 CNEL dBA contour for both I-505 and I-80. According to the Noise Element, the campus is also located outside of the 55 CNEL dBA contour for the Nut Tree Airport.

To determine ambient noise levels, three noise measurements were conducted for this noise study (see Figure 6). One measurement (Site 1) was conducted adjacent to Vaca Valley Parkway, east of the intersection with North Village Parkway, at the southern boundary of the campus. A second measurement (Site 2) was conducted adjacent to North Village Parkway, north of the intersection with Vaca Valley Parkway. A third measurement (Site 3) was conducted adjacent to Crescent Road, near the intersection with Stratton Ranch Road. The measured average noise level for Site 1 was 68 dBA, Site 2 was 65 dBA, and Site 3 was 59 dBA, as shown in Table 3.12-1.

Table 3.12-1
Measured Average Sound Levels at Local Roadways

Site	Description	Date/Time	Leq1	Cars	MT2	HT3
1	Approximately 45 feet to center line of Vaca Valley Parkway	10/23/2014 11:05 to 11:15 a.m.	68 dB	98	7	4
2	Approximately 40 feet to center line of North Village Parkway	10/23/2014 10:45 to 10:55 a.m.	65 dB	103	0	5
3	Approximately 25 feet to center line of Crescent Drive	10/23/2014 11:30 a.m. to noon	59 dB	60	4	1

Notes:
1 Equivalent Continuous Sound Level (Time-Average Sound Level)
2 Medium Trucks
3 Heavy Trucks
Source: Dudek 2015

KEY: # Noise Measurement Location

DUDEK

8583

SOURCE: Dudek, 2015.

FIGURE 6
Noise Measurements

Solano Community College Vacaville Center MND

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Table 3.12-2 presents the results of the noise modelling of existing traffic noise levels, at the noise measurement locations. As illustrated in the table, the existing hourly average noise levels during the day range from 59 to 62 dBA L_{EQ} along roadways at the boundaries of the campus. The existing CNEL values range from 60 to 63 dBA along roadways at the boundaries of campus. The measurement locations are generally within 15 feet from the edge of the roadway shoulder; at greater distance from the roadways the noise levels would be lower than indicated in the table.

Table 3.12-2
Existing Ambient Noise Levels Noise Monitor Locations (dBA)

Measurement Location	Noise Source	LEQ Daytime	CNEL
1	Vaca Valley Parkway	61	62
2	North Village Parkway	62	63
3	Crescent Drive	59	60

Source: Dudek 2015

The Vacaville General Plan Update Noise Element (Public Draft, 2014) specifies the following noise compatibility guidelines applicable to the project, listed in Table 3.12-3. A significant impact could occur if the ambient noise level encompassing the proposed new buildings is greater than 70 dB CNEL.

Table 3.12-3
City of Vacaville Noise Standards

Land Use	Normally Acceptable Limit (Maximum CNEL, dB)	Conditionally Acceptable Limit (Maximum CNEL, dB)
Residential	60	70
Schools	70	70
Office, Commercial, Prof.	70	77

Source: Dudek 2015

As shown in Tables 3.12-1 and 3.12-2, the proposed project would not exceed the City's noise standards. Therefore, the impact is considered less than significant.

b) Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Project construction would generate some groundborne vibration that would be limited to the immediate project site. No pile driving or other intensive construction activities that generate vibration as well as loud repetitive noise would be required as part of project construction. In addition, the project would not have the potential to generate long-term ground-borne vibration or noise. Typical office or classroom buildings do not include equipment or activities that produce perceptible vibration levels outside the building. Ground vibration from construction activities do not often reach the levels that can damage structures or affect activities that are not vibration-sensitive, although the vibrations may be felt by nearby persons in close proximity and result in annoyance (FTA 2006). As a guide, major construction activity within 200 feet and pile driving within 600 feet may be potentially disruptive to sensitive operations (Caltrans 2002). The project construction activity would not include pile driving, and the closest existing off-site structures to the construction area are located approximately 650 feet away. Consequently, groundborne vibration or noise would be considered less than significant.

c) ***Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?***

The primary long-term noise effect, or increase in ambient noise levels, of the proposed Biotechnology Science Building (Phase 1) and, cumulatively, the future Classroom Building and Student Success Center (Phase 2) would be associated with new traffic trips generated by the new space. Dudek calculated the increase in ambient noise levels for just the Biotech building versus existing traffic noise, and for the Biotech building, New Classroom Building, and Student Success Center compared to the near term or existing traffic noise levels. The comparison of ambient, project-related, and ambient plus project noise levels is provided in Table 3.12-4.

Based upon the analysis of changes in traffic-related noise levels resulting from the proposed project, the noise levels would increase by no more than 3 CNEL dBA. In addition, there are no noise sensitive land uses located adjacent to these roadway segments (e.g., residences, lodging facilities, or hospitals). Consequently, the proposed project, including Phase 1 and Phase 2 together, would not result in a significant increase in the ambient noise environment over the long term. The impact would be less than significant.

Table 3.12-4
Ambient Noise Level Increases Selected Receptor Locations (CNEL dBA)

Measure Location	Existing CNEL	Existing Plus Biotech	Difference	Near Term Plus Biotech, Classrooms, Student Success	Difference	Impact
1	62	62	0	63	1	No
2	63	63	0	66	3	No

Source: Dudek, 2015

d) Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction of the proposed project would generate noise that could expose nearby receptors to elevated noise levels that may disrupt communication and routine activities. The magnitude of the impact would depend on the type of construction activity, equipment, duration of the construction, distance between the noise source and receiver, and intervening structures.

Construction activities would vary by project component and location. More construction equipment would be required to construct the Biotechnical (Biotech) Sciences Building because it is the largest building. However, for a conservative analysis of off-site construction levels, the noise evaluation used the same equipment assumptions for each of the three proposed buildings. For instance, the new classroom building, while considerably smaller than the Biotech building, was assumed to require the same number and type of construction equipment. Table 3.12-5 summarizes the equipment list and distances to sensitive receptors used in the analysis of construction noise levels.

Table 3.12-5
Construction Equipment List and Distances to Sensitive Receptors

Equipment Needed	(1) Man lift (1) Compressor (1) Drum mixer (1) Crane (1) Tractor (1) Front End Loader (1) Concrete Pump (3) Backhoe (1) Welder
Sensitive Receptors	Biotech Building to Crescent Residences: 625 feet New Class Building to Crescent Residences: 1,235 feet Student Success Building to Crescent Residences: 1,550 feet

Source: Dudek 2015

A construction noise analysis was performed using a model developed under the auspices of the Federal Highway Administration (FHWA) called the Roadway Construction Noise Model (RCNM) (FHWA 2008). Table 3.12-6 presents the construction noise levels based on the model results.

Table 3.12-6
Construction Noise Levels Summary of Results (dBA LEQ)

Building Under Construction	Receptor	LEQ Daytime (Existing)	Construction Noise Level
Biotech Science	Crescent Drive Residences	59	64
New Classroom	Crescent Drive Residences		58
Student Success	Crescent Drive Residences		56

Source: Dudek 2015

The City of Vacaville General Plan includes Policy NOI-P4.2, which requires the following construction noise control measures:

- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction area.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Limit hours of operation of outdoor noise sources through conditions of approval.

In addition, the City's Municipal Code Title 8, Health and Safety, Chapter 8.10.030 includes provisions regarding construction activities. Specifically, the Code states that noise from construction activities require that "[n]o construction or grading equipment shall be operated nor any outdoor construction or repair work shall be permitted within 500 feet from any occupied residence between dusk (one-half hour after sunset) and 7:00 a.m. Monday through Saturday, and no such construction or grading activities shall be allowed on Sundays or holidays." There are some exceptions associated with emergency activities and individual homeowners. The project would be required to comply with the City's Municipal Code regarding construction noise; however, the closest residence is located over 500 feet from the project site; therefore, there would be no requirement to limit the hours of construction.

Project construction would result in construction noise levels at off-site noise-sensitive land uses that are very similar to the existing ambient daytime noise levels. Due to the proximity of the Biotech Sciences building site to Crescent Drive, construction noise levels could be approximately 5 dBA higher than existing daytime exterior levels, which would be noticeable, but would not be expected to disrupt daytime activities inside nearby residences.

Average noise levels from construction activities may be mildly annoying at times, compared to existing daytime ambient noise levels. With lower ambient noise levels in the evening and at night, construction noise would be more noticeable during these periods, and would also have a greater potential to be disruptive for residences and lodging uses in the project vicinity. This is considered a potentially significant impact. Compliance with Mitigation Measure NOI-1 would ensure potential noise impacts associated with construction activities would be reduced to a less-than-significant level.

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?

The proposed project is located within the sphere of influence for the Nut Tree Airport Land Use Compatibility Plan (ALUCP) (Solano County 2013). The Nut Tree ALUCP specifies land use compatibility "Safety Zones," which range from A to F, with Safety Zone A including the most sensitive land uses to airport-related safety and noise impacts and Safety Zone F the least sensitive land uses. The proposed project would be located in Safety Zone F, which permits all land uses. The project would not expose students or faculty to excessive noise levels from the Nut Tree Airport and the impact is less than significant.

f) For a project be within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The project site is not within the vicinity of a private airstrip; therefore, students or faculty would not be exposed to excessive noise levels. There would be no impact.

Mitigation Measure

NOI-1 To avoid disruption to nearby residents, construction activities shall be limited to daytime hours between 7 AM to 7 PM Monday through Saturday. No exterior construction activities shall be permitted on Sundays.

3.13 Population and Housing

a) Would the project 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)?

The proposed project would expand the existing Vacaville campus of the SCCD. The campus currently supports approximately 2000 students. SCCD estimates that student growth will occur at an annual rate of 1% district-wide (SCCD, 2014). The proposed project would expand the services of Vacaville Center to accommodate the projected demand for higher education in Solano County, planned for by the SCCD. The impacts of the project on population growth would be less than significant.

b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

The project would be constructed on a vacant site within the existing Vacaville Center. The project would not displace existing housing (no impact).

c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The project would be constructed on a vacant site within the existing Vacaville Center. The project would not displace any people (no impact).

3.14 Public Services

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire protection?

The proposed project would receive fire protection services from the Vacaville Fire Department, which serves the existing Vacaville Center. The Vacaville Fire Department's Station 73, located at 650 Eubanks Court, would serve the project site. The project would not substantially increase demands on fire service, and would have a less than significant impact to public services/facilities.

Police protection?

The proposed project would be served by the Solano Community College Police Department. Because the department is managed by the SCCD, the proposed project's increased demand for police protection services is planned for and would not result in any environmental changes related to increased public service demand.

Schools?

The project proposes to add classroom and laboratory facilities to the Vacaville Center of SCCD to accommodate an increased interest in and demand for post-secondary scientific education in Solano County. As the proposed project would primarily serve people already residing in Solano County, it would not result in substantial growth within regional elementary and secondary schools.

Parks?

The project does not include the addition of any new residents that would require park and recreational amenities.

Other public facilities?

The proposed project would not affect any other public facilities.

3.15 Recreation

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The project would not affect existing neighborhood parks. As Vacaville Center primarily serves those living in or immediately adjacent to Solano County, the demand for neighborhood or regional park space would not change substantially. The proposed project includes outdoor areas to serve students and staff on campus. Therefore, the project would have a less than significant impact on existing neighborhood and regional parks.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

The proposed project does not include the construction or expansion of recreational facilities.

3.16 Transportation and Traffic

Information in this section is from the Transportation Impact Analysis, Solano Community College Vacaville Campus, prepared by Fehr & Peers April 2015, and included as Appendix G of this Initial Study.

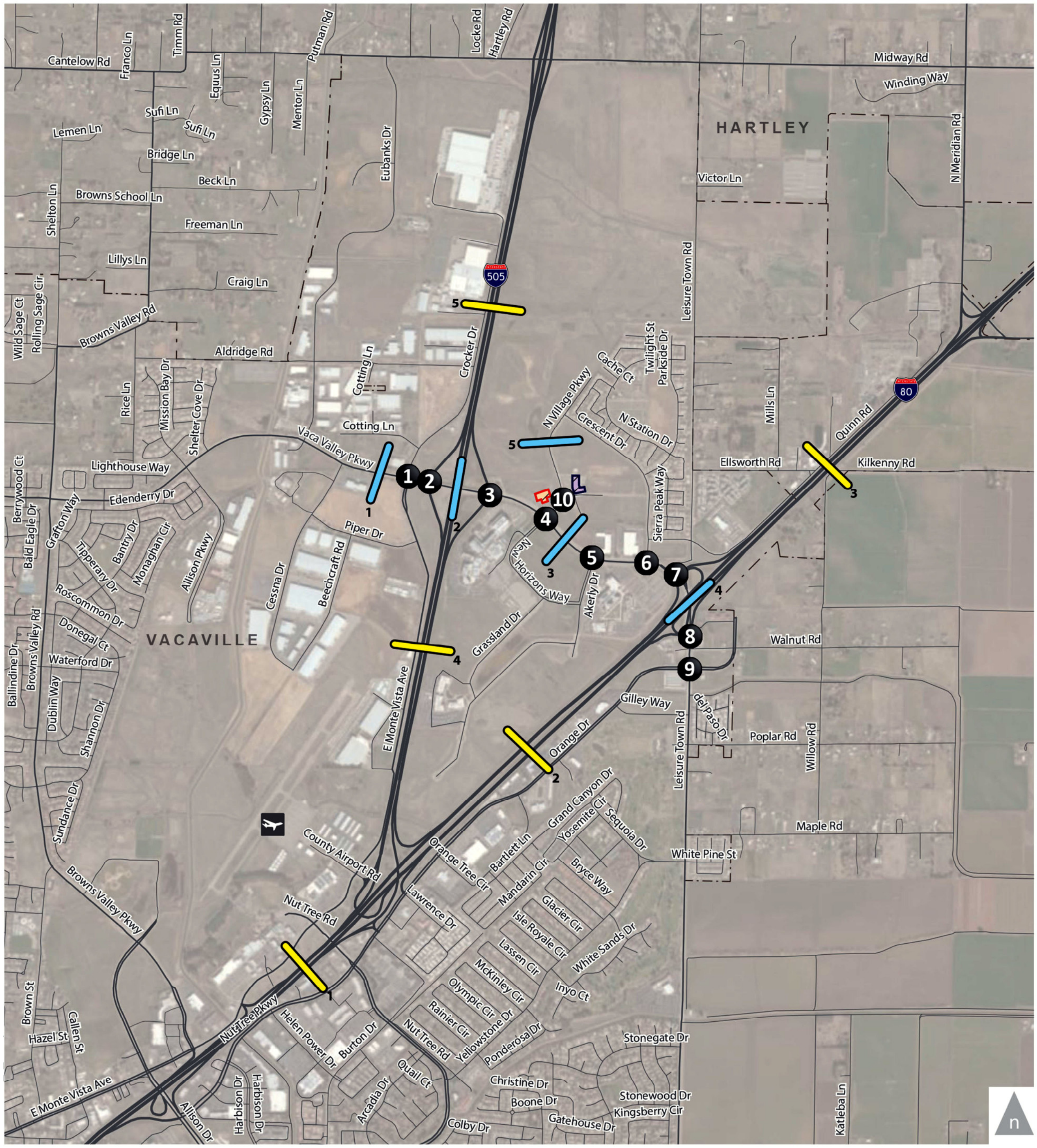
a) ***Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?***

Transportation impacts at ten (10) study intersections, five (5) roadway segments and five (5) freeway segments were evaluated under guidelines provided by staff from the City of Vacaville (see Figure 7). Roadway system operations were evaluated under the following study scenarios:

- Existing Conditions
- Existing with Phase 1 Conditions
- Near Term Conditions
- Near Term with Phase 1 Conditions
- Near Term with Phase 2 Conditions
- Cumulative without Project Conditions
- Cumulative with Phase 1 Conditions
- Cumulative with Phase 2 Conditions

The Transportation Impact Analysis (TIA) refers to the proposed project as "Phase 1." Phase 1 is the Biotechnology and Science Building. "Phase 2" refers to the two additional buildings planned for future bond funding (the Student Success Center and the additional Annex classroom building) For purposes of this Initial Study, Phase 2 is part of the cumulative conditions (as they are planned for construction five to ten years after completion of Phase 1).

Impacts to pedestrians, bicyclists and the transit system were also evaluated (see item f discussion, below).



LEGEND

\# Study Intersection — Workforce Development Center — Main Vacaville Center Campus

\# Freeway Segment — \# Arterial Segment

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Project-generated vehicle trips were estimated based on the current site's traffic generation per square foot, applying those rates to the added floor area. Phase 1 of the project is expected to generate 138 new AM peak hour trips (72 inbound, 66 outbound) and 129 new PM peak hour trips (71 inbound, 58 outbound). Phase 2 of the project is expected to generate (by itself) 131 new AM peak hour trips (68 inbound, 63 outbound) and 122 new PM peak hour trips (138 inbound, 113 outbound). Therefore, the total net new trips after construction of Phase 2 is 269 AM peak hour trips (140 inbound, 129 outbound) and 251 PM peak hour trips (138 inbound, 113 outbound). Trip generation calculations and trip distribution are discussed in Section 3 of the TIA (Appendix G).

Intersection Impacts

Of the ten study intersections shown on Figure 7, all but one operates acceptably under existing conditions, using the designated Level of Service (LOS) Standard. The LOS standards for intersections, freeway segments, and roadway segments are discussed in Section 1 of the TIA (Appendix G). Intersection #2, I-505 Southbound Ramps/Vaca Valley Parkway operates at LOS F for the worst approach, AM and PM peak hours. This intersection is a side street stop controlled intersection that currently meets the warrants for installation of a traffic signal.

Existing and Near Term

Project traffic effects were calculated for the existing traffic scenario, and under "near term" conditions. See Table 3.16-1 for existing and existing plus project ("Phase 1") conditions. Near term conditions take into account traffic generated by development that is already approved, but not yet built (see Section 4 of the Transportation Impact Analysis). The near term roughly coincides with the completion of the proposed Biotechnology and Science Building. See Table 3.16-2 for near term and near term plus project ("Phase 1") conditions.

Table 3.16-1
Existing with Project Intersection Peak Hour Levels of Service

Intersection		Control[1]	Peak Hour	Existing Conditions		Existing with Phase 1 Conditions	
				Delay[2]	*LOS[3]*	*Delay[2]*	*LOS[3]*
1	East Monte Vista Avenue-Crocker Drive/Vaca Valley Parkway	Signal	AM PM	15 31	B C	15 32	B C
2	I-505 Southbound Ramps/Vaca Valley Parkway	SSSC	AM PM	9 (83) 27 (>300)	A (F) D (F)	15 **(139)** **48 (>300)**	C **(F)** **E (F)**

Table 3.16-1
Existing with Project Intersection Peak Hour Levels of Service

Intersection		Control[1]	Peak Hour	Existing Conditions		Existing with Phase 1 Conditions	
				Delay[2]	*LOS*[3]	*Delay*[2]	*LOS*[3]
3	I-505 Northbound Ramps/Vaca Valley Parkway	Signal	AM PM	14 14	B B	15 15	B B
4	New Horizons Way-North Village Parkway/Vaca Valley Parkway	Signal	AM PM	13 19	B B	14 22	B C
5	Akerly Drive/Vaca Valley Parkway	Signal	AM PM	21 13	C B	22 13	C B
6	Kaiser Hospital Driveway-Crescent Drive/Vaca Valley Parkway	Signal	AM PM	32 30	C C	33 30	C C
7	I-80 Westbound Ramps/Vaca Valley Parkway	Signal	AM PM	5 7	A A	5 7	A A
8	I-80 Eastbound Ramps/Leisure Town Road	Signal	AM PM	12 13	B B	13 13	B B
9	Orange Drive/Leisure Town Road	Signal	AM PM	14 18	B B	14 18	B B
10	North Village Parkway/Vacaville Campus Main Driveways	SSSC	AM PM	3 (11) 4 (11)	A (B) A (B)	5 (12) 6 (12)	A (B) A (B)

Notes: Results in **bold** denotes unacceptable operations. **Bold and highlighted** indicates a significant impact.
1. Signal = Signalized intersection, SSSC = Side-street stop controlled intersection
2. Signalized intersection level of service based on average intersection control delay; SSSC intersection delay is reported as intersection average (worst-case approach)
3. LOS = Level of Service per 2010 HCM

Source: Fehr & Peers, March 2015 (TIA Table 11)

Under existing plus project scenario, Intersection #2 would be subject to additional delay (see Table 3.16-1). Under existing plus near term conditions, Intersection #2 would be subject to additional delay. No other intersections would operate at an unacceptable LOS. As Intersection #2 already operates at an unacceptable level of service and meets signal warrants, the addition of project traffic is considered a cumulative impact. The project's contribution to the cumulative impact at Intersection #2 would be reduced to a less-than-significant level by the implementation of Mitigation Measure TRA-1.

Table 3.16-2
Near Term with Project Intersection Peak Hour Levels of Service

Location		Control[1]	Peak Hour	Near Term Conditions		Near Term With Phase 1		Near Term with Phase 2	
				Delay[2]	*LOS[3]*	*Delay[2]*	*LOS[3]*	*Delay[2]*	*LOS[3]*
1	East Monte Vista Avenue-Crocker Drive/Vaca Valley Parkway	Signal	AM PM	17 51	B D	17 53	B D	17 54	B D
2	I-505 Southbound Ramps/Vaca Valley Parkway	SSSC	AM PM	25 (198) 181 (>300)	D (F) F (F)	**39 (>300)** **>300 (>300)**	**E (F)** **F (F)**	**59 (>300)** **47 (>300)**	**F (F)** **E (F)**
3	I-505 Northbound Ramps/Vaca Valley Parkway	Signal	AM PM	16 18	B B	16 20	B B	17 22	B C
4	New Horizons Way-North Village Parkway/Vaca Valley Parkway	Signal	AM PM	14 25	B C	16 32	B C	18 44	B D
5	Akerly Drive/Vaca Valley Parkway	Signal	AM PM	32 14	C B	33 14	C B	34 14	C B
6	Kaiser Hospital Driveway-Crescent Drive/Vaca Valley Parkway	Signal	AM PM	58 40	E D	58 40	E D	59 40	E D
7	I-80 Westbound Ramps/Vaca Valley Parkway	Signal	AM PM	6 10	A A	6 10	A A	6 10	A A
8	I-80 Eastbound Ramps/Leisure Town Road	Signal	AM PM	13 14	B B	13 14	B B	14 14	B B
9	Orange Drive/Leisure Town Road	Signal	AM PM	17 22	B C	17 22	B C	17 23	B C
10	North Village Parkway/Vacaville Campus Main Driveways	SSSC	AM PM	2 (13) 3 (14)	A (B) A (B)	4 (15) 5 (17)	A (B) A (C)	6 (21) 7 (25)	A (C) A (C)

Notes: Results in **bold** denotes unacceptable operations. **Bold and highlighted** indicates a significant impact.
1. Signal = Signalized intersection, SSSC = Side-street stop controlled intersection
2. Signalized intersection level of service based on average intersection control delay; SSSC intersection delay is reported as intersection average (worst-case approach)
3. LOS = Level of Service per 2010 HCM

Source: Fehr & Peers, March 2015 (TIA Table 14)

Future (2035)

The future conditions are based on City forecasts for General Plan buildout (2035). Certain roadway improvements (including the intersection improvements described in Mitigation Measure TRA-1) are assumed to have occurred by 2035. The methodology for developing the future traffic scenario is described in Section 5 of the TIA (Appendix G). As shown in Table 3.16-3, four intersections would fail to operate at an acceptable LOS, prior to the addition of project traffic:

- Intersection #3 – I-505 Northbound Ramps/Vaca Valley Parkway (PM peak hour)
- Intersection #4 – New Horizons Way-North Village Parkway/Vaca Valley Parkway (PM peak hour)
- Intersection #6 – Kaiser Hospital Driveway-Crescent Drive/Vaca Valley Parkway (PM peak hour)
- Intersection #8 - Orange Drive/Leisure Town Road (PM peak hour)

Table 3.16-3
Future (2035) with Project Intersection Peak Hour Levels of Service

Location		Control[1]	Peak Hour	Cumulative Conditions		Cumulative With Phase 1		Cumulative with Phase 2	
				Delay[2]	*LOS[3]*	*Delay[2]*	*LOS[3]*	*Delay[2]*	*LOS[3]*
1	East Monte Vista Avenue-Crocker Drive/Vaca Valley Parkway	Signal	AM PM	16 32	B C	16 33	B C	16 33	B C
2	I-505 Southbound Ramps/Vaca Valley Parkway	Signal	AM PM	8 8	A A	8 8	A A	8 8	A A
3	I-505 Northbound Ramps/Vaca Valley Parkway	Signal	AM PM	22 48	C D	25 **55**	C **E**	28 **62**	C **E**
4	New Horizons Way-North Village Parkway/Vaca Valley Parkway	Signal	AM PM	19 55	B D	22 **66**	C **E**	31 **79**	C **E**
5	Akerly Drive/Vaca Valley Parkway	Signal	AM PM	19 39	B D	19 40	B D	20 42	B D
6	Kaiser Hospital Driveway-Crescent Drive/Vaca Valley Parkway	Signal	AM PM	42 111	D F	42 114	D F	43 **118**	D F
7	I-80 Westbound Ramps/ Vaca Valley Parkway	Signal	AM PM	12 19	B B	12 19	B B	13 20	B B
8	I-80 Eastbound Ramps/Leisure Town Road	Signal	AM PM	21 21	C C	21 21	C C	21 21	C C
9	Orange Drive/Leisure Town Road	Signal	AM PM	28 73	C E	29 72*	C E	29 71*	C E
10	North Village Parkway/ Vacaville Campus Main Driveways	SSSC	AM PM	2 (16) 2 (22)	A (C) A (C)	3 (20) 4 **(31)**	A (C) A **(D)**	5 (28) 7 **(54)**	A (D) A **(F)**

Notes: Results in **bold** denotes unacceptable operations. **Bold and highlighted** indicates a significant impact. * indicates that project adds trips to movement(s) with delays lower than the average, thus the reduction in average delay.
1. Signal = Signalized intersection, SSSC = Side-street stop controlled intersection
2. Signalized intersection level of service based on average intersection control delay; SSSC intersection delay is reported as intersection average (worst-case approach)
3. LOS = Level of Service per 2010 HCM

Source: Fehr & Peers, March 2015 (TIA Table 17)

The addition of project traffic would contribute to a cumulative (future) impact at three intersections:

- Intersection #3 – I-505 Northbound Ramps/Vaca Valley Parkway (PM peak hour)
- Intersection #4 - New Horizons Way-North Village Parkway/Vaca Valley Parkway (PM Peak Hour)
- Intersection #10 - North Village Parkway/Vacaville Campus Main Driveways (PM Peak Hour)

The consideration of Phase 2 traffic would contribute to an additional cumulative impact:

- Intersection #6 - Kaiser Hospital Driveway-Crescent Drive/Vaca Valley Parkway (PM Peak Hour)

The implementation of Mitigation Measures TRA-2, TRA-3, and TRA-4 would reduce the project's contribution to these cumulative impacts to a less-than-significant level.

Roadway Segments

As discussed in the TIA, all roadway segments studies operate at an acceptable LOS under existing and near term conditions, with or without the addition of project traffic. Under future (cumulative) conditions, two roadway segments do not meet LOS standards:

- Vaca Valley Parkway west of East Monte Vista Avenue (PM Peak Hour)
- Vaca Valley Parkway/Leisure Town Road I-80 overcrossing (PM Peak Hour)

The addition of project traffic does not considerably worsen the performance of these segments (the change in volume-to-capacity ratio is less than 0.02). Therefore, the project would not contribute to a cumulative impact at these roadway segments.

Freeway Segments

As discussed in the TIA, all freeway segments studies operate at an acceptable LOS under existing and near term conditions, with or without the addition of project traffic. Under future (cumulative) conditions, two freeway segments do not meet LOS standards:

- I-80 between East Monte Vista Avenue and I-505 (Eastbound: PM Peak Hour, Westbound: AM and PM Peak Hour)
- I-80 between Vaca Valley Parkway and Meridian Road (Eastbound: PM Peak Hour)

The addition of project traffic does not considerably worsen the performance of these freeway segments (the change in volume-to-capacity ratio is less than 0.01). Therefore, the project would not contribute to a cumulative impact at these roadway segments.

b) Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

The project would not conflict with an applicable congestion management program. Note that Vaca Valley Parkway, from I-80 to I-505, is part of the Congestion Management Program in Solano County (STA 2013). The proposed project would not have a significant effect upon this roadway segment. The proposed project would contribute to cumulative impacts at two intersections on this segment. However, these intersections are not identified as study intersections in the plan, and the proposed project mitigation measures would reduce any project contributions to cumulative impacts less than significant.

c) Would the project 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?

The project would not result in a change to air traffic patterns (no impact).

d) Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The project would not alter the transportation facilities, or introduce new, potentially incompatible, uses that could substantially increase traffic hazards. The impact would be less than significant.

e) Would the project result in inadequate emergency access?

The project would not alter the ingress or egress to the project site or nearby properties. The effect to emergency access would be less than significant.

f) ***Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?***

The proposed project could result in increased pedestrian trips across North Village Parkway at the Campus Driveway intersection. The intersection currently lacks a marked crosswalk across North Village Parkway and warning signage indicating the presence to pedestrian crossings. This presents a potentially hazardous situation, as North Village Parkway is a high-speed roadway, so the project causes a potentially significant impact for pedestrians at this location. Mitigation measures to alleviate this impact include providing a marked crosswalk and warning signage at the intersection to facilitate pedestrian crossings of North Village Parkway (Measure TRA-7). Implementing the mitigation measures would result in the impacts to pedestrian being less than significant with mitigation.

Bicycle access for the site is primarily handled by Class II bike lanes along North Village Parkway. The project is not expected to disrupt any on-street/off-campus bicycle facilities, so the impacts to bicyclists are less than significant.

The project will generate new demand for the transit services and facilities that serve the area. Fixed-route bus service operates near the site with stops located within walking distance of the proposed development. While student enrollment may increase over time with the implementation of Phase 1 and Phase 2 of the project, transit capacities are not expected to be exceeded. Therefore impacts to transit are less than significant.

Mitigation Measures

TRA-1 I-505 Southbound Ramps/Vaca Valley Parkway is an unsignalized intersection that operates unacceptably in the AM and PM peak hours under Existing Conditions and Existing with Phase 1 Conditions. The intersection also meets the Peak Hour signal warrant in the AM and PM peak hours under Existing Conditions and Existing with Phase 1 Conditions. The mitigation measure is to fund (on a fair share basis) construction of the following improvements at the intersection:

- Signalize intersection (westbound left turn protected phase), signal coordinated with East Monte Vista Avenue-Crocker Drive/Vaca Valley Parkway signal

- Southbound approach: 1 left turn pocket (150 feet length), 1 through-right turn shared lane
- Westbound approach: 1 left turn pocket (150 feet length), 1 through lane
- Eastbound approach: 1 through lane, 1 right-turn lane

Since the intersection operates unacceptably under Existing Conditions and meets the Peak Hour signal warrant under Existing Conditions, the District shall pay a fair share contribution towards the construction of a signal and other improvements at the intersection. Alternatively, improvements may be funded through payment into the City's Development Impact Fee (DIF) program.

Constructing these improvements would result in acceptable traffic operations (LOS C or better) at the intersection (8 seconds of delay in the AM peak hour, 12 seconds of delay in the PM peak hour). It should also be noted that these mitigation measures will not preclude implementation of the Cumulative year I-505/Vaca Valley Parkway overcrossing improvements.

TRA-2 I-505 Northbound Ramps/Vaca Valley Parkway and New Horizons Way-North Village Parkway/Vaca Valley Parkway are signalized intersections that operate unacceptably before the addition of project trips under Cumulative with Phase 1 Conditions. The mitigation measures proposed below operate as a system, and should be implemented together as one package.

- New Horizons Way-North Village Parkway/Vaca Valley Parkway
  - Add new third westbound lane from Akerly Drive/Vaca Valley Parkway to New Horizons Way-North Village Parkway/Vaca Valley Parkway
  - Stripe westbound approach as 1 left turn lane, 2 through lanes and 1 through-right turn shared lane
  - Restripe southbound approach to 2 left turn lanes and 1 through-right turn shared lane
  - Restripe northbound approach to 2 left turn lanes and 1 through-right turn shared lane

- I-505 Northbound Ramps/Vaca Valley Parkway
    - Carry new third westbound lane from New Horizons Way-North Village Parkway/Vaca Valley Parkway to I-505 Northbound Ramps/Vaca Valley Parkway
    - Stripe westbound approach to 2 through lanes and 1 right turn only lane

Since the two intersections along Vaca Valley Parkway operate deficiently before project trips are added, the project shall pay a fair share percentage of construction costs for improvements at New Horizons Way-North Village Parkway/Vaca Valley Parkway and I-505 Northbound Ramps/Vaca Valley Parkway. Alternatively, improvements may be funded through payment into the City's Development Impact Fee (DIF) program.

New Horizons Way-North Village Parkway/Vaca Valley Parkway would operate at 46 seconds of delay (LOS D); the operations are improved over Cumulative without Project Conditions, so the impact has been reduced to less than significant with mitigation.

I-505 Northbound Ramps/Vaca Valley Parkway would operate at 40 seconds of delay (LOS D); the operations are improved over Cumulative without Project Conditions, so the impact has been reduced to less than significant with mitigation.

TRA-3 North Village Parkway/Vacaville Campus Main Driveways is a side-street stop-controlled intersection that operates acceptably before the addition of project trips under Cumulative with Phase 1 Conditions; the intersection does not meet signal warrants under Cumulative without Project or Cumulative with Phase 1 Conditions. The mitigation measure for this impact consists of the following items:

- Monitor intersection operations at North Village Parkway/Vacaville Campus Main Driveways every five (5) years after occupancy of Phase 1. Monitoring consists of collecting new intersection turning movement counts and intersection LOS analysis using state-of-the-practice analysis methods.
- If intersection operations degrade to an unacceptable level, construct one of the following improvements:
    - If signal warrants are not met, roundabout or all-way stop-control

- If signal warrants are met, signalize or roundabout

The District shall fully sponsor improvements related to mitigating the impact at the North Village Parkway/Vacaville Campus Main Driveways intersection as the intersection operated acceptably before the addition of project trips.

Implementation of these improvements results in North Village Parkway/Vacaville Campus Main Driveways operating at 9 seconds of delay (LOS A) with a one lane roundabout or 13 seconds of delay (LOS B) with all-way stop-control. Signalizing the intersection would result in low levels of delay. The mitigation measures would result in the impact being reduced to less than significant with mitigation.

TRA-4 Kaiser Hospital Driveway-Crescent Drive/Vaca Valley Parkway is a signalized intersection that operates unacceptably before the addition of project trips under Cumulative with Phase 2 Conditions. The mitigation measure for this intersection is to add right turn overlap phases for the westbound right turn movement and northbound right turn movement. The project shall pay a fair share contribution towards the modification of the signals for the overlap phases. Alternatively, the improvements may be funded through payment into the City's Development Impact Fee (DIF) program. Implementing these improvements results in the intersection operating at 59 seconds of delay (LOS E); the operations are improved over Cumulative without Project Conditions, so the impact has been reduced to less than significant with mitigation.

TRA-5 The District shall install a crosswalk and appropriate warning signage to facilitate pedestrians crossing the north leg of the intersection at North Village Parkway/Vacaville Campus Main Driveways. The District shall coordinate with the City of Vacaville to install the crosswalk prior to the start of classes at the Biotechnology and Science Building.

3.17 Utilities and Service Systems

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

The project would be served by the Easterly Waste Water Treatment Plant. The plant operates under a National Pollutant Discharge Elimination System (NPDES) permit, issued by the Central Valley Regional Water Quality Control Board. The Easterly Waste

Water Treatment Plant is in compliance with the requirements of the NPDES permit, and the proposed project would not adversely impact the ability of the Plant to comply with these requirements.

Because of the use of laboratory chemicals within the proposed biotechnology building, the project would require processing of hazardous waste. The project would be required to comply with all federal, state, and local regulations governing hazardous waste treatment and disposal. This issue is discussed further under Section 3.8, Hazards and Hazardous Materials.

b) Would the project 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?

The City of Vacaville would provide water and wastewater treatment facilities for the proposed project. Potable water is treated at either the North Bay Regional water treatment plant (NBR) or the City’s diatomaceous earth water treatment plant (DE Plant). The DE Plant has a capacity of 10 million gallons per day (mgd), and the NBR plant provides a capacity of 13.3 mgd to Vacaville (Vacaville General Plan EIR 2013). The Easterly Waste Water Treatment Plant (WWTP), which has a capacity of 15 mgd, would serve the proposed project (City of Vacaville 2015). Current wastewater flows within the City are within the design capacity of the WWTP (Vacaville Draft General Plan, 2013). The project would not require treatment of water or wastewater beyond the capacities of these facilities.

The proposed building would be served by a new domestic water and fire water line. The City water main is located in N. Village Parkway. Approximately 400 linear feet of 6-inch sewer line would be connected to the existing 6 inch sewer line on site (which in turn connects to the City sewer main in Vaca Valley Parkway). Construction/expansion of water or wastewater facilities would therefore have a less than significant effect on the environment.

c) Would the project 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?

The proposed building would connect to the existing storm drain system. The existing storm drain system transports runoff from the developed area via a 24-inch storm drain, which then daylights south of the existing Vacaville Center Building. The water then connects via surface flow, to the City storm drain system in Vaca Valley Parkway to the south, and Crescent Drive to the east. Project impact related to storm drainage facilities would be less than significant.

d) ***Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?***

The City of Vacaville would provide water service to the project. The City receives water from three supply sources, including the Solano Project, State Water Project (North Bay Aqueduct), and settlement water from an agreement with the Department of Water Resources (DWR). The City also draws water from groundwater sources (Vacaville Urban Water Management Plan (UWMP) 2010). The City's UWMP estimates the total water supply to Vacaville in 2035 will be approximately 41,653 acre-feet per year. The project would be served by the existing water supplies and would not require the City to seek new or expanded entitlements. The project's impact to water supplies would be less than significant.

e) ***Would the project 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?***

Please refer to item (b).

f) ***Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?***

Hay Road Landfill, which has a capacity of 2,400 tons per day, would receive the solid waste generated by the proposed project. The Vacaville Draft General Plan states that the Hay Road Landfill is projected to reach capacity in 2069. The solid waste generated by the project would have a less-than-significant impact on this facility.

g) ***Would the project comply with federal, state, and local statutes and regulations related to solid waste?***

The project would comply with regulations related to solid waste. With the use of laboratory chemicals within the proposed biotechnology building, the project would require processing of hazardous waste. The project would be required to comply with all federal, state, and local regulations governing hazardous waste treatment and disposal. This issue is discussed further under Section 3.8, Hazards and Hazardous Materials. The impact would be less than significant.

3.18 Mandatory Findings of Significance

a) ***Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?***

The project has the potential to impact wildlife species, as discussed in Section 3.4 of this Initial Study (see also Appendix B, Biological Technical Report). However, implementation of Mitigation Measure BIO-1, which would require pre-construction surveys for burrowing owl and other raptors, would ensure that potential impacts to wildlife would be reduced to less than significant. The project would not substantially reduce habitat, restrict the range of a population, or cause a population to drop below self-sustaining levels. As discussed in Section 3.5, the project would not substantially affect historical or archaeological resources. Mitigation Measure CUL-1 would ensure appropriate handling and evaluation of previously unknown archaeological resources, should they be discovered during project construction.

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)?***

The cumulative scenario of the proposed project includes the buildout of projects potentially funded by the Bond Program (Measure Q), which includes development of a Student Support building at the Vacaville Center and an additional building at the Vacaville Annex. Air quality, GHG, and noise impacts associated with the operation of program buildout would not result in a cumulative effect. The traffic analysis incorporates projected (cumulative) growth consistent with the City's general plan and traffic model.

c) ***Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?***

As discussed in this Initial Study, the project would not have substantial adverse effects on human beings, directly or indirectly. Impacts related to air quality, hazardous materials, and water quality would be less than significant. Impacts related to noise would be less than significant (with mitigation incorporated to reduce nuisance associated with construction noise).

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Note: Additional references contained in Appendices A through G of the Initial Study.

4.2 List of Preparers

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APPENDIX A

Air Quality Data

tblProjectCharacteristics

ProjectNan	LocationSc	EMFAC_ID	WindSpeed	Precipitatio	ClimateZor	Urbanizatic	Operationa	UtilityComp	CO2Intens	CH4Intensi	N2OIntens	TotalPopul
Vacaville C	AD	YSAQMD	6.8	55	4	Urban	2035	Pacific Gas	641.35	0.029	0.006	0

TotalLotAc	UsingHistoricalEnergyUseData
1.77	0

PollutantSe	PollutantFu	PollutantName
1	Reactive O	ROG
1	Nitrogen O	NOX
1	Carbon Mo	CO
1	Sulfur Diox	SO2
1	Particulate	PM10
1	Particulate	PM2_5
1	Fugitive PM	PM10_FUG
1	Fugitive PM	PM25_FUG
1	Biogenic C	CO2_BIO
1	Non-Bioger	CO2_NBIO
1	Carbon Dic	CO2
1	Methane (C	CH4
1	Nitrous Oxi	N2O
1	CO2 Equiv	CO2E

LandUseTy	LandUseSu	LandUseUn	LandUseSi	LotAcreage	LandUseSq	Population
Educationa	Junior Coll	31.9	1000sqft	1.7	31900	0
Parking	Other Non-	3	1000sqft	0.07	3000	0

tblConstructionPhase

PhaseNum	PhaseNam	PhaseType	PhaseStart	PhaseEndI	NumDaysV	NumDays	PhaseDescription
1	Site Prepai	Site Prepai	2016/01/01	2016/01/04	5	2	

PhaseNam	OffRoadEq	OffRoadEq	UsageHour	HorsePowe	LoadFactor
Site Prepai	Graders	1	8	174	0.41
Site Prepai	Rubber Tire	1	7	255	0.4
Site Prepai	Tractors/Lc	1	8	97	0.37

PhaseNam	WorkerTrip	VendorTrip	HaulingTrip	WorkerTrip	VendorTrip	HaulingTrip	WorkerVeh	VendorVeh
Site Prepar	8	0	0	10.8	7.3	20	LD_Mix	HDT_Mix

HaulingVehicleClass
HHDT

PhaseNam	WorkerPer	VendorPer	HaulingPer	RoadSiltLo	MaterialSilt	MaterialMo	AverageVe	MeanVehic
Site Prepai	94	94	94	0.1	8.5	0.5	2.4	40

leSpeed

PhaseNam	Demolition!	DemolitionUnitAmount

PhaseNam	MaterialImp	MaterialExp	GradingSiz	ImportExpo	MeanVehic	AcresOfGra	MaterialMo	MaterialMo
Site Prepar	0	0		0	7.1	1	7.9	12

MaterialSiltContent
6.9

PhaseNam	Architectur	Architectur	EF_Reside	ConstArea_	EF_Reside	ConstArea_	EF_Nonres	ConstArea_

EF_Nonres	ConstArea_Nonresidential_Exterior

ParkingLotAcreage

VehicleTrip	VehicleTrip	WD_TR	ST_TR	SU_TR	HW_TL	HS_TL	HO_TL	CC_TL
Junior Coll	1000sqft	45.04	11.23	1.21	0	0	0	7.3
Other Non-	1000sqft	0	0	0	0	0	0	7.3

CW_TL	CNW_TL	PR_TP	DV_TP	PB_TP	HW_TTP	HS_TTP	HO_TTP	CC_TTP
9.5	7.3	92	7	1	0	0	0	88.6
9.5	7.3	0	0	0	0	0	0	0

CW_TTP	CNW_TTP
6.4	5
0	0

Season	EmissionTy	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD
A	FleetMix	0.472386	0.067706	0.148876	0.143449	0.055135	0.00643	0.025978
A	CH4_IDLE	0	0	0	0	0.001026	0.00077	0.00827
A	CH4_RUNI	0.009286	0.010576	0.011235	0.014357	0.008728	0.006523	0.004957
A	CH4_STRE	0.003546	0.004938	0.004589	0.007826	0.009703	0.00453	0
A	CO_IDLEX	0	0	0	0	0.153006	0.119695	2.104809
A	CO_RUNE	0.650699	0.769389	0.763047	1.046392	0.716822	0.833336	0.400382
A	CO_STRE	1.166901	1.53356	1.437389	2.24022	2.139776	1.158556	8.102847
A	CO2_NBIC	0	0	0	0	8.32912	9.081185	572.7368
A	CO2_NBIC	211.0983	252.5655	328.2785	434.6341	685.06	587.2628	1021.026
A	CO2_NBIC	44.12752	53.43815	68.9767	91.29065	31.57829	18.59151	49.32141
A	NOX_IDLE	0	0	0	0	0.087521	0.136824	3.261942
A	NOX_RUN	0.069969	0.081415	0.0862	0.124895	0.614414	0.786492	0.979345
A	NOX_STRI	0.069574	0.091658	0.096405	0.166825	0.826007	0.432151	0.907863
A	PM10_IDLI	0	0	0	0	0.000912	0.001443	0.007574
A	PM10_PMI	0.03675	0.03675	0.03675	0.03675	0.055093	0.073641	0.122038
A	PM10_PMT	0.008	0.008	0.008	0.008	0.009849	0.010814	0.011645
A	PM10_RUI	0.002087	0.002068	0.002058	0.002006	0.015093	0.021943	0.03424
A	PM10_STF	0.005269	0.004978	0.005197	0.004799	0.000217	0.000092	0.000377
A	PM25_IDLI	0	0	0	0	0.000839	0.001328	0.006968
A	PM25_PMI	0.01575	0.01575	0.01575	0.01575	0.023611	0.03156	0.052302
A	PM25_PMT	0.002	0.002	0.002	0.002	0.002462	0.002704	0.002911
A	PM25_RUI	0.001936	0.001919	0.001909	0.001861	0.013887	0.020188	0.031501
A	PM25_STF	0.004889	0.004619	0.004822	0.004452	0.000201	0.000086	0.000349
A	ROG_DIUI	0.017036	0.045011	0.048713	0.083686	0.001335	0.000653	0.001536
A	ROG_HTS	0.049042	0.103932	0.098833	0.16813	0.042419	0.018863	0.062987
A	ROG_IDLE	0	0	0	0	0.023505	0.017411	0.178046
A	ROG_RES	0.014715	0.038568	0.04543	0.080951	0.000811	0.000404	0.000921
A	ROG_RUN	0.011267	0.013599	0.013738	0.019796	0.064432	0.079825	0.108226
A	ROG_RUN	0.165089	0.363881	0.341871	0.531942	0.223315	0.097223	0.332587
A	ROG_STR	0.062906	0.08759	0.081404	0.138817	0.172109	0.080349	0.495959
A	SO2_IDLE	0	0	0	0	0.000093	0.000099	0.006071
A	SO2_RUNI	0.003546	0.004118	0.004826	0.006184	0.007497	0.006356	0.010851
A	SO2_STRE	0.000757	0.000885	0.001033	0.001328	0.000389	0.000227	0.00069
A	TOG_DIUI	0.017036	0.045011	0.048713	0.083686	0.001335	0.000653	0.001536
A	TOG_HTSI	0.049042	0.103932	0.098833	0.16813	0.042419	0.018863	0.062987
A	TOG_IDLE	0	0	0	0	0.025162	0.018884	0.202691
A	TOG_RES	0.014715	0.038568	0.04543	0.080951	0.000811	0.000404	0.000921
A	TOG_RUN	0.020759	0.024416	0.025219	0.03449	0.07823	0.093405	0.123851
A	TOG_RUN	0.165089	0.363881	0.341871	0.531942	0.223315	0.097223	0.332587
A	TOG_STRI	0.067164	0.093519	0.086914	0.148214	0.18376	0.085788	0.529531
S	FleetMix	0.472386	0.067706	0.148876	0.143449	0.055135	0.00643	0.025978
S	CH4_IDLE	0	0	0	0	0.001026	0.00077	0.007794
S	CH4_RUNI	0.009286	0.010576	0.011235	0.014357	0.008728	0.006523	0.004957
S	CH4_STRE	0.003546	0.004938	0.004589	0.007826	0.009703	0.00453	0
S	CO_IDLEX	0	0	0	0	0.153006	0.119695	1.529441
S	CO_RUNE	0.814709	0.956491	0.950196	1.300327	0.723272	0.835632	0.401359
S	CO_STRE	0.832213	1.095636	1.025387	1.599531	1.516092	0.820434	5.816633
S	CO2_NBIC	0	0	0	0	8.32912	9.081185	606.764
S	CO2_NBIC	232.754	277.5476	360.9666	477.4186	685.06	587.2628	1021.026
S	CO2_NBIC	44.12752	53.43815	68.97669	91.29065	31.57829	18.59151	49.32141

S	NOX_IDLE	0	0	0	0	0.087521	0.136824	3.366871
S	NOX_RUN	0.062938	0.072936	0.077256	0.111778	0.571294	0.738035	0.918668
S	NOX_STRI	0.063005	0.082994	0.087297	0.151034	0.775869	0.405995	0.85285
S	PM10_IDLI	0	0	0	0	0.000912	0.001443	0.006385
S	PM10_PMI	0.03675	0.03675	0.03675	0.03675	0.055093	0.073641	0.122038
S	PM10_PMT	0.008	0.008	0.008	0.008	0.009849	0.010814	0.011645
S	PM10_RUI	0.002087	0.002068	0.002058	0.002006	0.015093	0.021943	0.03424
S	PM10_STF	0.005269	0.004978	0.005197	0.004799	0.000217	0.000092	0.000377
S	PM25_IDLI	0	0	0	0	0.000839	0.001328	0.005874
S	PM25_PMI	0.01575	0.01575	0.01575	0.01575	0.023611	0.03156	0.052302
S	PM25_PMT	0.002	0.002	0.002	0.002	0.002462	0.002704	0.002911
S	PM25_RUI	0.001936	0.001919	0.001909	0.001861	0.013887	0.020188	0.031501
S	PM25_STF	0.004889	0.004619	0.004822	0.004452	0.000201	0.000086	0.000349
S	ROG_DIUF	0.044052	0.115371	0.122653	0.207042	0.003333	0.001622	0.003864
S	ROG_HTS	0.056148	0.12019	0.11356	0.186969	0.047825	0.021072	0.071758
S	ROG_IDLE	0	0	0	0	0.023505	0.017411	0.167791
S	ROG_RES	0.034578	0.088212	0.101893	0.176645	0.001764	0.000873	0.001995
S	ROG_RUN	0.012999	0.015683	0.015823	0.022952	0.064806	0.079948	0.108277
S	ROG_RUN	0.159101	0.352629	0.330333	0.515558	0.221149	0.095934	0.329644
S	ROG_STR	0.049598	0.069149	0.064204	0.109544	0.142515	0.066512	0.413364
S	SO2_IDLE	0	0	0	0	0.000093	0.000099	0.006432
S	SO2_RUNI	0.003912	0.004528	0.005309	0.006796	0.007497	0.006356	0.010851
S	SO2_STRE	0.000752	0.000878	0.001026	0.001317	0.000379	0.000221	0.000651
S	TOG_DIUF	0.044052	0.115371	0.122653	0.207042	0.003333	0.001622	0.003864
S	TOG_HTSI	0.056148	0.12019	0.11356	0.186969	0.047825	0.021072	0.071758
S	TOG_IDLE	0	0	0	0	0.025162	0.018884	0.191018
S	TOG_RES	0.034578	0.088212	0.101893	0.176645	0.001764	0.000873	0.001995
S	TOG_RUN	0.023935	0.02805	0.029006	0.039603	0.078793	0.093623	0.123928
S	TOG_RUN	0.159101	0.352629	0.330333	0.515558	0.221149	0.095934	0.329644
S	TOG_STRI	0.052955	0.07383	0.06855	0.116959	0.152162	0.071014	0.441345
W	FleetMix	0.472386	0.067706	0.148876	0.143449	0.055135	0.00643	0.025978
W	CH4_IDLE	0	0	0	0	0.001026	0.00077	0.008928
W	CH4_RUNI	0.009286	0.010576	0.011235	0.014357	0.008728	0.006523	0.004957
W	CH4_STRE	0.003546	0.004938	0.004589	0.007826	0.009703	0.00453	0
W	CO_IDLEX	0	0	0	0	0.153006	0.119695	2.899365
W	CO_RUNE	0.621188	0.736174	0.729793	1.001367	0.709634	0.830772	0.399288
W	CO_STRE	1.586327	2.08369	1.953738	3.044124	3.037191	1.645587	11.44861
W	CO2_NBIC	0	0	0	0	8.32912	9.081185	525.7468
W	CO2_NBIC	205.552	246.171	319.9188	423.699	685.06	587.2628	1021.026
W	CO2_NBIC	44.12752	53.43815	68.97669	91.29065	31.57829	18.59151	49.32141
W	NOX_IDLE	0	0	0	0	0.087521	0.136824	3.117039
W	NOX_RUN	0.078688	0.091753	0.097162	0.14082	0.632371	0.804097	0.999473
W	NOX_STRI	0.077631	0.102287	0.107575	0.186175	0.89113	0.466231	0.979695
W	PM10_IDLI	0	0	0	0	0.000912	0.001443	0.009216
W	PM10_PMI	0.03675	0.03675	0.03675	0.03675	0.055093	0.073641	0.122038
W	PM10_PMT	0.008	0.008	0.008	0.008	0.009849	0.010814	0.011645
W	PM10_RUI	0.002087	0.002068	0.002058	0.002006	0.015093	0.021943	0.03424
W	PM10_STF	0.005269	0.004978	0.005197	0.004799	0.000217	0.000092	0.000377
W	PM25_IDLI	0	0	0	0	0.000839	0.001328	0.008479
W	PM25_PMI	0.01575	0.01575	0.01575	0.01575	0.023611	0.03156	0.052302
W	PM25_PMT	0.002	0.002	0.002	0.002	0.002462	0.002704	0.002911

W	PM25_RUI	0.001936	0.001919	0.001909	0.001861	0.013887	0.020188	0.031501
W	PM25_STF	0.004889	0.004619	0.004822	0.004452	0.000201	0.000086	0.000349
W	ROG_DIUI	0.005235	0.014257	0.01628	0.029405	0.000484	0.00024	0.00055
W	ROG_HTS	0.048638	0.103	0.097998	0.167067	0.042124	0.01874	0.062441
W	ROG_IDLE	0	0	0	0	0.023505	0.017411	0.192206
W	ROG_RES	0.003092	0.008481	0.010035	0.018436	0.000203	0.000102	0.000232
W	ROG_RUN	0.010674	0.012881	0.013021	0.018707	0.064003	0.079684	0.108168
W	ROG_RUN	0.197978	0.438905	0.409095	0.632451	0.249058	0.108382	0.3734
W	ROG_STR	0.080531	0.112038	0.104188	0.177576	0.212246	0.099153	0.610477
W	SO2_IDLE	0	0	0	0	0.000093	0.000099	0.005573
W	SO2_RUNI	0.003453	0.004014	0.004703	0.006028	0.007497	0.006356	0.010851
W	SO2_STRE	0.000764	0.000895	0.001042	0.001341	0.000405	0.000235	0.000746
W	TOG_DIUI	0.005235	0.014257	0.01628	0.029405	0.000484	0.00024	0.00055
W	TOG_HTSI	0.048638	0.103	0.097998	0.167067	0.042124	0.01874	0.062441
W	TOG_IDLE	0	0	0	0	0.025162	0.018884	0.218812
W	TOG_RES	0.003092	0.008481	0.010035	0.018436	0.000203	0.000102	0.000232
W	TOG_RUN	0.019672	0.023161	0.023915	0.032722	0.077581	0.093153	0.123761
W	TOG_RUN	0.197978	0.438905	0.409095	0.632451	0.249058	0.108382	0.3734
W	TOG_STRI	0.085982	0.119622	0.11124	0.189596	0.226614	0.105865	0.651801

HHD	OBUS	UBUS	MCY	SBUS	MH
0.066258	0.001	0.001302	0.008345	0.000427	0.002709
0.02848	0.026062	0	0	0.007967	0
0.009354	0.002208	0	0	0.010687	0
0	0	0	0	0	0
3.458742	3.305433	0	0	2.028305	0
1.123237	0.559333	1.282754	28.18646	1.304661	0.299563
60.2792	6.738546	3.367497	11.15298	18.16261	4.336661
527.6554	533.3623	0	0	573.4634	0
1540.958	941.9852	1830.028	163.3629	1045.681	693.8811
49.32141	32.73429	27.36272	36.30273	115.3017	27.45988
3.241973	3.200746	0	0	3.644479	0
1.936556	0.858477	6.313434	1.26942	3.742574	0.870545
3.781827	0.934583	0.750189	0.314724	1.825303	0.561686
0.009025	0.008796	0	0	0.007655	0
0.060689	0.081063	0.697136	0.03675	0.585258	0.051793
0.035305	0.009894	0.008	0.008	0.011099	0.008643
0.066416	0.026595	0.121115	0.000283	0.040114	0.012166
0.000353	0.000294	0.000115	0.000673	0.001059	0.000188
0.008303	0.008092	0	0	0.007042	0
0.02601	0.034741	0.298772	0.01575	0.250825	0.022197
0.008826	0.002473	0.002	0.002	0.002775	0.002161
0.061103	0.024468	0.111426	0.000245	0.036907	0.011194
0.000328	0.000273	0.000106	0.000589	0.000982	0.000174
0.001668	0.000858	0.002498	0.869869	0.019461	0.409403
0.070952	0.024436	0.035364	0.398412	0.170797	0.026262
0.613171	0.561094	0	0	0.171526	0
0.001038	0.000408	0.001388	0.450011	0.007559	0.193003
0.204461	0.091308	0.293467	3.006411	0.268534	0.039882
0.519968	0.287534	0.378894	1.179505	1.22622	0.398321
1.096497	0.426913	0.454985	2.16389	1.099451	0.238566
0.005593	0.005654	0	0	0.006079	0
0.01634	0.010149	0.019472	0.002352	0.01117	0.007614
0.001527	0.000482	0.000371	0.000647	0.001599	0.00038
0.001668	0.000858	0.002498	0.869869	0.019461	0.409403
0.070952	0.024436	0.035364	0.398412	0.170797	0.026262
0.698048	0.638763	0	0	0.195269	0
0.001038	0.000408	0.001388	0.450011	0.007559	0.193003
0.233064	0.107704	0.336562	3.276679	0.307114	0.05172
0.519968	0.287534	0.378894	1.179505	1.22622	0.398321
1.170721	0.455812	0.485784	2.321222	1.173875	0.254714
0.066258	0.001	0.001302	0.008345	0.000427	0.002709
0.02684	0.024561	0	0	0.007508	0
0.009354	0.002208	0	0	0.010687	0
0	0	0	0	0	0
2.513264	2.401864	0	0	1.47385	0
1.130053	0.566926	1.285983	27.95709	1.326643	0.306221
43.16153	4.778461	2.614581	9.013973	14.47723	3.071021
559.0043	565.0502	0	0	607.5338	0
1540.958	941.9852	1830.028	163.3629	1045.681	693.8811
49.32141	32.73429	27.36272	36.30273	115.3017	27.45988

3.346261	3.303707	0	0	3.761714	0
1.822799	0.797847	5.915406	1.070536	3.491288	0.804915
3.550585	0.876575	0.700111	0.290636	1.674015	0.526673
0.007608	0.007415	0	0	0.006453	0
0.060689	0.081063	0.697136	0.03675	0.585258	0.051793
0.035305	0.009894	0.008	0.008	0.011099	0.008643
0.066416	0.026595	0.121115	0.000283	0.040114	0.012166
0.000353	0.000294	0.000115	0.000673	0.001059	0.000188
0.006999	0.006822	0	0	0.005937	0
0.02601	0.034741	0.298772	0.01575	0.250825	0.022197
0.008826	0.002473	0.002	0.002	0.002775	0.002161
0.061103	0.024468	0.111426	0.000245	0.036907	0.011194
0.000328	0.000273	0.000106	0.000589	0.000982	0.000174
0.004127	0.002184	0.006559	2.535608	0.052975	1.034335
0.079995	0.026569	0.04668	0.698518	0.191519	0.02918
0.577856	0.528779	0	0	0.161647	0
0.002223	0.00084	0.002907	1.543504	0.015608	0.3979
0.20458	0.091707	0.293596	2.937888	0.269967	0.040242
0.512351	0.28337	0.358076	1.134199	1.066279	0.391052
0.912226	0.353293	0.394037	1.792804	0.958948	0.197272
0.005926	0.00599	0	0	0.00644	0
0.01634	0.010149	0.019472	0.002346	0.01117	0.007614
0.001253	0.000449	0.000357	0.000601	0.001536	0.000359
0.004127	0.002184	0.006559	2.535608	0.052975	1.034335
0.079995	0.026569	0.04668	0.698518	0.191519	0.02918
0.657845	0.601974	0	0	0.184023	0
0.002223	0.00084	0.002907	1.543504	0.015608	0.3979
0.233194	0.108265	0.336773	3.204614	0.308696	0.052326
0.512351	0.28337	0.358076	1.134199	1.066279	0.391052
0.973976	0.377208	0.42071	1.922996	1.023861	0.210626
0.066258	0.001	0.001302	0.008345	0.000427	0.002709
0.030746	0.028134	0	0	0.008601	0
0.009354	0.002208	0	0	0.010687	0
0	0	0	0	0	0
4.764401	4.553219	0	0	2.793981	0
1.115768	0.55089	1.279312	31.66059	1.281679	0.292198
85.18453	9.592713	4.429396	14.46244	23.40102	6.174393
484.3641	489.6028	0	0	526.4138	0
1540.958	941.9852	1830.028	163.3629	1045.681	693.8811
49.32141	32.73429	27.36272	36.30273	115.3017	27.45988
3.097958	3.058562	0	0	3.482583	0
1.977514	0.883995	6.439731	1.395509	3.831924	0.899038
4.081018	1.008848	0.811532	0.343561	1.989351	0.606319
0.010981	0.010702	0	0	0.009314	0
0.060689	0.081063	0.697136	0.03675	0.585258	0.051793
0.035305	0.009894	0.008	0.008	0.011099	0.008643
0.066416	0.026595	0.121115	0.000283	0.040114	0.012166
0.000353	0.000294	0.000115	0.000673	0.001059	0.000188
0.010103	0.009846	0	0	0.008569	0
0.02601	0.034741	0.298772	0.01575	0.250825	0.022197
0.008826	0.002473	0.002	0.002	0.002775	0.002161

0.061103	0.024468	0.111426	0.000245	0.036907	0.011194
0.000328	0.000273	0.000106	0.000589	0.000982	0.000174
0.000621	0.000351	0.000987	0.142222	0.006911	0.168871
0.070439	0.024303	0.034694	0.383176	0.168853	0.026096
0.661939	0.605721	0	0	0.185168	0
0.000264	0.000103	0.00045	0.044475	0.001933	0.049538
0.204328	0.090847	0.293338	3.16119	0.266999	0.03947
0.588223	0.313222	0.487631	1.473953	1.5777	0.436182
1.349756	0.527947	0.534732	2.699873	1.272627	0.295039
0.005135	0.00519	0	0	0.00558	0
0.01634	0.010149	0.019472	0.002411	0.011169	0.007614
0.001926	0.00053	0.00039	0.000716	0.001686	0.000411
0.000621	0.000351	0.000987	0.142222	0.006911	0.168871
0.070439	0.024303	0.034694	0.383176	0.168853	0.026096
0.753567	0.689567	0	0	0.2108	0
0.000264	0.000103	0.00045	0.044475	0.001933	0.049538
0.232919	0.107055	0.33633	3.439537	0.305418	0.051024
0.588223	0.313222	0.487631	1.473953	1.5777	0.436182
1.441123	0.563684	0.570929	2.89672	1.358774	0.315011

RoadPerce	RoadSiltLo	MaterialSilt	MaterialMo	MobileAver	MeanVehicleSpeed
100	0.1	4.3	0.5	2.4	40

Woodstove	NumberCo	NumberCa	NumberNo	NumberPel	Woodstove	WoodstoveWoodMass

FireplacesI	NumberWc	NumberGa	NumberPrc	NumberNo	FireplaceH	FireplaceD	FireplaceWoodMass

ROG_EF
2.14E-05

Area_EF_F	Area_Resid	Area_EF_F	Area_Resid	Area_EF_N	Area_Nonr	Area_EF_N	Area_Nonr	Reapplicati
100	0	100	0	150	52350	150	17450	10

onRatePercent

NumberSn	NumberSummerDays
0	180

EnergyUse	T24E	NT24E	LightingEle	T24NG	NT24NG
Junior Coll	3.34	2.27	3.34	21.92	3.3
Other Non-	0	0	0	0	0

WaterLand	WaterLand	IndoorWate	OutdoorWa	ElectricityIr	ElectricityIr	ElectricityIr	ElectricityIr	SepticTank
Junior Coll	1000sqft	1564664	2447295	2117	111	1272	1911	10.33
Other Non-	1000sqft	0	0	2117	111	1272	1911	10.33

AerobicPer	Anaerobica	AnaDigest(	AnaDigestCogenCombDigestGasPercent
87.46	2.21	100	0
87.46	2.21	100	0

SolidWaste	SolidWaste	SolidWaste	LandfillNoC	LandfillCap	LandfillCaptureGasEnergyRecovery
Junior Coll	1000sqft	41.47	6	94	0
Other Non-	1000sqft	0	6	94	0

Vegetation	Vegetation	AcresBegir	AcresEnd	CO2peracre

BroadSpec	NumberOfl	CO2perTree

ConstMitiga	FuelType	Tier	NumberOfE	TotalNumb	DPF	OxidationCatalyst
Graders	Diesel	No Change	0	1	No Change	0
Rubber Tire	Diesel	No Change	0	1	No Change	0
Tractors/Lo	Diesel	No Change	0	1	No Change	0

SoilStabiliz	SoilStabiliz	SoilStabiliz	ReplaceGr	ReplaceGr	ReplaceGr	WaterExpo	WaterExpo	WaterExpo
0	0	0	0	0	0	1	2	55

WaterExpo	WaterUnpa	WaterUnpa	WaterUnpa	WaterUnpa	CleanPavedRoadPercentReduction
55	0	0	0	0	0

ProjectSett	IncreaseDe	IncreaseDe	IncreaseDe	IncreaseDi	ImproveWa	ImproveWa	ImproveDe	ImproveDe

IncreaseTr	IncreaseTr	IntegrateBe	IntegrateBe	ImprovePe	ImprovePe	ProvideTra	ProvideTra	ProvideTra

ImplementI	ImplementI	LimitParkin	LimitParkin	UnbundleP	UnbundleP	OnStreetM	OnStreetM	ProvideBR'

ProvideBR	ExpandTra	ExpandTra	IncreaseTr	IncreaseTr	IncreaseTransitFrequencyHeadwaysPercentR

Reduction

Implement	Implement	Implement	TransitSub	TransitSub	TransitSub	ImplementI	ImplementI	WorkplaceI
0			0			0		0

Workplace	Workplace	Encourage	Encourage	Encourage	Encourage	MarketCon	MarketCon	EmployeeV
		0				0		0

EmployeeV	EmployeeV	ProvideRid	ProvideRid	ImplementS	ImplementSchoolBusProgram	PercentFamilyU
	2	0		0		

Jsing

Landscape	Landscape	Landscape	Landscape	Landscape	Landscape	UseLowVC	UseLowVC	UseLowVC
0		0		0		0	100	0

UseLowVC	UseLowVC	UseLowVC	UseLowVC	UseLowVC	HearthOnly	NoHearthC	UseLowVOCCleaningS
100	0	150	0	150	0	0	0

SuppliesCheck

ExceedTitl	ExceedTitl	InstallHighI	InstallHighI	OnSiteRen	KwhGener	KwhGener	PercentOfE	PercentOfE

ElectricityUseGenerated

ApplianceT	ApplianceL	PercentImprovement
ClothWasher		30
DishWasher		15
Fan		50
Refrigerator		15

ApplyWate	ApplyWate	ApplyWate	UseReclair	PercentOu	PercentInd	UseGreyW	PercentOu	PercentInd
0			0			0		

InstallLowF	PercentRe	InstallLowF	PercentRe	InstallLowF	PercentRe	InstallLowF	PercentRe	TurfReduct
0	32	0	18	0	20	0	20	0

TurfReduct	TurfReduct	UseWaterE	UseWaterE	WaterEffici	MAWA	ETWU
		0	6.1	0		

InstituteRe	InstituteRecyclingAndCompostingServicesWastePercentReduction

OperOffRo	OperOffRo	OperHours	OperDaysF	OperHorse	OperLoadF	OperFuelType

SubModule	PhaseNam	Season	Remarks
1			
3			site size increased to account for approx 40,000 sq ft landscaping
4			trenching phase for utilities, lengthed construction phase to account f
5	Architectural Coating		
5	Building Construction		tractor/loader/backhoe added to account for landscaping equipment
5	Paving		
5	Utilities		trenching equipment
6			water trucks in first three phases
9			sie prep and grading over majoority of site - building footprint, landsca
12			per traffic analysis
13		A	
13		S	
13		W	
14			all roads paved
18			
21			all wastewater treated at WWTP
25			

or landscaping

aping, and hardscape

Vacaville Center Future Operation

Yolo/Solano AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	31.90	1000sqft	1.70	31,900.00	0
Other Non-Asphalt Surfaces	3.00	1000sqft	0.07	3,000.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 6.8 **Precipitation Freq (Days)** 55

Climate Zone 4 **Operational Year** 2035

Utility Company Pacific Gas & Electric Company

CO2 Intensity (lb/MWhr) 641.35 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - site size increased to account for approx 40,000 sq ft landscaping

Construction Phase - trenching phase for utilities, lengthed construction phase to account for landscaping

Off-road Equipment -

Trips and VMT - water trucks in first three phases

Grading - sie prep and grading over majoority of site - building footprint, landscaping, and hardscape

Vehicle Trips - per traffic analysis

Road Dust - all roads paved

Area Coating -

Water And Wastewater - all wastewater treated at WWTP

Construction Off-road Equipment Mitigation -

Vechicle Emission Factors -

Vechicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	0.73	1.70
tblProjectCharacteristics	OperationalYear	2014	2035
tblRoadDust	RoadPercentPave	94	100
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	9.3540e-003	0.01
tblVehicleEF	HHD	3.46	2.94
tblVehicleEF	HHD	1.12	1.34
tblVehicleEF	HHD	60.28	95.69
tblVehicleEF	HHD	527.66	557.27
tblVehicleEF	HHD	1,540.96	1,638.41
tblVehicleEF	HHD	49.32	63.89
tblVehicleEF	HHD	0.07	0.05
tblVehicleEF	HHD	3.24	4.53
tblVehicleEF	HHD	1.94	4.83
tblVehicleEF	HHD	3.78	4.63
tblVehicleEF	HHD	9.0250e-003	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.07	0.08
tblVehicleEF	HHD	3.5300e-004	5.3290e-003
tblVehicleEF	HHD	8.3030e-003	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8260e-003	8.8040e-003
tblVehicleEF	HHD	0.06	0.07
tblVehicleEF	HHD	3.2800e-004	4.2950e-003
tblVehicleEF	HHD	1.6680e-003	4.5410e-003

tblVehicleEF	HHD	0.07	0.22
tblVehicleEF	HHD	0.61	0.53
tblVehicleEF	HHD	1.0380e-003	2.2720e-003
tblVehicleEF	HHD	0.20	0.23
tblVehicleEF	HHD	0.52	1.17
tblVehicleEF	HHD	1.10	3.82
tblVehicleEF	HHD	5.5930e-003	5.5960e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.5270e-003	2.2940e-003
tblVehicleEF	HHD	1.6680e-003	4.5410e-003
tblVehicleEF	HHD	0.07	0.22
tblVehicleEF	HHD	0.70	0.60
tblVehicleEF	HHD	1.0380e-003	2.2720e-003
tblVehicleEF	HHD	0.23	0.26
tblVehicleEF	HHD	0.52	1.17
tblVehicleEF	HHD	1.17	4.09
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	9.3540e-003	0.01
tblVehicleEF	HHD	2.51	2.14
tblVehicleEF	HHD	1.13	1.35
tblVehicleEF	HHD	43.16	70.40
tblVehicleEF	HHD	559.00	590.38
tblVehicleEF	HHD	1,540.96	1,638.41
tblVehicleEF	HHD	49.32	63.89
tblVehicleEF	HHD	0.07	0.05
tblVehicleEF	HHD	3.35	4.68
tblVehicleEF	HHD	1.82	4.54
tblVehicleEF	HHD	3.55	4.34
tblVehicleEF	HHD	7.6080e-003	0.01
tblVehicleEF	HHD	0.06	0.06

tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.07	0.08
tblVehicleEF	HHD	3.5300e-004	5.3290e-003
tblVehicleEF	HHD	6.9990e-003	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8260e-003	8.8040e-003
tblVehicleEF	HHD	0.06	0.07
tblVehicleEF	HHD	3.2800e-004	4.2950e-003
tblVehicleEF	HHD	4.1270e-003	0.01
tblVehicleEF	HHD	0.08	0.27
tblVehicleEF	HHD	0.58	0.50
tblVehicleEF	HHD	2.2230e-003	5.9950e-003
tblVehicleEF	HHD	0.20	0.23
tblVehicleEF	HHD	0.51	1.19
tblVehicleEF	HHD	0.91	2.86
tblVehicleEF	HHD	5.9260e-003	5.9290e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.2530e-003	1.8670e-003
tblVehicleEF	HHD	4.1270e-003	0.01
tblVehicleEF	HHD	0.08	0.27
tblVehicleEF	HHD	0.66	0.57
tblVehicleEF	HHD	2.2230e-003	5.9950e-003
tblVehicleEF	HHD	0.23	0.26
tblVehicleEF	HHD	0.51	1.19
tblVehicleEF	HHD	0.97	3.07
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	9.3540e-003	0.01
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tblVehicleEF	HHD	1.12	1.34
tblVehicleEF	HHD	85.18	136.04

tblVehicleEF	HHD	484.36	511.55
tblVehicleEF	HHD	1,540.96	1,638.41
tblVehicleEF	HHD	49.32	63.89
tblVehicleEF	HHD	0.07	0.05
tblVehicleEF	HHD	3.10	4.33
tblVehicleEF	HHD	1.98	4.93
tblVehicleEF	HHD	4.08	5.00
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.07	0.08
tblVehicleEF	HHD	3.5300e-004	5.3290e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8260e-003	8.8040e-003
tblVehicleEF	HHD	0.06	0.07
tblVehicleEF	HHD	3.2800e-004	4.2950e-003
tblVehicleEF	HHD	6.2100e-004	1.0700e-003
tblVehicleEF	HHD	0.07	0.26
tblVehicleEF	HHD	0.66	0.57
tblVehicleEF	HHD	2.6400e-004	3.6600e-004
tblVehicleEF	HHD	0.20	0.23
tblVehicleEF	HHD	0.59	1.26
tblVehicleEF	HHD	1.35	5.28
tblVehicleEF	HHD	5.1350e-003	5.1370e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.9260e-003	2.9740e-003
tblVehicleEF	HHD	6.2100e-004	1.0700e-003
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tblVehicleEF	HHD	0.75	0.65

tblVehicleEF	HHD	2.6400e-004	3.6600e-004
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tblVehicleEF	HHD	0.59	1.26
tblVehicleEF	HHD	1.44	5.66
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tblVehicleEF	LDA	1.17	2.46
tblVehicleEF	LDA	211.10	276.17
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tblVehicleEF	LDA	0.47	0.47
tblVehicleEF	LDA	0.07	0.11
tblVehicleEF	LDA	0.07	0.16
tblVehicleEF	LDA	2.0870e-003	1.7410e-003
tblVehicleEF	LDA	5.2690e-003	2.9460e-003
tblVehicleEF	LDA	1.9360e-003	1.6030e-003
tblVehicleEF	LDA	4.8890e-003	2.7180e-003
tblVehicleEF	LDA	0.02	0.04
tblVehicleEF	LDA	0.05	0.11
tblVehicleEF	LDA	0.01	0.03
tblVehicleEF	LDA	0.01	0.03
tblVehicleEF	LDA	0.17	0.27
tblVehicleEF	LDA	0.06	0.16
tblVehicleEF	LDA	3.5460e-003	3.5520e-003
tblVehicleEF	LDA	7.5700e-004	7.7500e-004
tblVehicleEF	LDA	0.02	0.04
tblVehicleEF	LDA	0.05	0.11
tblVehicleEF	LDA	0.01	0.03
tblVehicleEF	LDA	0.02	0.04
tblVehicleEF	LDA	0.17	0.27

tblVehicleEF	LDA	0.07	0.17
tblVehicleEF	LDA	9.2860e-003	0.01
tblVehicleEF	LDA	3.5460e-003	9.2340e-003
tblVehicleEF	LDA	0.81	1.36
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tblVehicleEF	LDA	44.13	59.20
tblVehicleEF	LDA	0.47	0.47
tblVehicleEF	LDA	0.06	0.10
tblVehicleEF	LDA	0.06	0.14
tblVehicleEF	LDA	2.0870e-003	1.7410e-003
tblVehicleEF	LDA	5.2690e-003	2.9460e-003
tblVehicleEF	LDA	1.9360e-003	1.6030e-003
tblVehicleEF	LDA	4.8890e-003	2.7180e-003
tblVehicleEF	LDA	0.04	0.12
tblVehicleEF	LDA	0.06	0.13
tblVehicleEF	LDA	0.03	0.09
tblVehicleEF	LDA	0.01	0.03
tblVehicleEF	LDA	0.16	0.26
tblVehicleEF	LDA	0.05	0.13
tblVehicleEF	LDA	3.9120e-003	3.9190e-003
tblVehicleEF	LDA	7.5200e-004	7.6300e-004
tblVehicleEF	LDA	0.04	0.12
tblVehicleEF	LDA	0.06	0.13
tblVehicleEF	LDA	0.03	0.09
tblVehicleEF	LDA	0.02	0.04
tblVehicleEF	LDA	0.16	0.26
tblVehicleEF	LDA	0.05	0.14
tblVehicleEF	LDA	9.2860e-003	0.01
tblVehicleEF	LDA	3.5460e-003	9.2340e-003

tblVehicleEF	LDA	0.62	1.07
tblVehicleEF	LDA	1.59	3.34
tblVehicleEF	LDA	205.55	268.98
tblVehicleEF	LDA	44.13	59.20
tblVehicleEF	LDA	0.47	0.47
tblVehicleEF	LDA	0.08	0.13
tblVehicleEF	LDA	0.08	0.18
tblVehicleEF	LDA	2.0870e-003	1.7410e-003
tblVehicleEF	LDA	5.2690e-003	2.9460e-003
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tblVehicleEF	LDA	3.0920e-003	6.5250e-003
tblVehicleEF	LDA	0.01	0.03
tblVehicleEF	LDA	0.20	0.31
tblVehicleEF	LDA	0.08	0.21
tblVehicleEF	LDA	3.4530e-003	3.4590e-003
tblVehicleEF	LDA	7.6400e-004	7.9100e-004
tblVehicleEF	LDA	5.2350e-003	0.01
tblVehicleEF	LDA	0.05	0.11
tblVehicleEF	LDA	3.0920e-003	6.5250e-003
tblVehicleEF	LDA	0.02	0.04
tblVehicleEF	LDA	0.20	0.31
tblVehicleEF	LDA	0.09	0.22
tblVehicleEF	LDT1	0.01	0.02
tblVehicleEF	LDT1	4.9380e-003	0.02
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tblVehicleEF	LDT1	1.53	5.71
tblVehicleEF	LDT1	252.57	327.85

tblVehicleEF	LDT1	53.44	70.27
tblVehicleEF	LDT1	0.07	0.07
tblVehicleEF	LDT1	0.08	0.28
tblVehicleEF	LDT1	0.09	0.31
tblVehicleEF	LDT1	2.0680e-003	3.3760e-003
tblVehicleEF	LDT1	1.9190e-003	3.1090e-003
tblVehicleEF	LDT1	4.6190e-003	4.5840e-003
tblVehicleEF	LDT1	0.05	0.14
tblVehicleEF	LDT1	0.10	0.24
tblVehicleEF	LDT1	0.04	0.09
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	0.36	0.86
tblVehicleEF	LDT1	0.09	0.41
tblVehicleEF	LDT1	4.1180e-003	4.1190e-003
tblVehicleEF	LDT1	8.8500e-004	9.4500e-004
tblVehicleEF	LDT1	0.05	0.14
tblVehicleEF	LDT1	0.10	0.24
tblVehicleEF	LDT1	0.04	0.09
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	0.36	0.86
tblVehicleEF	LDT1	0.09	0.44
tblVehicleEF	LDT1	0.01	0.02
tblVehicleEF	LDT1	4.9380e-003	0.02
tblVehicleEF	LDT1	0.96	2.94
tblVehicleEF	LDT1	1.10	4.14
tblVehicleEF	LDT1	277.55	359.17
tblVehicleEF	LDT1	53.44	70.27
tblVehicleEF	LDT1	0.07	0.07
tblVehicleEF	LDT1	0.07	0.24
tblVehicleEF	LDT1	0.08	0.28

tblVehicleEF	LDT1	2.0680e-003	3.3760e-003
tblVehicleEF	LDT1	1.9190e-003	3.1090e-003
tblVehicleEF	LDT1	4.6190e-003	4.5840e-003
tblVehicleEF	LDT1	0.12	0.37
tblVehicleEF	LDT1	0.12	0.32
tblVehicleEF	LDT1	0.09	0.24
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	0.35	0.84
tblVehicleEF	LDT1	0.07	0.32
tblVehicleEF	LDT1	4.5280e-003	4.5210e-003
tblVehicleEF	LDT1	8.7800e-004	9.1800e-004
tblVehicleEF	LDT1	0.12	0.37
tblVehicleEF	LDT1	0.12	0.32
tblVehicleEF	LDT1	0.09	0.24
tblVehicleEF	LDT1	0.03	0.10
tblVehicleEF	LDT1	0.35	0.84
tblVehicleEF	LDT1	0.07	0.35
tblVehicleEF	LDT1	0.01	0.02
tblVehicleEF	LDT1	4.9380e-003	0.02
tblVehicleEF	LDT1	0.74	2.42
tblVehicleEF	LDT1	2.08	7.73
tblVehicleEF	LDT1	246.17	319.85
tblVehicleEF	LDT1	53.44	70.27
tblVehicleEF	LDT1	0.07	0.07
tblVehicleEF	LDT1	0.09	0.31
tblVehicleEF	LDT1	0.10	0.35
tblVehicleEF	LDT1	2.0680e-003	3.3760e-003
tblVehicleEF	LDT1	1.9190e-003	3.1090e-003
tblVehicleEF	LDT1	4.6190e-003	4.5840e-003
tblVehicleEF	LDT1	0.01	0.03

tblVehicleEF	LDT1	0.10	0.25
tblVehicleEF	LDT1	8.4810e-003	0.02
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	0.44	1.05
tblVehicleEF	LDT1	0.11	0.53
tblVehicleEF	LDT1	4.0140e-003	4.0170e-003
tblVehicleEF	LDT1	8.9500e-004	9.8000e-004
tblVehicleEF	LDT1	0.01	0.03
tblVehicleEF	LDT1	0.10	0.25
tblVehicleEF	LDT1	8.4810e-003	0.02
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	0.44	1.05
tblVehicleEF	LDT1	0.12	0.57
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	4.5890e-003	0.01
tblVehicleEF	LDT2	0.76	1.49
tblVehicleEF	LDT2	1.44	3.64
tblVehicleEF	LDT2	328.28	401.78
tblVehicleEF	LDT2	68.98	85.49
tblVehicleEF	LDT2	0.15	0.15
tblVehicleEF	LDT2	0.09	0.19
tblVehicleEF	LDT2	0.10	0.32
tblVehicleEF	LDT2	2.0580e-003	1.7750e-003
tblVehicleEF	LDT2	5.1970e-003	3.0960e-003
tblVehicleEF	LDT2	1.9090e-003	1.6330e-003
tblVehicleEF	LDT2	4.8220e-003	2.8530e-003
tblVehicleEF	LDT2	0.05	0.06
tblVehicleEF	LDT2	0.10	0.15
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.01	0.04

tblVehicleEF	LDT2	0.34	0.48
tblVehicleEF	LDT2	0.08	0.24
tblVehicleEF	LDT2	4.8260e-003	4.8450e-003
tblVehicleEF	LDT2	1.0330e-003	1.0660e-003
tblVehicleEF	LDT2	0.05	0.06
tblVehicleEF	LDT2	0.10	0.15
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.03	0.05
tblVehicleEF	LDT2	0.34	0.48
tblVehicleEF	LDT2	0.09	0.26
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	4.5890e-003	0.01
tblVehicleEF	LDT2	0.95	1.82
tblVehicleEF	LDT2	1.03	2.62
tblVehicleEF	LDT2	360.97	441.53
tblVehicleEF	LDT2	68.98	85.49
tblVehicleEF	LDT2	0.15	0.15
tblVehicleEF	LDT2	0.08	0.17
tblVehicleEF	LDT2	0.09	0.29
tblVehicleEF	LDT2	2.0580e-003	1.7750e-003
tblVehicleEF	LDT2	5.1970e-003	3.0960e-003
tblVehicleEF	LDT2	1.9090e-003	1.6330e-003
tblVehicleEF	LDT2	4.8220e-003	2.8530e-003
tblVehicleEF	LDT2	0.12	0.17
tblVehicleEF	LDT2	0.11	0.18
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.02	0.04
tblVehicleEF	LDT2	0.33	0.46
tblVehicleEF	LDT2	0.06	0.19
tblVehicleEF	LDT2	5.3090e-003	5.3310e-003

tblVehicleEF	LDT2	1.0260e-003	1.0480e-003
tblVehicleEF	LDT2	0.12	0.17
tblVehicleEF	LDT2	0.11	0.18
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.03	0.06
tblVehicleEF	LDT2	0.33	0.46
tblVehicleEF	LDT2	0.07	0.20
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	4.5890e-003	0.01
tblVehicleEF	LDT2	0.73	1.46
tblVehicleEF	LDT2	1.95	4.93
tblVehicleEF	LDT2	319.92	391.63
tblVehicleEF	LDT2	68.98	85.49
tblVehicleEF	LDT2	0.15	0.15
tblVehicleEF	LDT2	0.10	0.22
tblVehicleEF	LDT2	0.11	0.36
tblVehicleEF	LDT2	2.0580e-003	1.7750e-003
tblVehicleEF	LDT2	5.1970e-003	3.0960e-003
tblVehicleEF	LDT2	1.9090e-003	1.6330e-003
tblVehicleEF	LDT2	4.8220e-003	2.8530e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.10	0.15
tblVehicleEF	LDT2	0.01	9.9080e-003
tblVehicleEF	LDT2	0.01	0.04
tblVehicleEF	LDT2	0.41	0.57
tblVehicleEF	LDT2	0.10	0.31
tblVehicleEF	LDT2	4.7030e-003	4.7220e-003
tblVehicleEF	LDT2	1.0420e-003	1.0880e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.10	0.15

tblVehicleEF	LDT2	0.01	9.9080e-003
tblVehicleEF	LDT2	0.02	0.05
tblVehicleEF	LDT2	0.41	0.57
tblVehicleEF	LDT2	0.11	0.33
tblVehicleEF	LHD1	1.0260e-003	1.0620e-003
tblVehicleEF	LHD1	8.7280e-003	0.02
tblVehicleEF	LHD1	9.7030e-003	0.02
tblVehicleEF	LHD1	0.15	0.16
tblVehicleEF	LHD1	0.72	2.07
tblVehicleEF	LHD1	2.14	4.04
tblVehicleEF	LHD1	8.33	8.79
tblVehicleEF	LHD1	685.06	725.50
tblVehicleEF	LHD1	31.58	32.13
tblVehicleEF	LHD1	0.06	0.06
tblVehicleEF	LHD1	0.09	0.09
tblVehicleEF	LHD1	0.61	2.00
tblVehicleEF	LHD1	0.83	1.20
tblVehicleEF	LHD1	9.1200e-004	9.6700e-004
tblVehicleEF	LHD1	0.06	0.06
tblVehicleEF	LHD1	9.8490e-003	9.8420e-003
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.1700e-004	8.9500e-004
tblVehicleEF	LHD1	8.3900e-004	8.8900e-004
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	2.4620e-003	2.4600e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	2.0100e-004	8.2400e-004
tblVehicleEF	LHD1	1.3350e-003	1.9100e-003
tblVehicleEF	LHD1	0.04	0.06
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	8.1100e-004	9.2900e-004
tblVehicleEF	LHD1	0.06	0.23
tblVehicleEF	LHD1	0.22	0.35
tblVehicleEF	LHD1	0.17	0.40
tblVehicleEF	LHD1	7.4970e-003	7.5440e-003
tblVehicleEF	LHD1	3.8900e-004	4.1400e-004
tblVehicleEF	LHD1	1.3350e-003	1.9100e-003
tblVehicleEF	LHD1	0.04	0.06
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	8.1100e-004	9.2900e-004
tblVehicleEF	LHD1	0.08	0.27
tblVehicleEF	LHD1	0.22	0.35
tblVehicleEF	LHD1	0.18	0.42
tblVehicleEF	LHD1	1.0260e-003	1.0620e-003
tblVehicleEF	LHD1	8.7280e-003	0.02
tblVehicleEF	LHD1	9.7030e-003	0.02
tblVehicleEF	LHD1	0.15	0.16
tblVehicleEF	LHD1	0.72	2.12
tblVehicleEF	LHD1	1.52	2.85
tblVehicleEF	LHD1	8.33	8.79
tblVehicleEF	LHD1	685.06	725.50
tblVehicleEF	LHD1	31.58	32.13
tblVehicleEF	LHD1	0.06	0.06
tblVehicleEF	LHD1	0.09	0.09
tblVehicleEF	LHD1	0.57	1.86
tblVehicleEF	LHD1	0.78	1.13
tblVehicleEF	LHD1	9.1200e-004	9.6700e-004
tblVehicleEF	LHD1	0.06	0.06
tblVehicleEF	LHD1	9.8490e-003	9.8420e-003
tblVehicleEF	LHD1	0.02	0.03

tblVehicleEF	LHD1	2.1700e-004	8.9500e-004
tblVehicleEF	LHD1	8.3900e-004	8.8900e-004
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	2.4620e-003	2.4600e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	2.0100e-004	8.2400e-004
tblVehicleEF	LHD1	3.3330e-003	5.1640e-003
tblVehicleEF	LHD1	0.05	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7640e-003	2.3930e-003
tblVehicleEF	LHD1	0.06	0.24
tblVehicleEF	LHD1	0.22	0.35
tblVehicleEF	LHD1	0.14	0.33
tblVehicleEF	LHD1	7.4970e-003	7.5450e-003
tblVehicleEF	LHD1	3.7900e-004	3.9300e-004
tblVehicleEF	LHD1	3.3330e-003	5.1640e-003
tblVehicleEF	LHD1	0.05	0.07
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.7640e-003	2.3930e-003
tblVehicleEF	LHD1	0.08	0.27
tblVehicleEF	LHD1	0.22	0.35
tblVehicleEF	LHD1	0.15	0.35
tblVehicleEF	LHD1	1.0260e-003	1.0620e-003
tblVehicleEF	LHD1	8.7280e-003	0.02
tblVehicleEF	LHD1	9.7030e-003	0.02
tblVehicleEF	LHD1	0.15	0.16
tblVehicleEF	LHD1	0.71	2.03
tblVehicleEF	LHD1	3.04	5.77
tblVehicleEF	LHD1	8.33	8.79
tblVehicleEF	LHD1	685.06	725.50

tblVehicleEF	LHD1	31.58	32.13
tblVehicleEF	LHD1	0.06	0.06
tblVehicleEF	LHD1	0.09	0.09
tblVehicleEF	LHD1	0.63	2.06
tblVehicleEF	LHD1	0.89	1.29
tblVehicleEF	LHD1	9.1200e-004	9.6700e-004
tblVehicleEF	LHD1	0.06	0.06
tblVehicleEF	LHD1	9.8490e-003	9.8420e-003
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.1700e-004	8.9500e-004
tblVehicleEF	LHD1	8.3900e-004	8.8900e-004
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	2.4620e-003	2.4600e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	2.0100e-004	8.2400e-004
tblVehicleEF	LHD1	4.8400e-004	5.0500e-004
tblVehicleEF	LHD1	0.04	0.06
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	2.0300e-004	1.7800e-004
tblVehicleEF	LHD1	0.06	0.23
tblVehicleEF	LHD1	0.25	0.39
tblVehicleEF	LHD1	0.21	0.49
tblVehicleEF	LHD1	7.4970e-003	7.5430e-003
tblVehicleEF	LHD1	4.0500e-004	4.4400e-004
tblVehicleEF	LHD1	4.8400e-004	5.0500e-004
tblVehicleEF	LHD1	0.04	0.06
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.0300e-004	1.7800e-004
tblVehicleEF	LHD1	0.08	0.26
tblVehicleEF	LHD1	0.25	0.39

tblVehicleEF	LHD1	0.23	0.53
tblVehicleEF	LHD2	7.7000e-004	7.8800e-004
tblVehicleEF	LHD2	6.5230e-003	0.02
tblVehicleEF	LHD2	4.5300e-003	0.01
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	0.83	1.56
tblVehicleEF	LHD2	1.16	2.00
tblVehicleEF	LHD2	9.08	9.59
tblVehicleEF	LHD2	587.26	620.41
tblVehicleEF	LHD2	18.59	18.98
tblVehicleEF	LHD2	6.4300e-003	6.8210e-003
tblVehicleEF	LHD2	0.14	0.14
tblVehicleEF	LHD2	0.79	2.63
tblVehicleEF	LHD2	0.43	0.67
tblVehicleEF	LHD2	1.4430e-003	1.4780e-003
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	9.2000e-005	4.4300e-004
tblVehicleEF	LHD2	1.3280e-003	1.3590e-003
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	2.7040e-003	2.7060e-003
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	8.6000e-005	3.9900e-004
tblVehicleEF	LHD2	6.5300e-004	9.3800e-004
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.0400e-004	4.6900e-004
tblVehicleEF	LHD2	0.08	0.22
tblVehicleEF	LHD2	0.10	0.17

tblVehicleEF	LHD2	0.08	0.20
tblVehicleEF	LHD2	6.3560e-003	6.3690e-003
tblVehicleEF	LHD2	2.2700e-004	2.3700e-004
tblVehicleEF	LHD2	6.5300e-004	9.3800e-004
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.0400e-004	4.6900e-004
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.10	0.17
tblVehicleEF	LHD2	0.09	0.21
tblVehicleEF	LHD2	7.7000e-004	7.8800e-004
tblVehicleEF	LHD2	6.5230e-003	0.02
tblVehicleEF	LHD2	4.5300e-003	0.01
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	0.84	1.57
tblVehicleEF	LHD2	0.82	1.43
tblVehicleEF	LHD2	9.08	9.59
tblVehicleEF	LHD2	587.26	620.41
tblVehicleEF	LHD2	18.59	18.98
tblVehicleEF	LHD2	6.4300e-003	6.8210e-003
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tblVehicleEF	LHD2	0.74	2.47
tblVehicleEF	LHD2	0.41	0.63
tblVehicleEF	LHD2	1.4430e-003	1.4780e-003
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	9.2000e-005	4.4300e-004
tblVehicleEF	LHD2	1.3280e-003	1.3590e-003
tblVehicleEF	LHD2	0.03	0.03

tblVehicleEF	LHD2	2.7040e-003	2.7060e-003
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	8.6000e-005	3.9900e-004
tblVehicleEF	LHD2	1.6220e-003	2.5200e-003
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	8.7300e-004	1.1840e-003
tblVehicleEF	LHD2	0.08	0.22
tblVehicleEF	LHD2	0.10	0.17
tblVehicleEF	LHD2	0.07	0.16
tblVehicleEF	LHD2	6.3560e-003	6.3690e-003
tblVehicleEF	LHD2	2.2100e-004	2.2700e-004
tblVehicleEF	LHD2	1.6220e-003	2.5200e-003
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	8.7300e-004	1.1840e-003
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.10	0.17
tblVehicleEF	LHD2	0.07	0.18
tblVehicleEF	LHD2	7.7000e-004	7.8800e-004
tblVehicleEF	LHD2	6.5230e-003	0.02
tblVehicleEF	LHD2	4.5300e-003	0.01
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	0.83	1.55
tblVehicleEF	LHD2	1.65	2.82
tblVehicleEF	LHD2	9.08	9.59
tblVehicleEF	LHD2	587.26	620.41
tblVehicleEF	LHD2	18.59	18.98
tblVehicleEF	LHD2	6.4300e-003	6.8210e-003
tblVehicleEF	LHD2	0.14	0.14

tblVehicleEF	LHD2	0.80	2.69
tblVehicleEF	LHD2	0.47	0.72
tblVehicleEF	LHD2	1.4430e-003	1.4780e-003
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	9.2000e-005	4.4300e-004
tblVehicleEF	LHD2	1.3280e-003	1.3590e-003
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	2.7040e-003	2.7060e-003
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	8.6000e-005	3.9900e-004
tblVehicleEF	LHD2	2.4000e-004	2.5900e-004
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.0200e-004	9.4000e-005
tblVehicleEF	LHD2	0.08	0.22
tblVehicleEF	LHD2	0.11	0.19
tblVehicleEF	LHD2	0.10	0.25
tblVehicleEF	LHD2	6.3560e-003	6.3690e-003
tblVehicleEF	LHD2	2.3500e-004	2.5100e-004
tblVehicleEF	LHD2	2.4000e-004	2.5900e-004
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.0200e-004	9.4000e-005
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.19
tblVehicleEF	LHD2	0.11	0.26
tblVehicleEF	MCY	28.19	33.36
tblVehicleEF	MCY	11.15	10.76

tblVehicleEF	MCY	163.36	162.02
tblVehicleEF	MCY	36.30	42.09
tblVehicleEF	MCY	8.3450e-003	8.3320e-003
tblVehicleEF	MCY	1.27	1.30
tblVehicleEF	MCY	0.31	0.31
tblVehicleEF	MCY	0.04	0.04
tblVehicleEF	MCY	2.8300e-004	5.7900e-004
tblVehicleEF	MCY	6.7300e-004	1.4260e-003
tblVehicleEF	MCY	2.4500e-004	4.7400e-004
tblVehicleEF	MCY	5.8900e-004	1.1500e-003
tblVehicleEF	MCY	0.87	0.88
tblVehicleEF	MCY	0.40	0.44
tblVehicleEF	MCY	0.45	0.46
tblVehicleEF	MCY	3.01	3.18
tblVehicleEF	MCY	1.18	1.46
tblVehicleEF	MCY	2.16	2.26
tblVehicleEF	MCY	2.3520e-003	2.3290e-003
tblVehicleEF	MCY	6.4700e-004	6.8300e-004
tblVehicleEF	MCY	0.87	0.88
tblVehicleEF	MCY	0.40	0.44
tblVehicleEF	MCY	0.45	0.46
tblVehicleEF	MCY	3.28	3.46
tblVehicleEF	MCY	1.18	1.46
tblVehicleEF	MCY	2.32	2.43
tblVehicleEF	MCY	27.96	33.01
tblVehicleEF	MCY	9.01	8.96
tblVehicleEF	MCY	163.36	162.02
tblVehicleEF	MCY	36.30	42.09
tblVehicleEF	MCY	8.3450e-003	8.3320e-003
tblVehicleEF	MCY	1.07	1.10

tblVehicleEF	MCY	0.29	0.29
tblVehicleEF	MCY	0.04	0.04
tblVehicleEF	MCY	2.8300e-004	5.7900e-004
tblVehicleEF	MCY	6.7300e-004	1.4260e-003
tblVehicleEF	MCY	2.4500e-004	4.7400e-004
tblVehicleEF	MCY	5.8900e-004	1.1500e-003
tblVehicleEF	MCY	2.54	2.56
tblVehicleEF	MCY	0.70	0.76
tblVehicleEF	MCY	1.54	1.57
tblVehicleEF	MCY	2.94	3.07
tblVehicleEF	MCY	1.13	1.41
tblVehicleEF	MCY	1.79	1.85
tblVehicleEF	MCY	2.3460e-003	2.3200e-003
tblVehicleEF	MCY	6.0100e-004	6.4200e-004
tblVehicleEF	MCY	2.54	2.56
tblVehicleEF	MCY	0.70	0.76
tblVehicleEF	MCY	1.54	1.57
tblVehicleEF	MCY	3.20	3.35
tblVehicleEF	MCY	1.13	1.41
tblVehicleEF	MCY	1.92	1.99
tblVehicleEF	MCY	31.66	37.74
tblVehicleEF	MCY	14.46	13.72
tblVehicleEF	MCY	163.36	162.02
tblVehicleEF	MCY	36.30	42.09
tblVehicleEF	MCY	8.3450e-003	8.3320e-003
tblVehicleEF	MCY	1.40	1.43
tblVehicleEF	MCY	0.34	0.34
tblVehicleEF	MCY	0.04	0.04
tblVehicleEF	MCY	2.8300e-004	5.7900e-004
tblVehicleEF	MCY	6.7300e-004	1.4260e-003

tblVehicleEF	MCY	2.4500e-004	4.7400e-004
tblVehicleEF	MCY	5.8900e-004	1.1500e-003
tblVehicleEF	MCY	0.14	0.14
tblVehicleEF	MCY	0.38	0.44
tblVehicleEF	MCY	0.04	0.04
tblVehicleEF	MCY	3.16	3.39
tblVehicleEF	MCY	1.47	1.78
tblVehicleEF	MCY	2.70	2.87
tblVehicleEF	MCY	2.4110e-003	2.4040e-003
tblVehicleEF	MCY	7.1600e-004	7.4900e-004
tblVehicleEF	MCY	0.14	0.14
tblVehicleEF	MCY	0.38	0.44
tblVehicleEF	MCY	0.04	0.04
tblVehicleEF	MCY	3.44	3.68
tblVehicleEF	MCY	1.47	1.78
tblVehicleEF	MCY	2.90	3.08
tblVehicleEF	MDV	0.01	0.03
tblVehicleEF	MDV	7.8260e-003	0.03
tblVehicleEF	MDV	1.05	2.50
tblVehicleEF	MDV	2.24	6.23
tblVehicleEF	MDV	434.63	535.06
tblVehicleEF	MDV	91.29	112.14
tblVehicleEF	MDV	0.14	0.15
tblVehicleEF	MDV	0.12	0.37
tblVehicleEF	MDV	0.17	0.57
tblVehicleEF	MDV	2.0060e-003	2.2090e-003
tblVehicleEF	MDV	4.7990e-003	3.5350e-003
tblVehicleEF	MDV	1.8610e-003	2.0330e-003
tblVehicleEF	MDV	4.4520e-003	3.2620e-003
tblVehicleEF	MDV	0.08	0.08

tblVehicleEF	MDV	0.17	0.20
tblVehicleEF	MDV	0.08	0.07
tblVehicleEF	MDV	0.02	0.07
tblVehicleEF	MDV	0.53	0.64
tblVehicleEF	MDV	0.14	0.48
tblVehicleEF	MDV	6.1840e-003	6.1770e-003
tblVehicleEF	MDV	1.3280e-003	1.3770e-003
tblVehicleEF	MDV	0.08	0.08
tblVehicleEF	MDV	0.17	0.20
tblVehicleEF	MDV	0.08	0.07
tblVehicleEF	MDV	0.03	0.10
tblVehicleEF	MDV	0.53	0.64
tblVehicleEF	MDV	0.15	0.51
tblVehicleEF	MDV	0.01	0.03
tblVehicleEF	MDV	7.8260e-003	0.03
tblVehicleEF	MDV	1.30	3.03
tblVehicleEF	MDV	1.60	4.48
tblVehicleEF	MDV	477.42	587.02
tblVehicleEF	MDV	91.29	112.14
tblVehicleEF	MDV	0.14	0.15
tblVehicleEF	MDV	0.11	0.33
tblVehicleEF	MDV	0.15	0.52
tblVehicleEF	MDV	2.0060e-003	2.2090e-003
tblVehicleEF	MDV	4.7990e-003	3.5350e-003
tblVehicleEF	MDV	1.8610e-003	2.0330e-003
tblVehicleEF	MDV	4.4520e-003	3.2620e-003
tblVehicleEF	MDV	0.21	0.22
tblVehicleEF	MDV	0.19	0.24
tblVehicleEF	MDV	0.18	0.17
tblVehicleEF	MDV	0.02	0.08

tblVehicleEF	MDV	0.52	0.63
tblVehicleEF	MDV	0.11	0.38
tblVehicleEF	MDV	6.7960e-003	6.7850e-003
tblVehicleEF	MDV	1.3170e-003	1.3460e-003
tblVehicleEF	MDV	0.21	0.22
tblVehicleEF	MDV	0.19	0.24
tblVehicleEF	MDV	0.18	0.17
tblVehicleEF	MDV	0.04	0.11
tblVehicleEF	MDV	0.52	0.63
tblVehicleEF	MDV	0.12	0.41
tblVehicleEF	MDV	0.01	0.03
tblVehicleEF	MDV	7.8260e-003	0.03
tblVehicleEF	MDV	1.00	2.46
tblVehicleEF	MDV	3.04	8.43
tblVehicleEF	MDV	423.70	521.81
tblVehicleEF	MDV	91.29	112.14
tblVehicleEF	MDV	0.14	0.15
tblVehicleEF	MDV	0.14	0.42
tblVehicleEF	MDV	0.19	0.64
tblVehicleEF	MDV	2.0060e-003	2.2090e-003
tblVehicleEF	MDV	4.7990e-003	3.5350e-003
tblVehicleEF	MDV	1.8610e-003	2.0330e-003
tblVehicleEF	MDV	4.4520e-003	3.2620e-003
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.17	0.20
tblVehicleEF	MDV	0.02	0.01
tblVehicleEF	MDV	0.02	0.07
tblVehicleEF	MDV	0.63	0.77
tblVehicleEF	MDV	0.18	0.62
tblVehicleEF	MDV	6.0280e-003	6.0230e-003

tblVehicleEF	MDV	1.3410e-003	1.4160e-003
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.17	0.20
tblVehicleEF	MDV	0.02	0.01
tblVehicleEF	MDV	0.03	0.10
tblVehicleEF	MDV	0.63	0.77
tblVehicleEF	MDV	0.19	0.66
tblVehicleEF	MH	0.30	3.53
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tblVehicleEF	MH	693.88	730.85
tblVehicleEF	MH	27.46	29.71
tblVehicleEF	MH	2.7090e-003	2.9280e-003
tblVehicleEF	MH	0.87	1.93
tblVehicleEF	MH	0.56	0.91
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.01	0.04
tblVehicleEF	MH	1.8800e-004	1.0520e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.01	0.03
tblVehicleEF	MH	1.7400e-004	9.3600e-004
tblVehicleEF	MH	0.41	0.99
tblVehicleEF	MH	0.03	0.07
tblVehicleEF	MH	0.19	0.33
tblVehicleEF	MH	0.04	0.18
tblVehicleEF	MH	0.40	1.70
tblVehicleEF	MH	0.24	0.51
tblVehicleEF	MH	7.6140e-003	7.6530e-003
tblVehicleEF	MH	3.8000e-004	4.6900e-004
tblVehicleEF	MH	0.41	0.99
tblVehicleEF	MH	0.03	0.07

tblVehicleEF	MH	0.19	0.33
tblVehicleEF	MH	0.05	0.22
tblVehicleEF	MH	0.40	1.70
tblVehicleEF	MH	0.25	0.55
tblVehicleEF	MH	0.31	3.65
tblVehicleEF	MH	3.07	6.17
tblVehicleEF	MH	693.88	730.85
tblVehicleEF	MH	27.46	29.71
tblVehicleEF	MH	2.7090e-003	2.9280e-003
tblVehicleEF	MH	0.80	1.75
tblVehicleEF	MH	0.53	0.85
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.01	0.04
tblVehicleEF	MH	1.8800e-004	1.0520e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.01	0.03
tblVehicleEF	MH	1.7400e-004	9.3600e-004
tblVehicleEF	MH	1.03	2.68
tblVehicleEF	MH	0.03	0.09
tblVehicleEF	MH	0.40	0.83
tblVehicleEF	MH	0.04	0.19
tblVehicleEF	MH	0.39	1.68
tblVehicleEF	MH	0.20	0.40
tblVehicleEF	MH	7.6140e-003	7.6550e-003
tblVehicleEF	MH	3.5900e-004	4.2200e-004
tblVehicleEF	MH	1.03	2.68
tblVehicleEF	MH	0.03	0.09
tblVehicleEF	MH	0.40	0.83
tblVehicleEF	MH	0.05	0.22
tblVehicleEF	MH	0.39	1.68

tblVehicleEF	MH	0.21	0.43
tblVehicleEF	MH	0.29	3.48
tblVehicleEF	MH	6.17	13.21
tblVehicleEF	MH	693.88	730.85
tblVehicleEF	MH	27.46	29.71
tblVehicleEF	MH	2.7090e-003	2.9280e-003
tblVehicleEF	MH	0.90	2.02
tblVehicleEF	MH	0.61	0.98
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.01	0.04
tblVehicleEF	MH	1.8800e-004	1.0520e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.01	0.03
tblVehicleEF	MH	1.7400e-004	9.3600e-004
tblVehicleEF	MH	0.17	0.27
tblVehicleEF	MH	0.03	0.08
tblVehicleEF	MH	0.05	0.06
tblVehicleEF	MH	0.04	0.18
tblVehicleEF	MH	0.44	1.82
tblVehicleEF	MH	0.30	0.67
tblVehicleEF	MH	7.6140e-003	7.6520e-003
tblVehicleEF	MH	4.1100e-004	5.4100e-004
tblVehicleEF	MH	0.17	0.27
tblVehicleEF	MH	0.03	0.08
tblVehicleEF	MH	0.05	0.06
tblVehicleEF	MH	0.05	0.21
tblVehicleEF	MH	0.44	1.82
tblVehicleEF	MH	0.32	0.72
tblVehicleEF	MHD	8.2700e-003	7.9800e-003
tblVehicleEF	MHD	4.9570e-003	7.5100e-003

tblVehicleEF	MHD	2.10	1.83
tblVehicleEF	MHD	0.40	1.04
tblVehicleEF	MHD	8.10	23.96
tblVehicleEF	MHD	572.74	594.22
tblVehicleEF	MHD	1,021.03	1,080.31
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tblVehicleEF	MHD	3.26	6.13
tblVehicleEF	MHD	0.98	3.35
tblVehicleEF	MHD	0.91	1.98
tblVehicleEF	MHD	7.5740e-003	0.03
tblVehicleEF	MHD	0.12	0.12
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.03	0.08
tblVehicleEF	MHD	3.7700e-004	4.1690e-003
tblVehicleEF	MHD	6.9680e-003	0.02
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	2.9110e-003	2.8950e-003
tblVehicleEF	MHD	0.03	0.07
tblVehicleEF	MHD	3.4900e-004	3.4820e-003
tblVehicleEF	MHD	1.5360e-003	3.9190e-003
tblVehicleEF	MHD	0.06	0.17
tblVehicleEF	MHD	0.18	0.17
tblVehicleEF	MHD	9.2100e-004	1.8260e-003
tblVehicleEF	MHD	0.11	0.19
tblVehicleEF	MHD	0.33	0.66
tblVehicleEF	MHD	0.50	1.62
tblVehicleEF	MHD	6.0710e-003	5.9680e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	6.9000e-004	1.0480e-003

tblVehicleEF	MHD	1.5360e-003	3.9190e-003
tblVehicleEF	MHD	0.06	0.17
tblVehicleEF	MHD	0.20	0.20
tblVehicleEF	MHD	9.2100e-004	1.8260e-003
tblVehicleEF	MHD	0.12	0.22
tblVehicleEF	MHD	0.33	0.66
tblVehicleEF	MHD	0.53	1.74
tblVehicleEF	MHD	7.7940e-003	7.5200e-003
tblVehicleEF	MHD	4.9570e-003	7.5100e-003
tblVehicleEF	MHD	1.53	1.33
tblVehicleEF	MHD	0.40	1.05
tblVehicleEF	MHD	5.82	17.42
tblVehicleEF	MHD	606.76	629.53
tblVehicleEF	MHD	1,021.03	1,080.31
tblVehicleEF	MHD	49.32	59.10
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	3.37	6.32
tblVehicleEF	MHD	0.92	3.14
tblVehicleEF	MHD	0.85	1.86
tblVehicleEF	MHD	6.3850e-003	0.02
tblVehicleEF	MHD	0.12	0.12
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.03	0.08
tblVehicleEF	MHD	3.7700e-004	4.1690e-003
tblVehicleEF	MHD	5.8740e-003	0.02
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	2.9110e-003	2.8950e-003
tblVehicleEF	MHD	0.03	0.07
tblVehicleEF	MHD	3.4900e-004	3.4820e-003
tblVehicleEF	MHD	3.8640e-003	0.01

tblVehicleEF	MHD	0.07	0.21
tblVehicleEF	MHD	0.17	0.16
tblVehicleEF	MHD	1.9950e-003	4.9140e-003
tblVehicleEF	MHD	0.11	0.19
tblVehicleEF	MHD	0.33	0.66
tblVehicleEF	MHD	0.41	1.27
tblVehicleEF	MHD	6.4320e-003	6.3220e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	6.5100e-004	9.3500e-004
tblVehicleEF	MHD	3.8640e-003	0.01
tblVehicleEF	MHD	0.07	0.21
tblVehicleEF	MHD	0.19	0.18
tblVehicleEF	MHD	1.9950e-003	4.9140e-003
tblVehicleEF	MHD	0.12	0.22
tblVehicleEF	MHD	0.33	0.66
tblVehicleEF	MHD	0.44	1.36
tblVehicleEF	MHD	8.9280e-003	8.6140e-003
tblVehicleEF	MHD	4.9570e-003	7.5100e-003
tblVehicleEF	MHD	2.90	2.52
tblVehicleEF	MHD	0.40	1.04
tblVehicleEF	MHD	11.45	34.09
tblVehicleEF	MHD	525.75	545.47
tblVehicleEF	MHD	1,021.03	1,080.31
tblVehicleEF	MHD	49.32	59.10
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	3.12	5.85
tblVehicleEF	MHD	1.00	3.42
tblVehicleEF	MHD	0.98	2.14
tblVehicleEF	MHD	9.2160e-003	0.03
tblVehicleEF	MHD	0.12	0.12

tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.03	0.08
tblVehicleEF	MHD	3.7700e-004	4.1690e-003
tblVehicleEF	MHD	8.4790e-003	0.03
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	2.9110e-003	2.8950e-003
tblVehicleEF	MHD	0.03	0.07
tblVehicleEF	MHD	3.4900e-004	3.4820e-003
tblVehicleEF	MHD	5.5000e-004	8.8700e-004
tblVehicleEF	MHD	0.06	0.19
tblVehicleEF	MHD	0.19	0.19
tblVehicleEF	MHD	2.3200e-004	2.8800e-004
tblVehicleEF	MHD	0.11	0.19
tblVehicleEF	MHD	0.37	0.72
tblVehicleEF	MHD	0.61	2.14
tblVehicleEF	MHD	5.5730e-003	5.4780e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.4600e-004	1.2240e-003
tblVehicleEF	MHD	5.5000e-004	8.8700e-004
tblVehicleEF	MHD	0.06	0.19
tblVehicleEF	MHD	0.22	0.21
tblVehicleEF	MHD	2.3200e-004	2.8800e-004
tblVehicleEF	MHD	0.12	0.22
tblVehicleEF	MHD	0.37	0.72
tblVehicleEF	MHD	0.65	2.30
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	2.2080e-003	1.9400e-003
tblVehicleEF	OBUS	3.31	2.37
tblVehicleEF	OBUS	0.56	2.87
tblVehicleEF	OBUS	6.74	15.12

tblVehicleEF	OBUS	533.36	563.74
tblVehicleEF	OBUS	941.99	945.91
tblVehicleEF	OBUS	32.73	35.78
tblVehicleEF	OBUS	1.0000e-003	1.0110e-003
tblVehicleEF	OBUS	3.20	5.55
tblVehicleEF	OBUS	0.86	3.05
tblVehicleEF	OBUS	0.93	1.99
tblVehicleEF	OBUS	8.7960e-003	0.01
tblVehicleEF	OBUS	0.08	0.07
tblVehicleEF	OBUS	9.8940e-003	9.5840e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	2.9400e-004	1.1430e-003
tblVehicleEF	OBUS	8.0920e-003	9.6700e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	2.4730e-003	2.3960e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	2.7300e-004	9.9400e-004
tblVehicleEF	OBUS	8.5800e-004	9.8900e-004
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.56	0.40
tblVehicleEF	OBUS	4.0800e-004	4.1800e-004
tblVehicleEF	OBUS	0.09	0.22
tblVehicleEF	OBUS	0.29	0.30
tblVehicleEF	OBUS	0.43	0.91
tblVehicleEF	OBUS	5.6540e-003	5.6610e-003
tblVehicleEF	OBUS	0.01	9.7280e-003
tblVehicleEF	OBUS	4.8200e-004	6.4200e-004
tblVehicleEF	OBUS	8.5800e-004	9.8900e-004
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.64	0.46

tblVehicleEF	OBUS	4.0800e-004	4.1800e-004
tblVehicleEF	OBUS	0.11	0.25
tblVehicleEF	OBUS	0.29	0.30
tblVehicleEF	OBUS	0.46	0.97
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	2.2080e-003	1.9400e-003
tblVehicleEF	OBUS	2.40	1.72
tblVehicleEF	OBUS	0.57	2.96
tblVehicleEF	OBUS	4.78	10.77
tblVehicleEF	OBUS	565.05	597.23
tblVehicleEF	OBUS	941.99	945.91
tblVehicleEF	OBUS	32.73	35.78
tblVehicleEF	OBUS	1.0000e-003	1.0110e-003
tblVehicleEF	OBUS	3.30	5.73
tblVehicleEF	OBUS	0.80	2.80
tblVehicleEF	OBUS	0.88	1.87
tblVehicleEF	OBUS	7.4150e-003	8.8610e-003
tblVehicleEF	OBUS	0.08	0.07
tblVehicleEF	OBUS	9.8940e-003	9.5840e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	2.9400e-004	1.1430e-003
tblVehicleEF	OBUS	6.8220e-003	8.1520e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	2.4730e-003	2.3960e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	2.7300e-004	9.9400e-004
tblVehicleEF	OBUS	2.1840e-003	2.7190e-003
tblVehicleEF	OBUS	0.03	0.04
tblVehicleEF	OBUS	0.53	0.38
tblVehicleEF	OBUS	8.4000e-004	9.6800e-004

tblVehicleEF	OBUS	0.09	0.22
tblVehicleEF	OBUS	0.28	0.30
tblVehicleEF	OBUS	0.35	0.74
tblVehicleEF	OBUS	5.9900e-003	5.9980e-003
tblVehicleEF	OBUS	0.01	9.7290e-003
tblVehicleEF	OBUS	4.4900e-004	5.6800e-004
tblVehicleEF	OBUS	2.1840e-003	2.7190e-003
tblVehicleEF	OBUS	0.03	0.04
tblVehicleEF	OBUS	0.60	0.43
tblVehicleEF	OBUS	8.4000e-004	9.6800e-004
tblVehicleEF	OBUS	0.11	0.25
tblVehicleEF	OBUS	0.28	0.30
tblVehicleEF	OBUS	0.38	0.79
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	2.2080e-003	1.9400e-003
tblVehicleEF	OBUS	4.55	3.26
tblVehicleEF	OBUS	0.55	2.79
tblVehicleEF	OBUS	9.59	21.55
tblVehicleEF	OBUS	489.60	517.49
tblVehicleEF	OBUS	941.99	945.91
tblVehicleEF	OBUS	32.73	35.78
tblVehicleEF	OBUS	1.0000e-003	1.0110e-003
tblVehicleEF	OBUS	3.06	5.30
tblVehicleEF	OBUS	0.88	3.18
tblVehicleEF	OBUS	1.01	2.15
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.08	0.07
tblVehicleEF	OBUS	9.8940e-003	9.5840e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	2.9400e-004	1.1430e-003

tblVehicleEF	OBUS	9.8460e-003	0.01
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	2.4730e-003	2.3960e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	2.7300e-004	9.9400e-004
tblVehicleEF	OBUS	3.5100e-004	3.1900e-004
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.61	0.44
tblVehicleEF	OBUS	1.0300e-004	8.4000e-005
tblVehicleEF	OBUS	0.09	0.21
tblVehicleEF	OBUS	0.31	0.33
tblVehicleEF	OBUS	0.53	1.15
tblVehicleEF	OBUS	5.1900e-003	5.1970e-003
tblVehicleEF	OBUS	0.01	9.7260e-003
tblVehicleEF	OBUS	5.3000e-004	7.5000e-004
tblVehicleEF	OBUS	3.5100e-004	3.1900e-004
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.69	0.50
tblVehicleEF	OBUS	1.0300e-004	8.4000e-005
tblVehicleEF	OBUS	0.11	0.24
tblVehicleEF	OBUS	0.31	0.33
tblVehicleEF	OBUS	0.56	1.23
tblVehicleEF	SBUS	7.9670e-003	5.4440e-003
tblVehicleEF	SBUS	0.01	8.4800e-003
tblVehicleEF	SBUS	2.03	1.07
tblVehicleEF	SBUS	1.30	3.42
tblVehicleEF	SBUS	18.16	36.05
tblVehicleEF	SBUS	573.46	562.55
tblVehicleEF	SBUS	1,045.68	1,129.15
tblVehicleEF	SBUS	115.30	125.62

tblVehicleEF	SBUS	4.2700e-004	5.0800e-004
tblVehicleEF	SBUS	3.64	8.05
tblVehicleEF	SBUS	3.74	8.73
tblVehicleEF	SBUS	1.83	2.78
tblVehicleEF	SBUS	7.6550e-003	0.03
tblVehicleEF	SBUS	0.59	0.61
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.04	0.09
tblVehicleEF	SBUS	1.0590e-003	5.6220e-003
tblVehicleEF	SBUS	7.0420e-003	0.02
tblVehicleEF	SBUS	0.25	0.26
tblVehicleEF	SBUS	2.7750e-003	2.8030e-003
tblVehicleEF	SBUS	0.04	0.09
tblVehicleEF	SBUS	9.8200e-004	4.8480e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.17	0.24
tblVehicleEF	SBUS	0.17	0.12
tblVehicleEF	SBUS	7.5590e-003	0.01
tblVehicleEF	SBUS	0.27	0.35
tblVehicleEF	SBUS	1.23	1.93
tblVehicleEF	SBUS	1.10	2.45
tblVehicleEF	SBUS	6.0790e-003	5.6490e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	1.5990e-003	1.9630e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.17	0.24
tblVehicleEF	SBUS	0.20	0.13
tblVehicleEF	SBUS	7.5590e-003	0.01
tblVehicleEF	SBUS	0.31	0.39
tblVehicleEF	SBUS	1.23	1.93

tblVehicleEF	SBUS	1.17	2.62
tblVehicleEF	SBUS	7.5080e-003	5.1310e-003
tblVehicleEF	SBUS	0.01	8.4800e-003
tblVehicleEF	SBUS	1.47	0.78
tblVehicleEF	SBUS	1.33	3.46
tblVehicleEF	SBUS	14.48	29.19
tblVehicleEF	SBUS	607.53	595.97
tblVehicleEF	SBUS	1,045.68	1,129.15
tblVehicleEF	SBUS	115.30	125.62
tblVehicleEF	SBUS	4.2700e-004	5.0800e-004
tblVehicleEF	SBUS	3.76	8.31
tblVehicleEF	SBUS	3.49	8.15
tblVehicleEF	SBUS	1.67	2.55
tblVehicleEF	SBUS	6.4530e-003	0.02
tblVehicleEF	SBUS	0.59	0.61
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.04	0.09
tblVehicleEF	SBUS	1.0590e-003	5.6220e-003
tblVehicleEF	SBUS	5.9370e-003	0.02
tblVehicleEF	SBUS	0.25	0.26
tblVehicleEF	SBUS	2.7750e-003	2.8030e-003
tblVehicleEF	SBUS	0.04	0.09
tblVehicleEF	SBUS	9.8200e-004	4.8480e-003
tblVehicleEF	SBUS	0.05	0.10
tblVehicleEF	SBUS	0.19	0.28
tblVehicleEF	SBUS	0.16	0.11
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.27	0.35
tblVehicleEF	SBUS	1.07	1.69
tblVehicleEF	SBUS	0.96	2.10

tblVehicleEF	SBUS	6.4400e-003	5.9850e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	1.5360e-003	1.8450e-003
tblVehicleEF	SBUS	0.05	0.10
tblVehicleEF	SBUS	0.19	0.28
tblVehicleEF	SBUS	0.18	0.13
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.31	0.39
tblVehicleEF	SBUS	1.07	1.69
tblVehicleEF	SBUS	1.02	2.24
tblVehicleEF	SBUS	8.6010e-003	5.8770e-003
tblVehicleEF	SBUS	0.01	8.4800e-003
tblVehicleEF	SBUS	2.79	1.47
tblVehicleEF	SBUS	1.28	3.52
tblVehicleEF	SBUS	23.40	45.86
tblVehicleEF	SBUS	526.41	516.39
tblVehicleEF	SBUS	1,045.68	1,129.15
tblVehicleEF	SBUS	115.30	125.62
tblVehicleEF	SBUS	4.2700e-004	5.0800e-004
tblVehicleEF	SBUS	3.48	7.69
tblVehicleEF	SBUS	3.83	8.93
tblVehicleEF	SBUS	1.99	3.03
tblVehicleEF	SBUS	9.3140e-003	0.03
tblVehicleEF	SBUS	0.59	0.61
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.04	0.09
tblVehicleEF	SBUS	1.0590e-003	5.6220e-003
tblVehicleEF	SBUS	8.5690e-003	0.03
tblVehicleEF	SBUS	0.25	0.26
tblVehicleEF	SBUS	2.7750e-003	2.8030e-003

tblVehicleEF	SBUS	0.04	0.09
tblVehicleEF	SBUS	9.8200e-004	4.8480e-003
tblVehicleEF	SBUS	6.9110e-003	8.3840e-003
tblVehicleEF	SBUS	0.17	0.26
tblVehicleEF	SBUS	0.19	0.13
tblVehicleEF	SBUS	1.9330e-003	1.9140e-003
tblVehicleEF	SBUS	0.27	0.35
tblVehicleEF	SBUS	1.58	2.44
tblVehicleEF	SBUS	1.27	2.91
tblVehicleEF	SBUS	5.5800e-003	5.1860e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	1.6860e-003	2.1320e-003
tblVehicleEF	SBUS	6.9110e-003	8.3840e-003
tblVehicleEF	SBUS	0.17	0.26
tblVehicleEF	SBUS	0.21	0.14
tblVehicleEF	SBUS	1.9330e-003	1.9140e-003
tblVehicleEF	SBUS	0.31	0.39
tblVehicleEF	SBUS	1.58	2.44
tblVehicleEF	SBUS	1.36	3.11
tblVehicleEF	UBUS	1.28	4.58
tblVehicleEF	UBUS	3.37	8.22
tblVehicleEF	UBUS	1,830.03	2,016.93
tblVehicleEF	UBUS	27.36	29.91
tblVehicleEF	UBUS	1.3020e-003	1.3670e-003
tblVehicleEF	UBUS	6.31	9.63
tblVehicleEF	UBUS	0.75	0.87
tblVehicleEF	UBUS	0.70	0.70
tblVehicleEF	UBUS	0.12	0.16
tblVehicleEF	UBUS	1.1500e-004	1.0180e-003
tblVehicleEF	UBUS	0.30	0.30

tblVehicleEF	UBUS	0.11	0.15
tblVehicleEF	UBUS	1.0600e-004	8.5400e-004
tblVehicleEF	UBUS	2.4980e-003	5.5120e-003
tblVehicleEF	UBUS	0.04	0.11
tblVehicleEF	UBUS	1.3880e-003	2.2800e-003
tblVehicleEF	UBUS	0.29	0.76
tblVehicleEF	UBUS	0.38	0.76
tblVehicleEF	UBUS	0.45	0.75
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	3.7100e-004	4.6700e-004
tblVehicleEF	UBUS	2.4980e-003	5.5120e-003
tblVehicleEF	UBUS	0.04	0.11
tblVehicleEF	UBUS	1.3880e-003	2.2800e-003
tblVehicleEF	UBUS	0.34	0.84
tblVehicleEF	UBUS	0.38	0.76
tblVehicleEF	UBUS	0.49	0.80
tblVehicleEF	UBUS	1.29	4.65
tblVehicleEF	UBUS	2.61	6.21
tblVehicleEF	UBUS	1,830.03	2,016.93
tblVehicleEF	UBUS	27.36	29.91
tblVehicleEF	UBUS	1.3020e-003	1.3670e-003
tblVehicleEF	UBUS	5.92	9.00
tblVehicleEF	UBUS	0.70	0.81
tblVehicleEF	UBUS	0.70	0.70
tblVehicleEF	UBUS	0.12	0.16
tblVehicleEF	UBUS	1.1500e-004	1.0180e-003
tblVehicleEF	UBUS	0.30	0.30
tblVehicleEF	UBUS	0.11	0.15
tblVehicleEF	UBUS	1.0600e-004	8.5400e-004
tblVehicleEF	UBUS	6.5590e-003	0.02

tblVehicleEF	UBUS	0.05	0.12
tblVehicleEF	UBUS	2.9070e-003	5.6610e-003
tblVehicleEF	UBUS	0.29	0.78
tblVehicleEF	UBUS	0.36	0.73
tblVehicleEF	UBUS	0.39	0.61
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	3.5700e-004	4.3100e-004
tblVehicleEF	UBUS	6.5590e-003	0.02
tblVehicleEF	UBUS	0.05	0.12
tblVehicleEF	UBUS	2.9070e-003	5.6610e-003
tblVehicleEF	UBUS	0.34	0.86
tblVehicleEF	UBUS	0.36	0.73
tblVehicleEF	UBUS	0.42	0.66
tblVehicleEF	UBUS	1.28	4.75
tblVehicleEF	UBUS	4.43	11.34
tblVehicleEF	UBUS	1,830.03	2,016.93
tblVehicleEF	UBUS	27.36	29.91
tblVehicleEF	UBUS	1.3020e-003	1.3670e-003
tblVehicleEF	UBUS	6.44	9.85
tblVehicleEF	UBUS	0.81	0.94
tblVehicleEF	UBUS	0.70	0.70
tblVehicleEF	UBUS	0.12	0.16
tblVehicleEF	UBUS	1.1500e-004	1.0180e-003
tblVehicleEF	UBUS	0.30	0.30
tblVehicleEF	UBUS	0.11	0.15
tblVehicleEF	UBUS	1.0600e-004	8.5400e-004
tblVehicleEF	UBUS	9.8700e-004	1.4230e-003
tblVehicleEF	UBUS	0.03	0.12
tblVehicleEF	UBUS	4.5000e-004	4.7000e-004
tblVehicleEF	UBUS	0.29	0.75

tblVehicleEF	UBUS	0.49	0.91
tblVehicleEF	UBUS	0.53	0.94
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	3.9000e-004	5.2200e-004
tblVehicleEF	UBUS	9.8700e-004	1.4230e-003
tblVehicleEF	UBUS	0.03	0.12
tblVehicleEF	UBUS	4.5000e-004	4.7000e-004
tblVehicleEF	UBUS	0.34	0.83
tblVehicleEF	UBUS	0.49	0.91
tblVehicleEF	UBUS	0.57	1.01

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					
2016	2.4700e-003	0.0258	0.0169	2.0000e-005	0.0123	1.4000e-003	0.0137	3.6200e-003	1.2900e-003	4.9000e-003	0.0000	1.6751	1.6751	4.9000e-004	0.0000	1.6854
Total	**2.4700e-003**	**0.0258**	**0.0169**	**2.0000e-005**	**0.0123**	**1.4000e-003**	**0.0137**	**3.6200e-003**	**1.2900e-003**	**4.9000e-003**	**0.0000**	**1.6751**	**1.6751**	**4.9000e-004**	**0.0000**	**1.6854**

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					
2016	2.4700e-003	0.0258	0.0169	2.0000e-005	9.1500e-003	1.4000e-003	0.0106	1.9900e-003	1.2900e-003	3.2800e-003	0.0000	1.6751	1.6751	4.9000e-004	0.0000	1.6854
Total	**2.4700e-003**	**0.0258**	**0.0169**	**2.0000e-005**	**9.1500e-003**	**1.4000e-003**	**0.0106**	**1.9900e-003**	**1.2900e-003**	**3.2800e-003**	**0.0000**	**1.6751**	**1.6751**	**4.9000e-004**	**0.0000**	**1.6854**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**25.85**	**0.00**	**23.22**	**45.03**	**0.00**	**33.06**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1606	0.0000	3.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.6000e-004
Energy	4.3400e-003	0.0394	0.0331	2.4000e-004		3.0000e-003	3.0000e-003		3.0000e-003	3.0000e-003	0.0000	125.9888	125.9888	4.5800e-003	1.5600e-003	126.5698
Mobile	0.5272	1.5549	6.0678	0.0106	0.6516	0.0202	0.6719	0.1749	0.0186	0.1935	0.0000	831.4472	831.4472	0.0334	0.0000	832.1479
Waste						0.0000	0.0000		0.0000	0.0000	8.4180	0.0000	8.4180	0.4975	0.0000	18.8654
Water						0.0000	0.0000		0.0000	0.0000	0.4964	4.9548	5.4512	0.0512	1.2500e-003	6.9141
Total	**0.6921**	**1.5943**	**6.1013**	**0.0109**	**0.6516**	**0.0232**	**0.6749**	**0.1749**	**0.0216**	**0.1965**	**8.9144**	**962.3914**	**971.3059**	**0.5867**	**2.8100e-003**	**984.4979**

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	0.1606	0.0000	3.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.6000e-004
Energy	4.3400e-003	0.0394	0.0331	2.4000e-004		3.0000e-003	3.0000e-003		3.0000e-003	3.0000e-003	0.0000	125.9888	125.9888	4.5800e-003	1.5600e-003	126.5698
Mobile	0.5272	1.5549	6.0678	0.0106	0.6516	0.0202	0.6719	0.1749	0.0186	0.1935	0.0000	831.4472	831.4472	0.0334	0.0000	832.1479
Waste						0.0000	0.0000		0.0000	0.0000	8.4180	0.0000	8.4180	0.4975	0.0000	18.8654
Water						0.0000	0.0000		0.0000	0.0000	0.4964	4.9548	5.4512	0.0512	1.2500e-003	6.9133
Total	**0.6921**	**1.5943**	**6.1013**	**0.0109**	**0.6516**	**0.0232**	**0.6749**	**0.1749**	**0.0216**	**0.1965**	**8.9144**	**962.3914**	**971.3059**	**0.5866**	**2.8100e-003**	**984.4971**

	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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	1/4/2016	5	2	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor

Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2016

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					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4400e-003	0.0258	0.0165	2.0000e-005		1.4000e-003	1.4000e-003		1.2900e-003	1.2900e-003	0.0000	1.6158	1.6158	4.9000e-004	0.0000	1.6260
Total	**2.4400e-003**	**0.0258**	**0.0165**	**2.0000e-005**	**5.8000e-003**	**1.4000e-003**	**7.2000e-003**	**2.9500e-003**	**1.2900e-003**	**4.2400e-003**	**0.0000**	**1.6158**	**1.6158**	**4.9000e-004**	**0.0000**	**1.6260**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	4.0000e-005	4.1000e-004	0.0000	6.5400e-003	0.0000	6.5400e-003	6.6000e-004	0.0000	6.6000e-004	0.0000	0.0593	0.0593	0.0000	0.0000	0.0594
Total	**3.0000e-005**	**4.0000e-005**	**4.1000e-004**	**0.0000**	**6.5400e-003**	**0.0000**	**6.5400e-003**	**6.6000e-004**	**0.0000**	**6.6000e-004**	**0.0000**	**0.0593**	**0.0593**	**0.0000**	**0.0000**	**0.0594**

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					2.6100e-003	0.0000	2.6100e-003	1.3300e-003	0.0000	1.3300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4400e-003	0.0258	0.0165	2.0000e-005		1.4000e-003	1.4000e-003		1.2900e-003	1.2900e-003	0.0000	1.6158	1.6158	4.9000e-004	0.0000	1.6260
Total	**2.4400e-003**	**0.0258**	**0.0165**	**2.0000e-005**	**2.6100e-003**	**1.4000e-003**	**4.0100e-003**	**1.3300e-003**	**1.2900e-003**	**2.6200e-003**	**0.0000**	**1.6158**	**1.6158**	**4.9000e-004**	**0.0000**	**1.6260**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	4.0000e-005	4.1000e-004	0.0000	6.5400e-003	0.0000	6.5400e-003	6.6000e-004	0.0000	6.6000e-004	0.0000	0.0593	0.0593	0.0000	0.0000	0.0594

Total	3.0000e-005	4.0000e-005	4.1000e-004	0.0000	6.5400e-003	0.0000	6.5400e-003	6.6000e-004	0.0000	6.6000e-004	0.0000	0.0593	0.0593	0.0000	0.0000	0.0594

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5272	1.5549	6.0678	0.0106	0.6516	0.0202	0.6719	0.1749	0.0186	0.1935	0.0000	831.4472	831.4472	0.0334	0.0000	832.1479
Unmitigated	0.5272	1.5549	6.0678	0.0106	0.6516	0.0202	0.6719	0.1749	0.0186	0.1935	0.0000	831.4472	831.4472	0.0334	0.0000	832.1479

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	876.93	358.24	38.60	1,734,682	1,734,682
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	876.93	358.24	38.60	1,734,682	1,734,682

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
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	Primary	Diverted	Pass-by
Junior College (2Yr)	9.50	7.30	7.30	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711	0.054898	0.001011	0.001367	0.008332	0.000508	0.002928

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.0567	83.0567	3.7600e-003	7.8000e-004	83.3764
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.0567	83.0567	3.7600e-003	7.8000e-004	83.3764
NaturalGas Mitigated	4.3400e-003	0.0394	0.0331	2.4000e-004		3.0000e-003	3.0000e-003		3.0000e-003	3.0000e-003	0.0000	42.9321	42.9321	8.2000e-004	7.9000e-004	43.1934
NaturalGas Unmitigated	4.3400e-003	0.0394	0.0331	2.4000e-004		3.0000e-003	3.0000e-003		3.0000e-003	3.0000e-003	0.0000	42.9321	42.9321	8.2000e-004	7.9000e-004	43.1934

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	804518	4.3400e-003	0.0394	0.0331	2.4000e-004		3.0000e-003	3.0000e-003		3.0000e-003	3.0000e-003	0.0000	42.9321	42.9321	8.2000e-004	7.9000e-004	43.1934
Total		**4.3400e-003**	**0.0394**	**0.0331**	**2.4000e-004**		**3.0000e-003**	**3.0000e-003**		**3.0000e-003**	**3.0000e-003**	**0.0000**	**42.9321**	**42.9321**	**8.2000e-004**	**7.9000e-004**	**43.1934**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	804518	4.3400e-003	0.0394	0.0331	2.4000e-004		3.0000e-003	3.0000e-003		3.0000e-003	3.0000e-003	0.0000	42.9321	42.9321	8.2000e-004	7.9000e-004	43.1934
Total		**4.3400e-003**	**0.0394**	**0.0331**	**2.4000e-004**		**3.0000e-003**	**3.0000e-003**		**3.0000e-003**	**3.0000e-003**	**0.0000**	**42.9321**	**42.9321**	**8.2000e-004**	**7.9000e-004**	**43.1934**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	285505	83.0567	3.7600e-003	7.8000e-004	83.3764
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**83.0567**	**3.7600e-003**	**7.8000e-004**	**83.3764**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	285505	83.0567	3.7600e-003	7.8000e-004	83.3764
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**83.0567**	**3.7600e-003**	**7.8000e-004**	**83.3764**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1606	0.0000	3.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.6000e-004
Unmitigated	0.1606	0.0000	3.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.6000e-004

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	0.0243					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1363					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	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
Landscaping	3.0000e-005	0.0000	3.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.6000e-004
Total	**0.1606**	**0.0000**	**3.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.2000e-004**	**6.2000e-004**	**0.0000**	**0.0000**	**6.6000e-004**

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	0.0243					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1363					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.6000e-004
Total	**0.1606**	**0.0000**	**3.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.2000e-004**	**6.2000e-004**	**0.0000**	**0.0000**	**6.6000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.4512	0.0512	1.2500e-003	6.9133
Unmitigated	5.4512	0.0512	1.2500e-003	6.9141

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.56466 / 2.4473	5.4512	0.0512	1.2500e-003	6.9141
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**5.4512**	**0.0512**	**1.2500e-003**	**6.9141**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.56466 / 2.4473	5.4512	0.0512	1.2500e-003	6.9133
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**5.4512**	**0.0512**	**1.2500e-003**	**6.9133**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	8.4180	0.4975	0.0000	18.8654
Mitigated	8.4180	0.4975	0.0000	18.8654

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	41.47	8.4180	0.4975	0.0000	18.8654
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**8.4180**	**0.4975**	**0.0000**	**18.8654**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	41.47	8.4180	0.4975	0.0000	18.8654
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000

Total		**8.4180**	**0.4975**	**0.0000**	**18.8654**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Vacaville Center

Yolo/Solano AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	31.90	1000sqft	1.70	31,900.00	0
Other Non-Asphalt Surfaces	3.00	1000sqft	0.07	3,000.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 6.8 **Precipitation Freq (Days)** 55

Climate Zone 4 **Operational Year** 2017

Utility Company Pacific Gas & Electric Company

CO2 Intensity (lb/MWhr) 641.35 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - site size increased to account for approx 40,000 sq ft landscaping

Construction Phase - trenching phase for utilities, lengthed construction phase to account for landscaping

Off-road Equipment -

Off-road Equipment - tractor/loader/backhoe added to account for landscaping equipment

Off-road Equipment -

Off-road Equipment - trenching equipment

Trips and VMT - water trucks in first three phases

Grading - sie prep and grading over majoority of site - building footprint, landscaping, and hardscape

Vehicle Trips - per traffic analysis

Road Dust - all roads paved

Area Coating -

Water And Wastewater - all wastewater treated at WWTP

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	109.00
tblConstructionPhase	NumDays	2.00	7.00
tblConstructionPhase	PhaseStartDate	6/25/2016	6/27/2016
tblConstructionPhase	PhaseStartDate	6/18/2016	6/20/2016
tblGrading	AcresOfGrading	2.63	1.75
tblGrading	AcresOfGrading	0.50	1.00
tblLandUse	LotAcreage	0.73	1.70
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	PhaseName		Utilities
tblOffRoadEquipment	PhaseName		Utilities
tblProjectCharacteristics	OperationalYear	2014	2017
tblRoadDust	RoadPercentPave	94	100
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblVehicleTrips	WD_TR	27.49	45.04
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.4594	1.4439	1.1042	1.6100e-003	0.9479	0.0947	1.0425	0.1044	0.0905	0.1949	0.0000	138.5628	138.5628	0.0296	0.0000	139.1846
Total	**0.4594**	**1.4439**	**1.1042**	**1.6100e-003**	**0.9479**	**0.0947**	**1.0425**	**0.1044**	**0.0905**	**0.1949**	**0.0000**	**138.5628**	**138.5628**	**0.0296**	**0.0000**	**139.1846**

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					
2016	0.4594	1.4439	1.1042	1.6100e-003	0.9369	0.0947	1.0316	0.0988	0.0905	0.1892	0.0000	138.5627	138.5627	0.0296	0.0000	139.1845
Total	**0.4594**	**1.4439**	**1.1042**	**1.6100e-003**	**0.9369**	**0.0947**	**1.0316**	**0.0988**	**0.0905**	**0.1892**	**0.0000**	**138.5627**	**138.5627**	**0.0296**	**0.0000**	**139.1845**

	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**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**1.16**	**0.00**	**1.05**	**5.42**	**0.00**	**2.90**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1606	0.0000	3.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.6000e-004
Energy	4.3400e-003	0.0394	0.0331	2.4000e-004		3.0000e-003	3.0000e-003		3.0000e-003	3.0000e-003	0.0000	125.9888	125.9888	4.5800e-003	1.5600e-003	126.5698
Mobile	0.8358	2.4651	9.6201	0.0168	1.0331	0.0320	1.0652	0.2773	0.0295	0.3068	0.0000	1,318.2008	1,318.2008	0.0529	0.0000	1,319.3117
Waste						0.0000	0.0000		0.0000	0.0000	8.4180	0.0000	8.4180	0.4975	0.0000	18.8654
Water						0.0000	0.0000		0.0000	0.0000	0.5536	4.9548	5.5084	2.1300e-003	1.2500e-003	5.9407
Total	**1.0008**	**2.5045**	**9.6536**	**0.0171**	**1.0331**	**0.0350**	**1.0682**	**0.2773**	**0.0325**	**0.3098**	**8.9716**	**1,449.1450**	**1,458.1166**	**0.5571**	**2.8100e-003**	**1,470.6882**

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	0.1606	0.0000	3.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.6000e-004
Energy	4.3400e-003	0.0394	0.0331	2.4000e-004		3.0000e-003	3.0000e-003		3.0000e-003	3.0000e-003	0.0000	125.9888	125.9888	4.5800e-003	1.5600e-003	126.5698
Mobile	0.8358	2.4651	9.6201	0.0168	1.0331	0.0320	1.0652	0.2773	0.0295	0.3068	0.0000	1,318.2008	1,318.2008	0.0529	0.0000	1,319.3117
Waste						0.0000	0.0000		0.0000	0.0000	8.4180	0.0000	8.4180	0.4975	0.0000	18.8654
Water						0.0000	0.0000		0.0000	0.0000	0.5536	4.9548	5.5084	2.1200e-003	1.2500e-003	5.9398
Total	**1.0008**	**2.5045**	**9.6536**	**0.0171**	**1.0331**	**0.0350**	**1.0682**	**0.2773**	**0.0325**	**0.3098**	**8.9716**	**1,449.1450**	**1,458.1166**	**0.5571**	**2.8100e-003**	**1,470.6873**

	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**	**N20**	**CO2e**

Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	1/1/2016	5	1	
2	Grading	Grading	1/2/2016	1/12/2016	5	7	
3	Utilities	Trenching	1/13/2016	1/18/2016	5	4	
4	Building Construction	Building Construction	1/19/2016	6/17/2016	5	109	
5	Paving	Paving	6/20/2016	6/24/2016	5	5	
6	Architectural Coating	Architectural Coating	6/27/2016	7/1/2016	5	5	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 52,350; Non-Residential Outdoor: 17,450 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Utilities	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Utilities	Trenchers	2	7.00	80	0.50
Building Construction	Cranes	1	6.00	226	0.29

Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Utilities	4	10.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	15.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2016

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					3.1600e-003	0.0000	3.1600e-003	1.5100e-003	0.0000	1.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2200e-003	0.0129	8.2600e-003	1.0000e-005		7.0000e-004	7.0000e-004		6.4000e-004	6.4000e-004	0.0000	0.8079	0.8079	2.4000e-004	0.0000	0.8130
Total	**1.2200e-003**	**0.0129**	**8.2600e-003**	**1.0000e-005**	**3.1600e-003**	**7.0000e-004**	**3.8600e-003**	**1.5100e-003**	**6.4000e-004**	**2.1500e-003**	**0.0000**	**0.8079**	**0.8079**	**2.4000e-004**	**0.0000**	**0.8130**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	5.0000e-005	8.0000e-005	0.0000	2.8000e-004	0.0000	2.8000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0109	0.0109	0.0000	0.0000	0.0109
Worker	1.0000e-005	2.0000e-005	2.0000e-004	0.0000	3.2700e-003	0.0000	3.2700e-003	3.3000e-004	0.0000	3.3000e-004	0.0000	0.0297	0.0297	0.0000	0.0000	0.0297
Total	**2.0000e-005**	**7.0000e-005**	**2.8000e-004**	**0.0000**	**3.5500e-003**	**0.0000**	**3.5500e-003**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**0.0000**	**0.0405**	**0.0405**	**0.0000**	**0.0000**	**0.0406**

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					1.4200e-003	0.0000	1.4200e-003	6.8000e-004	0.0000	6.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2200e-003	0.0129	8.2600e-003	1.0000e-005		7.0000e-004	7.0000e-004		6.4000e-004	6.4000e-004	0.0000	0.8079	0.8079	2.4000e-004	0.0000	0.8130

Total	1.2200e-003	0.0129	8.2600e-003	1.0000e-005	1.4200e-003	7.0000e-004	2.1200e-003	6.8000e-004	6.4000e-004	1.3200e-003	0.0000	0.8079	0.8079	2.4000e-004	0.0000	0.8130

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	5.0000e-005	8.0000e-005	0.0000	2.8000e-004	0.0000	2.8000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0109	0.0109	0.0000	0.0000	0.0109
Worker	1.0000e-005	2.0000e-005	2.0000e-004	0.0000	3.2700e-003	0.0000	3.2700e-003	3.3000e-004	0.0000	3.3000e-004	0.0000	0.0297	0.0297	0.0000	0.0000	0.0297
Total	**2.0000e-005**	**7.0000e-005**	**2.8000e-004**	**0.0000**	**3.5500e-003**	**0.0000**	**3.5500e-003**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**0.0000**	**0.0405**	**0.0405**	**0.0000**	**0.0000**	**0.0406**

3.3 Grading - 2016

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					0.0167	0.0000	0.0167	8.7900e-003	0.0000	8.7900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9700e-003	0.0736	0.0479	5.0000e-005		3.9900e-003	3.9900e-003		3.6700e-003	3.6700e-003	0.0000	4.6448	4.6448	1.4000e-003	0.0000	4.6742
Total	**6.9700e-003**	**0.0736**	**0.0479**	**5.0000e-005**	**0.0167**	**3.9900e-003**	**0.0207**	**8.7900e-003**	**3.6700e-003**	**0.0125**	**0.0000**	**4.6448**	**4.6448**	**1.4000e-003**	**0.0000**	**4.6742**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-005	3.4000e-004	5.9000e-004	0.0000	1.9400e-003	1.0000e-005	1.9400e-003	2.0000e-004	1.0000e-005	2.0000e-004	0.0000	0.0762	0.0762	0.0000	0.0000	0.0762
Worker	1.0000e-004	1.5000e-004	1.4200e-003	0.0000	0.0229	0.0000	0.0229	2.3200e-003	0.0000	2.3200e-003	0.0000	0.2076	0.2076	1.0000e-005	0.0000	0.2079
Total	**1.5000e-004**	**4.9000e-004**	**2.0100e-003**	**0.0000**	**0.0248**	**1.0000e-005**	**0.0248**	**2.5200e-003**	**1.0000e-005**	**2.5200e-003**	**0.0000**	**0.2838**	**0.2838**	**1.0000e-005**	**0.0000**	**0.2841**

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					7.5300e-003	0.0000	7.5300e-003	3.9600e-003	0.0000	3.9600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9700e-003	0.0736	0.0479	5.0000e-005		3.9900e-003	3.9900e-003		3.6700e-003	3.6700e-003	0.0000	4.6448	4.6448	1.4000e-003	0.0000	4.6742
Total	**6.9700e-003**	**0.0736**	**0.0479**	**5.0000e-005**	**7.5300e-003**	**3.9900e-003**	**0.0115**	**3.9600e-003**	**3.6700e-003**	**7.6300e-003**	**0.0000**	**4.6448**	**4.6448**	**1.4000e-003**	**0.0000**	**4.6742**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-005	3.4000e-004	5.9000e-004	0.0000	1.9400e-003	1.0000e-005	1.9400e-003	2.0000e-004	1.0000e-005	2.0000e-004	0.0000	0.0762	0.0762	0.0000	0.0000	0.0762
Worker	1.0000e-004	1.5000e-004	1.4200e-003	0.0000	0.0229	0.0000	0.0229	2.3200e-003	0.0000	2.3200e-003	0.0000	0.2076	0.2076	1.0000e-005	0.0000	0.2079
Total	**1.5000e-004**	**4.9000e-004**	**2.0100e-003**	**0.0000**	**0.0248**	**1.0000e-005**	**0.0248**	**2.5200e-003**	**1.0000e-005**	**2.5200e-003**	**0.0000**	**0.2838**	**0.2838**	**1.0000e-005**	**0.0000**	**0.2841**

3.4 Utilities - 2016

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	3.1400e-003	0.0284	0.0183	2.0000e-005		2.2100e-003	2.2100e-003		2.0400e-003	2.0400e-003	0.0000	2.1699	2.1699	6.5000e-004	0.0000	2.1837
Total	**3.1400e-003**	**0.0284**	**0.0183**	**2.0000e-005**		**2.2100e-003**	**2.2100e-003**		**2.0400e-003**	**2.0400e-003**	**0.0000**	**2.1699**	**2.1699**	**6.5000e-004**	**0.0000**	**2.1837**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	1.9000e-004	3.4000e-004	0.0000	1.1100e-003	0.0000	1.1100e-003	1.1000e-004	0.0000	1.2000e-004	0.0000	0.0435	0.0435	0.0000	0.0000	0.0435
Worker	7.0000e-005	1.1000e-004	1.0100e-003	0.0000	0.0164	0.0000	0.0164	1.6600e-003	0.0000	1.6600e-003	0.0000	0.1483	0.1483	1.0000e-005	0.0000	0.1485
Total	**1.0000e-004**	**3.0000e-004**	**1.3500e-003**	**0.0000**	**0.0175**	**0.0000**	**0.0175**	**1.7700e-003**	**0.0000**	**1.7800e-003**	**0.0000**	**0.1918**	**0.1918**	**1.0000e-005**	**0.0000**	**0.1920**

Mitigated Construction On-Site

Category	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
	tons/yr										MT/yr					
Off-Road	3.1400e-003	0.0284	0.0183	2.0000e-005		2.2100e-003	2.2100e-003		2.0400e-003	2.0400e-003	0.0000	2.1699	2.1699	6.5000e-004	0.0000	2.1837
Total	**3.1400e-003**	**0.0284**	**0.0183**	**2.0000e-005**		**2.2100e-003**	**2.2100e-003**		**2.0400e-003**	**2.0400e-003**	**0.0000**	**2.1699**	**2.1699**	**6.5000e-004**	**0.0000**	**2.1837**

Mitigated Construction Off-Site

Category	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
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	1.9000e-004	3.4000e-004	0.0000	1.1100e-003	0.0000	1.1100e-003	1.1000e-004	0.0000	1.2000e-004	0.0000	0.0435	0.0435	0.0000	0.0000	0.0435
Worker	7.0000e-005	1.1000e-004	1.0100e-003	0.0000	0.0164	0.0000	0.0164	1.6600e-003	0.0000	1.6600e-003	0.0000	0.1483	0.1483	1.0000e-005	0.0000	0.1485
Total	**1.0000e-004**	**3.0000e-004**	**1.3500e-003**	**0.0000**	**0.0175**	**0.0000**	**0.0175**	**1.7700e-003**	**0.0000**	**1.7800e-003**	**0.0000**	**0.1918**	**0.1918**	**1.0000e-005**	**0.0000**	**0.1920**

3.5 Building Construction - 2016

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	0.1933	1.2528	0.9002	1.3200e-003		0.0847	0.0847		0.0812	0.0812	0.0000	113.2064	113.2064	0.0259	0.0000	113.7496
Total	**0.1933**	**1.2528**	**0.9002**	**1.3200e-003**		**0.0847**	**0.0847**		**0.0812**	**0.0812**	**0.0000**	**113.2064**	**113.2064**	**0.0259**	**0.0000**	**113.7496**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.6100e-003	0.0318	0.0550	8.0000e-005	0.1811	5.2000e-004	0.1816	0.0185	4.8000e-004	0.0189	0.0000	7.1171	7.1171	6.0000e-005	0.0000	7.1184
Worker	2.9300e-003	4.3000e-003	0.0415	8.0000e-005	0.6683	5.0000e-005	0.6684	0.0677	5.0000e-005	0.0678	0.0000	6.0620	6.0620	3.5000e-004	0.0000	6.0694
Total	**7.5400e-003**	**0.0361**	**0.0965**	**1.6000e-004**	**0.8494**	**5.7000e-004**	**0.8500**	**0.0862**	**5.3000e-004**	**0.0867**	**0.0000**	**13.1792**	**13.1792**	**4.1000e-004**	**0.0000**	**13.1878**

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	0.1933	1.2528	0.9002	1.3200e-003		0.0847	0.0847		0.0812	0.0812	0.0000	113.2063	113.2063	0.0259	0.0000	113.7494

Total	**0.1933**	**1.2528**	**0.9002**	**1.3200e-003**		**0.0847**	**0.0847**		**0.0812**	**0.0812**	**0.0000**	**113.2063**	**113.2063**	**0.0259**	**0.0000**	**113.7494**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.6100e-003	0.0318	0.0550	8.0000e-005	0.1811	5.2000e-004	0.1816	0.0185	4.8000e-004	0.0189	0.0000	7.1171	7.1171	6.0000e-005	0.0000	7.1184
Worker	2.9300e-003	4.3000e-003	0.0415	8.0000e-005	0.6683	5.0000e-005	0.6684	0.0677	5.0000e-005	0.0678	0.0000	6.0620	6.0620	3.5000e-004	0.0000	6.0694
Total	**7.5400e-003**	**0.0361**	**0.0965**	**1.6000e-004**	**0.8494**	**5.7000e-004**	**0.8500**	**0.0862**	**5.3000e-004**	**0.0867**	**0.0000**	**13.1792**	**13.1792**	**4.1000e-004**	**0.0000**	**13.1878**

3.6 Paving - 2016

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	3.2200e-003	0.0330	0.0227	3.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	3.1036	3.1036	9.2000e-004	0.0000	3.1229
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.2200e-003**	**0.0330**	**0.0227**	**3.0000e-005**		**2.0200e-003**	**2.0200e-003**		**1.8600e-003**	**1.8600e-003**	**0.0000**	**3.1036**	**3.1036**	**9.2000e-004**	**0.0000**	**3.1229**

Unmitigated Construction Off-Site

Category	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
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.7000e-004	1.6500e-003	0.0000	0.0266	0.0000	0.0266	2.6900e-003	0.0000	2.6900e-003	0.0000	0.2410	0.2410	1.0000e-005	0.0000	0.2413
Total	**1.2000e-004**	**1.7000e-004**	**1.6500e-003**	**0.0000**	**0.0266**	**0.0000**	**0.0266**	**2.6900e-003**	**0.0000**	**2.6900e-003**	**0.0000**	**0.2410**	**0.2410**	**1.0000e-005**	**0.0000**	**0.2413**

Mitigated Construction On-Site

Category	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
	tons/yr										MT/yr					
Off-Road	3.2200e-003	0.0330	0.0227	3.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	3.1036	3.1036	9.2000e-004	0.0000	3.1229
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.2200e-003**	**0.0330**	**0.0227**	**3.0000e-005**		**2.0200e-003**	**2.0200e-003**		**1.8600e-003**	**1.8600e-003**	**0.0000**	**3.1036**	**3.1036**	**9.2000e-004**	**0.0000**	**3.1229**

Mitigated Construction Off-Site

Category	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
	tons/yr										MT/yr					

	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
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.7000e-004	1.6500e-003	0.0000	0.0266	0.0000	0.0266	2.6900e-003	0.0000	2.6900e-003	0.0000	0.2410	0.2410	1.0000e-005	0.0000	0.2413
Total	**1.2000e-004**	**1.7000e-004**	**1.6500e-003**	**0.0000**	**0.0266**	**0.0000**	**0.0266**	**2.6900e-003**	**0.0000**	**2.6900e-003**	**0.0000**	**0.2410**	**0.2410**	**1.0000e-005**	**0.0000**	**0.2413**

3.7 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2426					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2000e-004	5.9300e-003	4.7100e-003	1.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	0.6383	0.6383	8.0000e-005	0.0000	0.6399
Total	**0.2436**	**5.9300e-003**	**4.7100e-003**	**1.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.9000e-004**	**4.9000e-004**	**0.0000**	**0.6383**	**0.6383**	**8.0000e-005**	**0.0000**	**0.6399**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	4.0000e-005	3.8000e-004	0.0000	6.1300e-003	0.0000	6.1300e-003	6.2000e-004	0.0000	6.2000e-004	0.0000	0.0556	0.0556	0.0000	0.0000	0.0557
Total	**3.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**6.1300e-003**	**0.0000**	**6.1300e-003**	**6.2000e-004**	**0.0000**	**6.2000e-004**	**0.0000**	**0.0556**	**0.0556**	**0.0000**	**0.0000**	**0.0557**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2426					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2000e-004	5.9300e-003	4.7100e-003	1.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	0.6383	0.6383	8.0000e-005	0.0000	0.6399
Total	**0.2436**	**5.9300e-003**	**4.7100e-003**	**1.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.9000e-004**	**4.9000e-004**	**0.0000**	**0.6383**	**0.6383**	**8.0000e-005**	**0.0000**	**0.6399**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	4.0000e-005	3.8000e-004	0.0000	6.1300e-003	0.0000	6.1300e-003	6.2000e-004	0.0000	6.2000e-004	0.0000	0.0556	0.0556	0.0000	0.0000	0.0557
Total	**3.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**6.1300e-003**	**0.0000**	**6.1300e-003**	**6.2000e-004**	**0.0000**	**6.2000e-004**	**0.0000**	**0.0556**	**0.0556**	**0.0000**	**0.0000**	**0.0557**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	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
	tons/yr										MT/yr					
Mitigated	0.8358	2.4651	9.6201	0.0168	1.0331	0.0320	1.0652	0.2773	0.0295	0.3068	0.0000	1,318.2008	1,318.2008	0.0529	0.0000	1,319.3117
Unmitigated	0.8358	2.4651	9.6201	0.0168	1.0331	0.0320	1.0652	0.2773	0.0295	0.3068	0.0000	1,318.2008	1,318.2008	0.0529	0.0000	1,319.3117

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	1,436.78	358.24	38.60	2,750,216	2,750,216
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,436.78	358.24	38.60	2,750,216	2,750,216

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
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	Primary	Diverted	Pass-by
Junior College (2Yr)	9.50	7.30	7.30	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711	0.054898	0.001011	0.001367	0.008332	0.000508	0.002928

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.0567	83.0567	3.7600e-003	7.8000e-004	83.3764
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.0567	83.0567	3.7600e-003	7.8000e-004	83.3764
NaturalGas Mitigated	4.3400e-003	0.0394	0.0331	2.4000e-004		3.0000e-003	3.0000e-003		3.0000e-003	3.0000e-003	0.0000	42.9321	42.9321	8.2000e-004	7.9000e-004	43.1934
NaturalGas Unmitigated	4.3400e-003	0.0394	0.0331	2.4000e-004		3.0000e-003	3.0000e-003		3.0000e-003	3.0000e-003	0.0000	42.9321	42.9321	8.2000e-004	7.9000e-004	43.1934

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	804518	4.3400e-003	0.0394	0.0331	2.4000e-004		3.0000e-003	3.0000e-003		3.0000e-003	3.0000e-003	0.0000	42.9321	42.9321	8.2000e-004	7.9000e-004	43.1934
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.3400e-003**	**0.0394**	**0.0331**	**2.4000e-004**		**3.0000e-003**	**3.0000e-003**		**3.0000e-003**	**3.0000e-003**	**0.0000**	**42.9321**	**42.9321**	**8.2000e-004**	**7.9000e-004**	**43.1934**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	804518	4.3400e-003	0.0394	0.0331	2.4000e-004		3.0000e-003	3.0000e-003		3.0000e-003	3.0000e-003	0.0000	42.9321	42.9321	8.2000e-004	7.9000e-004	43.1934
Total		**4.3400e-003**	**0.0394**	**0.0331**	**2.4000e-004**		**3.0000e-003**	**3.0000e-003**		**3.0000e-003**	**3.0000e-003**	**0.0000**	**42.9321**	**42.9321**	**8.2000e-004**	**7.9000e-004**	**43.1934**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	285505	83.0567	3.7600e-003	7.8000e-004	83.3764
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**83.0567**	**3.7600e-003**	**7.8000e-004**	**83.3764**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	285505	83.0567	3.7600e-003	7.8000e-004	83.3764
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**83.0567**	**3.7600e-003**	**7.8000e-004**	**83.3764**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1606	0.0000	3.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.6000e-004
Unmitigated	0.1606	0.0000	3.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.6000e-004

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	0.0243					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1363					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.6000e-004
Total	**0.1606**	**0.0000**	**3.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.2000e-004**	**6.2000e-004**	**0.0000**	**0.0000**	**6.6000e-004**

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	0.0243					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1363					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.6000e-004
Total	**0.1606**	**0.0000**	**3.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.2000e-004**	**6.2000e-004**	**0.0000**	**0.0000**	**6.6000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.5084	2.1200e-003	1.2500e-003	5.9398
Unmitigated	5.5084	2.1300e-003	1.2500e-003	5.9407

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.56466 / 2.4473	5.5084	2.1300e-003	1.2500e-003	5.9407

Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**5.5084**	**2.1300e-003**	**1.2500e-003**	**5.9407**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.56466 / 2.4473	5.5084	2.1200e-003	1.2500e-003	5.9398
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**5.5084**	**2.1200e-003**	**1.2500e-003**	**5.9398**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.4180	0.4975	0.0000	18.8654
Unmitigated	8.4180	0.4975	0.0000	18.8654

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	41.47	8.4180	0.4975	0.0000	18.8654
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**8.4180**	**0.4975**	**0.0000**	**18.8654**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	41.47	8.4180	0.4975	0.0000	18.8654
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**8.4180**	**0.4975**	**0.0000**	**18.8654**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Vacaville Center - GHG operational emissions

Yolo/Solano AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	31.90	1000sqft	1.70	31,900.00	0
Other Non-Asphalt Surfaces	3.00	1000sqft	0.07	3,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - site size increased to account for approx 40,000 sq ft landscaping

Construction Phase - GHG emissions from operation only

Off-road Equipment -

Trips and VMT - water trucks in first three phases

Grading - sie prep and grading over majoority of site - building footprint, landscaping, and hardscape

Vehicle Trips - per traffic analysis, 45.04 trips per 1,000 sq ft. School in session for 8 months of year, plus 2 months of summer session at 50% capacity.
for purposes of GHG analysis, daily trip rate reduced to 75% of total. Additional 2.5% reduction from the reduced trip rate for weekdays provided to reflect

Road Dust - all roads paved

Area Coating -

Water And Wastewater - all wastewater treated at WWTP

Construction Off-road Equipment Mitigation -

Energy Mitigation - assume 10% improvement in energy efficiency compared to 2014 Title 24 to reflect LEED Silver standard (CalEEMod assumes 2008 Title 24, 23.5% improvement from 2008 Title 24 = 10% better than 2014 Title 24)

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	1.00
tblGrading	AcresOfGrading	0.50	1.00
tblLandUse	LotAcreage	0.73	1.70
tblProjectCharacteristics	OperationalYear	2014	2017
tblRoadDust	RoadPercentPave	94	100
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblVehicleTrips	ST_TR	11.23	8.42
tblVehicleTrips	SU_TR	1.21	0.91
tblVehicleTrips	WD_TR	27.49	32.94
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					

2016											0.0000	0.8484	0.8484	2.5000e-004	0.0000	0.8536
Total											**0.0000**	**0.8484**	**0.8484**	**2.5000e-004**	**0.0000**	**0.8536**

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					
2016											0.0000	0.8484	0.8484	2.5000e-004	0.0000	0.8536
Total											**0.0000**	**0.8484**	**0.8484**	**2.5000e-004**	**0.0000**	**0.8536**

	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**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.6000e-004
Energy											0.0000	125.9888	125.9888	4.5800e-003	1.5600e-003	126.5698

Mobile											0.0000	965.3530	965.3530	0.0387	0.0000	966.1665
Waste											8.4180	0.0000	8.4180	0.4975	0.0000	18.8654
Water											0.5536	4.9548	5.5084	2.1300e-003	1.2500e-003	5.9407
Total											**8.9716**	**1,096.2972**	**1,105.2688**	**0.5429**	**2.8100e-003**	**1,117.5430**

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											0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.6000e-004
Energy											0.0000	102.2383	102.2383	3.8200e-003	1.2300e-003	102.7008
Mobile											0.0000	965.3530	965.3530	0.0387	0.0000	966.1665
Waste											5.8926	0.0000	5.8926	0.3482	0.0000	13.2058
Water											0.4852	4.4984	4.9835	1.8600e-003	1.1000e-003	5.3622
Total											**6.3778**	**1,072.0903**	**1,078.4681**	**0.3927**	**2.3300e-003**	**1,087.4359**

	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**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**28.91**	**2.21**	**2.42**	**27.68**	**17.08**	**2.69**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description

1	Site Preparation	Site Preparation	1/1/2016	1/1/2016	5	1	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road											0.0000	0.8079	0.8079	2.4000e-004	0.0000	0.8130
Total											**0.0000**	**0.8079**	**0.8079**	**2.4000e-004**	**0.0000**	**0.8130**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0109	0.0109	0.0000	0.0000	0.0109
Worker											0.0000	0.0297	0.0297	0.0000	0.0000	0.0297
Total											**0.0000**	**0.0405**	**0.0405**	**0.0000**	**0.0000**	**0.0406**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	0.8079	0.8079	2.4000e-004	0.0000	0.8130
Total											**0.0000**	**0.8079**	**0.8079**	**2.4000e-004**	**0.0000**	**0.8130**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0109	0.0109	0.0000	0.0000	0.0109
Worker											0.0000	0.0297	0.0297	0.0000	0.0000	0.0297
Total											**0.0000**	**0.0405**	**0.0405**	**0.0000**	**0.0000**	**0.0406**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	965.3530	965.3530	0.0387	0.0000	966.1665
Unmitigated											0.0000	965.3530	965.3530	0.0387	0.0000	966.1665

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	1,050.79	268.60	29.03	2,014,055	2,014,055
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,050.79	268.60	29.03	2,014,055	2,014,055

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
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	Primary	Diverted	Pass-by
Junior College (2Yr)	9.50	7.30	7.30	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711	0.054898	0.001011	0.001367	0.008332	0.000508	0.002928

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	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											0.0000	71.4334	71.4334	3.2300e-003	6.7000e-004	71.7084
Electricity Unmitigated											0.0000	83.0567	83.0567	3.7600e-003	7.8000e-004	83.3764
NaturalGas Mitigated											0.0000	30.8049	30.8049	5.9000e-004	5.6000e-004	30.9924
NaturalGas Unmitigated											0.0000	42.9321	42.9321	8.2000e-004	7.9000e-004	43.1934

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	804518											0.0000	42.9321	42.9321	8.2000e-004	7.9000e-004	43.1934
Total												**0.0000**	**42.9321**	**42.9321**	**8.2000e-004**	**7.9000e-004**	**43.1934**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	577262											0.0000	30.8049	30.8049	5.9000e-004	5.6000e-004	30.9924
Total												**0.0000**	**30.8049**	**30.8049**	**5.9000e-004**	**5.6000e-004**	**30.9924**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	285505	83.0567	3.7600e-003	7.8000e-004	83.3764
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**83.0567**	**3.7600e-003**	**7.8000e-004**	**83.3764**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	245550	71.4334	3.2300e-003	6.7000e-004	71.7084
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**71.4334**	**3.2300e-003**	**6.7000e-004**	**71.7084**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.6000e-004
Unmitigated											0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.6000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.6000e-004
Total											**0.0000**	**6.2000e-004**	**6.2000e-004**	**0.0000**	**0.0000**	**6.6000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	6.2000e-004	6.2000e-004	0.0000	0.0000	6.6000e-004
Total											**0.0000**	**6.2000e-004**	**6.2000e-004**	**0.0000**	**0.0000**	**6.6000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.9835	1.8600e-003	1.1000e-003	5.3622
Unmitigated	5.5084	2.1300e-003	1.2500e-003	5.9407

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.56466 / 2.4473	5.5084	2.1300e-003	1.2500e-003	5.9407
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**5.5084**	**2.1300e-003**	**1.2500e-003**	**5.9407**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.37127 / 2.29801	4.9835	1.8600e-003	1.1000e-003	5.3622
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**4.9835**	**1.8600e-003**	**1.1000e-003**	**5.3622**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	8.4180	0.4975	0.0000	18.8654
Mitigated	5.8926	0.3482	0.0000	13.2058

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Junior College (2Yr)	41.47	8.4180	0.4975	0.0000	18.8654
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**8.4180**	**0.4975**	**0.0000**	**18.8654**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	29.029	5.8926	0.3482	0.0000	13.2058
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**5.8926**	**0.3482**	**0.0000**	**13.2058**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Vacaville Center

Yolo/Solano AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	31.90	1000sqft	1.70	31,900.00	0
Other Non-Asphalt Surfaces	3.00	1000sqft	0.07	3,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - site size increased to account for approx 40,000 sq ft landscaping

Construction Phase - trenching phase for utilities, lengthed construction phase to account for landscaping

Off-road Equipment -

Off-road Equipment - tractor/loader/backhoe added to account for landscaping equipment

Off-road Equipment -

Off-road Equipment - trenching equipment

Trips and VMT - water trucks in first three phases

Grading - sie prep and grading over majoority of site - building footprint, landscaping, and hardscape

Vehicle Trips - per traffic analysis

Road Dust - all roads paved

Area Coating -

Water And Wastewater - all wastewater treated at WWTP

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	109.00
tblConstructionPhase	NumDays	2.00	7.00
tblConstructionPhase	PhaseStartDate	6/25/2016	6/27/2016
tblConstructionPhase	PhaseStartDate	6/18/2016	6/20/2016
tblGrading	AcresOfGrading	2.63	1.75
tblGrading	AcresOfGrading	0.50	1.00
tblLandUse	LotAcreage	0.73	1.70
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	PhaseName		Utilities
tblOffRoadEquipment	PhaseName		Utilities
tblProjectCharacteristics	OperationalYear	2014	2017
tblRoadDust	RoadPercentPave	94	100
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblVehicleTrips	WD_TR	27.49	45.04
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2016	97.4378	25.9017	18.1577	0.0274	18.3288	1.5640	19.8928	3.8550	1.5001	5.1435	0.0000	2,568.6381	2,568.6381	0.5412	0.0000	2,580.0042
Total	**97.4378**	**25.9017**	**18.1577**	**0.0274**	**18.3288**	**1.5640**	**19.8928**	**3.8550**	**1.5001**	**5.1435**	**0.0000**	**2,568.6381**	**2,568.6381**	**0.5412**	**0.0000**	**2,580.0042**

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	lb/day										lb/day					
2016	97.4378	25.9017	18.1577	0.0274	18.3288	1.5640	19.8928	2.1990	1.5001	3.4875	0.0000	2,568.6381	2,568.6381	0.5412	0.0000	2,580.0042
Total	**97.4378**	**25.9017**	**18.1577**	**0.0274**	**18.3288**	**1.5640**	**19.8928**	**2.1990**	**1.5001**	**3.4875**	**0.0000**	**2,568.6381**	**2,568.6381**	**0.5412**	**0.0000**	**2,580.0042**

	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**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**42.96**	**0.00**	**32.20**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8802	3.0000e-005	3.6300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.6400e-003	7.6400e-003	2.0000e-005		8.0800e-003
Energy	0.0238	0.2161	0.1815	1.3000e-003		0.0164	0.0164		0.0164	0.0164		259.3128	259.3128	4.9700e-003	4.7500e-003	260.8910
Mobile	6.4525	16.7717	68.4623	0.1308	7.7808	0.2332	8.0140	2.0829	0.2144	2.2973		11,262.7810	11,262.7810	0.4253		11,271.7119
Total	**7.3564**	**16.9878**	**68.6475**	**0.1321**	**7.7808**	**0.2496**	**8.0304**	**2.0829**	**0.2308**	**2.3138**		**11,522.1015**	**11,522.1015**	**0.4303**	**4.7500e-003**	**11,532.6110**

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	lb/day										lb/day					
Area	0.8802	3.0000e-005	3.6300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.6400e-003	7.6400e-003	2.0000e-005		8.0800e-003
Energy	0.0238	0.2161	0.1815	1.3000e-003		0.0164	0.0164		0.0164	0.0164		259.3128	259.3128	4.9700e-003	4.7500e-003	260.8910
Mobile	6.4525	16.7717	68.4623	0.1308	7.7808	0.2332	8.0140	2.0829	0.2144	2.2973		11,262.7810	11,262.7810	0.4253		11,271.7119
Total	**7.3564**	**16.9878**	**68.6475**	**0.1321**	**7.7808**	**0.2496**	**8.0304**	**2.0829**	**0.2308**	**2.3138**		**11,522.1015**	**11,522.1015**	**0.4303**	**4.7500e-003**	**11,532.6110**

	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**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	1/1/2016	5	1	
2	Grading	Grading	1/2/2016	1/12/2016	5	7	
3	Utilities	Trenching	1/13/2016	1/18/2016	5	4	
4	Building Construction	Building Construction	1/19/2016	6/17/2016	5	109	
5	Paving	Paving	6/20/2016	6/24/2016	5	5	
6	Architectural Coating	Architectural Coating	6/27/2016	7/1/2016	5	5	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 52,350; Non-Residential Outdoor: 17,450 (Architectural Coating –

<u>OffRoad Equipment</u>

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Utilities	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Utilities	Trenchers	2	7.00	80	0.50
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42

Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Utilities	4	10.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	15.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2016

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	lb/day										lb/day					
Fugitive Dust					6.3298	0.0000	6.3298	3.0110	0.0000	3.0110			0.0000			0.0000
Off-Road	2.4428	25.7718	16.5144	0.0171		1.3985	1.3985		1.2866	1.2866		1,781.0872	1,781.0872	0.5372		1,792.3693
Total	**2.4428**	**25.7718**	**16.5144**	**0.0171**	**6.3298**	**1.3985**	**7.7283**	**3.0110**	**1.2866**	**4.2976**		**1,781.0872**	**1,781.0872**	**0.5372**		**1,792.3693**

Unmitigated Construction Off-Site

Category	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
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0126	0.0925	0.1310	2.4000e-004	0.6510	1.5800e-003	0.6526	0.0662	1.4500e-003	0.0676		24.0682	24.0682	1.9000e-004		24.0722
Worker	0.0331	0.0374	0.4560	8.7000e-004	7.6920	5.0000e-004	7.6925	0.7779	4.6000e-004	0.7783		71.7482	71.7482	3.8100e-003		71.8282
Total	**0.0457**	**0.1299**	**0.5870**	**1.1100e-003**	**8.3431**	**2.0800e-003**	**8.3452**	**0.8441**	**1.9100e-003**	**0.8460**		**95.8164**	**95.8164**	**4.0000e-003**		**95.9004**

Mitigated Construction On-Site

Category	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
	lb/day										lb/day					
Fugitive Dust					2.8484	0.0000	2.8484	1.3549	0.0000	1.3549			0.0000			0.0000
Off-Road	2.4428	25.7718	16.5144	0.0171		1.3985	1.3985		1.2866	1.2866	0.0000	1,781.0872	1,781.0872	0.5372		1,792.3693
Total	**2.4428**	**25.7718**	**16.5144**	**0.0171**	**2.8484**	**1.3985**	**4.2469**	**1.3549**	**1.2866**	**2.6415**	**0.0000**	**1,781.0872**	**1,781.0872**	**0.5372**		**1,792.3693**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0126	0.0925	0.1310	2.4000e-004	0.6510	1.5800e-003	0.6526	0.0662	1.4500e-003	0.0676		24.0682	24.0682	1.9000e-004		24.0722
Worker	0.0331	0.0374	0.4560	8.7000e-004	7.6920	5.0000e-004	7.6925	0.7779	4.6000e-004	0.7783		71.7482	71.7482	3.8100e-003		71.8282
Total	**0.0457**	**0.1299**	**0.5870**	**1.1100e-003**	**8.3431**	**2.0800e-003**	**8.3452**	**0.8441**	**1.9100e-003**	**0.8460**		**95.8164**	**95.8164**	**4.0000e-003**		**95.9004**

3.3 Grading - 2016

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	lb/day										lb/day					
Fugitive Dust					4.7817	0.0000	4.7817	2.5113	0.0000	2.5113			0.0000			0.0000
Off-Road	1.9908	21.0361	13.6704	0.0141		1.1407	1.1407		1.0494	1.0494		1,462.8468	1,462.8468	0.4413		1,472.1130
Total	**1.9908**	**21.0361**	**13.6704**	**0.0141**	**4.7817**	**1.1407**	**5.9224**	**2.5113**	**1.0494**	**3.5607**		**1,462.8468**	**1,462.8468**	**0.4413**		**1,472.1130**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0126	0.0925	0.1310	2.4000e-004	0.6510	1.5800e-003	0.6526	0.0662	1.4500e-003	0.0676		24.0682	24.0682	1.9000e-004		24.0722
Worker	0.0331	0.0374	0.4560	8.7000e-004	7.6920	5.0000e-004	7.6925	0.7779	4.6000e-004	0.7783		71.7482	71.7482	3.8100e-003		71.8282

Total	**0.0457**	**0.1299**	**0.5870**	**1.1100e-003**	**8.3431**	**2.0800e-003**	**8.3452**	**0.8441**	**1.9100e-003**	**0.8460**		**95.8164**	**95.8164**	**4.0000e-003**		**95.9004**

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	lb/day										lb/day					
Fugitive Dust					2.1518	0.0000	2.1518	1.1301	0.0000	1.1301			0.0000			0.0000
Off-Road	1.9908	21.0361	13.6704	0.0141		1.1407	1.1407		1.0494	1.0494	0.0000	1,462.8468	1,462.8468	0.4413		1,472.1130
Total	**1.9908**	**21.0361**	**13.6704**	**0.0141**	**2.1518**	**1.1407**	**3.2925**	**1.1301**	**1.0494**	**2.1795**	**0.0000**	**1,462.8468**	**1,462.8468**	**0.4413**		**1,472.1130**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0126	0.0925	0.1310	2.4000e-004	0.6510	1.5800e-003	0.6526	0.0662	1.4500e-003	0.0676		24.0682	24.0682	1.9000e-004		24.0722
Worker	0.0331	0.0374	0.4560	8.7000e-004	7.6920	5.0000e-004	7.6925	0.7779	4.6000e-004	0.7783		71.7482	71.7482	3.8100e-003		71.8282
Total	**0.0457**	**0.1299**	**0.5870**	**1.1100e-003**	**8.3431**	**2.0800e-003**	**8.3452**	**0.8441**	**1.9100e-003**	**0.8460**		**95.8164**	**95.8164**	**4.0000e-003**		**95.9004**

3.4 Utilities - 2016

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	lb/day										lb/day					
Off-Road	1.5688	14.2177	9.1459	0.0115		1.1069	1.1069		1.0184	1.0184		1,195.9554	1,195.9554	0.3607		1,203.5309
Total	**1.5688**	**14.2177**	**9.1459**	**0.0115**		**1.1069**	**1.1069**		**1.0184**	**1.0184**		**1,195.9554**	**1,195.9554**	**0.3607**		**1,203.5309**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0126	0.0925	0.1310	2.4000e-004	0.6510	1.5800e-003	0.6526	0.0662	1.4500e-003	0.0676		24.0682	24.0682	1.9000e-004		24.0722
Worker	0.0413	0.0467	0.5700	1.0800e-003	9.6151	6.2000e-004	9.6157	0.9724	5.7000e-004	0.9729		89.6853	89.6853	4.7600e-003		89.7853
Total	**0.0539**	**0.1392**	**0.7010**	**1.3200e-003**	**10.2661**	**2.2000e-003**	**10.2683**	**1.0385**	**2.0200e-003**	**1.0406**		**113.7534**	**113.7534**	**4.9500e-003**		**113.8575**

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	lb/day										lb/day					

	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
Off-Road	1.5688	14.2177	9.1459	0.0115		1.1069	1.1069		1.0184	1.0184	0.0000	1,195.9554	1,195.9554	0.3607		1,203.5309
Total	**1.5688**	**14.2177**	**9.1459**	**0.0115**		**1.1069**	**1.1069**		**1.0184**	**1.0184**	**0.0000**	**1,195.9554**	**1,195.9554**	**0.3607**		**1,203.5309**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0126	0.0925	0.1310	2.4000e-004	0.6510	1.5800e-003	0.6526	0.0662	1.4500e-003	0.0676		24.0682	24.0682	1.9000e-004		24.0722
Worker	0.0413	0.0467	0.5700	1.0800e-003	9.6151	6.2000e-004	9.6157	0.9724	5.7000e-004	0.9729		89.6853	89.6853	4.7600e-003		89.7853
Total	**0.0539**	**0.1392**	**0.7010**	**1.3200e-003**	**10.2661**	**2.2000e-003**	**10.2683**	**1.0385**	**2.0200e-003**	**1.0406**		**113.7534**	**113.7534**	**4.9500e-003**		**113.8575**

3.5 Building Construction - 2016

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	lb/day										lb/day					
Off-Road	3.5469	22.9872	16.5168	0.0243		1.5536	1.5536		1.4905	1.4905		2,289.7012	2,289.7012	0.5231		2,300.6870
Total	**3.5469**	**22.9872**	**16.5168**	**0.0243**		**1.5536**	**1.5536**		**1.4905**	**1.4905**		**2,289.7012**	**2,289.7012**	**0.5231**		**2,300.6870**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0755	0.5551	0.7858	1.4400e-003	3.9062	9.4800e-003	3.9157	0.3970	8.7100e-003	0.4057		144.4090	144.4090	1.1500e-003		144.4332
Worker	0.0620	0.0701	0.8550	1.6200e-003	14.4226	9.3000e-004	14.4235	1.4585	8.5000e-004	1.4594		134.5279	134.5279	7.1500e-003		134.6780
Total	**0.1375**	**0.6252**	**1.6409**	**3.0600e-003**	**18.3288**	**0.0104**	**18.3392**	**1.8555**	**9.5600e-003**	**1.8651**		**278.9369**	**278.9369**	**8.3000e-003**		**279.1111**

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	lb/day										lb/day					
Off-Road	3.5469	22.9872	16.5168	0.0243		1.5536	1.5536		1.4905	1.4905	0.0000	2,289.7012	2,289.7012	0.5231		2,300.6870
Total	**3.5469**	**22.9872**	**16.5168**	**0.0243**		**1.5536**	**1.5536**		**1.4905**	**1.4905**	**0.0000**	**2,289.7012**	**2,289.7012**	**0.5231**		**2,300.6870**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0755	0.5551	0.7858	1.4400e-003	3.9062	9.4800e-003	3.9157	0.3970	8.7100e-003	0.4057		144.4090	144.4090	1.1500e-003		144.4332
Worker	0.0620	0.0701	0.8550	1.6200e-003	14.4226	9.3000e-004	14.4235	1.4585	8.5000e-004	1.4594		134.5279	134.5279	7.1500e-003		134.6780
Total	**0.1375**	**0.6252**	**1.6409**	**3.0600e-003**	**18.3288**	**0.0104**	**18.3392**	**1.8555**	**9.5600e-003**	**1.8651**		**278.9369**	**278.9369**	**8.3000e-003**		**279.1111**

3.6 Paving - 2016

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	lb/day										lb/day					
Off-Road	1.2872	13.2076	9.0880	0.0133		0.8075	0.8075		0.7438	0.7438		1,368.4366	1,368.4366	0.4053		1,376.9473
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2872**	**13.2076**	**9.0880**	**0.0133**		**0.8075**	**0.8075**		**0.7438**	**0.7438**		**1,368.4366**	**1,368.4366**	**0.4053**		**1,376.9473**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0537	0.0607	0.7410	1.4100e-003	12.4996	8.1000e-004	12.5004	1.2641	7.4000e-004	1.2648		116.5908	116.5908	6.1900e-003		116.7209

	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
Total	**0.0537**	**0.0607**	**0.7410**	**1.4100e-003**	**12.4996**	**8.1000e-004**	**12.5004**	**1.2641**	**7.4000e-004**	**1.2648**		**116.5908**	**116.5908**	**6.1900e-003**		**116.7209**

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	lb/day										lb/day					
Off-Road	1.2872	13.2076	9.0880	0.0133		0.8075	0.8075		0.7438	0.7438	0.0000	1,368.4366	1,368.4366	0.4053		1,376.9473
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2872**	**13.2076**	**9.0880**	**0.0133**		**0.8075**	**0.8075**		**0.7438**	**0.7438**	**0.0000**	**1,368.4366**	**1,368.4366**	**0.4053**		**1,376.9473**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0537	0.0607	0.7410	1.4100e-003	12.4996	8.1000e-004	12.5004	1.2641	7.4000e-004	1.2648		116.5908	116.5908	6.1900e-003		116.7209
Total	**0.0537**	**0.0607**	**0.7410**	**1.4100e-003**	**12.4996**	**8.1000e-004**	**12.5004**	**1.2641**	**7.4000e-004**	**1.2648**		**116.5908**	**116.5908**	**6.1900e-003**		**116.7209**

3.7 Architectural Coating - 2016

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	lb/day										lb/day					
Archit. Coating	97.0569					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**97.4254**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0124	0.0140	0.1710	3.2000e-004	2.8845	1.9000e-004	2.8847	0.2917	1.7000e-004	0.2919		26.9056	26.9056	1.4300e-003		26.9356
Total	**0.0124**	**0.0140**	**0.1710**	**3.2000e-004**	**2.8845**	**1.9000e-004**	**2.8847**	**0.2917**	**1.7000e-004**	**0.2919**		**26.9056**	**26.9056**	**1.4300e-003**		**26.9356**

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	lb/day										lb/day					

Archit. Coating	97.0569					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449
Total	**97.4254**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**	**0.0000**	**281.4481**	**281.4481**	**0.0332**		**282.1449**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0124	0.0140	0.1710	3.2000e-004	2.8845	1.9000e-004	2.8847	0.2917	1.7000e-004	0.2919		26.9056	26.9056	1.4300e-003		26.9356
Total	**0.0124**	**0.0140**	**0.1710**	**3.2000e-004**	**2.8845**	**1.9000e-004**	**2.8847**	**0.2917**	**1.7000e-004**	**0.2919**		**26.9056**	**26.9056**	**1.4300e-003**		**26.9356**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.4525	16.7717	68.4623	0.1308	7.7808	0.2332	8.0140	2.0829	0.2144	2.2973		11,262.7810	11,262.7810	0.4253		11,271.7119
Unmitigated	6.4525	16.7717	68.4623	0.1308	7.7808	0.2332	8.0140	2.0829	0.2144	2.2973		11,262.7810	11,262.7810	0.4253		11,271.7119

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	1,436.78	358.24	38.60	2,750,216	2,750,216
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,436.78	358.24	38.60	2,750,216	2,750,216

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
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	Primary	Diverted	Pass-by
Junior College (2Yr)	9.50	7.30	7.30	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711	0.054898	0.001011	0.001367	0.008332	0.000508	0.002928

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0238	0.2161	0.1815	1.3000e-003		0.0164	0.0164		0.0164	0.0164		259.3128	259.3128	4.9700e-003	4.7500e-003	260.8910
NaturalGas Unmitigated	0.0238	0.2161	0.1815	1.3000e-003		0.0164	0.0164		0.0164	0.0164		259.3128	259.3128	4.9700e-003	4.7500e-003	260.8910

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	2204.16	0.0238	0.2161	0.1815	1.3000e-003		0.0164	0.0164		0.0164	0.0164		259.3128	259.3128	4.9700e-003	4.7500e-003	260.8910
Total		**0.0238**	**0.2161**	**0.1815**	**1.3000e-003**		**0.0164**	**0.0164**		**0.0164**	**0.0164**		**259.3128**	**259.3128**	**4.9700e-003**	**4.7500e-003**	**260.8910**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	2.20416	0.0238	0.2161	0.1815	1.3000e-003		0.0164	0.0164		0.0164	0.0164		259.3128	259.3128	4.9700e-003	4.7500e-003	260.8910
Total		**0.0238**	**0.2161**	**0.1815**	**1.3000e-003**		**0.0164**	**0.0164**		**0.0164**	**0.0164**		**259.3128**	**259.3128**	**4.9700e-003**	**4.7500e-003**	**260.8910**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8802	3.0000e-005	3.6300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.6400e-003	7.6400e-003	2.0000e-005		8.0800e-003
Unmitigated	0.8802	3.0000e-005	3.6300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.6400e-003	7.6400e-003	2.0000e-005		8.0800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1330					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7469					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.5000e-004	3.0000e-005	3.6300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.6400e-003	7.6400e-003	2.0000e-005		8.0800e-003
Total	**0.8802**	**3.0000e-005**	**3.6300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.6400e-003**	**7.6400e-003**	**2.0000e-005**		**8.0800e-003**

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	lb/day										lb/day					

Architectural Coating	0.1330					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7469					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.5000e-004	3.0000e-005	3.6300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.6400e-003	7.6400e-003	2.0000e-005		8.0800e-003
Total	**0.8802**	**3.0000e-005**	**3.6300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.6400e-003**	**7.6400e-003**	**2.0000e-005**		**8.0800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

tblProjectCharacteristics

ProjectNan	LocationSc	EMFAC_ID	WindSpeed	Precipitatio	ClimateZor	Urbanizatic	Operationa	UtilityComp
Vacaville C	AD	YSAQMD	6.8	55	4	Urban	2017	Pacific Gas

CO2Intens	CH4Intensi	N2OIntens	TotalPopul	TotalLotAc	UsingHistoricalEnergyUseData
641.35	0.029	0.006	0	1.77	0

PollutantSe	PollutantFu	PollutantName
0	Reactive O	ROG
0	Nitrogen O	NOX
0	Carbon Mo	CO
0	Sulfur Diox	SO2
0	Particulate	PM10
0	Particulate	PM2_5
0	Fugitive PM	PM10_FUG
0	Fugitive PM	PM25_FUG
1	Biogenic C	CO2_BIO
1	Non-Bioger	CO2_NBIO
1	Carbon Dic	CO2
1	Methane (C	CH4
1	Nitrous Oxi	N2O
1	CO2 Equiv	CO2E

LandUseTy	LandUseSu	LandUseUn	LandUseSi	LotAcreage	LandUseSq	Population
Educationa	Junior Colle	31.9	1000sqft	1.7	31900	0
Parking	Other Non-	3	1000sqft	0.07	3000	0

tblConstructionPhase

PhaseNum	PhaseNam	PhaseType	PhaseStart	PhaseEndI	NumDaysV	NumDays	PhaseDescription
1	Site Prepar	Site Prepar	2016/01/01	2016/01/01	5	1	

PhaseNam	OffRoadEq	OffRoadEq	UsageHour	HorsePowe	LoadFactor
Site Prepai	Graders	1	8	174	0.41
Site Prepai	Rubber Tire	1	7	255	0.4
Site Prepai	Tractors/Lc	1	8	97	0.37

PhaseNam	WorkerTrip	VendorTrip	HaulingTrip	WorkerTrip	VendorTrip	HaulingTrip	WorkerVeh	VendorVeh
Site Prepar	8	1	0	10.8	7.3	20	LD_Mix	HDT_Mix

HaulingVehicleClass
HHDT

PhaseNam	WorkerPer	VendorPer	HaulingPer	RoadSiltLo	MaterialSilt	MaterialMo	AverageVe	MeanVehic
Site Prepar	94	94	94	0.1	8.5	0.5	2.4	40

leSpeed

PhaseNam	Demolition:	DemolitionUnitAmount

PhaseNam	MaterialImp	MaterialExp	GradingSiz	ImportExpo	MeanVehic	AcresOfGra	MaterialMo	MaterialMo
Site Prepar	0	0		0	7.1	1	7.9	12

MaterialSiltContent
6.9

PhaseNam	Architectur	Architectur	EF_Reside	ConstArea_	EF_Reside	ConstArea_	EF_Nonres	ConstArea_

EF_Nonres	ConstArea_Nonresidential_Exterior

ParkingLotAcreage

tblVehicleTrips

VehicleTrip	VehicleTrip	WD_TR	ST_TR	SU_TR	HW_TL	HS_TL	HO_TL	CC_TL
Junior Coll	1000sqft	32.94	8.42	0.91	0	0	0	7.3
Other Non-	1000sqft	0	0	0	0	0	0	7.3

CW_TL	CNW_TL	PR_TP	DV_TP	PB_TP	HW_TTP	HS_TTP	HO_TTP	CC_TTP
9.5	7.3	92	7	1	0	0	0	88.6
9.5	7.3	0	0	0	0	0	0	0

CW_TTP	CNW_TTP
6.4	5
0	0

Season	EmissionTy	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD
A	FleetMix	0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711
A	CH4_IDLE	0	0	0	0	0.001062	0.000788	0.00798
A	CH4_RUNI	0.01311	0.023808	0.017442	0.029434	0.02271	0.015718	0.00751
A	CH4_STRE	0.009234	0.023421	0.013633	0.027284	0.022459	0.011357	0
A	CO_IDLEX	0	0	0	0	0.157597	0.121986	1.826387
A	CO_RUNE	1.100195	2.450207	1.494808	2.499907	2.072951	1.557078	1.039937
A	CO_STRE	2.463878	5.714675	3.639243	6.22573	4.044512	1.996372	23.95701
A	CO2_NBIC	0	0	0	0	8.792369	9.593906	594.2233
A	CO2_NBIC	276.1659	327.8532	401.7779	535.058	725.5014	620.4133	1080.313
A	CO2_NBIC	59.19985	70.27456	85.49288	112.1384	32.12577	18.97576	59.10018
A	NOX_IDLE	0	0	0	0	0.087518	0.137312	6.125202
A	NOX_RUN	0.113153	0.276837	0.191869	0.373303	2.000909	2.63118	3.348012
A	NOX_STRI	0.157802	0.312056	0.321598	0.572505	1.200117	0.667029	1.982547
A	PM10_IDLI	0	0	0	0	0.000967	0.001478	0.026064
A	PM10_PMI	0.03675	0.03675	0.03675	0.03675	0.055022	0.073792	0.120535
A	PM10_PMT	0.008	0.008	0.008	0.008	0.009842	0.010826	0.011581
A	PM10_RUI	0.001741	0.003376	0.001775	0.002209	0.026932	0.038522	0.08035
A	PM10_STF	0.002946	0.004978	0.003096	0.003535	0.000895	0.000443	0.004169
A	PM25_IDLI	0	0	0	0	0.000889	0.001359	0.023978
A	PM25_PMI	0.01575	0.01575	0.01575	0.01575	0.023581	0.031625	0.051658
A	PM25_PMT	0.002	0.002	0.002	0.002	0.00246	0.002706	0.002895
A	PM25_RUI	0.001603	0.003109	0.001633	0.002033	0.024784	0.035438	0.073918
A	PM25_STF	0.002718	0.004584	0.002853	0.003262	0.000824	0.000399	0.003482
A	ROG_DIUF	0.044161	0.135318	0.064526	0.084578	0.00191	0.000938	0.003919
A	ROG_HTS	0.110236	0.244653	0.148334	0.197371	0.055223	0.029454	0.167984
A	ROG_IDLE	0	0	0	0	0.024471	0.017902	0.171801
A	ROG_RES	0.034545	0.091332	0.05149	0.069408	0.000929	0.000469	0.001826
A	ROG_RUN	0.02646	0.068017	0.035975	0.071016	0.234138	0.216529	0.189666
A	ROG_RUN	0.26773	0.859867	0.47733	0.642746	0.348782	0.170134	0.65799
A	ROG_STR	0.161872	0.411479	0.239441	0.481012	0.39708	0.199147	1.619628
A	SO2_IDLE	0	0	0	0	0.000093	0.000099	0.005968
A	SO2_RUNI	0.003552	0.004119	0.004845	0.006177	0.007544	0.006369	0.01089
A	SO2_STRE	0.000775	0.000945	0.001066	0.001377	0.000414	0.000237	0.001048
A	TOG_DIUF	0.044161	0.135318	0.064526	0.084578	0.00191	0.000938	0.003919
A	TOG_HTSI	0.110236	0.244653	0.148334	0.197371	0.055223	0.029454	0.167984
A	TOG_IDLE	0	0	0	0	0.026179	0.019402	0.195582
A	TOG_RES	0.034545	0.091332	0.05149	0.069408	0.000929	0.000469	0.001826
A	TOG_RUN	0.040015	0.092885	0.054005	0.101542	0.269882	0.249221	0.215973
A	TOG_RUN	0.26773	0.859867	0.47733	0.642746	0.348782	0.170134	0.65799
A	TOG_STRI	0.172936	0.439554	0.255783	0.513738	0.424033	0.212756	1.73546
S	FleetMix	0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711
S	CH4_IDLE	0	0	0	0	0.001062	0.000788	0.00752
S	CH4_RUNI	0.01311	0.023808	0.017442	0.029434	0.02271	0.015718	0.00751
S	CH4_STRE	0.009234	0.023421	0.013633	0.027284	0.022459	0.011357	0
S	CO_IDLEX	0	0	0	0	0.157597	0.121986	1.327128
S	CO_RUNE	1.35692	2.93755	1.823308	3.03355	2.119308	1.573415	1.053712
S	CO_STRE	1.770649	4.140334	2.617947	4.483208	2.853716	1.431583	17.42332
S	CO2_NBIC	0	0	0	0	8.792369	9.593906	629.527
S	CO2_NBIC	304.2723	359.1681	441.5338	587.0173	725.5014	620.4134	1080.313
S	CO2_NBIC	59.19985	70.27456	85.49288	112.1384	32.12577	18.97576	59.10018

S	NOX_IDLE	0	0	0	0	0.087518	0.137312	6.322236
S	NOX_RUN	0.101209	0.244065	0.170868	0.331958	1.85959	2.467669	3.135187
S	NOX_STRI	0.142839	0.28244	0.291154	0.518125	1.126725	0.626309	1.860991
S	PM10_IDLI	0	0	0	0	0.000967	0.001478	0.021972
S	PM10_PMI	0.03675	0.03675	0.03675	0.03675	0.055022	0.073792	0.120535
S	PM10_PMT	0.008	0.008	0.008	0.008	0.009842	0.010826	0.011581
S	PM10_RUI	0.001741	0.003376	0.001775	0.002209	0.026932	0.038522	0.08035
S	PM10_STF	0.002946	0.004978	0.003096	0.003535	0.000895	0.000443	0.004169
S	PM25_IDLI	0	0	0	0	0.000889	0.001359	0.020214
S	PM25_PMI	0.01575	0.01575	0.01575	0.01575	0.023581	0.031625	0.051658
S	PM25_PMT	0.002	0.002	0.002	0.002	0.00246	0.002706	0.002895
S	PM25_RUI	0.001603	0.003109	0.001633	0.002033	0.024784	0.035438	0.073918
S	PM25_STF	0.002718	0.004584	0.002853	0.003262	0.000824	0.000399	0.003482
S	ROG_DIUF	0.117967	0.372874	0.171703	0.22258	0.005164	0.00252	0.011179
S	ROG_HTS	0.132798	0.319516	0.182219	0.238571	0.068572	0.03638	0.207661
S	ROG_IDLE	0	0	0	0	0.024471	0.017902	0.161906
S	ROG_RES	0.08719	0.244116	0.128651	0.170939	0.002393	0.001184	0.004914
S	ROG_RUN	0.02949	0.075858	0.039875	0.079845	0.2383	0.217551	0.190383
S	ROG_RUN	0.261642	0.843171	0.464501	0.626137	0.347718	0.169323	0.664972
S	ROG_STR	0.127418	0.324694	0.188913	0.379598	0.326583	0.163981	1.272546
S	SO2_IDLE	0	0	0	0	0.000093	0.000099	0.006322
S	SO2_RUNI	0.003919	0.004521	0.005331	0.006785	0.007545	0.006369	0.01089
S	SO2_STRE	0.000763	0.000918	0.001048	0.001346	0.000393	0.000227	0.000935
S	TOG_DIUF	0.117967	0.372874	0.171703	0.22258	0.005164	0.00252	0.011179
S	TOG_HTSI	0.132798	0.319516	0.182219	0.238571	0.068572	0.03638	0.207661
S	TOG_IDLE	0	0	0	0	0.026179	0.019402	0.184318
S	TOG_REST	0.08719	0.244116	0.128651	0.170939	0.002393	0.001184	0.004914
S	TOG_RUN	0.044841	0.103104	0.060109	0.113272	0.274533	0.25044	0.216758
S	TOG_RUN	0.261642	0.843171	0.464501	0.626137	0.347718	0.169323	0.664972
S	TOG_STRI	0.136131	0.346853	0.201809	0.405428	0.348746	0.175179	1.36346
W	FleetMix	0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711
W	CH4_IDLE	0	0	0	0	0.001062	0.000788	0.008614
W	CH4_RUNI	0.01311	0.023808	0.017442	0.029434	0.02271	0.015718	0.00751
W	CH4_STRE	0.009234	0.023421	0.013633	0.027284	0.022459	0.011357	0
W	CO_IDLEX	0	0	0	0	0.157597	0.121986	2.51584
W	CO_RUNE	1.073066	2.417428	1.461198	2.458564	2.031649	1.554019	1.044742
W	CO_STRE	3.339829	7.732195	4.932026	8.429884	5.770232	2.816837	34.0911
W	CO2_NBIC	0	0	0	0	8.792369	9.593906	545.4704
W	CO2_NBIC	268.9794	319.8506	391.6274	521.8122	725.5014	620.4134	1080.313
W	CO2_NBIC	59.19985	70.27456	85.49288	112.1384	32.12577	18.97576	59.10018
W	NOX_IDLE	0	0	0	0	0.087518	0.137312	5.853107
W	NOX_RUN	0.127248	0.313025	0.216418	0.421235	2.060292	2.691406	3.421418
W	NOX_STRI	0.176104	0.348532	0.358944	0.639049	1.294656	0.719601	2.140952
W	PM10_IDLI	0	0	0	0	0.000967	0.001478	0.031714
W	PM10_PMI	0.03675	0.03675	0.03675	0.03675	0.055022	0.073792	0.120535
W	PM10_PMT	0.008	0.008	0.008	0.008	0.009842	0.010826	0.011581
W	PM10_RUI	0.001741	0.003376	0.001775	0.002209	0.026932	0.038522	0.08035
W	PM10_STF	0.002946	0.004978	0.003096	0.003535	0.000895	0.000443	0.004169
W	PM25_IDLI	0	0	0	0	0.000889	0.001359	0.029177
W	PM25_PMI	0.01575	0.01575	0.01575	0.01575	0.023581	0.031625	0.051658
W	PM25_PMT	0.002	0.002	0.002	0.002	0.00246	0.002706	0.002895

W	PM25_RUI	0.001603	0.003109	0.001633	0.002033	0.024784	0.035438	0.073918
W	PM25_STF	0.002718	0.004584	0.002853	0.003262	0.000824	0.000399	0.003482
W	ROG_DIUF	0.012083	0.032504	0.018037	0.024451	0.000505	0.000259	0.000887
W	ROG_HTS	0.111016	0.245365	0.148745	0.196598	0.056743	0.030342	0.187634
W	ROG_IDLE	0	0	0	0	0.024471	0.017902	0.185465
W	ROG_RES	0.006525	0.01599	0.009908	0.013642	0.000178	0.000094	0.000288
W	ROG_RUN	0.026615	0.068367	0.036077	0.070387	0.229702	0.21565	0.189183
W	ROG_RUN	0.30832	1.045595	0.572487	0.769213	0.385788	0.188665	0.71925
W	ROG_STR	0.208361	0.529002	0.307438	0.616452	0.493491	0.247523	2.144166
W	SO2_IDLE	0	0	0	0	0.000093	0.000099	0.005478
W	SO2_RUNI	0.003459	0.004017	0.004722	0.006023	0.007543	0.006369	0.01089
W	SO2_STRE	0.000791	0.00098	0.001088	0.001416	0.000444	0.000251	0.001224
W	TOG_DIUF	0.012083	0.032504	0.018037	0.024451	0.000505	0.000259	0.000887
W	TOG_HTSI	0.111016	0.245365	0.148745	0.196598	0.056743	0.030342	0.187634
W	TOG_IDLE	0	0	0	0	0.026179	0.019402	0.211138
W	TOG_RES	0.006525	0.01599	0.009908	0.013642	0.000178	0.000094	0.000288
W	TOG_RUN	0.039613	0.092549	0.053391	0.10002	0.2649	0.248131	0.215428
W	TOG_RUN	0.30832	1.045595	0.572487	0.769213	0.385788	0.188665	0.71925
W	TOG_STRI	0.222604	0.565098	0.328422	0.658396	0.526997	0.264456	2.297879

HHD	OBUS	UBUS	MCY	SBUS	MH
0.054898	0.001011	0.001367	0.008332	0.000508	0.002928
0.024662	0.01879	0	0	0.005444	0
0.010147	0.00194	0	0	0.00848	0
0	0	0	0	0	0
2.941689	2.366964	0	0	1.069962	0
1.341984	2.870684	4.581536	33.35987	3.417762	3.527592
95.69364	15.11867	8.224065	10.75636	36.04735	8.986897
557.2732	563.7421	0	0	562.5478	0
1638.412	945.9118	2016.931	162.0183	1129.15	730.8519
63.89191	35.77506	29.91343	42.09353	125.6174	29.7104
4.53305	5.547784	0	0	8.052276	0
4.825575	3.054593	9.634945	1.301545	8.730939	1.929077
4.626414	1.993597	0.865641	0.314588	2.778109	0.905325
0.013338	0.010511	0	0	0.026779	0
0.060614	0.073819	0.699141	0.036749	0.605618	0.051788
0.035217	0.009584	0.008	0.008	0.011214	0.008643
0.077101	0.025944	0.164482	0.000579	0.093972	0.036663
0.005329	0.001143	0.001018	0.001426	0.005622	0.001052
0.012271	0.00967	0	0	0.024636	0
0.025977	0.031637	0.299632	0.01575	0.259551	0.022195
0.008804	0.002396	0.002	0.002	0.002803	0.002161
0.070933	0.023868	0.151268	0.000474	0.086415	0.033722
0.004295	0.000994	0.000854	0.00115	0.004848	0.000936
0.004541	0.000989	0.005512	0.877726	0.033093	0.991042
0.222795	0.0302	0.105368	0.444654	0.24442	0.07223
0.530956	0.404538	0	0	0.117215	0
0.002272	0.000418	0.00228	0.458059	0.010583	0.334268
0.226654	0.215767	0.761676	3.177564	0.345175	0.181001
1.165359	0.300519	0.759076	1.46089	1.926083	1.70073
3.816489	0.910703	0.746573	2.260851	2.451224	0.512598
0.005596	0.005661	0	0	0.005649	0
0.016462	0.009728	0.020384	0.002329	0.011454	0.007653
0.002294	0.000642	0.000467	0.000683	0.001963	0.000469
0.004541	0.000989	0.005512	0.877726	0.033093	0.991042
0.222795	0.0302	0.105368	0.444654	0.24442	0.07223
0.604453	0.460536	0	0	0.133441	0
0.002272	0.000418	0.00228	0.458059	0.010583	0.334268
0.258193	0.249201	0.841874	3.457006	0.388793	0.215796
1.165359	0.300519	0.759076	1.46089	1.926083	1.70073
4.090782	0.973377	0.799036	2.429345	2.622607	0.547918
0.054898	0.001011	0.001367	0.008332	0.000508	0.002928
0.023241	0.017708	0	0	0.005131	0
0.010147	0.00194	0	0	0.00848	0
0	0	0	0	0	0
2.137552	1.719934	0	0	0.777478	0
1.352625	2.955539	4.647659	33.01056	3.456387	3.650158
70.40328	10.76539	6.207504	8.960835	29.18922	6.173827
590.3817	597.2349	0	0	595.9696	0
1638.412	945.9118	2016.931	162.0183	1129.15	730.8519
63.89191	35.77506	29.91343	42.09353	125.6174	29.7104

4.678869	5.726244	0	0	8.311301	0
4.544635	2.795142	9.003033	1.095279	8.152547	1.749007
4.336859	1.869537	0.807361	0.289485	2.547423	0.848564
0.011244	0.008861	0	0	0.022575	0
0.060614	0.073819	0.699141	0.036749	0.605618	0.051788
0.035217	0.009584	0.008	0.008	0.011214	0.008643
0.077101	0.025944	0.164482	0.000579	0.093972	0.036663
0.005329	0.001143	0.001018	0.001426	0.005622	0.001052
0.010345	0.008152	0	0	0.020769	0
0.025977	0.031637	0.299632	0.01575	0.259551	0.022195
0.008804	0.002396	0.002	0.002	0.002803	0.002161
0.070933	0.023868	0.151268	0.000474	0.086415	0.033722
0.004295	0.000994	0.000854	0.00115	0.004848	0.000936
0.01301	0.002719	0.015717	2.563403	0.096095	2.679967
0.268513	0.035062	0.124948	0.763283	0.280027	0.088125
0.500376	0.38124	0	0	0.110464	0
0.005995	0.000968	0.005661	1.573886	0.025173	0.82743
0.226891	0.22085	0.778463	3.07382	0.345701	0.18585
1.188449	0.298793	0.731334	1.408401	1.686994	1.677473
2.862566	0.740674	0.612853	1.852974	2.098214	0.40153
0.005929	0.005998	0	0	0.005985	0
0.016462	0.009729	0.020386	0.00232	0.011455	0.007655
0.001867	0.000568	0.000431	0.000642	0.001845	0.000422
0.01301	0.002719	0.015717	2.563403	0.096095	2.679967
0.268513	0.035062	0.124948	0.763283	0.280027	0.088125
0.56964	0.434012	0	0	0.125755	0
0.005995	0.000968	0.005661	1.573886	0.025173	0.82743
0.25845	0.254733	0.859627	3.347843	0.389415	0.221225
1.188449	0.298793	0.731334	1.408401	1.686994	1.677473
3.068594	0.791593	0.655909	1.990976	2.244462	0.429179
0.054898	0.001011	0.001367	0.008332	0.000508	0.002928
0.026623	0.020284	0	0	0.005877	0
0.010147	0.00194	0	0	0.00848	0
0	0	0	0	0	0
4.052163	3.260483	0	0	1.473868	0
1.335334	2.793089	4.750814	37.73706	3.522043	3.476313
136.0412	21.54528	11.34046	13.7204	45.86114	13.20978
511.5519	517.4901	0	0	516.3937	0
1638.412	945.9118	2016.931	162.0183	1129.15	730.8519
63.89191	35.77506	29.91343	42.09353	125.6174	29.7104
4.331682	5.301338	0	0	7.694576	0
4.925641	3.18078	9.847638	1.433664	8.933135	2.022234
5.001098	2.152271	0.937033	0.344602	3.02845	0.97761
0.01623	0.01279	0	0	0.032584	0
0.060614	0.073819	0.699141	0.036749	0.605618	0.051788
0.035217	0.009584	0.008	0.008	0.011214	0.008643
0.077101	0.025944	0.164482	0.000579	0.093972	0.036663
0.005329	0.001143	0.001018	0.001426	0.005622	0.001052
0.014931	0.011767	0	0	0.029978	0
0.025977	0.031637	0.299632	0.01575	0.259551	0.022195
0.008804	0.002396	0.002	0.002	0.002803	0.002161

0.070933	0.023868	0.151268	0.000474	0.086415	0.033722
0.004295	0.000994	0.000854	0.00115	0.004848	0.000936
0.00107	0.000319	0.001423	0.141077	0.008384	0.266565
0.257755	0.031397	0.121321	0.442686	0.263608	0.081383
0.573185	0.436713	0	0	0.126538	0
0.000366	0.000084	0.00047	0.0431	0.001914	0.062296
0.226444	0.210228	0.749851	3.388919	0.346962	0.177104
1.259539	0.325758	0.905546	1.784036	2.442187	1.823854
5.278976	1.151529	0.941288	2.867532	2.905014	0.673647
0.005137	0.005197	0	0	0.005186	0
0.016462	0.009726	0.020386	0.002404	0.011456	0.007652
0.002974	0.00075	0.000522	0.000749	0.002132	0.000541
0.00107	0.000319	0.001423	0.141077	0.008384	0.266565
0.257755	0.031397	0.121321	0.442686	0.263608	0.081383
0.652527	0.497165	0	0	0.144054	0
0.000366	0.000084	0.00047	0.0431	0.001914	0.062296
0.257965	0.243158	0.829334	3.679445	0.3906	0.211318
1.259539	0.325758	0.905546	1.784036	2.442187	1.823854
5.658389	1.23091	1.00751	3.081697	3.108896	0.720114

RoadPerce	RoadSiltLo	MaterialSilt	MaterialMo	MobileAver	MeanVehicleSpeed
100	0.1	4.3	0.5	2.4	40

Woodstove	NumberCo	NumberCa	NumberNo	NumberPel	Woodstove	WoodstoveWoodMass

FireplacesI	NumberWc	NumberGa	NumberPrc	NumberNo	FireplaceH	FireplaceD	FireplaceWoodMass

ROG_EF
2.14E-05

Area_EF_F	Area_Resi	Area_EF_F	Area_Resi	Area_EF_N	Area_Nonr	Area_EF_N	Area_Nonr	Reapplicati
100	0	100	0	150	52350	150	17450	10

onRatePercent

NumberSn	NumberSummerDays
0	180

EnergyUse	T24E	NT24E	LightingEle	T24NG	NT24NG
Junior Coll	3.34	2.27	3.34	21.92	3.3
Other Non-	0	0	0	0	0

WaterLand	WaterLand	IndoorWate	OutdoorWa	ElectricityIr	ElectricityIr	ElectricityIr	ElectricityIr	SepticTank
Junior Coll	1000sqft	1564664	2447295	2117	111	1272	1911	0
Other Non-	1000sqft	0	0	2117	111	1272	1911	0

AerobicPer	Anaerobica	AnaDigest(	AnaDigestCogenCombDigestGasPercent
100	0	100	0
100	0	100	0

SolidWaste	SolidWaste	SolidWaste	LandfillNoC	LandfillCap	LandfillCaptureGasEnergyRecovery
Junior Coll	1000sqft	41.47	6	94	0
Other Non-	1000sqft	0	6	94	0

Vegetation	Vegetation	AcresBegir	AcresEnd	CO2peracre

BroadSpec	NumberOfl	CO2perTree

ConstMitiga	FuelType	Tier	NumberOfI	TotalNumb	DPF	OxidationCatalyst
Air Compre	Diesel	No Change	0	1	No Change	0
Cement an	Diesel	No Change	0	1	No Change	0
Cranes	Diesel	No Change	0	1	No Change	0
Forklifts	Diesel	No Change	0	1	No Change	0
Generator	Diesel	No Change	0	1	No Change	0
Graders	Diesel	No Change	0	2	No Change	0
Pavers	Diesel	No Change	0	1	No Change	0
Paving Equ	Diesel	No Change	0	1	No Change	0
Rollers	Diesel	No Change	0	1	No Change	0
Rubber Tir	Diesel	No Change	0	2	No Change	0
Tractors/Lo	Diesel	No Change	0	7	No Change	0
Trenchers	Diesel	No Change	0	2	No Change	0
Welders	Diesel	No Change	0	3	No Change	0

tblConstDustMitigation

SoilStabiliz	SoilStabiliz	SoilStabiliz	ReplaceGr	ReplaceGr	ReplaceGr	WaterExpo	WaterExpo	WaterExpo
0	0	0	0	0	0	1	2	55

WaterExpo	WaterUnpa	WaterUnpa	WaterUnpa	WaterUnpa	CleanPavedRoadPercentReduction
55	0	0	0	0	0

ProjectSett	IncreaseDe	IncreaseDe	IncreaseDe	IncreaseDi	ImproveWa	ImproveWa	ImproveDe	ImproveDe

IncreaseTr	IncreaseTr	IntegrateBe	IntegrateBe	ImprovePe	ImprovePe	ProvideTra	ProvideTra	ProvideTra

ImplementI	ImplementI	LimitParkin	LimitParkin	UnbundleP	UnbundleP	OnStreetM	OnStreetM	ProvideBR

ProvideBR	ExpandTra	ExpandTra	IncreaseTr	IncreaseTr	IncreaseTransitFrequencyHeadwaysPercentR

ʾeduction

Implement	Implement	Implement	TransitSub	TransitSub	TransitSub	ImplementI	ImplementI	WorkplaceI
0			0			0		0

Workplace	Workplace	Encourage	Encourage	Encourage	Encourage	MarketCon	MarketCon	EmployeeV
		0				0		0

Employee\	Employee\	ProvideRid	ProvideRid	ImplementS	ImplementSchoolBusProgramPercentFamilyU
	2	0		0	

Jsing

Landscape	Landscape	Landscape	Landscape	Landscape	Landscape	UseLowVC	UseLowVC	UseLowVC
0		0		0		0	100	0

UseLowVC	UseLowVC	UseLowVC	UseLowVC	UseLowVC	HearthOnly	NoHearthC	UseLowVOCCleaningS
100	0	150	0	150	0	0	0

SuppliesCheck

tblEnergyMitigation

ExceedTitle	ExceedTitle	InstallHighE	InstallHighE	OnSiteRen	KwhGenera	KwhGenera	PercentOfE	PercentOfE
1	32.5	1	5	0	0	0	0	0

ElectricityUseGenerated

ApplianceT	ApplianceL	PercentImprovement
ClothWasher		30
DishWasher		15
Fan		50
Refrigerator		15

ApplyWate	ApplyWate	ApplyWate	UseReclair	PercentOu	PercentInd	UseGreyW	PercentOu	PercentInd
0	0	0	0	0	0	0	0	0

InstallLowF	PercentRe	InstallLowF	PercentRe	InstallLowF	PercentRe	InstallLowF	PercentRe	TurfReduct
1	32	0	18	1	20	0	20	0

TurfReduct	TurfReduct	UseWaterE	UseWaterE	WaterEffici	MAWA	ETWU
0	0	1	6.1	0	0	0

InstituteRe	InstituteRecyclingAndCompostingServicesWastePercentReduction
1	30

OperOffRo	OperOffRo	OperHours	OperDaysF	OperHorse	OperLoadF	OperFuelType

SubModule	PhaseNam	Season	Remarks
1			
3			site size increased to account for approx 40,000 sq ft landscaping
4			GHG emissions from operation only
5	Architectural Coating		
5	Building Construction		tractor/loader/backhoe added to account for landscaping equipment
5	Paving		
5	Utilities		trenching equipment
6			water trucks in first three phases
9			sie prep and grading over majoority of site - building footprint, landsca

aping, and hardscape

Vacaville Center Phase 2

Yolo/Solano AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	30.00	1000sqft	0.69	30,000.00	0
Other Non-Asphalt Surfaces	3.00	1000sqft	0.07	3,000.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 6.8 **Precipitation Freq (Days)** 55

Climate Zone 4 **Operational Year** 2035

Utility Company Pacific Gas & Electric Company

CO2 Intensity (lb/MWhr) 641.35 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - site size increased to account for approx 3,000 sq ft landscaping

Construction Phase - trenching phase for utilities, lengthed construction phase to account for landscaping

Trips and VMT - water trucks in first three phases

Vehicle Trips - per traffic analysis

Road Dust - all roads paved

Area Coating -

Off-road Equipment - trenching equipment

Off-road Equipment -

Off-road Equipment - non asphalt - pouring concrete walkways

Off-road Equipment -

Grading - grading over full site - building footprint, landscaping, and hardscape

Water And Wastewater - all wastewater treated at WWTP

Construction Off-road Equipment Mitigation -

Off-road Equipment -

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	7.00
tblConstructionPhase	NumDays	100.00	103.00
tblConstructionPhase	NumDays	2.00	7.00
tblConstructionPhase	NumDays	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblProjectCharacteristics	OperationalYear	2014	2035
tblRoadDust	RoadPercentPave	94	100
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblVehicleTrips	WD_TR	27.49	45.04
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2034	0.2700	0.2163	0.4868	9.9000e-004	0.8315	4.7000e-003	0.8362	0.0855	4.6800e-003	0.0902	0.0000	82.7561	82.7561	3.2600e-003	0.0000	82.8246
Total	**0.2700**	**0.2163**	**0.4868**	**9.9000e-004**	**0.8315**	**4.7000e-003**	**0.8362**	**0.0855**	**4.6800e-003**	**0.0902**	**0.0000**	**82.7561**	**82.7561**	**3.2600e-003**	**0.0000**	**82.8246**

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					
2034	0.2700	0.2163	0.4868	9.9000e-004	0.8297	4.7000e-003	0.8344	0.0847	4.6800e-003	0.0894	0.0000	82.7561	82.7561	3.2600e-003	0.0000	82.8245
Total	**0.2700**	**0.2163**	**0.4868**	**9.9000e-004**	**0.8297**	**4.7000e-003**	**0.8344**	**0.0847**	**4.6800e-003**	**0.0894**	**0.0000**	**82.7561**	**82.7561**	**3.2600e-003**	**0.0000**	**82.8245**

	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**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.21**	**0.00**	**0.21**	**0.97**	**0.00**	**0.92**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Area	0.1519	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.9000e-004	5.9000e-004	0.0000	0.0000	6.2000e-004
Energy	4.0800e-003	0.0371	0.0312	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003	0.0000	118.4848	118.4848	4.3100e-003	1.4700e-003	119.0312
Mobile	0.4420	1.1059	5.2490	0.0161	0.9738	0.0255	0.9993	0.2616	0.0235	0.2851	0.0000	1,086.0363	1,086.0363	0.0286	0.0000	1,086.6361
Waste						0.0000	0.0000		0.0000	0.0000	7.9167	0.0000	7.9167	0.4679	0.0000	17.7417
Water						0.0000	0.0000		0.0000	0.0000	0.5206	4.6597	5.1803	2.0000e-003	1.1800e-003	5.5868
Total	**0.5979**	**1.1430**	**5.2804**	**0.0164**	**0.9738**	**0.0284**	**1.0022**	**0.2616**	**0.0264**	**0.2880**	**8.4373**	**1,209.1814**	**1,217.6186**	**0.5027**	**2.6500e-003**	**1,228.9964**

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	0.1519	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.9000e-004	5.9000e-004	0.0000	0.0000	6.2000e-004
Energy	4.0800e-003	0.0371	0.0312	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003	0.0000	118.4848	118.4848	4.3100e-003	1.4700e-003	119.0312
Mobile	0.4420	1.1059	5.2490	0.0161	0.9738	0.0255	0.9993	0.2616	0.0235	0.2851	0.0000	1,086.0363	1,086.0363	0.0286	0.0000	1,086.6361
Waste						0.0000	0.0000		0.0000	0.0000	7.9167	0.0000	7.9167	0.4679	0.0000	17.7417
Water						0.0000	0.0000		0.0000	0.0000	0.5206	4.6597	5.1803	1.9900e-003	1.1700e-003	5.5860
Total	**0.5979**	**1.1430**	**5.2804**	**0.0164**	**0.9738**	**0.0284**	**1.0022**	**0.2616**	**0.0264**	**0.2880**	**8.4373**	**1,209.1814**	**1,217.6186**	**0.5027**	**2.6400e-003**	**1,228.9956**

	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**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.38**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2034	1/3/2034	5	2	
2	Grading	Grading	1/4/2034	1/12/2034	5	7	
3	Utilities	Trenching	1/13/2034	1/19/2034	5	5	
4	Building Construction	Building Construction	1/20/2034	6/13/2034	5	103	
5	Paving	Paving	6/14/2034	6/20/2034	5	5	
6	Architectural Coating	Architectural Coating	6/21/2034	6/29/2034	5	7	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 49,500; Non-Residential Outdoor: 16,500 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Utilities	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Utilities	Trenchers	2	7.00	80	0.50
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	3	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Architectural Coating	Air Compressors		1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Utilities	4	10.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	14.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2034

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					5.3000e-004	0.0000	5.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7000e-004	2.0500e-003	6.5300e-003	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.9750	0.9750	4.0000e-005	0.0000	0.9758
Total	**4.7000e-004**	**2.0500e-003**	**6.5300e-003**	**1.0000e-005**	**5.3000e-004**	**7.0000e-005**	**6.0000e-004**	**6.0000e-005**	**7.0000e-005**	**1.3000e-004**	**0.0000**	**0.9750**	**0.9750**	**4.0000e-005**	**0.0000**	**0.9758**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	4.0000e-005	9.0000e-005	0.0000	5.5000e-004	0.0000	5.5000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0202	0.0202	0.0000	0.0000	0.0202
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	4.0900e-003	0.0000	4.0900e-003	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0279	0.0279	0.0000	0.0000	0.0280
Total	**2.0000e-005**	**5.0000e-005**	**1.9000e-004**	**0.0000**	**4.6400e-003**	**0.0000**	**4.6400e-003**	**4.7000e-004**	**0.0000**	**4.7000e-004**	**0.0000**	**0.0481**	**0.0481**	**0.0000**	**0.0000**	**0.0481**

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					2.4000e-004	0.0000	2.4000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7000e-004	2.0500e-003	6.5300e-003	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.9750	0.9750	4.0000e-005	0.0000	0.9758
Total	**4.7000e-004**	**2.0500e-003**	**6.5300e-003**	**1.0000e-005**	**2.4000e-004**	**7.0000e-005**	**3.1000e-004**	**3.0000e-005**	**7.0000e-005**	**1.0000e-004**	**0.0000**	**0.9750**	**0.9750**	**4.0000e-005**	**0.0000**	**0.9758**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	4.0000e-005	9.0000e-005	0.0000	5.5000e-004	0.0000	5.5000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0202	0.0202	0.0000	0.0000	0.0202
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	4.0900e-003	0.0000	4.0900e-003	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0279	0.0279	0.0000	0.0000	0.0280
Total	**2.0000e-005**	**5.0000e-005**	**1.9000e-004**	**0.0000**	**4.6400e-003**	**0.0000**	**4.6400e-003**	**4.7000e-004**	**0.0000**	**4.7000e-004**	**0.0000**	**0.0481**	**0.0481**	**0.0000**	**0.0000**	**0.0481**

3.3 Grading - 2034

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					2.6300e-003	0.0000	2.6300e-003	1.4500e-003	0.0000	1.4500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9600e-003	0.0128	0.0261	5.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0009	4.0009	1.6000e-004	0.0000	4.0041
Total	**1.9600e-003**	**0.0128**	**0.0261**	**5.0000e-005**	**2.6300e-003**	**2.8000e-004**	**2.9100e-003**	**1.4500e-003**	**2.8000e-004**	**1.7300e-003**	**0.0000**	**4.0009**	**4.0009**	**1.6000e-004**	**0.0000**	**4.0041**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	1.3000e-004	3.3000e-004	0.0000	1.9400e-003	0.0000	1.9400e-003	2.0000e-004	0.0000	2.0000e-004	0.0000	0.0705	0.0705	0.0000	0.0000	0.0706
Worker	5.0000e-005	7.0000e-005	7.1000e-004	0.0000	0.0286	0.0000	0.0286	2.9000e-003	0.0000	2.9000e-003	0.0000	0.1955	0.1955	1.0000e-005	0.0000	0.1957
Total	**7.0000e-005**	**2.0000e-004**	**1.0400e-003**	**0.0000**	**0.0306**	**0.0000**	**0.0306**	**3.1000e-003**	**0.0000**	**3.1000e-003**	**0.0000**	**0.2660**	**0.2660**	**1.0000e-005**	**0.0000**	**0.2662**

Mitigated Construction On-Site

Category	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
	tons/yr										MT/yr					
Fugitive Dust					1.1900e-003	0.0000	1.1900e-003	6.5000e-004	0.0000	6.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9600e-003	0.0128	0.0261	5.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0008	4.0008	1.6000e-004	0.0000	4.0041
Total	**1.9600e-003**	**0.0128**	**0.0261**	**5.0000e-005**	**1.1900e-003**	**2.8000e-004**	**1.4700e-003**	**6.5000e-004**	**2.8000e-004**	**9.3000e-004**	**0.0000**	**4.0008**	**4.0008**	**1.6000e-004**	**0.0000**	**4.0041**

Mitigated Construction Off-Site

Category	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
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	1.3000e-004	3.3000e-004	0.0000	1.9400e-003	0.0000	1.9400e-003	2.0000e-004	0.0000	2.0000e-004	0.0000	0.0705	0.0705	0.0000	0.0000	0.0706
Worker	5.0000e-005	7.0000e-005	7.1000e-004	0.0000	0.0286	0.0000	0.0286	2.9000e-003	0.0000	2.9000e-003	0.0000	0.1955	0.1955	1.0000e-005	0.0000	0.1957
Total	**7.0000e-005**	**2.0000e-004**	**1.0400e-003**	**0.0000**	**0.0306**	**0.0000**	**0.0306**	**3.1000e-003**	**0.0000**	**3.1000e-003**	**0.0000**	**0.2660**	**0.2660**	**1.0000e-005**	**0.0000**	**0.2662**

3.4 Utilities - 2034

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	1.9100e-003	0.0118	0.0204	3.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	2.8150	2.8150	1.5000e-004	0.0000	2.8182
Total	**1.9100e-003**	**0.0118**	**0.0204**	**3.0000e-005**		**4.8000e-004**	**4.8000e-004**		**4.8000e-004**	**4.8000e-004**	**0.0000**	**2.8150**	**2.8150**	**1.5000e-004**	**0.0000**	**2.8182**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	9.0000e-005	2.4000e-004	0.0000	1.3800e-003	0.0000	1.3900e-003	1.4000e-004	0.0000	1.4000e-004	0.0000	0.0504	0.0504	0.0000	0.0000	0.0504
Worker	3.0000e-005	5.0000e-005	5.1000e-004	0.0000	0.0204	0.0000	0.0204	2.0700e-003	0.0000	2.0700e-003	0.0000	0.1396	0.1396	1.0000e-005	0.0000	0.1398
Total	**5.0000e-005**	**1.4000e-004**	**7.5000e-004**	**0.0000**	**0.0218**	**0.0000**	**0.0218**	**2.2100e-003**	**0.0000**	**2.2100e-003**	**0.0000**	**0.1900**	**0.1900**	**1.0000e-005**	**0.0000**	**0.1902**

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	1.9100e-003	0.0118	0.0204	3.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	2.8150	2.8150	1.5000e-004	0.0000	2.8182

Total	**1.9100e-003**	**0.0118**	**0.0204**	**3.0000e-005**		**4.8000e-004**	**4.8000e-004**		**4.8000e-004**	**4.8000e-004**	**0.0000**	**2.8150**	**2.8150**	**1.5000e-004**	**0.0000**	**2.8182**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	9.0000e-005	2.4000e-004	0.0000	1.3800e-003	0.0000	1.3900e-003	1.4000e-004	0.0000	1.4000e-004	0.0000	0.0504	0.0504	0.0000	0.0000	0.0504
Worker	3.0000e-005	5.0000e-005	5.1000e-004	0.0000	0.0204	0.0000	0.0204	2.0700e-003	0.0000	2.0700e-003	0.0000	0.1396	0.1396	1.0000e-005	0.0000	0.1398
Total	**5.0000e-005**	**1.4000e-004**	**7.5000e-004**	**0.0000**	**0.0218**	**0.0000**	**0.0218**	**2.2100e-003**	**0.0000**	**2.2100e-003**	**0.0000**	**0.1900**	**0.1900**	**1.0000e-005**	**0.0000**	**0.1902**

3.5 Building Construction - 2034

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	0.0313	0.1659	0.3678	7.2000e-004		3.1800e-003	3.1800e-003		3.1800e-003	3.1800e-003	0.0000	61.4615	61.4615	2.5100e-003	0.0000	61.5142
Total	**0.0313**	**0.1659**	**0.3678**	**7.2000e-004**		**3.1800e-003**	**3.1800e-003**		**3.1800e-003**	**3.1800e-003**	**0.0000**	**61.4615**	**61.4615**	**2.5100e-003**	**0.0000**	**61.5142**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6200e-003	9.3300e-003	0.0242	6.0000e-005	0.1426	2.2000e-004	0.1428	0.0145	2.0000e-004	0.0147	0.0000	5.1899	5.1899	4.0000e-005	0.0000	5.1907
Worker	9.9000e-004	1.4900e-003	0.0146	7.0000e-005	0.5895	4.0000e-005	0.5895	0.0597	4.0000e-005	0.0598	0.0000	4.0273	4.0273	1.7000e-004	0.0000	4.0308
Total	**2.6100e-003**	**0.0108**	**0.0388**	**1.3000e-004**	**0.7320**	**2.6000e-004**	**0.7323**	**0.0743**	**2.4000e-004**	**0.0745**	**0.0000**	**9.2172**	**9.2172**	**2.1000e-004**	**0.0000**	**9.2215**

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	0.0313	0.1659	0.3678	7.2000e-004		3.1800e-003	3.1800e-003		3.1800e-003	3.1800e-003	0.0000	61.4615	61.4615	2.5100e-003	0.0000	61.5142
Total	**0.0313**	**0.1659**	**0.3678**	**7.2000e-004**		**3.1800e-003**	**3.1800e-003**		**3.1800e-003**	**3.1800e-003**	**0.0000**	**61.4615**	**61.4615**	**2.5100e-003**	**0.0000**	**61.5142**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6200e-003	9.3300e-003	0.0242	6.0000e-005	0.1426	2.2000e-004	0.1428	0.0145	2.0000e-004	0.0147	0.0000	5.1899	5.1899	4.0000e-005	0.0000	5.1907
Worker	9.9000e-004	1.4900e-003	0.0146	7.0000e-005	0.5895	4.0000e-005	0.5895	0.0597	4.0000e-005	0.0598	0.0000	4.0273	4.0273	1.7000e-004	0.0000	4.0308
Total	**2.6100e-003**	**0.0108**	**0.0388**	**1.3000e-004**	**0.7320**	**2.6000e-004**	**0.7323**	**0.0743**	**2.4000e-004**	**0.0745**	**0.0000**	**9.2172**	**9.2172**	**2.1000e-004**	**0.0000**	**9.2215**

3.6 Paving - 2034

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	1.6700e-003	9.4900e-003	0.0179	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	2.6206	2.6206	1.4000e-004	0.0000	2.6234
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.6700e-003**	**9.4900e-003**	**0.0179**	**3.0000e-005**		**3.5000e-004**	**3.5000e-004**		**3.5000e-004**	**3.5000e-004**	**0.0000**	**2.6206**	**2.6206**	**1.4000e-004**	**0.0000**	**2.6234**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	8.0000e-005	7.6000e-004	0.0000	0.0307	0.0000	0.0307	3.1100e-003	0.0000	3.1100e-003	0.0000	0.2095	0.2095	1.0000e-005	0.0000	0.2097
Total	**5.0000e-005**	**8.0000e-005**	**7.6000e-004**	**0.0000**	**0.0307**	**0.0000**	**0.0307**	**3.1100e-003**	**0.0000**	**3.1100e-003**	**0.0000**	**0.2095**	**0.2095**	**1.0000e-005**	**0.0000**	**0.2097**

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	1.6700e-003	9.4900e-003	0.0179	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	2.6206	2.6206	1.4000e-004	0.0000	2.6234
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.6700e-003**	**9.4900e-003**	**0.0179**	**3.0000e-005**		**3.5000e-004**	**3.5000e-004**		**3.5000e-004**	**3.5000e-004**	**0.0000**	**2.6206**	**2.6206**	**1.4000e-004**	**0.0000**	**2.6234**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	8.0000e-005	7.6000e-004	0.0000	0.0307	0.0000	0.0307	3.1100e-003	0.0000	3.1100e-003	0.0000	0.2095	0.2095	1.0000e-005	0.0000	0.2097
Total	**5.0000e-005**	**8.0000e-005**	**7.6000e-004**	**0.0000**	**0.0307**	**0.0000**	**0.0307**	**3.1100e-003**	**0.0000**	**3.1100e-003**	**0.0000**	**0.2095**	**0.2095**	**1.0000e-005**	**0.0000**	**0.2097**

3.7 Architectural Coating - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2294					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-004	3.0000e-003	6.2900e-003	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.8936	0.8936	4.0000e-005	0.0000	0.8944
Total	**0.2299**	**3.0000e-003**	**6.2900e-003**	**1.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.8936**	**0.8936**	**4.0000e-005**	**0.0000**	**0.8944**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	2.0000e-005	2.1000e-004	0.0000	8.5800e-003	0.0000	8.5800e-003	8.7000e-004	0.0000	8.7000e-004	0.0000	0.0587	0.0587	0.0000	0.0000	0.0587
Total	**1.0000e-005**	**2.0000e-005**	**2.1000e-004**	**0.0000**	**8.5800e-003**	**0.0000**	**8.5800e-003**	**8.7000e-004**	**0.0000**	**8.7000e-004**	**0.0000**	**0.0587**	**0.0587**	**0.0000**	**0.0000**	**0.0587**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2294					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	4.6000e-004	3.0000e-003	6.2900e-003	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.8936	0.8936	4.0000e-005	0.0000	0.8944
Total	**0.2299**	**3.0000e-003**	**6.2900e-003**	**1.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.8936**	**0.8936**	**4.0000e-005**	**0.0000**	**0.8944**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	2.0000e-005	2.1000e-004	0.0000	8.5800e-003	0.0000	8.5800e-003	8.7000e-004	0.0000	8.7000e-004	0.0000	0.0587	0.0587	0.0000	0.0000	0.0587
Total	**1.0000e-005**	**2.0000e-005**	**2.1000e-004**	**0.0000**	**8.5800e-003**	**0.0000**	**8.5800e-003**	**8.7000e-004**	**0.0000**	**8.7000e-004**	**0.0000**	**0.0587**	**0.0587**	**0.0000**	**0.0000**	**0.0587**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4420	1.1059	5.2490	0.0161	0.9738	0.0255	0.9993	0.2616	0.0235	0.2851	0.0000	1,086.0363	1,086.0363	0.0286	0.0000	1,086.6361
Unmitigated	0.4420	1.1059	5.2490	0.0161	0.9738	0.0255	0.9993	0.2616	0.0235	0.2851	0.0000	1,086.0363	1,086.0363	0.0286	0.0000	1,086.6361

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	1,351.20	336.90	36.30	2,586,410	2,586,410
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,351.20	336.90	36.30	2,586,410	2,586,410

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
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	Primary	Diverted	Pass-by
Junior College (2Yr)	9.50	7.30	7.30	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.472386	0.067706	0.148876	0.143449	0.055135	0.006430	0.025978	0.066258	0.001000	0.001302	0.008345	0.000427	0.002709

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	78.1097	78.1097	3.5300e-003	7.3000e-004	78.4104
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	78.1097	78.1097	3.5300e-003	7.3000e-004	78.4104
NaturalGas Mitigated	4.0800e-003	0.0371	0.0312	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003	0.0000	40.3751	40.3751	7.7000e-004	7.4000e-004	40.6208

NaturalGas Unmitigated	4.0800e-003	0.0371	0.0312	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003	0.0000	40.3751	40.3751	7.7000e-004	7.4000e-004	40.6208

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	756600	4.0800e-003	0.0371	0.0312	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003	0.0000	40.3751	40.3751	7.7000e-004	7.4000e-004	40.6208
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.0800e-003**	**0.0371**	**0.0312**	**2.2000e-004**		**2.8200e-003**	**2.8200e-003**		**2.8200e-003**	**2.8200e-003**	**0.0000**	**40.3751**	**40.3751**	**7.7000e-004**	**7.4000e-004**	**40.6208**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	756600	4.0800e-003	0.0371	0.0312	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003	0.0000	40.3751	40.3751	7.7000e-004	7.4000e-004	40.6208
Total		**4.0800e-003**	**0.0371**	**0.0312**	**2.2000e-004**		**2.8200e-003**	**2.8200e-003**		**2.8200e-003**	**2.8200e-003**	**0.0000**	**40.3751**	**40.3751**	**7.7000e-004**	**7.4000e-004**	**40.6208**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	268500	78.1097	3.5300e-003	7.3000e-004	78.4104
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**78.1097**	**3.5300e-003**	**7.3000e-004**	**78.4104**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	268500	78.1097	3.5300e-003	7.3000e-004	78.4104
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**78.1097**	**3.5300e-003**	**7.3000e-004**	**78.4104**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Mitigated	0.1519	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.9000e-004	5.9000e-004	0.0000	0.0000	6.2000e-004
Unmitigated	0.1519	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.9000e-004	5.9000e-004	0.0000	0.0000	6.2000e-004

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	0.0229					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1289					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.9000e-004	5.9000e-004	0.0000	0.0000	6.2000e-004
Total	**0.1519**	**0.0000**	**3.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.9000e-004**	**5.9000e-004**	**0.0000**	**0.0000**	**6.2000e-004**

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	0.0229					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1289					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.9000e-004	5.9000e-004	0.0000	0.0000	6.2000e-004

Total	**0.1519**	**0.0000**	**3.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.9000e-004**	**5.9000e-004**	**0.0000**	**0.0000**	**6.2000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.1803	1.9900e-003	1.1700e-003	5.5860
Unmitigated	5.1803	2.0000e-003	1.1800e-003	5.5868

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.47147 / 2.30153	5.1803	2.0000e-003	1.1800e-003	5.5868
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**5.1803**	**2.0000e-003**	**1.1800e-003**	**5.5868**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.47147 / 2.30153	5.1803	1.9900e-003	1.1700e-003	5.5860
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**5.1803**	**1.9900e-003**	**1.1700e-003**	**5.5860**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.9167	0.4679	0.0000	17.7417
Unmitigated	7.9167	0.4679	0.0000	17.7417

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Junior College (2Yr)	39	7.9167	0.4679	0.0000	17.7417
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**7.9167**	**0.4679**	**0.0000**	**17.7417**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	39	7.9167	0.4679	0.0000	17.7417
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**7.9167**	**0.4679**	**0.0000**	**17.7417**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Vacaville Center Phase 2

Yolo/Solano AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	30.00	1000sqft	0.69	30,000.00	0
Other Non-Asphalt Surfaces	3.00	1000sqft	0.07	3,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2035
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - site size increased to account for approx 3,000 sq ft landscaping

Construction Phase - trenching phase for utilities, lengthed construction phase to account for landscaping

Trips and VMT - water trucks in first three phases

Vehicle Trips - per traffic analysis

Road Dust - all roads paved

Area Coating -

Off-road Equipment - trenching equipment

Off-road Equipment -

Off-road Equipment - non asphalt - pouring concrete walkways

Off-road Equipment -

Grading - grading over full site - building footprint, landscaping, and hardscape

Water And Wastewater - all wastewater treated at WWTP

Construction Off-road Equipment Mitigation -

Off-road Equipment -

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	7.00
tblConstructionPhase	NumDays	100.00	103.00
tblConstructionPhase	NumDays	2.00	7.00
tblConstructionPhase	NumDays	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblProjectCharacteristics	OperationalYear	2014	2035
tblRoadDust	RoadPercentPave	94	100
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblVehicleTrips	WD_TR	27.49	45.04
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2034	65.6876	4.7545	8.4469	0.0166	16.7163	0.1929	16.7831	1.6922	0.1928	1.7585	0.0000	1,521.6873	1,521.6873	0.0699	0.0000	1,523.1559
Total	**65.6876**	**4.7545**	**8.4469**	**0.0166**	**16.7163**	**0.1929**	**16.7831**	**1.6922**	**0.1928**	**1.7585**	**0.0000**	**1,521.6873**	**1,521.6873**	**0.0699**	**0.0000**	**1,523.1559**

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	lb/day										lb/day					
2034	65.6876	4.7545	8.4469	0.0166	16.7163	0.1929	16.7831	1.6922	0.1928	1.7585	0.0000	1,521.6873	1,521.6873	0.0699	0.0000	1,523.1559
Total	**65.6876**	**4.7545**	**8.4469**	**0.0166**	**16.7163**	**0.1929**	**16.7831**	**1.6922**	**0.1928**	**1.7585**	**0.0000**	**1,521.6873**	**1,521.6873**	**0.0699**	**0.0000**	**1,523.1559**

	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**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Area	0.8322	3.0000e-005	3.3500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.2200e-003	7.2200e-003	2.0000e-005		7.6100e-003
Energy	0.0224	0.2032	0.1707	1.2200e-003		0.0154	0.0154		0.0154	0.0154		243.8679	243.8679	4.6700e-003	4.4700e-003	245.3520
Mobile	3.4655	7.5730	36.5052	0.1253	7.3334	0.1860	7.5194	1.9645	0.1715	2.1360		9,222.5852	9,222.5852	0.2294		9,227.4025
Total	**4.3200**	**7.7762**	**36.6793**	**0.1265**	**7.3334**	**0.2014**	**7.5349**	**1.9645**	**0.1869**	**2.1515**		**9,466.4603**	**9,466.4603**	**0.2341**	**4.4700e-003**	**9,472.7621**

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	lb/day										lb/day					
Area	0.8322	3.0000e-005	3.3500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.2200e-003	7.2200e-003	2.0000e-005		7.6100e-003
Energy	0.0224	0.2032	0.1707	1.2200e-003		0.0154	0.0154		0.0154	0.0154		243.8679	243.8679	4.6700e-003	4.4700e-003	245.3520
Mobile	3.4655	7.5730	36.5052	0.1253	7.3334	0.1860	7.5194	1.9645	0.1715	2.1360		9,222.5852	9,222.5852	0.2294		9,227.4025
Total	**4.3200**	**7.7762**	**36.6793**	**0.1265**	**7.3334**	**0.2014**	**7.5349**	**1.9645**	**0.1869**	**2.1515**		**9,466.4603**	**9,466.4603**	**0.2341**	**4.4700e-003**	**9,472.7621**

	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**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2034	1/3/2034	5	2	
2	Grading	Grading	1/4/2034	1/12/2034	5	7	

3	Utilities	Trenching	1/13/2034	1/19/2034	5	5	
4	Building Construction	Building Construction	1/20/2034	6/13/2034	5	103	
5	Paving	Paving	6/14/2034	6/20/2034	5	5	
6	Architectural Coating	Architectural Coating	6/21/2034	6/29/2034	5	7	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 49,500; Non-Residential Outdoor: 16,500 (Architectural Coating –

<u>OffRoad Equipment</u>

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Utilities	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Utilities	Trenchers	2	7.00	80	0.50
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	3	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

<u>Trips and VMT</u>

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Utilities	4	10.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	14.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2034

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	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.4704	2.0534	6.5301	0.0114		0.0668	0.0668		0.0668	0.0668		1,074.776 0	1,074.7760	0.0416		1,075.6499
Total	**0.4704**	**2.0534**	**6.5301**	**0.0114**	**0.5303**	**0.0668**	**0.5971**	**0.0573**	**0.0668**	**0.1241**		**1,074.776 0**	**1,074.7760**	**0.0416**		**1,075.6499**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.9700e-003	0.0347	0.0710	2.4000e-004	0.6511	8.4000e-004	0.6519	0.0662	7.7000e-004	0.0669		22.2892	22.2892	1.5000e-004		22.2925
Worker	7.9100e-003	9.2600e-003	0.1185	5.4000e-004	4.8075	3.1000e-004	4.8078	0.4862	2.8000e-004	0.4865		33.8258	33.8258	1.2700e-003		33.8525
Total	**0.0139**	**0.0440**	**0.1895**	**7.8000e-004**	**5.4586**	**1.1500e-003**	**5.4597**	**0.5524**	**1.0500e-003**	**0.5534**		**56.1150**	**56.1150**	**1.4200e-003**		**56.1450**

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	lb/day										lb/day					
Fugitive Dust					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.4704	2.0534	6.5301	0.0114		0.0668	0.0668		0.0668	0.0668	0.0000	1,074.7760	1,074.7760	0.0416		1,075.6499
Total	**0.4704**	**2.0534**	**6.5301**	**0.0114**	**0.2386**	**0.0668**	**0.3054**	**0.0258**	**0.0668**	**0.0926**	**0.0000**	**1,074.7760**	**1,074.7760**	**0.0416**		**1,075.6499**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.9700e-003	0.0347	0.0710	2.4000e-004	0.6511	8.4000e-004	0.6519	0.0662	7.7000e-004	0.0669		22.2892	22.2892	1.5000e-004		22.2925
Worker	7.9100e-003	9.2600e-003	0.1185	5.4000e-004	4.8075	3.1000e-004	4.8078	0.4862	2.8000e-004	0.4865		33.8258	33.8258	1.2700e-003		33.8525

Total	**0.0139**	**0.0440**	**0.1895**	**7.8000e-004**	**5.4586**	**1.1500e-003**	**5.4597**	**0.5524**	**1.0500e-003**	**0.5534**		**56.1150**	**56.1150**	**1.4200e-003**		**56.1450**

3.3 Grading - 2034

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	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.5611	3.6533	7.4621	0.0131		0.0804	0.0804		0.0804	0.0804		1,260.0513	1,260.0513	0.0491		1,261.0829
Total	**0.5611**	**3.6533**	**7.4621**	**0.0131**	**0.7528**	**0.0804**	**0.8332**	**0.4138**	**0.0804**	**0.4942**		**1,260.0513**	**1,260.0513**	**0.0491**		**1,261.0829**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.9700e-003	0.0347	0.0710	2.4000e-004	0.6511	8.4000e-004	0.6519	0.0662	7.7000e-004	0.0669		22.2892	22.2892	1.5000e-004		22.2925
Worker	0.0158	0.0185	0.2369	1.0800e-003	9.6151	6.1000e-004	9.6157	0.9724	5.7000e-004	0.9729		67.6516	67.6516	2.5500e-003		67.7051
Total	**0.0218**	**0.0533**	**0.3080**	**1.3200e-003**	**10.2661**	**1.4500e-003**	**10.2676**	**1.0385**	**1.3400e-003**	**1.0399**		**89.9408**	**89.9408**	**2.7000e-003**		**89.9975**

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	lb/day										lb/day					
Fugitive Dust					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	0.5611	3.6533	7.4621	0.0131		0.0804	0.0804		0.0804	0.0804	0.0000	1,260.0513	1,260.0513	0.0491		1,261.0829
Total	**0.5611**	**3.6533**	**7.4621**	**0.0131**	**0.3387**	**0.0804**	**0.4192**	**0.1862**	**0.0804**	**0.2666**	**0.0000**	**1,260.0513**	**1,260.0513**	**0.0491**		**1,261.0829**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.9700e-003	0.0347	0.0710	2.4000e-004	0.6511	8.4000e-004	0.6519	0.0662	7.7000e-004	0.0669		22.2892	22.2892	1.5000e-004		22.2925
Worker	0.0158	0.0185	0.2369	1.0800e-003	9.6151	6.1000e-004	9.6157	0.9724	5.7000e-004	0.9729		67.6516	67.6516	2.5500e-003		67.7051
Total	**0.0218**	**0.0533**	**0.3080**	**1.3200e-003**	**10.2661**	**1.4500e-003**	**10.2676**	**1.0385**	**1.3400e-003**	**1.0399**		**89.9408**	**89.9408**	**2.7000e-003**		**89.9975**

3.4 Utilities - 2034

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	lb/day										lb/day					

Off-Road	0.7632	4.7013	8.1389	0.0131		0.1915	0.1915		0.1915	0.1915		1,241.2079	1,241.2079	0.0672		1,242.6198
Total	**0.7632**	**4.7013**	**8.1389**	**0.0131**		**0.1915**	**0.1915**		**0.1915**	**0.1915**		**1,241.2079**	**1,241.2079**	**0.0672**		**1,242.6198**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.9700e-003	0.0347	0.0710	2.4000e-004	0.6511	8.4000e-004	0.6519	0.0662	7.7000e-004	0.0669		22.2892	22.2892	1.5000e-004		22.2925
Worker	0.0158	0.0185	0.2369	1.0800e-003	9.6151	6.1000e-004	9.6157	0.9724	5.7000e-004	0.9729		67.6516	67.6516	2.5500e-003		67.7051
Total	**0.0218**	**0.0533**	**0.3080**	**1.3200e-003**	**10.2661**	**1.4500e-003**	**10.2676**	**1.0385**	**1.3400e-003**	**1.0399**		**89.9408**	**89.9408**	**2.7000e-003**		**89.9975**

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	lb/day										lb/day					
Off-Road	0.7632	4.7013	8.1389	0.0131		0.1915	0.1915		0.1915	0.1915	0.0000	1,241.2079	1,241.2079	0.0672		1,242.6198
Total	**0.7632**	**4.7013**	**8.1389**	**0.0131**		**0.1915**	**0.1915**		**0.1915**	**0.1915**	**0.0000**	**1,241.2079**	**1,241.2079**	**0.0672**		**1,242.6198**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.9700e-003	0.0347	0.0710	2.4000e-004	0.6511	8.4000e-004	0.6519	0.0662	7.7000e-004	0.0669		22.2892	22.2892	1.5000e-004		22.2925
Worker	0.0158	0.0185	0.2369	1.0800e-003	9.6151	6.1000e-004	9.6157	0.9724	5.7000e-004	0.9729		67.6516	67.6516	2.5500e-003		67.7051
Total	**0.0218**	**0.0533**	**0.3080**	**1.3200e-003**	**10.2661**	**1.4500e-003**	**10.2676**	**1.0385**	**1.3400e-003**	**1.0399**		**89.9408**	**89.9408**	**2.7000e-003**		**89.9975**

3.5 Building Construction - 2034

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	lb/day										lb/day					
Off-Road	0.6071	3.2205	7.1424	0.0139		0.0617	0.0617		0.0617	0.0617		1,315.5291	1,315.5291	0.0537		1,316.6571
Total	**0.6071**	**3.2205**	**7.1424**	**0.0139**		**0.0617**	**0.0617**		**0.0617**	**0.0617**		**1,315.5291**	**1,315.5291**	**0.0537**		**1,316.6571**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0299	0.1737	0.3552	1.1900e-003	3.2553	4.1900e-003	3.2595	0.3309	3.8500e-003	0.3347		111.4460	111.4460	7.7000e-004		111.4623
Worker	0.0222	0.0259	0.3317	1.5100e-003	13.4611	8.6000e-004	13.4619	1.3613	8.0000e-004	1.3621		94.7122	94.7122	3.5700e-003		94.7871
Total	**0.0520**	**0.1996**	**0.6869**	**2.7000e-003**	**16.7163**	**5.0500e-003**	**16.7214**	**1.6922**	**4.6500e-003**	**1.6968**		**206.1582**	**206.1582**	**4.3400e-003**		**206.2494**

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	lb/day										lb/day					
Off-Road	0.6071	3.2205	7.1424	0.0139		0.0617	0.0617		0.0617	0.0617	0.0000	1,315.5291	1,315.5291	0.0537		1,316.6571
Total	**0.6071**	**3.2205**	**7.1424**	**0.0139**		**0.0617**	**0.0617**		**0.0617**	**0.0617**	**0.0000**	**1,315.5291**	**1,315.5291**	**0.0537**		**1,316.6571**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0299	0.1737	0.3552	1.1900e-003	3.2553	4.1900e-003	3.2595	0.3309	3.8500e-003	0.3347		111.4460	111.4460	7.7000e-004		111.4623
Worker	0.0222	0.0259	0.3317	1.5100e-003	13.4611	8.6000e-004	13.4619	1.3613	8.0000e-004	1.3621		94.7122	94.7122	3.5700e-003		94.7871

	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
Total	**0.0520**	**0.1996**	**0.6869**	**2.7000e-003**	**16.7163**	**5.0500e-003**	**16.7214**	**1.6922**	**4.6500e-003**	**1.6968**		**206.1582**	**206.1582**	**4.3400e-003**		**206.2494**

3.6 Paving - 2034

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	lb/day										lb/day					
Off-Road	0.6662	3.7973	7.1478	0.0126		0.1397	0.1397		0.1397	0.1397		1,155.4730	1,155.4730	0.0596		1,156.7254
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6662**	**3.7973**	**7.1478**	**0.0126**		**0.1397**	**0.1397**		**0.1397**	**0.1397**		**1,155.4730**	**1,155.4730**	**0.0596**		**1,156.7254**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0237	0.0278	0.3554	1.6200e-003	14.4226	9.2000e-004	14.4235	1.4585	8.5000e-004	1.4594		101.4774	101.4774	3.8200e-003		101.5576
Total	**0.0237**	**0.0278**	**0.3554**	**1.6200e-003**	**14.4226**	**9.2000e-004**	**14.4235**	**1.4585**	**8.5000e-004**	**1.4594**		**101.4774**	**101.4774**	**3.8200e-003**		**101.5576**

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	lb/day										lb/day					
Off-Road	0.6662	3.7973	7.1478	0.0126		0.1397	0.1397		0.1397	0.1397	0.0000	1,155.4730	1,155.4730	0.0596		1,156.7254
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6662**	**3.7973**	**7.1478**	**0.0126**		**0.1397**	**0.1397**		**0.1397**	**0.1397**	**0.0000**	**1,155.4730**	**1,155.4730**	**0.0596**		**1,156.7254**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0237	0.0278	0.3554	1.6200e-003	14.4226	9.2000e-004	14.4235	1.4585	8.5000e-004	1.4594		101.4774	101.4774	3.8200e-003		101.5576
Total	**0.0237**	**0.0278**	**0.3554**	**1.6200e-003**	**14.4226**	**9.2000e-004**	**14.4235**	**1.4585**	**8.5000e-004**	**1.4594**		**101.4774**	**101.4774**	**3.8200e-003**		**101.5576**

3.7 Architectural Coating - 2034

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	lb/day										lb/day					

Archit. Coating	65.5521					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.6873
Total	**65.6829**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.6873**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	4.7500e-003	5.5600e-003	0.0711	3.2000e-004	2.8845	1.8000e-004	2.8847	0.2917	1.7000e-004	0.2919		20.2955	20.2955	7.6000e-004		20.3115
Total	**4.7500e-003**	**5.5600e-003**	**0.0711**	**3.2000e-004**	**2.8845**	**1.8000e-004**	**2.8847**	**0.2917**	**1.7000e-004**	**0.2919**		**20.2955**	**20.2955**	**7.6000e-004**		**20.3115**

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	lb/day										lb/day					
Archit. Coating	65.5521					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.6873
Total	**65.6829**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.6873**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	4.7500e-003	5.5600e-003	0.0711	3.2000e-004	2.8845	1.8000e-004	2.8847	0.2917	1.7000e-004	0.2919		20.2955	20.2955	7.6000e-004		20.3115
Total	**4.7500e-003**	**5.5600e-003**	**0.0711**	**3.2000e-004**	**2.8845**	**1.8000e-004**	**2.8847**	**0.2917**	**1.7000e-004**	**0.2919**		**20.2955**	**20.2955**	**7.6000e-004**		**20.3115**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.4655	7.5730	36.5052	0.1253	7.3334	0.1860	7.5194	1.9645	0.1715	2.1360		9,222.5852	9,222.5852	0.2294		9,227.4025
Unmitigated	3.4655	7.5730	36.5052	0.1253	7.3334	0.1860	7.5194	1.9645	0.1715	2.1360		9,222.5852	9,222.5852	0.2294		9,227.4025

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Junior College (2Yr)	1,351.20	336.90	36.30	2,586,410	2,586,410
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,351.20	336.90	36.30	2,586,410	2,586,410

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
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	Primary	Diverted	Pass-by
Junior College (2Yr)	9.50	7.30	7.30	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.472386	0.067706	0.148876	0.143449	0.055135	0.006430	0.025978	0.066258	0.001000	0.001302	0.008345	0.000427	0.002709

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0224	0.2032	0.1707	1.2200e-003		0.0154	0.0154		0.0154	0.0154		243.8679	243.8679	4.6700e-003	4.4700e-003	245.3520
NaturalGas Unmitigated	0.0224	0.2032	0.1707	1.2200e-003		0.0154	0.0154		0.0154	0.0154		243.8679	243.8679	4.6700e-003	4.4700e-003	245.3520

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	2072.88	0.0224	0.2032	0.1707	1.2200e-003		0.0154	0.0154		0.0154	0.0154		243.8679	243.8679	4.6700e-003	4.4700e-003	245.3520
Total		**0.0224**	**0.2032**	**0.1707**	**1.2200e-003**		**0.0154**	**0.0154**		**0.0154**	**0.0154**		**243.8679**	**243.8679**	**4.6700e-003**	**4.4700e-003**	**245.3520**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Junior College (2Yr)	2.07288	0.0224	0.2032	0.1707	1.2200e-003		0.0154	0.0154		0.0154	0.0154		243.8679	243.8679	4.6700e-003	4.4700e-003	245.3520
Total		**0.0224**	**0.2032**	**0.1707**	**1.2200e-003**		**0.0154**	**0.0154**		**0.0154**	**0.0154**		**243.8679**	**243.8679**	**4.6700e-003**	**4.4700e-003**	**245.3520**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Mitigated	0.8322	3.0000e-005	3.3500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.2200e-003	7.2200e-003	2.0000e-005		7.6100e-003
Unmitigated	0.8322	3.0000e-005	3.3500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.2200e-003	7.2200e-003	2.0000e-005		7.6100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1257					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7062					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.1000e-004	3.0000e-005	3.3500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.2200e-003	7.2200e-003	2.0000e-005		7.6100e-003
Total	**0.8322**	**3.0000e-005**	**3.3500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.2200e-003**	**7.2200e-003**	**2.0000e-005**		**7.6100e-003**

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	lb/day										lb/day					
Architectural Coating	0.1257					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7062					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.1000e-004	3.0000e-005	3.3500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.2200e-003	7.2200e-003	2.0000e-005		7.6100e-003

Total	0.8322	3.0000e-005	3.3500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.2200e-003	7.2200e-003	2.0000e-005		7.6100e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

ProjectNan	LocationSc	EMFAC_ID	WindSpeed	Precipitatio	ClimateZor	Urbanizatic	Operationa	UtilityComp
Vacaville C	AD	YSAQMD	6.8	55	4	Urban	2017	Pacific Gas

CO2Intens	CH4Intensi	N2OIntens	TotalPopul	TotalLotAc	UsingHistoricalEnergyUseData
641.35	0.029	0.006	0	1.77	0

PollutantSe	PollutantFu	PollutantName
1	Reactive O	ROG
1	Nitrogen O	NOX
1	Carbon Mo	CO
1	Sulfur Diox	SO2
1	Particulate	PM10
1	Particulate	PM2_5
1	Fugitive PM	PM10_FUG
1	Fugitive PM	PM25_FUG
1	Biogenic C	CO2_BIO
1	Non-Bioger	CO2_NBIO
1	Carbon Dic	CO2
1	Methane (C	CH4
1	Nitrous Oxi	N2O
1	CO2 Equiv	CO2E

LandUseTy	LandUseSu	LandUseUr	LandUseSi	LotAcreage	LandUseSq	Population
Educationa	Junior Coll	31.9	1000sqft	1.7	31900	0
Parking	Other Non-	3	1000sqft	0.07	3000	0

tblConstructionPhase

PhaseNum	PhaseNam	PhaseType	PhaseStart	PhaseEndI	NumDaysV	NumDays	PhaseDescription
1	Site Prepar	Site Prepar	2016/01/01	2016/01/01	5	1	
2	Grading	Grading	2016/01/02	2016/01/12	5	7	
3	Utilities	Trenching	2016/01/13	2016/01/18	5	4	
4	Building Co	Building Co	2016/01/19	2016/06/17	5	109	
5	Paving	Paving	2016/06/20	2016/06/24	5	5	
6	Architectura	Architectura	2016/06/27	2016/07/01	5	5	

PhaseNam	OffRoadEq	OffRoadEq	UsageHour	HorsePowe	LoadFactor
Site Prepar	Graders	1	8	174	0.41
Site Prepar	Rubber Tire	1	7	255	0.4
Site Prepar	Tractors/Lo	1	8	97	0.37
Grading	Graders	1	6	174	0.41
Grading	Rubber Tire	1	6	255	0.4
Grading	Tractors/Lo	1	7	97	0.37
Utilities	Tractors/Lo	2	7	97	0.37
Utilities	Trenchers	2	7	80	0.5
Building Co	Cranes	1	6	226	0.29
Building Co	Forklifts	1	6	89	0.2
Building Co	Generator	1	8	84	0.74
Building Co	Tractors/Lo	2	6	97	0.37
Building Co	Welders	3	8	46	0.45
Paving	Cement an	1	6	9	0.56
Paving	Pavers	1	6	125	0.42
Paving	Paving Equ	1	8	130	0.36
Paving	Rollers	1	7	80	0.38
Paving	Tractors/Lo	1	8	97	0.37
Architectura	Air Compre	1	6	78	0.48

PhaseNam	WorkerTrip	VendorTrip	HaulingTrip	WorkerTrip	VendorTrip	HaulingTrip	WorkerVeh	VendorVeh
Site Prepar	8	1	0	10.8	7.3	20	LD_Mix	HDT_Mix
Grading	8	1	0	10.8	7.3	20	LD_Mix	HDT_Mix
Utilities	10	1	0	10.8	7.3	20	LD_Mix	HDT_Mix
Building Co	15	6	0	10.8	7.3	20	LD_Mix	HDT_Mix
Paving	13	0	0	10.8	7.3	20	LD_Mix	HDT_Mix
Architectura	3	0	0	10.8	7.3	20	LD_Mix	HDT_Mix

HaulingVehicleClass
HHDT
HHDT
HHDT
HHDT
HHDT
HHDT

PhaseNam	WorkerPer	VendorPer	HaulingPer	RoadSiltLo	MaterialSilt	MaterialMo	AverageVe	MeanVehic
Site Prepai	94	94	94	0.1	8.5	0.5	2.4	40
Grading	94	94	94	0.1	8.5	0.5	2.4	40
Utilities	94	94	94	0.1	8.5	0.5	2.4	40
Building Cc	94	94	94	0.1	8.5	0.5	2.4	40
Paving	94	94	94	0.1	8.5	0.5	2.4	40
Architectur	94	94	94	0.1	8.5	0.5	2.4	40

leSpeed

PhaseNam	Demolition\:	DemolitionUnitAmount

PhaseNam	MaterialIm	MaterialEx	GradingSiz	ImportExpo	MeanVehic	AcresOfGr	MaterialMo	MaterialMo
Site Prepar	0	0		0	7.1	1	7.9	12
Grading	0	0		0	7.1	1.75	7.9	12

MaterialSiltContent
6.9
6.9

tblArchitecturalCoating

PhaseNam	Architectur	Architectur	EF_Reside	ConstArea_	EF_Reside	ConstArea_	EF_Nonres	ConstArea_
Architectur	2003/01/01	2040/12/31	100	0	100	0	150	52350

EF_Nonres	ConstArea_Nonresidential_Exterior
150	17450

ParkingLotAcreage

VehicleTrip	VehicleTrip	WD_TR	ST_TR	SU_TR	HW_TL	HS_TL	HO_TL	CC_TL
Junior Coll	1000sqft	45.04	11.23	1.21	0	0	0	7.3
Other Non-	1000sqft	0	0	0	0	0	0	7.3

CW_TL	CNW_TL	PR_TP	DV_TP	PB_TP	HW_TTP	HS_TTP	HO_TTP	CC_TTP
9.5	7.3	92	7	1	0	0	0	88.6
9.5	7.3	0	0	0	0	0	0	0

CW_TTP	CNW_TTP
6.4	5
0	0

Season	EmissionTy	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD
A	FleetMix	0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711
A	CH4_IDLE.	0	0	0	0	0.001062	0.000788	0.00798
A	CH4_RUNI	0.01311	0.023808	0.017442	0.029434	0.02271	0.015718	0.00751
A	CH4_STRE	0.009234	0.023421	0.013633	0.027284	0.022459	0.011357	0
A	CO_IDLEX	0	0	0	0	0.157597	0.121986	1.826387
A	CO_RUNE	1.100195	2.450207	1.494808	2.499907	2.072951	1.557078	1.039937
A	CO_STRE.	2.463878	5.714675	3.639243	6.22573	4.044512	1.996372	23.95701
A	CO2_NBIC	0	0	0	0	8.792369	9.593906	594.2233
A	CO2_NBIC	276.1659	327.8532	401.7779	535.058	725.5014	620.4133	1080.313
A	CO2_NBIC	59.19985	70.27456	85.49288	112.1384	32.12577	18.97576	59.10018
A	NOX_IDLE	0	0	0	0	0.087518	0.137312	6.125202
A	NOX_RUN	0.113153	0.276837	0.191869	0.373303	2.000909	2.63118	3.348012
A	NOX_STRI	0.157802	0.312056	0.321598	0.572505	1.200117	0.667029	1.982547
A	PM10_IDLI	0	0	0	0	0.000967	0.001478	0.026064
A	PM10_PMI	0.03675	0.03675	0.03675	0.03675	0.055022	0.073792	0.120535
A	PM10_PM1	0.008	0.008	0.008	0.008	0.009842	0.010826	0.011581
A	PM10_RUI	0.001741	0.003376	0.001775	0.002209	0.026932	0.038522	0.08035
A	PM10_STF	0.002946	0.004978	0.003096	0.003535	0.000895	0.000443	0.004169
A	PM25_IDLI	0	0	0	0	0.000889	0.001359	0.023978
A	PM25_PMI	0.01575	0.01575	0.01575	0.01575	0.023581	0.031625	0.051658
A	PM25_PM1	0.002	0.002	0.002	0.002	0.00246	0.002706	0.002895
A	PM25_RUI	0.001603	0.003109	0.001633	0.002033	0.024784	0.035438	0.073918
A	PM25_STF	0.002718	0.004584	0.002853	0.003262	0.000824	0.000399	0.003482
A	ROG_DIUI	0.044161	0.135318	0.064526	0.084578	0.00191	0.000938	0.003919
A	ROG_HTS	0.110236	0.244653	0.148334	0.197371	0.055223	0.029454	0.167984
A	ROG_IDLE	0	0	0	0	0.024471	0.017902	0.171801
A	ROG_RES	0.034545	0.091332	0.05149	0.069408	0.000929	0.000469	0.001826
A	ROG_RUN	0.02646	0.068017	0.035975	0.071016	0.234138	0.216529	0.189666
A	ROG_RUN	0.26773	0.859867	0.47733	0.642746	0.348782	0.170134	0.65799
A	ROG_STR	0.161872	0.411479	0.239441	0.481012	0.39708	0.199147	1.619628
A	SO2_IDLE.	0	0	0	0	0.000093	0.000099	0.005968
A	SO2_RUNI	0.003552	0.004119	0.004845	0.006177	0.007544	0.006369	0.01089
A	SO2_STRE	0.000775	0.000945	0.001066	0.001377	0.000414	0.000237	0.001048
A	TOG_DIUI	0.044161	0.135318	0.064526	0.084578	0.00191	0.000938	0.003919
A	TOG_HTSI	0.110236	0.244653	0.148334	0.197371	0.055223	0.029454	0.167984
A	TOG_IDLE	0	0	0	0	0.026179	0.019402	0.195582
A	TOG_RES'	0.034545	0.091332	0.05149	0.069408	0.000929	0.000469	0.001826
A	TOG_RUN	0.040015	0.092885	0.054005	0.101542	0.269882	0.249221	0.215973
A	TOG_RUN	0.26773	0.859867	0.47733	0.642746	0.348782	0.170134	0.65799
A	TOG_STRI	0.172936	0.439554	0.255783	0.513738	0.424033	0.212756	1.73546
S	FleetMix	0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711
S	CH4_IDLE.	0	0	0	0	0.001062	0.000788	0.00752
S	CH4_RUNI	0.01311	0.023808	0.017442	0.029434	0.02271	0.015718	0.00751
S	CH4_STRE	0.009234	0.023421	0.013633	0.027284	0.022459	0.011357	0
S	CO_IDLEX	0	0	0	0	0.157597	0.121986	1.327128
S	CO_RUNE	1.35692	2.93755	1.823308	3.03355	2.119308	1.573415	1.053712
S	CO_STRE.	1.770649	4.140334	2.617947	4.483208	2.853716	1.431583	17.42332
S	CO2_NBIC	0	0	0	0	8.792369	9.593906	629.527
S	CO2_NBIC	304.2723	359.1681	441.5338	587.0173	725.5014	620.4134	1080.313
S	CO2_NBIC	59.19985	70.27456	85.49288	112.1384	32.12577	18.97576	59.10018

S	NOX_IDLE	0	0	0	0	0.087518	0.137312	6.322236
S	NOX_RUN	0.101209	0.244065	0.170868	0.331958	1.85959	2.467669	3.135187
S	NOX_STRI	0.142839	0.28244	0.291154	0.518125	1.126725	0.626309	1.860991
S	PM10_IDLI	0	0	0	0	0.000967	0.001478	0.021972
S	PM10_PMI	0.03675	0.03675	0.03675	0.03675	0.055022	0.073792	0.120535
S	PM10_PMT	0.008	0.008	0.008	0.008	0.009842	0.010826	0.011581
S	PM10_RUI	0.001741	0.003376	0.001775	0.002209	0.026932	0.038522	0.08035
S	PM10_STF	0.002946	0.004978	0.003096	0.003535	0.000895	0.000443	0.004169
S	PM25_IDLI	0	0	0	0	0.000889	0.001359	0.020214
S	PM25_PMI	0.01575	0.01575	0.01575	0.01575	0.023581	0.031625	0.051658
S	PM25_PMT	0.002	0.002	0.002	0.002	0.00246	0.002706	0.002895
S	PM25_RUI	0.001603	0.003109	0.001633	0.002033	0.024784	0.035438	0.073918
S	PM25_STF	0.002718	0.004584	0.002853	0.003262	0.000824	0.000399	0.003482
S	ROG_DIUI	0.117967	0.372874	0.171703	0.22258	0.005164	0.00252	0.011179
S	ROG_HTS	0.132798	0.319516	0.182219	0.238571	0.068572	0.03638	0.207661
S	ROG_IDLE	0	0	0	0	0.024471	0.017902	0.161906
S	ROG_RES	0.08719	0.244116	0.128651	0.170939	0.002393	0.001184	0.004914
S	ROG_RUN	0.02949	0.075858	0.039875	0.079845	0.2383	0.217551	0.190383
S	ROG_RUN	0.261642	0.843171	0.464501	0.626137	0.347718	0.169323	0.664972
S	ROG_STR	0.127418	0.324694	0.188913	0.379598	0.326583	0.163981	1.272546
S	SO2_IDLE	0	0	0	0	0.000093	0.000099	0.006322
S	SO2_RUNI	0.003919	0.004521	0.005331	0.006785	0.007545	0.006369	0.01089
S	SO2_STRE	0.000763	0.000918	0.001048	0.001346	0.000393	0.000227	0.000935
S	TOG_DIUI	0.117967	0.372874	0.171703	0.22258	0.005164	0.00252	0.011179
S	TOG_HTSI	0.132798	0.319516	0.182219	0.238571	0.068572	0.03638	0.207661
S	TOG_IDLE	0	0	0	0	0.026179	0.019402	0.184318
S	TOG_REST	0.08719	0.244116	0.128651	0.170939	0.002393	0.001184	0.004914
S	TOG_RUN	0.044841	0.103104	0.060109	0.113272	0.274533	0.25044	0.216758
S	TOG_RUN	0.261642	0.843171	0.464501	0.626137	0.347718	0.169323	0.664972
S	TOG_STRI	0.136131	0.346853	0.201809	0.405428	0.348746	0.175179	1.36346
W	FleetMix	0.471296	0.067201	0.153113	0.152945	0.056868	0.006821	0.022711
W	CH4_IDLE	0	0	0	0	0.001062	0.000788	0.008614
W	CH4_RUNI	0.01311	0.023808	0.017442	0.029434	0.02271	0.015718	0.00751
W	CH4_STRE	0.009234	0.023421	0.013633	0.027284	0.022459	0.011357	0
W	CO_IDLEX	0	0	0	0	0.157597	0.121986	2.51584
W	CO_RUNE	1.073066	2.417428	1.461198	2.458564	2.031649	1.554019	1.044742
W	CO_STRE	3.339829	7.732195	4.932026	8.429884	5.770232	2.816837	34.0911
W	CO2_NBIC	0	0	0	0	8.792369	9.593906	545.4704
W	CO2_NBIC	268.9794	319.8506	391.6274	521.8122	725.5014	620.4134	1080.313
W	CO2_NBIC	59.19985	70.27456	85.49288	112.1384	32.12577	18.97576	59.10018
W	NOX_IDLE	0	0	0	0	0.087518	0.137312	5.853107
W	NOX_RUN	0.127248	0.313025	0.216418	0.421235	2.060292	2.691406	3.421418
W	NOX_STRI	0.176104	0.348532	0.358944	0.639049	1.294656	0.719601	2.140952
W	PM10_IDLI	0	0	0	0	0.000967	0.001478	0.031714
W	PM10_PMI	0.03675	0.03675	0.03675	0.03675	0.055022	0.073792	0.120535
W	PM10_PMT	0.008	0.008	0.008	0.008	0.009842	0.010826	0.011581
W	PM10_RUI	0.001741	0.003376	0.001775	0.002209	0.026932	0.038522	0.08035
W	PM10_STF	0.002946	0.004978	0.003096	0.003535	0.000895	0.000443	0.004169
W	PM25_IDLI	0	0	0	0	0.000889	0.001359	0.029177
W	PM25_PMI	0.01575	0.01575	0.01575	0.01575	0.023581	0.031625	0.051658
W	PM25_PMT	0.002	0.002	0.002	0.002	0.00246	0.002706	0.002895

W	PM25_RUI	0.001603	0.003109	0.001633	0.002033	0.024784	0.035438	0.073918
W	PM25_STI	0.002718	0.004584	0.002853	0.003262	0.000824	0.000399	0.003482
W	ROG_DIUI	0.012083	0.032504	0.018037	0.024451	0.000505	0.000259	0.000887
W	ROG_HTS	0.111016	0.245365	0.148745	0.196598	0.056743	0.030342	0.187634
W	ROG_IDLE	0	0	0	0	0.024471	0.017902	0.185465
W	ROG_RES	0.006525	0.01599	0.009908	0.013642	0.000178	0.000094	0.000288
W	ROG_RUN	0.026615	0.068367	0.036077	0.070387	0.229702	0.21565	0.189183
W	ROG_RUN	0.30832	1.045595	0.572487	0.769213	0.385788	0.188665	0.71925
W	ROG_STR	0.208361	0.529002	0.307438	0.616452	0.493491	0.247523	2.144166
W	SO2_IDLE	0	0	0	0	0.000093	0.000099	0.005478
W	SO2_RUNI	0.003459	0.004017	0.004722	0.006023	0.007543	0.006369	0.01089
W	SO2_STRE	0.000791	0.00098	0.001088	0.001416	0.000444	0.000251	0.001224
W	TOG_DIUI	0.012083	0.032504	0.018037	0.024451	0.000505	0.000259	0.000887
W	TOG_HTSI	0.111016	0.245365	0.148745	0.196598	0.056743	0.030342	0.187634
W	TOG_IDLE	0	0	0	0	0.026179	0.019402	0.211138
W	TOG_RES	0.006525	0.01599	0.009908	0.013642	0.000178	0.000094	0.000288
W	TOG_RUN	0.039613	0.092549	0.053391	0.10002	0.2649	0.248131	0.215428
W	TOG_RUN	0.30832	1.045595	0.572487	0.769213	0.385788	0.188665	0.71925
W	TOG_STRI	0.222604	0.565098	0.328422	0.658396	0.526997	0.264456	2.297879

HHD	OBUS	UBUS	MCY	SBUS	MH
0.054898	0.001011	0.001367	0.008332	0.000508	0.002928
0.024662	0.01879	0	0	0.005444	0
0.010147	0.00194	0	0	0.00848	0
0	0	0	0	0	0
2.941689	2.366964	0	0	1.069962	0
1.341984	2.870684	4.581536	33.35987	3.417762	3.527592
95.69364	15.11867	8.224065	10.75636	36.04735	8.986897
557.2732	563.7421	0	0	562.5478	0
1638.412	945.9118	2016.931	162.0183	1129.15	730.8519
63.89191	35.77506	29.91343	42.09353	125.6174	29.7104
4.53305	5.547784	0	0	8.052276	0
4.825575	3.054593	9.634945	1.301545	8.730939	1.929077
4.626414	1.993597	0.865641	0.314588	2.778109	0.905325
0.013338	0.010511	0	0	0.026779	0
0.060614	0.073819	0.699141	0.036749	0.605618	0.051788
0.035217	0.009584	0.008	0.008	0.011214	0.008643
0.077101	0.025944	0.164482	0.000579	0.093972	0.036663
0.005329	0.001143	0.001018	0.001426	0.005622	0.001052
0.012271	0.00967	0	0	0.024636	0
0.025977	0.031637	0.299632	0.01575	0.259551	0.022195
0.008804	0.002396	0.002	0.002	0.002803	0.002161
0.070933	0.023868	0.151268	0.000474	0.086415	0.033722
0.004295	0.000994	0.000854	0.00115	0.004848	0.000936
0.004541	0.000989	0.005512	0.877726	0.033093	0.991042
0.222795	0.0302	0.105368	0.444654	0.24442	0.07223
0.530956	0.404538	0	0	0.117215	0
0.002272	0.000418	0.00228	0.458059	0.010583	0.334268
0.226654	0.215767	0.761676	3.177564	0.345175	0.181001
1.165359	0.300519	0.759076	1.46089	1.926083	1.70073
3.816489	0.910703	0.746573	2.260851	2.451224	0.512598
0.005596	0.005661	0	0	0.005649	0
0.016462	0.009728	0.020384	0.002329	0.011454	0.007653
0.002294	0.000642	0.000467	0.000683	0.001963	0.000469
0.004541	0.000989	0.005512	0.877726	0.033093	0.991042
0.222795	0.0302	0.105368	0.444654	0.24442	0.07223
0.604453	0.460536	0	0	0.133441	0
0.002272	0.000418	0.00228	0.458059	0.010583	0.334268
0.258193	0.249201	0.841874	3.457006	0.388793	0.215796
1.165359	0.300519	0.759076	1.46089	1.926083	1.70073
4.090782	0.973377	0.799036	2.429345	2.622607	0.547918
0.054898	0.001011	0.001367	0.008332	0.000508	0.002928
0.023241	0.017708	0	0	0.005131	0
0.010147	0.00194	0	0	0.00848	0
0	0	0	0	0	0
2.137552	1.719934	0	0	0.777478	0
1.352625	2.955539	4.647659	33.01056	3.456387	3.650158
70.40328	10.76539	6.207504	8.960835	29.18922	6.173827
590.3817	597.2349	0	0	595.9696	0
1638.412	945.9118	2016.931	162.0183	1129.15	730.8519
63.89191	35.77506	29.91343	42.09353	125.6174	29.7104

4.678869	5.726244	0	0	8.311301	0
4.544635	2.795142	9.003033	1.095279	8.152547	1.749007
4.336859	1.869537	0.807361	0.289485	2.547423	0.848564
0.011244	0.008861	0	0	0.022575	0
0.060614	0.073819	0.699141	0.036749	0.605618	0.051788
0.035217	0.009584	0.008	0.008	0.011214	0.008643
0.077101	0.025944	0.164482	0.000579	0.093972	0.036663
0.005329	0.001143	0.001018	0.001426	0.005622	0.001052
0.010345	0.008152	0	0	0.020769	0
0.025977	0.031637	0.299632	0.01575	0.259551	0.022195
0.008804	0.002396	0.002	0.002	0.002803	0.002161
0.070933	0.023868	0.151268	0.000474	0.086415	0.033722
0.004295	0.000994	0.000854	0.00115	0.004848	0.000936
0.01301	0.002719	0.015717	2.563403	0.096095	2.679967
0.268513	0.035062	0.124948	0.763283	0.280027	0.088125
0.500376	0.38124	0	0	0.110464	0
0.005995	0.000968	0.005661	1.573886	0.025173	0.82743
0.226891	0.22085	0.778463	3.07382	0.345701	0.18585
1.188449	0.298793	0.731334	1.408401	1.686994	1.677473
2.862566	0.740674	0.612853	1.852974	2.098214	0.40153
0.005929	0.005998	0	0	0.005985	0
0.016462	0.009729	0.020386	0.00232	0.011455	0.007655
0.001867	0.000568	0.000431	0.000642	0.001845	0.000422
0.01301	0.002719	0.015717	2.563403	0.096095	2.679967
0.268513	0.035062	0.124948	0.763283	0.280027	0.088125
0.56964	0.434012	0	0	0.125755	0
0.005995	0.000968	0.005661	1.573886	0.025173	0.82743
0.25845	0.254733	0.859627	3.347843	0.389415	0.221225
1.188449	0.298793	0.731334	1.408401	1.686994	1.677473
3.068594	0.791593	0.655909	1.990976	2.244462	0.429179
0.054898	0.001011	0.001367	0.008332	0.000508	0.002928
0.026623	0.020284	0	0	0.005877	0
0.010147	0.00194	0	0	0.00848	0
0	0	0	0	0	0
4.052163	3.260483	0	0	1.473868	0
1.335334	2.793089	4.750814	37.73706	3.522043	3.476313
136.0412	21.54528	11.34046	13.7204	45.86114	13.20978
511.5519	517.4901	0	0	516.3937	0
1638.412	945.9118	2016.931	162.0183	1129.15	730.8519
63.89191	35.77506	29.91343	42.09353	125.6174	29.7104
4.331682	5.301338	0	0	7.694576	0
4.925641	3.18078	9.847638	1.433664	8.933135	2.022234
5.001098	2.152271	0.937033	0.344602	3.02845	0.97761
0.01623	0.01279	0	0	0.032584	0
0.060614	0.073819	0.699141	0.036749	0.605618	0.051788
0.035217	0.009584	0.008	0.008	0.011214	0.008643
0.077101	0.025944	0.164482	0.000579	0.093972	0.036663
0.005329	0.001143	0.001018	0.001426	0.005622	0.001052
0.014931	0.011767	0	0	0.029978	0
0.025977	0.031637	0.299632	0.01575	0.259551	0.022195
0.008804	0.002396	0.002	0.002	0.002803	0.002161

0.070933	0.023868	0.151268	0.000474	0.086415	0.033722
0.004295	0.000994	0.000854	0.00115	0.004848	0.000936
0.00107	0.000319	0.001423	0.141077	0.008384	0.266565
0.257755	0.031397	0.121321	0.442686	0.263608	0.081383
0.573185	0.436713	0	0	0.126538	0
0.000366	0.000084	0.00047	0.0431	0.001914	0.062296
0.226444	0.210228	0.749851	3.388919	0.346962	0.177104
1.259539	0.325758	0.905546	1.784036	2.442187	1.823854
5.278976	1.151529	0.941288	2.867532	2.905014	0.673647
0.005137	0.005197	0	0	0.005186	0
0.016462	0.009726	0.020386	0.002404	0.011456	0.007652
0.002974	0.00075	0.000522	0.000749	0.002132	0.000541
0.00107	0.000319	0.001423	0.141077	0.008384	0.266565
0.257755	0.031397	0.121321	0.442686	0.263608	0.081383
0.652527	0.497165	0	0	0.144054	0
0.000366	0.000084	0.00047	0.0431	0.001914	0.062296
0.257965	0.243158	0.829334	3.679445	0.3906	0.211318
1.259539	0.325758	0.905546	1.784036	2.442187	1.823854
5.658389	1.23091	1.00751	3.081697	3.108896	0.720114

RoadPerce	RoadSiltLo	MaterialSilt	MaterialMo	MobileAver	MeanVehicleSpeed
100	0.1	4.3	0.5	2.4	40

Woodstove	NumberCo	NumberCa	NumberNo	NumberPel	Woodstove	Woodstove	WoodMass

FireplacesI	NumberWo	NumberGa	NumberPro	NumberNo	FireplaceH	FireplaceD	FireplaceWoodMass

ROG_EF
2.14E-05

Area_EF_F	Area_Resic	Area_EF_F	Area_Resic	Area_EF_N	Area_Nonr	Area_EF_N	Area_Nonr	Reapplicati
100	0	100	0	150	52350	150	17450	10

onRatePercent

NumberSn	NumberSummerDays
0	180

EnergyUse	T24E	NT24E	LightingEle	T24NG	NT24NG
Junior Coll	3.34	2.27	3.34	21.92	3.3
Other Non-	0	0	0	0	0

WaterLand	WaterLand	IndoorWate	OutdoorWa	ElectricityIr	ElectricityIr	ElectricityIr	ElectricityIr	SepticTank
Junior Coll	1000sqft	1564664	2447295	2117	111	1272	1911	0
Other Non-	1000sqft	0	0	2117	111	1272	1911	10.33

AerobicPer	Anaerobica	AnaDigest(	AnaDigestCogenCombDigestGasPercent
100	0	100	0
87.46	2.21	100	0

SolidWaste	SolidWaste	SolidWaste	LandfillNoC	LandfillCap	LandfillCaptureGasEnergyRecovery
Junior Coll	1000sqft	41.47	6	94	0
Other Non-	1000sqft	0	6	94	0

Vegetation	Vegetation	AcresBegir	AcresEnd	CO2peracre

BroadSpec	NumberOfI	CO2perTree

ConstMitig	FuelType	Tier	NumberOfE	TotalNumb	DPF	OxidationCatalyst
Air Compre	Diesel	No Change	0	1	No Change	0
Cement an	Diesel	No Change	0	1	No Change	0
Cranes	Diesel	No Change	0	1	No Change	0
Forklifts	Diesel	No Change	0	1	No Change	0
Generator	Diesel	No Change	0	1	No Change	0
Graders	Diesel	No Change	0	2	No Change	0
Pavers	Diesel	No Change	0	1	No Change	0
Paving Equ	Diesel	No Change	0	1	No Change	0
Rollers	Diesel	No Change	0	1	No Change	0
Rubber Tir	Diesel	No Change	0	2	No Change	0
Tractors/Lo	Diesel	No Change	0	6	No Change	0
Trenchers	Diesel	No Change	0	2	No Change	0
Welders	Diesel	No Change	0	3	No Change	0

SoilStabiliz	SoilStabiliz	SoilStabiliz	ReplaceGr	ReplaceGr	ReplaceGr	WaterExpo	WaterExpo	WaterExpo
0	0	0	0	0	0	1	2	55

WaterExpo	WaterUnpa	WaterUnpa	WaterUnpa	WaterUnpa	CleanPavedRoadPercentReduction
55	0	0	0	0	0

ProjectSett	IncreaseDe	IncreaseDe	IncreaseDe	IncreaseDi	ImproveWa	ImproveWa	ImproveDe	ImproveDe

IncreaseTr	IncreaseTr	IntegrateBe	IntegrateBe	ImprovePe	ImprovePe	ProvideTra	ProvideTra	ProvideTra

ImplementI	ImplementI	LimitParkin	LimitParkin	UnbundleP	UnbundleP	OnStreetM	OnStreetM	ProvideBR'

ProvideBR	ExpandTra	ExpandTra	IncreaseTr	IncreaseTr	IncreaseTransitFrequencyHeadwaysPercentR

Reduction

Implement	Implement	Implement	TransitSub	TransitSub	TransitSub	ImplementI	ImplementI	WorkplaceI
0			0			0		0

Workplace	Workplace	Encourage	Encourage	Encourage	Encourage	MarketCon	MarketCon	EmployeeV
		0				0		0

EmployeeV	EmployeeV	ProvideRid	ProvideRid	ImplementS	ImplementSchoolBusProgram	PercentFamilyU
	2	0		0		

Jsing

Landscape	Landscape	Landscape	Landscape	Landscape	Landscape	UseLowVC	UseLowVC	UseLowVC
0		0		0		0	100	0

UseLowVC	UseLowVC	UseLowVC	UseLowVC	UseLowVC	HearthOnly	NoHearthC	UseLowVOCCleaningS
100	0	150	0	150	0	0	0

SuppliesCheck

ExceedTitl	ExceedTitl	InstallHighI	InstallHighI	OnSiteRen	KwhGenera	KwhGenera	PercentOfE	PercentOfE

ElectricityUseGenerated

ApplianceT	ApplianceL	PercentImprovement
ClothWasher		30
DishWasher		15
Fan		50
Refrigerator		15

ApplyWate	ApplyWate	ApplyWate	UseReclair	PercentOu	PercentInd	UseGreyW	PercentOu	PercentInd
0			0			0		

InstallLowF	PercentRe	InstallLowF	PercentRe	InstallLowF	PercentRe	InstallLowF	PercentRe	TurfReduct
0	32	0	18	0	20	0	20	0

TurfReduct	TurfReduct	UseWaterE	UseWaterE	WaterEffici	MAWA	ETWU
		0	6.1	0		

InstituteRe	InstituteRecyclingAndCompostingServicesWastePercentReduction

tblOperationalOffRoadEquipment

OperOffRo	OperOffRo	OperHours	OperDaysF	OperHorse	OperLoadF	OperFuelType

SubModule	PhaseNam	Season	Remarks
1			
3			site size increased to account for approx 40,000 sq ft landscaping
4			trenching phase for utilities, lengthed construction phase to account f
5	Architectural Coating		
5	Building Construction		tractor/loader/backhoe added to account for landscaping equipment
5	Paving		
5	Utilities		trenching equipment
6			water trucks in first three phases
9			sie prep and grading over majoority of site - building footprint, landsca
12			per traffic analysis
14			all roads paved
18			
21			all wastewater treated at WWTP
25			

or landscaping

aping, and hardscape

ProjectNan	LocationSc	EMFAC_ID	WindSpeed	Precipitatio	ClimateZor	Urbanizatic	Operationa	UtilityComp
Vacaville C	AD	YSAQMD	6.8	55	4	Urban	2035	Pacific Gas

CO2Intens	CH4Intensi	N2OIntens	TotalPopul	TotalLotAc	UsingHistoricalEnergyUseData
641.35	0.029	0.006	0	0.76	0

PollutantSe	PollutantFu	PollutantName
1	Reactive O	ROG
1	Nitrogen O	NOX
1	Carbon Mo	CO
1	Sulfur Diox	SO2
1	Particulate	PM10
1	Particulate	PM2_5
1	Fugitive PM	PM10_FUG
1	Fugitive PM	PM25_FUG
1	Biogenic C	CO2_BIO
1	Non-Bioger	CO2_NBIO
1	Carbon Dic	CO2
1	Methane (C	CH4
1	Nitrous Oxi	N2O
1	CO2 Equiv	CO2E

LandUseTy	LandUseSu	LandUseU	LandUseSi	LotAcreage	LandUseSq	Population
Educationa	Junior Coll	30	1000sqft	0.69	30000	0
Parking	Other Non-	3	1000sqft	0.07	3000	0

tblConstructionPhase

PhaseNum	PhaseNam	PhaseType	PhaseStart	PhaseEndI	NumDaysV	NumDays	PhaseDescription
1	Site Prepai	Site Prepai	2034/01/02	2034/01/03	5	2	
2	Grading	Grading	2034/01/04	2034/01/12	5	7	
3	Utilities	Trenching	2034/01/13	2034/01/19	5	5	
4	Building Cc	Building Cc	2034/01/20	2034/06/13	5	103	
5	Paving	Paving	2034/06/14	2034/06/20	5	5	
6	Architectur	Architectur	2034/06/21	2034/06/29	5	7	

PhaseNam	OffRoadEq	OffRoadEq	UsageHour	HorsePowe	LoadFactor
Site Prepai	Graders	1	8	174	0.41
Site Prepai	Tractors/Lc	1	8	97	0.37
Grading	Concrete/Ir	1	8	81	0.73
Grading	Rubber Tire	1	1	255	0.4
Grading	Tractors/Lc	2	6	97	0.37
Utilities	Tractors/Lc	2	6	97	0.37
Utilities	Trenchers	2	7	80	0.5
Building Cc	Cranes	1	4	226	0.29
Building Cc	Forklifts	2	6	89	0.2
Building Cc	Tractors/Lc	2	8	97	0.37
Paving	Cement an	3	6	9	0.56
Paving	Pavers	1	7	125	0.42
Paving	Rollers	1	7	80	0.38
Paving	Tractors/Lc	1	7	97	0.37
Architectura	Air Compre	1	6	78	0.48

PhaseNam	WorkerTrip	VendorTrip	HaulingTrip	WorkerTrip	VendorTrip	HaulingTrip	WorkerVeh	VendorVeh
Site Prepar	5	1	0	10.8	7.3	20	LD_Mix	HDT_Mix
Grading	10	1	0	10.8	7.3	20	LD_Mix	HDT_Mix
Utilities	10	1	0	10.8	7.3	20	LD_Mix	HDT_Mix
Building Co	14	5	0	10.8	7.3	20	LD_Mix	HDT_Mix
Paving	15	0	0	10.8	7.3	20	LD_Mix	HDT_Mix
Architectura	3	0	0	10.8	7.3	20	LD_Mix	HDT_Mix

HaulingVehicleClass
HHDT
HHDT
HHDT
HHDT
HHDT
HHDT

PhaseNam	WorkerPer	VendorPer	HaulingPer	RoadSiltLo	MaterialSilt	MaterialMo	AverageVe	MeanVehic
Site Prepar	94	94	94	0.1	8.5	0.5	2.4	40
Grading	94	94	94	0.1	8.5	0.5	2.4	40
Utilities	94	94	94	0.1	8.5	0.5	2.4	40
Building Co	94	94	94	0.1	8.5	0.5	2.4	40
Paving	94	94	94	0.1	8.5	0.5	2.4	40
Architectur	94	94	94	0.1	8.5	0.5	2.4	40

leSpeed

PhaseNam	Demolition:	DemolitionUnitAmount

PhaseNam	MaterialImp	MaterialExp	GradingSiz	ImportExpo	MeanVehic	AcresOfGra	MaterialMo	MaterialMo
Site Prepar	0	0		0	7.1	1	7.9	12
Grading	0	0		0	7.1	0	7.9	12

MaterialSiltContent
6.9
6.9

PhaseNam	Architectur	Architectur	EF_Reside	ConstArea_	EF_Reside	ConstArea_	EF_Nonres	ConstArea_
Architectur	2003/01/01	2040/12/31	100	0	100	0	150	49500

EF_Nonres	ConstArea_Nonresidential_Exterior
150	16500

ParkingLotAcreage

VehicleTrip	VehicleTrip	WD_TR	ST_TR	SU_TR	HW_TL	HS_TL	HO_TL	CC_TL
Junior Coll	1000sqft	45.04	11.23	1.21	0	0	0	7.3
Other Non-	1000sqft	0	0	0	0	0	0	7.3

CW_TL	CNW_TL	PR_TP	DV_TP	PB_TP	HW_TTP	HS_TTP	HO_TTP	CC_TTP
9.5	7.3	92	7	1	0	0	0	88.6
9.5	7.3	0	0	0	0	0	0	0

CW_TTP	CNW_TTP
6.4	5
0	0

Season	EmissionTy	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD
A	FleetMix	0.472386	0.067706	0.148876	0.143449	0.055135	0.00643	0.025978
A	CH4_IDLE	0	0	0	0	0.001026	0.00077	0.00827
A	CH4_RUNI	0.009286	0.010576	0.011235	0.014357	0.008728	0.006523	0.004957
A	CH4_STRE	0.003546	0.004938	0.004589	0.007826	0.009703	0.00453	0
A	CO_IDLEX	0	0	0	0	0.153006	0.119695	2.104809
A	CO_RUNE	0.650699	0.769389	0.763047	1.046392	0.716822	0.833336	0.400382
A	CO_STRE	1.166901	1.53356	1.437389	2.24022	2.139776	1.158556	8.102847
A	CO2_NBIC	0	0	0	0	8.32912	9.081185	572.7368
A	CO2_NBIC	211.0983	252.5655	328.2785	434.6341	685.06	587.2628	1021.026
A	CO2_NBIC	44.12752	53.43815	68.9767	91.29065	31.57829	18.59151	49.32141
A	NOX_IDLE	0	0	0	0	0.087521	0.136824	3.261942
A	NOX_RUN	0.069969	0.081415	0.0862	0.124895	0.614414	0.786492	0.979345
A	NOX_STRI	0.069574	0.091658	0.096405	0.166825	0.826007	0.432151	0.907863
A	PM10_IDLI	0	0	0	0	0.000912	0.001443	0.007574
A	PM10_PMI	0.03675	0.03675	0.03675	0.03675	0.055093	0.073641	0.122038
A	PM10_PMT	0.008	0.008	0.008	0.008	0.009849	0.010814	0.011645
A	PM10_RUI	0.002087	0.002068	0.002058	0.002006	0.015093	0.021943	0.03424
A	PM10_STF	0.005269	0.004978	0.005197	0.004799	0.000217	0.000092	0.000377
A	PM25_IDLI	0	0	0	0	0.000839	0.001328	0.006968
A	PM25_PMI	0.01575	0.01575	0.01575	0.01575	0.023611	0.03156	0.052302
A	PM25_PMT	0.002	0.002	0.002	0.002	0.002462	0.002704	0.002911
A	PM25_RUI	0.001936	0.001919	0.001909	0.001861	0.013887	0.020188	0.031501
A	PM25_STF	0.004889	0.004619	0.004822	0.004452	0.000201	0.000086	0.000349
A	ROG_DIUI	0.017036	0.045011	0.048713	0.083686	0.001335	0.000653	0.001536
A	ROG_HTS	0.049042	0.103932	0.098833	0.16813	0.042419	0.018863	0.062987
A	ROG_IDLE	0	0	0	0	0.023505	0.017411	0.178046
A	ROG_RES	0.014715	0.038568	0.04543	0.080951	0.000811	0.000404	0.000921
A	ROG_RUN	0.011267	0.013599	0.013738	0.019796	0.064432	0.079825	0.108226
A	ROG_RUN	0.165089	0.363881	0.341871	0.531942	0.223315	0.097223	0.332587
A	ROG_STR	0.062906	0.08759	0.081404	0.138817	0.172109	0.080349	0.495959
A	SO2_IDLE	0	0	0	0	0.000093	0.000099	0.006071
A	SO2_RUNI	0.003546	0.004118	0.004826	0.006184	0.007497	0.006356	0.010851
A	SO2_STRE	0.000757	0.000885	0.001033	0.001328	0.000389	0.000227	0.00069
A	TOG_DIUI	0.017036	0.045011	0.048713	0.083686	0.001335	0.000653	0.001536
A	TOG_HTSI	0.049042	0.103932	0.098833	0.16813	0.042419	0.018863	0.062987
A	TOG_IDLE	0	0	0	0	0.025162	0.018884	0.202691
A	TOG_REST	0.014715	0.038568	0.04543	0.080951	0.000811	0.000404	0.000921
A	TOG_RUN	0.020759	0.024416	0.025219	0.03449	0.07823	0.093405	0.123851
A	TOG_RUN	0.165089	0.363881	0.341871	0.531942	0.223315	0.097223	0.332587
A	TOG_STRI	0.067164	0.093519	0.086914	0.148214	0.18376	0.085788	0.529531
S	FleetMix	0.472386	0.067706	0.148876	0.143449	0.055135	0.00643	0.025978
S	CH4_IDLE	0	0	0	0	0.001026	0.00077	0.007794
S	CH4_RUNI	0.009286	0.010576	0.011235	0.014357	0.008728	0.006523	0.004957
S	CH4_STRE	0.003546	0.004938	0.004589	0.007826	0.009703	0.00453	0
S	CO_IDLEX	0	0	0	0	0.153006	0.119695	1.529441
S	CO_RUNE	0.814709	0.956491	0.950196	1.300327	0.723272	0.835632	0.401359
S	CO_STRE	0.832213	1.095636	1.025387	1.599531	1.516092	0.820434	5.816633
S	CO2_NBIC	0	0	0	0	8.32912	9.081185	606.764
S	CO2_NBIC	232.754	277.5476	360.9666	477.4186	685.06	587.2628	1021.026
S	CO2_NBIC	44.12752	53.43815	68.97669	91.29065	31.57829	18.59151	49.32141

S	NOX_IDLE	0	0	0	0	0.087521	0.136824	3.366871
S	NOX_RUN	0.062938	0.072936	0.077256	0.111778	0.571294	0.738035	0.918668
S	NOX_STRI	0.063005	0.082994	0.087297	0.151034	0.775869	0.405995	0.85285
S	PM10_IDLI	0	0	0	0	0.000912	0.001443	0.006385
S	PM10_PMI	0.03675	0.03675	0.03675	0.03675	0.055093	0.073641	0.122038
S	PM10_PMT	0.008	0.008	0.008	0.008	0.009849	0.010814	0.011645
S	PM10_RUI	0.002087	0.002068	0.002058	0.002006	0.015093	0.021943	0.03424
S	PM10_STF	0.005269	0.004978	0.005197	0.004799	0.000217	0.000092	0.000377
S	PM25_IDLI	0	0	0	0	0.000839	0.001328	0.005874
S	PM25_PMI	0.01575	0.01575	0.01575	0.01575	0.023611	0.03156	0.052302
S	PM25_PMT	0.002	0.002	0.002	0.002	0.002462	0.002704	0.002911
S	PM25_RUI	0.001936	0.001919	0.001909	0.001861	0.013887	0.020188	0.031501
S	PM25_STF	0.004889	0.004619	0.004822	0.004452	0.000201	0.000086	0.000349
S	ROG_DIUF	0.044052	0.115371	0.122653	0.207042	0.003333	0.001622	0.003864
S	ROG_HTS	0.056148	0.12019	0.11356	0.186969	0.047825	0.021072	0.071758
S	ROG_IDLE	0	0	0	0	0.023505	0.017411	0.167791
S	ROG_RES	0.034578	0.088212	0.101893	0.176645	0.001764	0.000873	0.001995
S	ROG_RUN	0.012999	0.015683	0.015823	0.022952	0.064806	0.079948	0.108277
S	ROG_RUN	0.159101	0.352629	0.330333	0.515558	0.221149	0.095934	0.329644
S	ROG_STR	0.049598	0.069149	0.064204	0.109544	0.142515	0.066512	0.413364
S	SO2_IDLE	0	0	0	0	0.000093	0.000099	0.006432
S	SO2_RUNI	0.003912	0.004528	0.005309	0.006796	0.007497	0.006356	0.010851
S	SO2_STRE	0.000752	0.000878	0.001026	0.001317	0.000379	0.000221	0.000651
S	TOG_DIUF	0.044052	0.115371	0.122653	0.207042	0.003333	0.001622	0.003864
S	TOG_HTSI	0.056148	0.12019	0.11356	0.186969	0.047825	0.021072	0.071758
S	TOG_IDLE	0	0	0	0	0.025162	0.018884	0.191018
S	TOG_REST	0.034578	0.088212	0.101893	0.176645	0.001764	0.000873	0.001995
S	TOG_RUN	0.023935	0.02805	0.029006	0.039603	0.078793	0.093623	0.123928
S	TOG_RUN	0.159101	0.352629	0.330333	0.515558	0.221149	0.095934	0.329644
S	TOG_STRI	0.052955	0.07383	0.06855	0.116959	0.152162	0.071014	0.441345
W	FleetMix	0.472386	0.067706	0.148876	0.143449	0.055135	0.00643	0.025978
W	CH4_IDLE	0	0	0	0	0.001026	0.00077	0.008928
W	CH4_RUNI	0.009286	0.010576	0.011235	0.014357	0.008728	0.006523	0.004957
W	CH4_STRE	0.003546	0.004938	0.004589	0.007826	0.009703	0.00453	0
W	CO_IDLEX	0	0	0	0	0.153006	0.119695	2.899365
W	CO_RUNE	0.621188	0.736174	0.729793	1.001367	0.709634	0.830772	0.399288
W	CO_STRE	1.586327	2.08369	1.953738	3.044124	3.037191	1.645587	11.44861
W	CO2_NBIC	0	0	0	0	8.32912	9.081185	525.7468
W	CO2_NBIC	205.552	246.171	319.9188	423.699	685.06	587.2628	1021.026
W	CO2_NBIC	44.12752	53.43815	68.97669	91.29065	31.57829	18.59151	49.32141
W	NOX_IDLE	0	0	0	0	0.087521	0.136824	3.117039
W	NOX_RUN	0.078688	0.091753	0.097162	0.14082	0.632371	0.804097	0.999473
W	NOX_STRI	0.077631	0.102287	0.107575	0.186175	0.89113	0.466231	0.979695
W	PM10_IDLI	0	0	0	0	0.000912	0.001443	0.009216
W	PM10_PMI	0.03675	0.03675	0.03675	0.03675	0.055093	0.073641	0.122038
W	PM10_PMT	0.008	0.008	0.008	0.008	0.009849	0.010814	0.011645
W	PM10_RUI	0.002087	0.002068	0.002058	0.002006	0.015093	0.021943	0.03424
W	PM10_STF	0.005269	0.004978	0.005197	0.004799	0.000217	0.000092	0.000377
W	PM25_IDLI	0	0	0	0	0.000839	0.001328	0.008479
W	PM25_PMI	0.01575	0.01575	0.01575	0.01575	0.023611	0.03156	0.052302
W	PM25_PMT	0.002	0.002	0.002	0.002	0.002462	0.002704	0.002911

W	PM25_RUI	0.001936	0.001919	0.001909	0.001861	0.013887	0.020188	0.031501
W	PM25_STF	0.004889	0.004619	0.004822	0.004452	0.000201	0.000086	0.000349
W	ROG_DIUI	0.005235	0.014257	0.01628	0.029405	0.000484	0.00024	0.00055
W	ROG_HTS	0.048638	0.103	0.097998	0.167067	0.042124	0.01874	0.062441
W	ROG_IDLE	0	0	0	0	0.023505	0.017411	0.192206
W	ROG_RES	0.003092	0.008481	0.010035	0.018436	0.000203	0.000102	0.000232
W	ROG_RUN	0.010674	0.012881	0.013021	0.018707	0.064003	0.079684	0.108168
W	ROG_RUN	0.197978	0.438905	0.409095	0.632451	0.249058	0.108382	0.3734
W	ROG_STR	0.080531	0.112038	0.104188	0.177576	0.212246	0.099153	0.610477
W	SO2_IDLE	0	0	0	0	0.000093	0.000099	0.005573
W	SO2_RUNI	0.003453	0.004014	0.004703	0.006028	0.007497	0.006356	0.010851
W	SO2_STRE	0.000764	0.000895	0.001042	0.001341	0.000405	0.000235	0.000746
W	TOG_DIUI	0.005235	0.014257	0.01628	0.029405	0.000484	0.00024	0.00055
W	TOG_HTSI	0.048638	0.103	0.097998	0.167067	0.042124	0.01874	0.062441
W	TOG_IDLE	0	0	0	0	0.025162	0.018884	0.218812
W	TOG_RES	0.003092	0.008481	0.010035	0.018436	0.000203	0.000102	0.000232
W	TOG_RUN	0.019672	0.023161	0.023915	0.032722	0.077581	0.093153	0.123761
W	TOG_RUN	0.197978	0.438905	0.409095	0.632451	0.249058	0.108382	0.3734
W	TOG_STRI	0.085982	0.119622	0.11124	0.189596	0.226614	0.105865	0.651801

HHD	OBUS	UBUS	MCY	SBUS	MH
0.066258	0.001	0.001302	0.008345	0.000427	0.002709
0.02848	0.026062	0	0	0.007967	0
0.009354	0.002208	0	0	0.010687	0
0	0	0	0	0	0
3.458742	3.305433	0	0	2.028305	0
1.123237	0.559333	1.282754	28.18646	1.304661	0.299563
60.2792	6.738546	3.367497	11.15298	18.16261	4.336661
527.6554	533.3623	0	0	573.4634	0
1540.958	941.9852	1830.028	163.3629	1045.681	693.8811
49.32141	32.73429	27.36272	36.30273	115.3017	27.45988
3.241973	3.200746	0	0	3.644479	0
1.936556	0.858477	6.313434	1.26942	3.742574	0.870545
3.781827	0.934583	0.750189	0.314724	1.825303	0.561686
0.009025	0.008796	0	0	0.007655	0
0.060689	0.081063	0.697136	0.03675	0.585258	0.051793
0.035305	0.009894	0.008	0.008	0.011099	0.008643
0.066416	0.026595	0.121115	0.000283	0.040114	0.012166
0.000353	0.000294	0.000115	0.000673	0.001059	0.000188
0.008303	0.008092	0	0	0.007042	0
0.02601	0.034741	0.298772	0.01575	0.250825	0.022197
0.008826	0.002473	0.002	0.002	0.002775	0.002161
0.061103	0.024468	0.111426	0.000245	0.036907	0.011194
0.000328	0.000273	0.000106	0.000589	0.000982	0.000174
0.001668	0.000858	0.002498	0.869869	0.019461	0.409403
0.070952	0.024436	0.035364	0.398412	0.170797	0.026262
0.613171	0.561094	0	0	0.171526	0
0.001038	0.000408	0.001388	0.450011	0.007559	0.193003
0.204461	0.091308	0.293467	3.006411	0.268534	0.039882
0.519968	0.287534	0.378894	1.179505	1.22622	0.398321
1.096497	0.426913	0.454985	2.16389	1.099451	0.238566
0.005593	0.005654	0	0	0.006079	0
0.01634	0.010149	0.019472	0.002352	0.01117	0.007614
0.001527	0.000482	0.000371	0.000647	0.001599	0.00038
0.001668	0.000858	0.002498	0.869869	0.019461	0.409403
0.070952	0.024436	0.035364	0.398412	0.170797	0.026262
0.698048	0.638763	0	0	0.195269	0
0.001038	0.000408	0.001388	0.450011	0.007559	0.193003
0.233064	0.107704	0.336562	3.276679	0.307114	0.05172
0.519968	0.287534	0.378894	1.179505	1.22622	0.398321
1.170721	0.455812	0.485784	2.321222	1.173875	0.254714
0.066258	0.001	0.001302	0.008345	0.000427	0.002709
0.02684	0.024561	0	0	0.007508	0
0.009354	0.002208	0	0	0.010687	0
0	0	0	0	0	0
2.513264	2.401864	0	0	1.47385	0
1.130053	0.566926	1.285983	27.95709	1.326643	0.306221
43.16153	4.778461	2.614581	9.013973	14.47723	3.071021
559.0043	565.0502	0	0	607.5338	0
1540.958	941.9852	1830.028	163.3629	1045.681	693.8811
49.32141	32.73429	27.36272	36.30273	115.3017	27.45988

3.346261	3.303707	0	0	3.761714	0
1.822799	0.797847	5.915406	1.070536	3.491288	0.804915
3.550585	0.876575	0.700111	0.290636	1.674015	0.526673
0.007608	0.007415	0	0	0.006453	0
0.060689	0.081063	0.697136	0.03675	0.585258	0.051793
0.035305	0.009894	0.008	0.008	0.011099	0.008643
0.066416	0.026595	0.121115	0.000283	0.040114	0.012166
0.000353	0.000294	0.000115	0.000673	0.001059	0.000188
0.006999	0.006822	0	0	0.005937	0
0.02601	0.034741	0.298772	0.01575	0.250825	0.022197
0.008826	0.002473	0.002	0.002	0.002775	0.002161
0.061103	0.024468	0.111426	0.000245	0.036907	0.011194
0.000328	0.000273	0.000106	0.000589	0.000982	0.000174
0.004127	0.002184	0.006559	2.535608	0.052975	1.034335
0.079995	0.026569	0.04668	0.698518	0.191519	0.02918
0.577856	0.528779	0	0	0.161647	0
0.002223	0.00084	0.002907	1.543504	0.015608	0.3979
0.20458	0.091707	0.293596	2.937888	0.269967	0.040242
0.512351	0.28337	0.358076	1.134199	1.066279	0.391052
0.912226	0.353293	0.394037	1.792804	0.958948	0.197272
0.005926	0.00599	0	0	0.00644	0
0.01634	0.010149	0.019472	0.002346	0.01117	0.007614
0.001253	0.000449	0.000357	0.000601	0.001536	0.000359
0.004127	0.002184	0.006559	2.535608	0.052975	1.034335
0.079995	0.026569	0.04668	0.698518	0.191519	0.02918
0.657845	0.601974	0	0	0.184023	0
0.002223	0.00084	0.002907	1.543504	0.015608	0.3979
0.233194	0.108265	0.336773	3.204614	0.308696	0.052326
0.512351	0.28337	0.358076	1.134199	1.066279	0.391052
0.973976	0.377208	0.42071	1.922996	1.023861	0.210626
0.066258	0.001	0.001302	0.008345	0.000427	0.002709
0.030746	0.028134	0	0	0.008601	0
0.009354	0.002208	0	0	0.010687	0
0	0	0	0	0	0
4.764401	4.553219	0	0	2.793981	0
1.115768	0.55089	1.279312	31.66059	1.281679	0.292198
85.18453	9.592713	4.429396	14.46244	23.40102	6.174393
484.3641	489.6028	0	0	526.4138	0
1540.958	941.9852	1830.028	163.3629	1045.681	693.8811
49.32141	32.73429	27.36272	36.30273	115.3017	27.45988
3.097958	3.058562	0	0	3.482583	0
1.977514	0.883995	6.439731	1.395509	3.831924	0.899038
4.081018	1.008848	0.811532	0.343561	1.989351	0.606319
0.010981	0.010702	0	0	0.009314	0
0.060689	0.081063	0.697136	0.03675	0.585258	0.051793
0.035305	0.009894	0.008	0.008	0.011099	0.008643
0.066416	0.026595	0.121115	0.000283	0.040114	0.012166
0.000353	0.000294	0.000115	0.000673	0.001059	0.000188
0.010103	0.009846	0	0	0.008569	0
0.02601	0.034741	0.298772	0.01575	0.250825	0.022197
0.008826	0.002473	0.002	0.002	0.002775	0.002161

0.061103	0.024468	0.111426	0.000245	0.036907	0.011194
0.000328	0.000273	0.000106	0.000589	0.000982	0.000174
0.000621	0.000351	0.000987	0.142222	0.006911	0.168871
0.070439	0.024303	0.034694	0.383176	0.168853	0.026096
0.661939	0.605721	0	0	0.185168	0
0.000264	0.000103	0.00045	0.044475	0.001933	0.049538
0.204328	0.090847	0.293338	3.16119	0.266999	0.03947
0.588223	0.313222	0.487631	1.473953	1.5777	0.436182
1.349756	0.527947	0.534732	2.699873	1.272627	0.295039
0.005135	0.00519	0	0	0.00558	0
0.01634	0.010149	0.019472	0.002411	0.011169	0.007614
0.001926	0.00053	0.00039	0.000716	0.001686	0.000411
0.000621	0.000351	0.000987	0.142222	0.006911	0.168871
0.070439	0.024303	0.034694	0.383176	0.168853	0.026096
0.753567	0.689567	0	0	0.2108	0
0.000264	0.000103	0.00045	0.044475	0.001933	0.049538
0.232919	0.107055	0.33633	3.439537	0.305418	0.051024
0.588223	0.313222	0.487631	1.473953	1.5777	0.436182
1.441123	0.563684	0.570929	2.89672	1.358774	0.315011

RoadPerce	RoadSiltLo	MaterialSilt	MaterialMo	MobileAver	MeanVehicleSpeed
100	0.1	4.3	0.5	2.4	40

Woodstove	NumberCo	NumberCa	NumberNo	NumberPel	Woodstove	WoodstoveWoodMass

FireplacesI	NumberWc	NumberGa	NumberPrc	NumberNo	FireplaceH	FireplaceD	FireplaceWoodMass

ROG_EF
2.14E-05

Area_EF_F	Area_Resid	Area_EF_F	Area_Resid	Area_EF_N	Area_Nonr	Area_EF_N	Area_Nonr	Reapplicati
100	0	100	0	150	49500	150	16500	10

onRatePercent

NumberSn	NumberSummerDays
0	180

EnergyUse	T24E	NT24E	LightingEle	T24NG	NT24NG
Junior Coll	3.34	2.27	3.34	21.92	3.3
Other Non-	0	0	0	0	0

WaterLand	WaterLand	IndoorWate	OutdoorWa	ElectricityIr	ElectricityIr	ElectricityIr	ElectricityIr	SepticTank
Junior Coll	1000sqft	1471471	2301532	2117	111	1272	1911	0
Other Non-	1000sqft	0	0	2117	111	1272	1911	10.33

AerobicPer	Anaerobica	AnaDigest(	AnaDigestCogenCombDigestGasPercent
100	0	100	0
87.46	2.21	100	0

SolidWaste	SolidWaste	SolidWaste	LandfillNoC	LandfillCap	LandfillCaptureGasEnergyRecovery
Junior Coll	1000sqft	39	6	94	0
Other Non-	1000sqft	0	6	94	0

Vegetation	Vegetation	AcresBegir	AcresEnd	CO2peracre

BroadSpec	NumberOfI	CO2perTree

tblConstEquipMitigation

ConstMitiga	FuelType	Tier	NumberOfE	TotalNumb	DPF	OxidationCatalyst
Air Compre	Diesel	No Change	0	1	No Change	0
Cement an	Diesel	No Change	0	3	No Change	0
Concrete/In	Diesel	No Change	0	1	No Change	0
Cranes	Diesel	No Change	0	1	No Change	0
Forklifts	Diesel	No Change	0	2	No Change	0
Graders	Diesel	No Change	0	1	No Change	0
Pavers	Diesel	No Change	0	1	No Change	0
Rollers	Diesel	No Change	0	1	No Change	0
Rubber Tir	Diesel	No Change	0	1	No Change	0
Tractors/Lo	Diesel	No Change	0	8	No Change	0
Trenchers	Diesel	No Change	0	2	No Change	0

tblConstDustMitigation

SoilStabiliz	SoilStabiliz	SoilStabiliz	ReplaceGr	ReplaceGr	ReplaceGr	WaterExpo	WaterExpo	WaterExpo
0	0	0	0	0	0	1	2	55

WaterExpo	WaterUnpa	WaterUnpa	WaterUnpa	WaterUnpa	CleanPavedRoadPercentReduction
55	0	0	0	0	0

ProjectSett	IncreaseDe	IncreaseDe	IncreaseDe	IncreaseDi	ImproveWa	ImproveWa	ImproveDe	ImproveDe

IncreaseTr	IncreaseTr	IntegrateBe	IntegrateBe	ImprovePe	ImprovePe	ProvideTra	ProvideTra	ProvideTra

ImplementI	ImplementI	LimitParkin	LimitParkin	UnbundleP	UnbundleP	OnStreetM	OnStreetM	ProvideBR

ProvideBR	ExpandTra	ExpandTra	IncreaseTr	IncreaseTr	IncreaseTransitFrequencyHeadwaysPercentR

Reduction

Implement	Implement	Implement	TransitSub	TransitSub	TransitSub	ImplementI	ImplementI	WorkplaceI
0			0			0		0

tblCommuteMitigation

Workplace	Workplace	Encourage	Encourage	Encourage	Encourage	MarketCon	MarketCon	EmployeeV
		0				0		0

Employee\	Employee\	ProvideRid	ProvideRid	ImplementS	ImplementSchoolBusProgram	PercentFamilyU
	2	0		0		

Jsing

Landscape	Landscape	Landscape	Landscape	Landscape	Landscape	UseLowVC	UseLowVC	UseLowVC
0		0		0		0	100	0

UseLowVC	UseLowVC	UseLowVC	UseLowVC	UseLowVC	HearthOnly	NoHearthC	UseLowVOCCleaningS
100	0	150	0	150	0	0	0

SuppliesCheck

ExceedTitle	ExceedTitle	InstallHighI	InstallHighI	OnSiteRen	KwhGenera	KwhGenera	PercentOfE	PercentOfE

ElectricityUseGenerated

ApplianceT	ApplianceL	PercentImprovement
ClothWasher		30
DishWasher		15
Fan		50
Refrigerator		15

tblWaterMitigation

ApplyWate	ApplyWate	ApplyWate	UseReclair	PercentOu	PercentInd	UseGreyW	PercentOu	PercentInd
0			0			0		

InstallLowF	PercentRe	InstallLowF	PercentRe	InstallLowF	PercentRe	InstallLowF	PercentRe	TurfReduct
0	32	0	18	0	20	0	20	0

tblWaterMitigation

TurfReduct	TurfReduct	UseWaterE	UseWaterE	WaterEffici	MAWA	ETWU
		0	6.1	0		

InstituteRe	InstituteRecyclingAndCompostingServicesWastePercentReduction

tblOperationalOffRoadEquipment

OperOffRo	OperOffRo	OperHours	OperDaysF	OperHorse	OperLoadF	OperFuelType

SubModule	PhaseNam	Season	Remarks
1			
3			site size increased to account for approx 3,000 sq ft landscaping
4			trenching phase for utilities, lengthed construction phase to account f
5	Architectural Coating		
5	Building Construction		
5	Grading		
5	Paving		non asphalt - pouring concrete walkways
5	Site Preparation		
5	Utilities		trenching equipment
6			water trucks in first three phases
9			grading over full site - building footprint, landscaping, and hardscape
12			per traffic analysis
14			all roads paved
18			
21			all wastewater treated at WWTP
25			

or landscaping

APPENDIX B

Biology Technical Report

BIOLOGICAL TECHNICAL REPORT
for the
Vacaville Campus Site
City of Vacaville, California

Prepared for:

Solano Community College District
c/o Kitchell
360 Campus Lane, Suite 203
Fairfield, California 94534
Contact: Ines Zildzic

Prepared by:

DUDEK
853 Lincoln Way, Suite 105
Auburn, California 95603
Contact: Kevin Derby

MARCH 2015

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APPENDICES

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FIGURES

TABLES

1 INTRODUCTION

Dudek conducted a biological resources assessment for the approximately 48.75-acre Vacaville Campus Site in the City of Sacramento, California. The purpose of the assessment was to identify and characterize the vegetation communities present on and immediately adjacent to the project site, to record plant and animal species observed on the site, and to evaluate the site for its potential to support sensitive biological resources, including special-status plant and animal species and any other resources considered sensitive by local, state, and/or federal resource agencies, that could potentially be impacted by proposed development of the site.

This report documents the methods and results of the assessment and provides recommendations that will help ensure compliance with applicable biological resources laws and regulations.

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2 SETTING

2.1 Location

The project site is located approximately 3.5 miles northeast of downtown Vacaville, (see Figure 1, Regional Map). This location corresponds to Township 6 North and Range 1 West of the Allendale, California U.S. Geological Survey (USGS) 7.5 minute topographic quadrangle (Latitude 38°23'37" N, Longitude 121°56'23" W). The Campus is located at the northeast corner of Vacaville Center Parkway and North Village Parkway (see Figure 2). The Solano Community College District (SCCD) property is approximately 48.75 acres, excluding streets. The property is comprised of five parcels (Assessor's Parcel Nos. 133-030-13; 133-180-13, -14, -15, -16, -17).

2.2 General Physical Characteristics

The approximately 48.75-acre property is moderately flat with elevations on the site ranging from approximately 84 feet above mean sea level (AMSL) on the east side of the property, to approximately 99 feet AMSL on the northern side of the property. The project site is currently vacant and contains a fallow field dominated by non-native grasses and scattered trees and shrubs. Regular disking occurs which creates low quality habitat for most species due to the disturbed nature of the site. Two paved (and unmaintained) roads, a classroom, a raised sewer manhole, and three ditches running west to east also occur on the site. Access to the project site is currently available from Vaca Valley Parkway, Crescent Drive, North Village Parkway, and the existing Solano Community College Vacaville Campus (Figure 2, Project Location Map). The site is only partially developed, and includes an existing 36,359-square foot classroom building with associated parking and landscaping.

SCCD also recently completed the transfer of the Solano County Department of Education property on the west side of North Village Parkway. This property is approximately 11 acres (Assessor's Parcel No. 133-190-49) and includes an existing classroom building and associated parking and landscaping.

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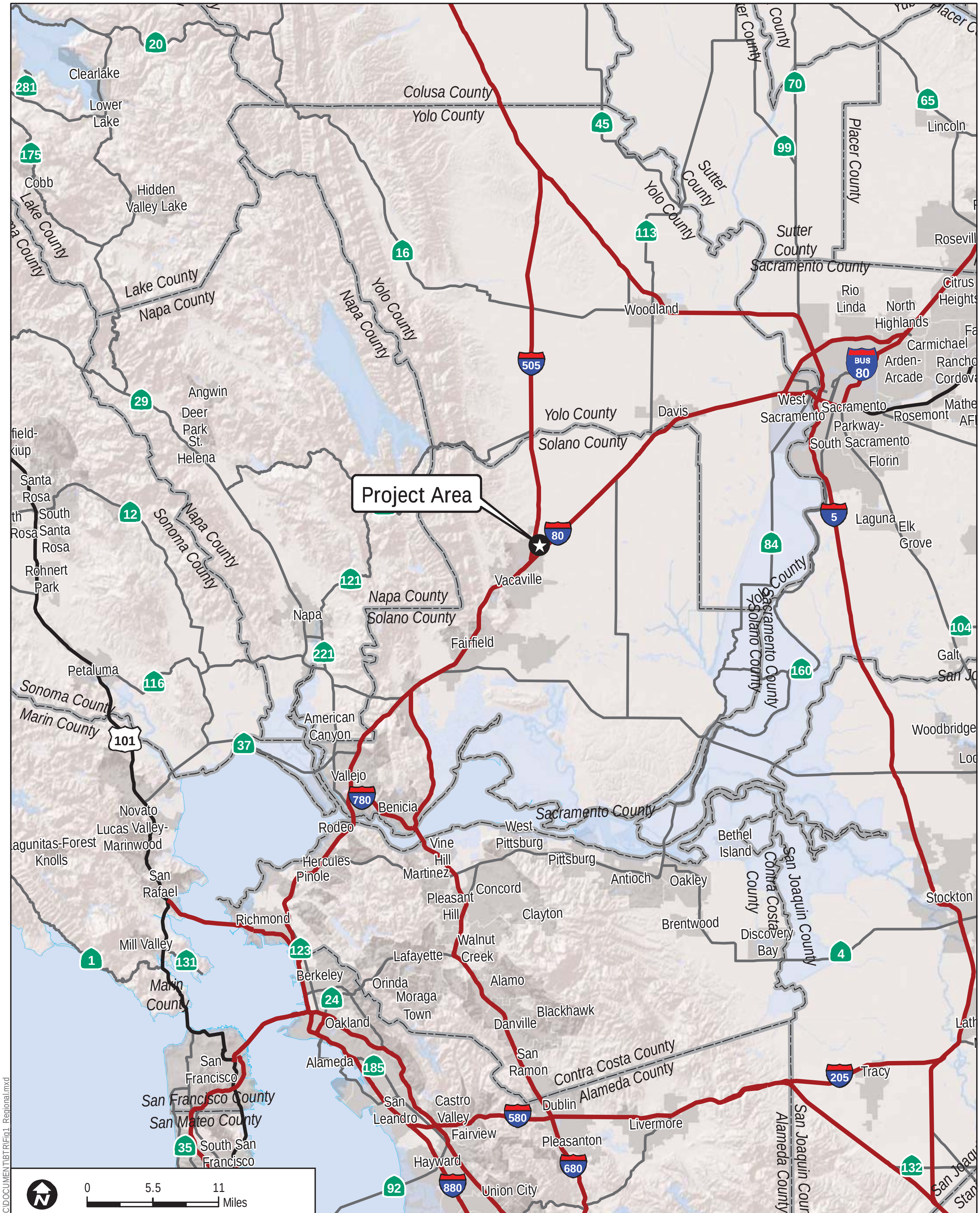

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FIGURE 1

Regional Map

SOLANO COMMUNITY COLLEGE VACAVILLE CENTER BTR

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SOURCE: Bing 2015

FIGURE 2

Project Location

SOLANO COMMUNITY COLLEGE VACAVILLE CENTER BTR

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3 METHODS

3.1 California Natural Diversity Database and Literature Review

Prior to the field survey, the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) was queried for any reported occurrences of special-status species (defined in Section 4.4 below) in the nine quadrangle area centered on the Allendale Quadrangle, within which the site is located (CDFW 2013). A search of existing biology reports for adjacent properties, soils reports, aerial photos, California Environmental Quality Act (CEQA) documents, and online resources also contributed to development of the list of special-status species with the potential to occur on or immediately adjacent to the site. The list of wildlife potentially occurring on the project site (Table 3) was generated from CNDDB Rarefind (Accessed October 20, 2014), USFWS database Species List (Sacramento Fish and Wildlife Office, Accessed October 20, 2014) and CNPS Rare and Endangered Plant Inventory (Accessed January 14, 2015), along with an assessment of the site during the field visit.

The CNDDB, USFWS and CNPS search revealed occurrences for 35 special-status plant species and 55 special-status wildlife species known to occur within the search area (Figure 3, 5-Mile Radius CNDDB Map). The nine quadrangle search area included some species that require very specialized habitats that do not occur near the project area (e.g., vernal pools, salt marsh, serpentine soils, etc.), and were thus eliminated from further consideration. A summary of the records search is included in Appendix A.

3.2 Field Survey

A field survey was conducted by Dudek Senior Biologist Kevin Derby on November 5, 2014. The field survey was conducted on foot and all areas of the project site were visited. On-site habitat types, species observations, and other field data were recorded during the visit. Due to the time of year the survey was performed, no breeding habitat was observed and accurate blooming periods were absent, therefore no focused, protocol-level surveys for such species were conducted at the time.

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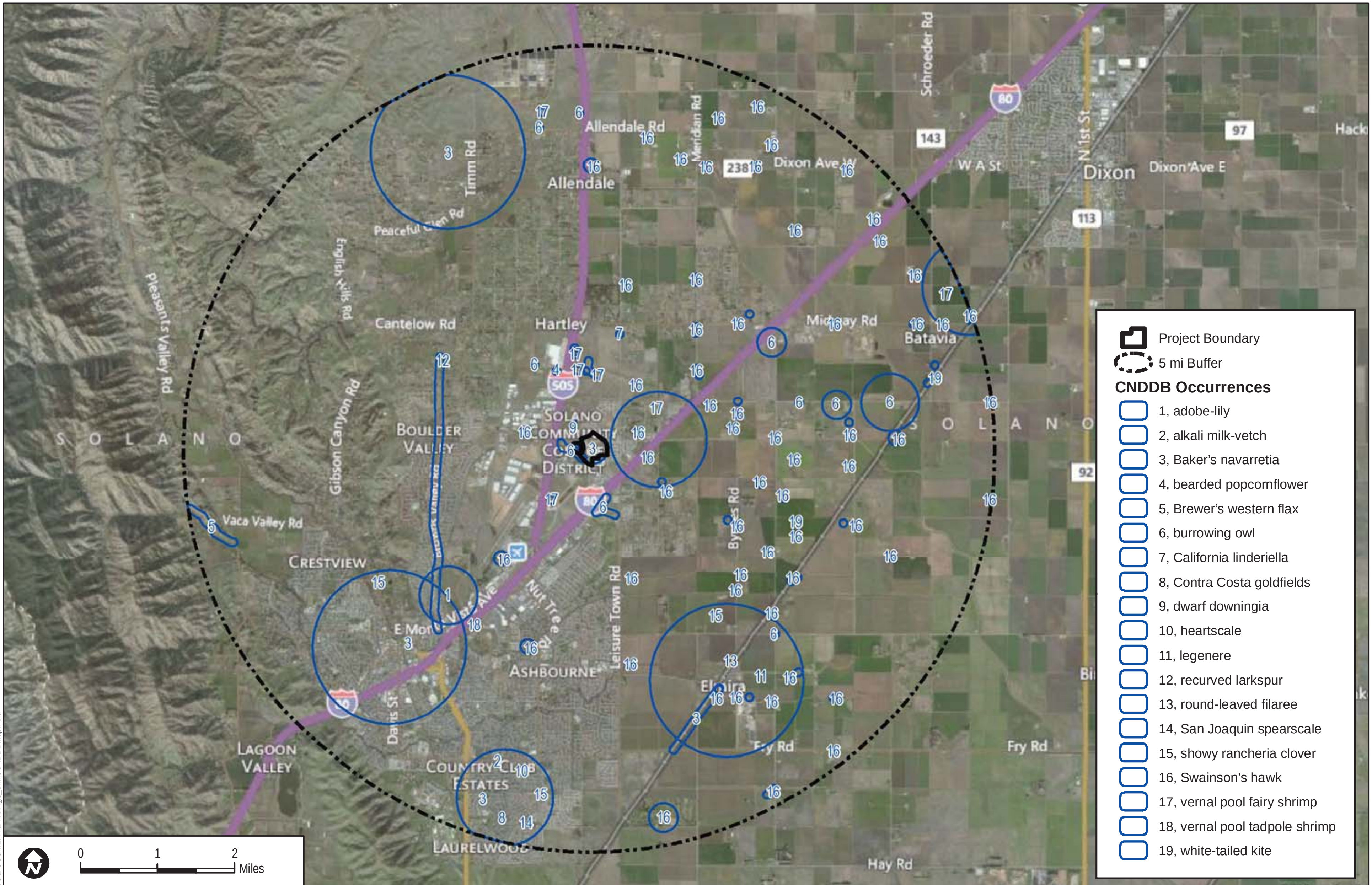

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SOURCE: Bing 2015, CNDDB

FIGURE 3

5-Mile CNDDB Map

SOLANO COMMUNITY COLLEGE VACAVILLE CENTER BTR

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4 FINDINGS/RESULTS

4.1 Soils

Soil types and their distribution in the project area were identified through a review of maps provided by the U.S. Soil Conservation Service (now called the Natural Resources Conservation Service (NRCS). Soil behavior characteristics identified by the NRCS include permeability, available water capacity, runoff, erosion, and shrink-swell potential. With the exception of urbanized areas where soils typically consist of engineered fill, the NRCS soil characteristics describe native, undisturbed soils (NRCS 1993).

According to the Soil Survey of Solano County, soils within the project site belong to the Clear Lake and San Ysidro soil series (see Figure 4, Soil Cover). Descriptions of the soil units mapped to the project site are provided below. The two soil map units described below are listed on the National Hydric Soils list as very deep, poorly to moderately drained soils that formed in fine textured alluvium derived from sandstone and shale or sedimentary rocks (NRCS 2015).

4.1.1 Clear Lake Clay, 0%–2% Slopes - CeA

This very deep, poorly drained soil is basin alluvium derived from igneous, metamorphic, and sedimentary rock. This soil type is considered prime farmland if irrigated. The effective rooting depth is 60 inches or more; depth to the water table is 4 – 10 feet. Runoff is high and the hazard of water erosion is slight. The soil is subject to rare periods of flooding. This soil may provide wetland functions and values when not altered by artificial drainage.

4.1.2 San Ysidro Sandy Loam, 0%–2% Slopes

San Ysidro soils typically occur on old low terraces at elevations less than 1,500 feet and have slopes ranging from 0 to 2 percent. These moderately well-drained soils typically have slow to medium runoff and very slow permeability. They formed in alluvium from sedimentary rocks and are found in the foothills and valleys of the Coast Range of central California. They are typically used for growing dryland grains, dryland pasture, and shallow rooted row crops, as well as pasture under irrigation. Uncultivated areas typically have a cover of annual grasses and forbs.

4.2 Vegetation and Habitat Types

The majority of the site consists of ruderal/disturbed habitat (non-native annual grass species and non-native forbs and/or bare dirt) that is annually mowed and disked (Figure 5, Vegetation Communities). are Developed land (e.g., abandoned roads), ornamental tree plantings, and three ditches running east to west to east, one of which is actively wet and two that are dry, cover the remainder of the project site. Representative photos of the project site are in Appendix B. The plant species observed within the project site are listed in Table 1 below.

Table 1
Flora Observed on the Proposed Vacaville Campus Project Site

Scientific Name	Common Name
Alnus sp.	alder
*Amaranthus albus**	tumble weed
Amsinckia intermedia	common fiddleneck
*Avena fatua**	wild oat
Baccharis pilularis	coyote brush
*Bromus diandrus**	ripgut brome
*Bromus madritensis**	foxtail brome
*Centaurea solstitialis**	yellow star-thistle
*Convolvulus arvensis**	field bindweed
Croton setigerus	turkey mullein
*Cynodon dactylon**	Bermuda grass
Cyperus eragrostis	nut sedge
Epilobium brachycarpum	panicled willow-herb
*Erodium botrys**	storks bill
*Festuca perennis**	perennial ryegrass
Holocarpha virgata	tarweed
Limonium californicum	limonium
*Malva parviflora**	common mallow
Oenothera elata	Hooker's evening primrose
*Paspalum dilatatum**	dallisgrass
Populus fremontii	Fremont's cottonwood
Rosa californica	California rose
*Rumex crispus**	curly dock
Salix laevigata	red willow
*Salsola tragus**	Russian thistle
Typha latifolia	cattail
Xanthium strumarium	cocklebur

*non-native species

4.2.1 Developed

Developed land on this property includes the existing Solano Community College buildings, parking lots, roads, sidewalks, and two unused roads that are in disrepair. This land cover has little to no habitat value for native flora and fauna.

4.2.2 Ditch

There are three east-west trending ditches on the project site. The two northern-most ditches were not actively flowing at the time of the field assessment. A few patches (no larger than ten square feet) of facultative plants such as nutsedge (*Cyperus eragrostis*) were observed growing in the bottom of the ditches, but the dominant plant community in the ditches is comprised of upland plants such as Russian thistle (*Salsola tragus*), fiddleneck (*Amsinckia intermedia*) and ripgut brome (*Bromus diandrus*). It does not appear that the two ditches are currently transporting water and may have been abandoned.

A wet ditch along the southern boundary of the project site was active and flowing water was observed moving from west to east on the day of the biological survey. Hydrophytic (wetland obligate) vegetation was observed in the bottom of the ditch and the lower half of its steep sided slopes. The ditch enters an underground culvert under Crescent Drive. The dominant plant cover in the wet ditch included cattail (*Typha latifolia*), willow (*Salix laevigata*), cottonwood (*Populus fremontii*), and hooker's evening primrose (*Oenothera elata*). Based on an initial analysis, it was unclear whether or not this wet ditch is considered a water of the United States (U.S.) under the jurisdiction of the U.S. Army Corps of Engineers (ACOE), as its source is stormwater drain runoff from the existing campus facilities. Jurisdictional wetlands and waters of the U.S. and the State of California are discussed in more detail in Section 4.4.4.

4.2.3 Ornamental

Ornamental plantings refer to areas where non-native ornamental and landscaping vegetation have been installed. Ornamental plantings are not regulated by state or federal resource agencies, and any impacts to this vegetation do not require mitigation.

Ornamental plantings in the study area occur along Crescent Drive in a narrow strip and interspersed among the existing campus parking lots and building areas. These plantings generally consist of exotic tree species and low growing shrubs and are irrigated.

4.2.4 Non-native Grassland - Disturbed

Non-native Grassland – Disturbed was used to describe the disked non-native grassland on the project site. Non-native grassland is a general habitat recognized in the *List of Terrestrial Natural Communities* (CDFG 2003). Holland (1986) states that non-native grassland has a sparse to dense cover of annual grasses that are typically 0.2 to 0.5 meter (0.7 to 1.6 feet) tall and can be up to 1 meter (3 feet) tall. Wildflowers are often associated with non-native grassland, especially in years with favorable precipitation (Holland 1986).

According to Holland (1986) and the *List of Terrestrial Natural Communities* (CDFG 2003), grasses that occur in non-native grassland include wild oats, bromes, fescue (*Vulpia* spp.), and Italian ryegrass (*Lolium multiflorum*). On the project site the majority of this land cover type had been recently disked, so identification of vegetation was nearly impossible. However, wild oat (*Avena fatua*) was abundant and recognizable and appears to be the dominant grass species within the non-native grassland on the site.

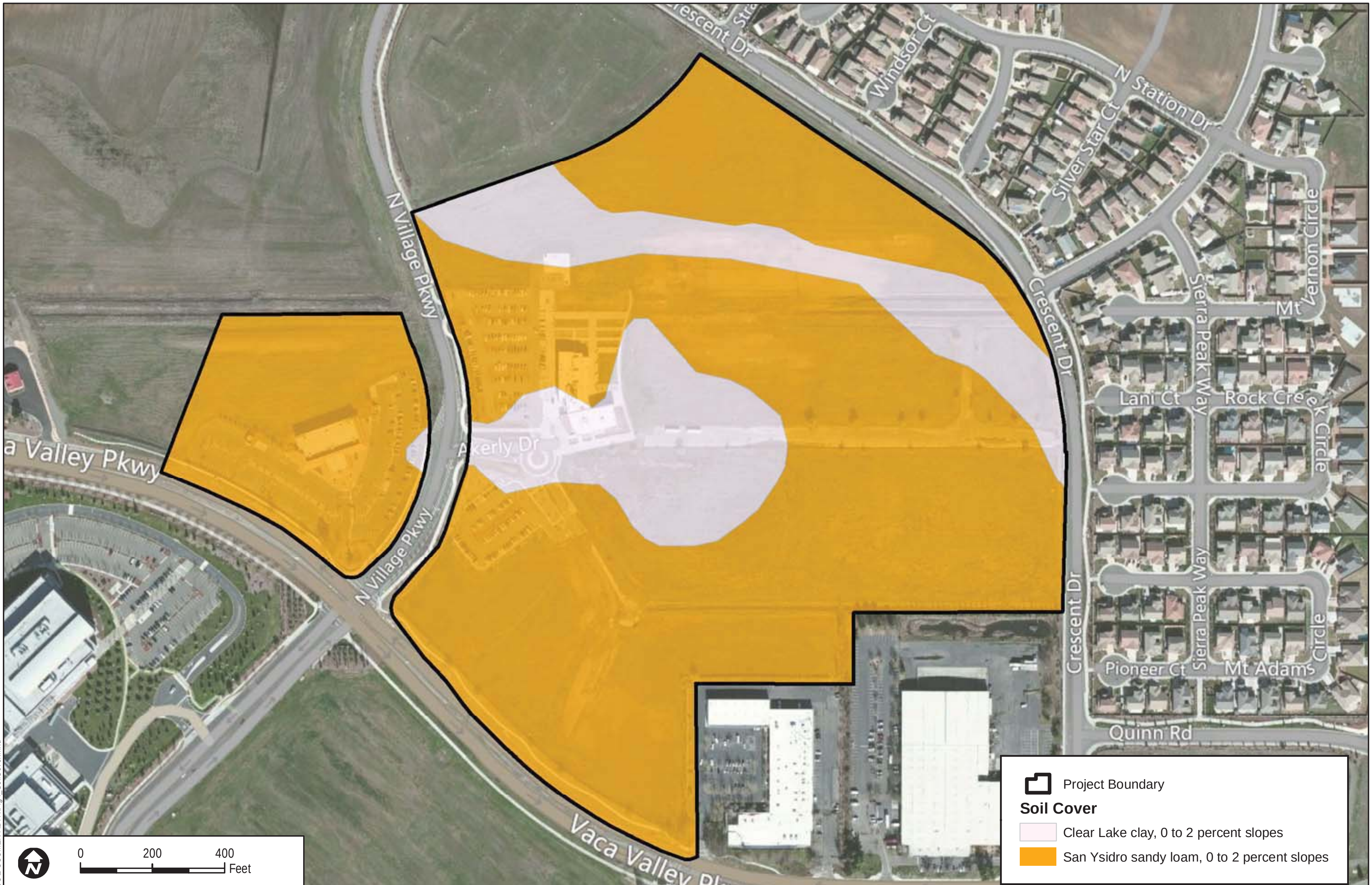
4.3 Common Wildlife

During the November 5, 2014 survey, a total of nine (9) animal species (two mammals, seven birds) were observed within the boundaries of the project site. Additionally, coyote scat was observed along one of the dry ditches. The animal species observed (as well as those likely to occur) on the project site are generally common species that are adapted to life in proximity to human activity and the urban/suburban environment. A complete list of all species observed on the project site is included in Table 3 below.

No amphibians or reptiles were observed on site. However, the site would likely support some reptile species that are adapted to the suburban environment. These species could include, but are not limited to, California king snake (*Lamprepeltis getuda californiae*), western fence lizard (*Sceloporus occidentalis*), and Pacific gopher snake (*Pituophis catenifer catenifer*). The wet ditch has limited habitat for common amphibian species such as Pacific tree frogs (*Hyla regilla*) and bullfrogs (*Lithobates catesbeianus*), but frequent disturbance to adjacent upland habitat (i.e. disking) makes even common amphibians presence unlikely. Due to the disturbed nature of the remainder of the site, special status amphibian species are not likely to occur.

Two mammals were observed on the project site. One California ground squirrel (*Otospermophilus beecheyi*) was observed near the manhole in the southwestern portion of the property. However, no large burrow complexes typical of this species were observed on the project site, likely due to the fairly recent mowing and disking of most of the site. A black-tailed jackrabbit (*Lepus californicus*) was observed in near the two dry ditches. Other common mammal species expected to occasionally occur on the project include, but are not limited to, Botta's pocket gopher (*Thomomys bottae*), California vole (*Microtus californicus*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), and coyote (*Canis latrans*). Coyote scat was observed near the dry ditches.

Seven bird species were observed during the field visit. Six of the birds are common native species that are well adapted to human activities. The seventh bird, European starling (*Sturnis vulgaris*), is a non-native invasive species.



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SOURCE: Bing 2015, USDA

FIGURE 4

Soil Cover

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SOURCE: Bing 2015

FIGURE 5

Vegetation Communities

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Table 2
Fauna Observed on the Proposed Vacaville Campus Project Site

Scientific Name	Common Name
Otospermophilus beecheyi	California ground squirrel
Sturnis vulgaris	European starling*
Carpodacus mexicanus	house finch
Zenaida macroura	mourning dove
Corvus brachyrhynchos	American crow
Lepus californicus	black-tailed jackrabbit
Sturnella neglecta	western meadowlark
Euphagus cyanocephalus	Brewer's blackbird
Canis latrans	coyote (scat)
Sayornis nigricans	black phoebe

*non-native species

4.4 Special-Status Species

Special-status species are those that are state- or federally listed as rare, threatened, or endangered; are candidates for listing or proposed for listing; are state fully protected; are considered of special concern by state and/or federal resource agencies; or, for plants, are also considered rare by the California Native Plant Society (CNPS). Special-status plant and/or animal species known to occur, or with some potential of occurring, on or immediately adjacent to the project site are discussed below and listed in Table 3.

4.4.1 Flora

Thirty five special-status plant species occurrences are documented within a 5-mile radius of the project area (CNDDB 2015). To ensure no species were overlooked, a list of special-status plants in Solano County was also reviewed (CNDDB 2015), but most of the special-status plant species in the County are associated with Gabbro soils, vernal pools, or perennial/salt marsh wetlands, none of which occurs on the project site. Of the 35 plant species that have occurrences within five miles of the project site, 30 species were removed from consideration due to lack of suitable habitat. The five remaining species that have the potential to grow in undisturbed grassland habitat are round-leaved filaree (*California macrophylla*), adobe-lily (*Fritillaria pluriflora*), Carquinez goldenbush (*Isocoma argute*), Heckard's pepper-grass (*Lepidium latipes var. heckardii*) *and Contra Costa goldfields* (*Lasthenia conjugens*) and are listed in Table 3 below. However, because of its disturbed nature (frequent disking) of the onsite grassland habitat and history of development, the potential of any of these five grassland plants to occur on the site is considered low.

4.4.2 Fauna

The results of the CNDDB and USFWS search resulted in the identification of 55 special-status animal species known to occur in the project region (Allendale Quad and/or within 5 miles). The USFWS search revealed 22 species not included in the CNDDB occurrences, most of which have specialized habitats not present on the project site. Of these species, 50 are dependent on specialized habitat types that do not occur on or adjacent to the project site and were eliminated from further investigation and were not included in Table 3 below. These include giant garter snake (*Thamnophis gigas*), California linderiella (*Linderiella occidentalis*), longfin smelt (*Spirinchus thaleichthys*), tri-colored blackbird (*Agelaius tricolor*), California tiger salamander (*Ambystoma californiense*), western pond turtle (*Emys marmorata*), conservancy fairy shrimp (*Branchinecta conservatio*), midvalley fairy shrimp (*Branchinecta mesovallensis*), vernal pool fairy shrimp (*Branchinecta lynchi*), and vernal pool tadpole shrimp (*Lepidurus packardi*). All are dependent on perennial flowing water, perennial marsh habitat, or vernal pool grassland habitat, none of which occur on or adjacent to the project site.

The five remaining special-status animal species are known to occur in non-native grasslands or disturbed habitats, all of which occur to some degree on or adjacent to the site. While the project is disturbed and surrounded by development, the potential for these five species to potentially occur within the project site could not be discounted. Table 3 and the narrative below include more detailed information regarding these species.

Western burrowing owl (*Athene cunicularia*)

The western burrowing owl is a California Species of Special Concern. Burrowing owls in the Sacramento region are typically found in annual and perennial grasslands, although owl habitat may also include more vegetated areas if the canopy covers less than 30% of the ground surface. Burrows are the essential component of burrowing owl habitat. Burrowing owls typically use burrows made by fossorial mammals, such as ground squirrels or badgers, but also may use man-made structures, such as cement culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement. Western burrowing owls exhibit high site-fidelity and reuse burrows year after year (Gervais et al. 2008). They are opportunistic feeders, primarily feeding on arthropods, small mammals and birds found in grasslands, mowed areas, overgrazed grasslands, and agricultural areas near nest sites (Gervais et al. 2008). Western burrowing owls breed from March through August, with a peak in April and May. Known occurrences of burrowing owl are shown on the CNDDB just to the southwest of the project site.

Very little ground squirrel activity was observed on site, but a few burrows and squirrels were observed in the southwestern portion of the project site around elevated manholes. As noted above, burrowing owls are typically found in association with ground squirrel burrow complexes in the region, but the lack of large burrow complexes on the project site indicates that the species is likely only to occur in low numbers, if at all. However, an individual owl could briefly forage on the site during migration or movement periods and utilize the observed burrows or some undiscovered mammal burrow or other cavity could occur that could support burrowing owls.

Swainson's hawk (*Buteo swainsoni*)

The Swainson's hawk is listed as threatened in California and protected under the MBTA. This species migrates into California from South America in the spring to establish breeding territories for the summer and typically migrates out of California by the end of September. In the Sacramento Valley region, Swainson's hawks typically nest in woodland habitats, tree clusters, or isolated trees, usually near riparian systems and generally adjacent to or in close proximity to suitable foraging habitat, which includes rangelands, grasslands, and various agricultural fields (Estep 1989).

The disturbed/ruderal habitat on the site can provide foraging opportunities for Swainson's hawks, especially during and after annual mowing and disking of the site, which occurs in the late spring to early summer when Swainson's hawks are actively nesting and foraging in the area. However, after mowing/disking occurs, the relative value of this habitat for Swainson's hawk and other raptors likely declines over time as the prey base decreases in numbers due to lack of vegetative cover. While the site does provide some foraging habitat value to Swainson's hawks, the cyclical nature of management activities on the site likely results in a range of habitat values during the time that Swainson's hawks are in the region (generally March through September), with the highest values expected to occur during and immediately after mowing and disking of the site. Consequently, it can be assumed that those Swainson's hawks that utilize the site as a source of prey likely forage in other areas in the region as well to adequately address foraging demands during the breeding season. Known occurrences of Swainson's hawk are shown on the CNNDB between one-half mile to one-mile from the project site.

White-tailed kite (*Elanus leucurus*)

The white-tailed kite (*Elanus leucurus*) is a California Fully Protected species. This year-round resident breeds between February and October. White-tailed kites are known to forage for small rodents and insects in agricultural areas, especially alfalfa fields. Nests are generally built in available trees near hunting grounds. Nest sites are closely associated with suitable foraging habitat with high rodent populations in the immediate vicinity of the nest. The white-tailed kite breeds from February to October, with a peak from May to August.

No white-tailed kites were observed on the site during surveys, but suitable foraging habitat of marginal quality is present within and adjacent to the project area. Similar to Swainson's hawk, the value of the site as foraging habitat is likely variable given the cyclic nature on on-site management activities, with the highest habitat values expected to be during and immediately following vegetation mowing and disking of the site in the early summer. Occurrences of white-tailed kite are shown on the CNDDB approximately one mile from the project site.

Loggerhead shrike (*Lanius ludovicianus*)

The loggerhead shrike is a yearlong resident species in most of California with the largest breeding populations located in portions of the Central Valley, the Coast Ranges, and the southeastern deserts (Humple 2008).

Preferred habitats for the loggerhead shrike are open areas that include scattered shrubs, trees, posts, fences, utility lines, or other structures that provide hunting perches with views of open ground, as well as nearby spiny vegetation or man-made structures (such as the top of chain-link fences or barbed wire) that provide a location to impale prey items for storage or manipulation (Humple 2008). Loggerhead shrikes occur most frequently in riparian areas along the woodland edge, grasslands with sufficient perch and butcher sites, scrublands, and open-canopied woodlands, although they can be quite common in agricultural and grazing areas, and can sometimes be found in mowed roadsides, cemeteries, and golf courses. Loggerhead shrikes occur only rarely in heavily urbanized areas. For nesting, the height of shrubs and presence of canopy cover are most important (Yosef 1996).

Suitable foraging and nesting habitat for loggerhead shrike occurs within the shrubs and disked areas on site. Scattered shrubs and fencing provide a perch for hunting, and shrubs provide suitable nesting habitat. This species is known to occur in the region and would be expected to occur on the project site.

Townsend's big-eared bat (*Corynorhinus townsendii)*

The Townsend's big-eared bat (big-eared bat) ranges throughout the western United States and is primarily associated with mesic habitats characterized by coniferous and deciduous forests, although it also occurs in xeric areas (Kunz and Martin 1982).

In California, this species was historically associated with limestone caves and lava tubes located in coastal lowlands, agricultural valleys, and hillsides with mixed vegetation; it occurs in all parts of California, with the exception of alpine and subalpine areas of the Sierra Nevada (Zeiner *et al*. 1990). The species also occurs in man-made structures and tunnels (Kunz and Martin 1982), mines (López-González and Torres-Morales 2004) as well as in caves and mines (Sherwin et al. 2000).

Townsend's big-eared bat roost sites could potentially occur in the buildings found in the center of the project site. The entire site could then potentially be used for foraging at night, as Townsend's big eared bats tend to forage close to primary roost sites.

Table 3
Special-Status Species Known to Occur or Potentially Occur on or Adjacent to the Proposed Vacaville Campus Project Site.

Common Name	Scientific Name	Federal Status	State Status	California Distribution/Range	Habitat Associations	Potential to Occur in the Project Area
Birds						
Western burrowing owl	*Athene cunicularia*	None	CSC	Western burrowing owl is found throughout California in open areas and grasslands.	The burrowing owl utilizes abandoned ground squirrel burrows in open habitats and grasslands, also disturbed areas. Commonly uses burrows on levees or mounds where there are unobstructed views of possible predators such as raptors or foxes.	Moderate potential to occur. Suitable nesting and foraging habitat for this species exists throughout the project site.
Swainson's hawk	*Buteo swainsoni*	None	Threatened	Swainson's hawk is found throughout the Central Valley of California in open habitats, especially agricultural areas.	Swainson's hawk spends the breeding season in the Central Valley of California and is commonly found in agricultural areas or open grasslands containing solitary trees for nesting.	Moderate potential to forage on the site. No nesting habitat occurs.
white-tailed kite	*Elanus leucurus*	None	Fully Protected	White-tailed kite is found throughout the Central Valley and coastal areas of California. Highly associated with agricultural fields.	White-tailed kite is a year-round resident in California that is found in open to semi-open habitats with solitary trees with dense canopy or small groups of trees for nesting.	Moderate potential to forage on the site. No nesting habitat occurs.

Table 3
Special-Status Species Known to Occur or Potentially Occur on or Adjacent to the Proposed Vacaville Campus Project Site.

Common Name	Scientific Name	Federal Status	State Status	California Distribution/Range	Habitat Associations	Potential to Occur in the Project Area
loggerhead shrike	*Lanius ludovicianus*	None	CSC	Loggerhead shrike is found throughout most of California, except the high Sierras.	Loggerhead shrike is a year-round resident in most areas of California that contain grasslands, open areas, orchards and areas with scattered trees.	Moderate potential to occur. Suitable foraging habitat exists on the project site.
Mammals						
Townsend's big-eared bat	*Corynorhinus townsendii*	None	Candidate Threatened	Townsend's big-eared bat is found throughout California, except in subalpine and alpine habitats.	Townsend's big-eared bat mesic habitats and habitat edges for foraging. Roosts in caves, mines, tunnels, buildings or other human-made structures. Forms colonies and is highly sensitive to roost disturbance.	Moderate potential to occur. Buildings on site provide roost sites and open areas on site provide foraging habitat.
Plants						
round-leaved filaree	*California macrophylla*	None	CNPS 1B.1	Round-leaved filaree is found throughout the Central Valley and coasts of California.	Round-leaved filaree is an annual herb from the geranium family. It is found from 15-1200 meters in cismontane woodland and valley and foothill grassland clay habitats. Blooms from March to May.	Low potential to occur. Marginal habitat exists on the project site before disking, although documented occurrences exist in nearby areas.

Table 3
Special-Status Species Known to Occur or Potentially Occur on or Adjacent to the Proposed Vacaville Campus Project Site.

Common Name	Scientific Name	Federal Status	State Status	California Distribution/Range	Habitat Associations	Potential to Occur in the Project Area
adobe-lily	*Fritillaria pluriflora*	None	CNPS 1B.2	Adobe-lily is found in the northern portion of the Central Valley of California.	Adobe-lily is a perennial bulbiferous herb from the lily family. It is found from 60-705 meters in cismontane woodland, chapparal, and valley and foothill grassland habitats, often serpentinite. Blooms from February to April.	Low potential to occur. Marginal habitat exists on the project site before disking, but no serpentine soils.
Carquinez goldenbush	*Isocoma argute*	None	CNPS 1B.1	Carqinez goldenbush is found in small populations around the San Francisco Bay area.	Carquinez goldenbush is a perennial shrub in the sunflower family. It is found from 1-20 meters in valley and foothill grassland habitats. Blooms August to December.	Low potential to occur. Marginal habitat exists on the project site before disking, although documented occurrences exist in nearby areas.
Heckard's pepper-grass	*Lepidium latipes var. heckardii*	None	CNPS 1B.2	Heckard's pepper-grass is found in the northern portion of the Central Valley of California.	Heckard's pepper-grass is an annual herb in the mustard family. It is found from 2-200 meters in valley and foothill grassland habitats. Blooms March to May.	Low potential to occur. Marginal habitat exists on the project site before disking, although documented occurrences exist in nearby areas.

Table 3
Special-Status Species Known to Occur or Potentially Occur on or Adjacent to the Proposed Vacaville Campus Project Site.

Common Name	Scientific Name	Federal Status	State Status	California Distribution/Range	Habitat Associations	Potential to Occur in the Project Area
Contra Costa goldfields	*Lasthenia conjugens*	Federally Endangered	CNPS 1B.1	Contra Costa goldfields is found in the coastal counties of central Calilfornia.	Contra Costa goldfields is an annual herb in the sunflower family. It is found from 0-470 meters in cismontane woodland, playas, valley and foothill grassland and vernal pools.	Low potential to occur. No vernal pool or seasonal wetland habitat exists on site, although a documented occurrence is recorded across the street from the site.

CSC- California Species of Special Concern

Potential to Occur on the Project Site

Moderate: Species is known to occur in the site vicinity, but the suitability of habitat on the site is considered moderate such that the species would only be expected to occur on an occasional basis.

Low: Species is known to occur in the vicinity of the site, but habitat on site is considered marginally suitable for the species or the species is only expected to occur on an irregular basis.

4.4.3 Wildlife Movement Corridors

The project site is not part of a regional wildlife corridor, as it is largely surrounded by urban development and other artificial land uses. The closest natural habitat corridor in the area is associated with Alamo Creek which is approximately 2.8 miles south of the site and separated by Interstate 80. Consequently, while a number of common wildlife species will potentially utilize the site as habitat for breeding, foraging, and shelter to some degree, due to the fact that it is essentially surrounded by agricultural and suburban development, the site itself does not function as part of a corridor that links large open space areas.

4.4.4 Jurisdictional Wetlands and Waters

A jurisdictional delineation for the Vacaville Campus site was not conducted as part of the biological assessment. However, the property does have two dry ditches and one wet ditch that all run parallel from west to east. The two dry ditches appear to be inactive and excavated in uplands, and they do not support a dominance of hydrophytic vegetation; therefore, they are most likely not ACOE or CDFW jurisdictional features. The wet ditch has running water, hydrophytic vegetation, and hydric soils. The wet ditch originates from the existing campus, facilities' stormwater and irrigation runoff, and daylights in the center of the property. It then flows to the east before entering a concrete culvert at Crescent Drive (Figure 5 and Photo 10). Preliminary reviews of aerial photographs indicate that the storm water ditch appears to flow under Crescent Drive to the southeast toward a detention basin at the corner of Crescent Drive and Quinn Road. The detention basin appears to have an eventual connection to Prospect Slough which flows to the Sacramento River, Suisun Bay and then San Pablo Bay. The direct hydrologic connection (significant nexus) of a relatively permanent water (wet ditch) to a traditional navigable water (Sacramento River, Suisun Bay, San Pablo Bay) indicates the wet ditch is a waters of the U.S.

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5 RECOMMENDATIONS

No special-status species have been historically documented on or immediately adjacent to the project site and none were observed during the site reconnaissance survey (though, as previously stated, the survey was conducted outside the breeding/blooming period for most special-status species potentially occurring on the site). Due to the disturbed nature of the site and its close proximity to suburban development, the only substantial biological constraints associated with the project site are those associated with the potential for various bird and bat species, primarily raptors, to occur on the site. The following recommendations will help ensure compliance with applicable resource agency laws and regulations:

- If project construction work is required to be scheduled during the nesting season (February through August) when native birds could potentially be nesting on the site, a qualified biologist should conduct a preconstruction survey of the work area to determine if any native birds are nesting on or immediately adjacent to the site. The preconstruction survey should be conducted within 15 days prior to the start of work from February through August. If active nests are found in the work area, the biologist will determine an appropriately sized buffer around the nest in which no work shall be allowed until the young have successfully fledged. The size of the nest buffer shall be determined by the biologist (and/or CDFW if consultation is necessary for any special-status species observed nesting on or adjacent to the site) in consideration of the affected species, type, and extent of ground disturbance, and other site conditions. Surveys for special-status species shall be conducted pursuant to accepted survey protocols, if available.
- Because the white-tailed kite is a state Fully Protected species, no activities that could result in take of the species are permitted to occur should the species nest immediately adjacent to the site. Similar to the above measure for native nesting birds, a qualified biologist shall conduct surveys for this species if construction and ground-disturbing activities would occur during the species nesting season (March through July). If an active nest is identified on or immediately adjacent to the project site, the biologist shall establish a non-disturbance buffer of at least 500 feet (or as otherwise determined by the biologist in consideration of site-specific conditions and proposed activities) until the young have fledged and are no longer dependent upon the nest for survival, as determined by the biologist. The applicant shall consult with the CDFW on any other measures deemed necessary to avoid take.
- While no Swainson’s hawks are expected to nest on site, the species could potentially use the site for foraging after mowing activities. The site could potentially be used by burrowing owls for nesting if any suitable California ground squirrel burrows are present on site. If any burrowing owls or sign of owls (scat, feathers, white wash, etc.) is observed during pre-construction nest surveys (described above), further protocol level surveys may be necessary

to determine if owls are nesting on the site. If owls are determined to be nesting on site, an appropriate no work buffer will be implemented to avoid take of owls or chicks and CDFW should be consulted to determine if additional mitigation for loss of active nests will be necessary. Work may resume in the area when the qualified biologist determines the chicks have fledged.

- Preliminary reviews of aerial photographs indicate that the wet ditch described above appears to flow under Crescent Drive to the southeast toward a detention basin at the corner of Crescent Drive and Quinn Road. The detention basin appears to have an eventual connection to Prospect Slough which flows to the Sacramento River, Suisun Bay, and then San Pablo Bay. The wet ditch is therefore a jurisdictional water of the U.S. pursuant to Sections 401 and 404 of the Federal Clean Water Act and Section 1600 of the California Fish and Game Code. Fill of the wet ditch would require permit acquisitions from federal and state natural resource agencies to ensure compliance with these laws.

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APPENDIX A

Summary of CNDDB Query Results

APPENDIX B

Representative Photos

Appendix B
Representative Photos

Photo 1: Ornamental planting along Crescent Drive, looking north.

Photo 2: Disturbed valley and foothill grassland, looking west.

Photo 3: Developed internal road (abandoned), looking west from Crescent Drive.

Photo 4: Disturbed valley and foothill grassland, looking southwest.

Photo 5: Disturbed valley and foothill grassland, looking southwest.

Photo 6: Raised manhole with ground squirrel burrows in southern portion of the property.

Photo 7: Rock pile in disturbed valley and foothill grassland, looking northeast.

Photo 8: Wet ditch, looking east.

Photo 9: Disturbed valley and foothill grassland, looking northwest.

Photo 10: Wet ditch flowing east into culvert under Crescent Drive, looking east.

Photo 11: Dry ditch (northern), looking west.

Photo 12: Dry ditch (southern), looking west.

Photo 13: Disturbed valley and foothill grassland on parcel west of North Village Parkway, looking northwest.

Photo 14: Disturbed valley and foothill grassland on parcel west of North Village Parkway, looking west/southwest.

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APPENDIX C

Cultural Resources Report

DUDEK

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March 10, 2015 8583

Ines Zildzic
Program Manager
Solano Community Collage District
360 Campus Lane, Suite 203
Fairfield, California 94534

Subject: ***Negative Cultural Resources Inventory for the Vacaville Center Campus Project, City of Vacaville, California***

Dear Ms. Zildzic:

The following letter report summarizes the cultural resources inventory conducted by Dudek for the proposed Vacaville Center Campus Project, located in the City of Vacaville, California (Figure 1). The proposed project includes construction of Biotechnology and Science Buildings, as well as building, utility, and landscape improvements, at the Solano Community College District (SCCD) Vacaville Center campus. The Phase I cultural resources inventory summarized herein has included a Northwest Information Center (NWIC) records search, Native American Heritage Commission (NAHC) Sacred Lands File search, Native American tribal information outreach, and an intensive pedestrian survey of the project area. Inventory efforts identified no cultural resource within the project area of potential effects (APE). Based on the negative results of this inventory, and the low potential to encounter unanticipated cultural resources within this area, it is recommended that no additional archaeological investigation or cultural mitigation efforts are required for work relating to the proposed project.

PROJECT SETTING AND DESCRIPTION

The project APE will include the nearly 49 acre site boundary (Figure 2), as well as a maximum approximate depth of ground disturbance of less than twenty feet below the surface (vertical APE). The project site is relatively flat, with elevations on the site ranging from approximately 84 feet above mean sea level (AMSL) in the east to approximately 99 feet AMSL in the north. The site is comprised of five parcels (APNs 133-030-13; 133-180-13, -14, -15, -16, -17), all located northeast of the intersection of Vacaville Center Parkway and North Village Parkway.

The area falls within the following PLSS area: Township 16 N/ Range 1W - Section 2; Allendale, CA 1:24,000 USGS map. The project site is currently vacant and contains a fallow field dominated by non-native grasses and scattered trees and shrubs. Two paved (and unmaintained) roads, raised sewer manholes, and three ditches running west to east also occur on the site. Access to the project site is currently available from Vaca Valley Parkway, Crescent Drive, North Village Parkway, and the existing Solano Community College Vacaville Campus.

REGULATORY FRAMEWORK

California Environmental Quality Act

CEQA requires that all private and public activities not specifically exempted be evaluated for the potential to impact the environment, including effects to historical resources. Historical resources are recognized as part of the environment under CEQA. It defines historical resources as "any object, building, structure, site, area, or place, which is historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (Division I, Public Resources Code, Section 5021.1(b)).

Lead agencies have a responsibility to evaluate historical resources against the California Register criteria prior to making a finding as to a proposed project's impacts to historical resources. Mitigation of adverse impacts is required if the proposed project will cause substantial adverse change. Substantial adverse change includes demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired. While demolition and destruction are fairly obvious significant impacts, it is more difficult to assess when change, alteration, or relocation crosses the threshold of substantial adverse change. The CEQA Guidelines provide that a project that demolishes or alters those physical characteristics of an historical resource that convey its historical significance (i.e., its character-defining features) can be considered to materially impair the resource's significance.

The California Register is used in the consideration of historic resources relative to significance for purposes of CEQA. The California Register includes resources listed in, or formally determined eligible for some California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts), or that have been identified in a local historical resources inventory may be eligible for listing in the California Register and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise.

Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852) consisting of the following:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. It 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
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

NWIC RECORDS SEARCH

Staff of the North Central Information Center (NWIC) conducted a records search for the project area and a one mile radius surrounding the project area on January 26, 2015 (Confidential Appendix A). These records indicate that no cultural (including archaeological and built-environment) resources have been previously recorded within the project area. The results of this search are summarized below.

Previously Conducted Investigations

Twenty-seven cultural resources technical studies have been conducted within one mile of the project area, four of which have covered at least a portion of the current APE (Table 1). The entirety of the APE appears to have been subject to previous investigation.

Table 1. Previous technical investigations that have included the APE

Report No.	Year	Author	Title
5156	1966	Adan Treganza, Robert L. Edwards, and Thomas F. King	Archeological Survey and Excavation Along the Tehama-Colusa Canal. Report Location Approximated.
7675	1985	Dana McGowen Seldner	A Preliminary Archeological Study of the Northeast Sector, Vacaville, Solano County, California.

Report No.	Year	Author	Title
19521	1996	Micheal Corbett and William Kostura	Historic Architectural Survey Report, Interstate I-80 and Leisure Town Road Project, City of Vacaville, Solano County, California Department of Transportation District 10, 10-SOL-80, KP 47.48/49.08
19562	1996	Micheal Corbett and William Kostura	Historic Property Survey Report, 10-SOL-I-80 KP47.48-49.08 EA 325400, Improvements to I-80 (Caltrans)

Previously Recorded Resources

No previously recorded cultural resources were identified within the project APE; three historical-era archaeological sites have been recorded within the one-mile record search radius (Table 2). None of these resources will be impacted by proposed project activities.

Table 2. Previously recorded cultural resources

Primary No.	Trinomial	Age	Description	Distance from APE
P-48-000177	CA-SOL-000382H	Historic	Demolished late 1800s-mid 1900s structure.	3,300 feet
P-48-000178	CA-SOL-000383H	Historic	North Gate Road. Determined not NRHP eligible.	870 feet
P-48-000409	CA-SOL-000362H	Historic	Historic structure	1,300 feet

Dudek reviewed available historical topographic maps for the presence of structures or other features that may have been in the project area. Map series from to the following years were inspected: 1994, 1988, 1975, 1969, 1967, 1959, 1954, 1947, 1944, 1922, 1917, and 1908. The nearest symbolized resources, consisting of a structure and dirt road (observed to be present on the 1908-1947 map series), were located approximately 850 feet south of the project APE. These features would have likely been associated with previously recorded resource P-48-000409. No historical roads or features have been recorded on these maps for areas within the project area.

The record search also provided documentation relating to the NRHP and Office of Historic Preservation (OHP) Archaeological Determinations of Eligibility (ADOE) and Historic Property Directory (HPD) lists. No sites listed as eligible for listing have been recorded within the project APE, or a surrounding one-mile area. Historical route P-48-000178, located 870 feet east of the project, has been classified 6Y; determined ineligible for listing in the National Register through a consensus determination of a federal agency and the State Historic Preservation Officer.

NAHC SACRED LANDS FILE SEARCH

On March 1, 2015, a request was submitted to the State of California NAHC to review the Sacred Lands File for information on Native American cultural resources that might be impacted by the proposed project (Confidential Appendix B). A response was received on March 11, 2015 indicating that the NAHC search failed to indicate the presence of Native American cultural resources in the proposed Project area.

TRIBAL OUTREACH

The NAHC response further enclosed a list of Native American individuals/organizations that may have knowledge of cultural resources in the proposed Project area. Outreach letters were sent to these individual with a project description, location maps, and a request for any additional information that might be provided relating to Native American resources in the vicinity (Confidential Appendix B). As requested by the NAHC in their response, follow up outreach attempts were made by e-mail and telephone on March 20, 2015 (Table 3). To date, no responses to these outreach attempts have been received.

Table 3. Record of tribal information request outreach

Tribal Representative	Tribe / Organization	E-mail	Phone	Letters	Comments
Ms. Cynthia Clarke	Yocha Dehe Wintun Nation	No contact available	3/20/2015	3/11/2015	No response received.
Mr. Kesner Flores	Maidu / Miwok	3/20/2015	3/20/2015	3/11/2015	No response received.
Mr. Leland Kinter	Yocha Dehe Wintun Nation	No contact available	3/20/2015	3/11/2015	No response received.
Native Cultural Renewal Committee	Yocha Dehe Wintun Nation	No contact available	3/20/2015	3/11/2015	No response received.
Mr. Charlie Wright	Cortina Band of Indians	No contact available	3/20/2015	3/11/2015	No response received.

INTENSIVE PEDESTRIAN SURVEY

An intensive pedestrian survey of the project area was conducted by Dudek archaeologist Nicholas Hanten on February 2, 2015 using standard archaeological procedures and techniques that meet the Secretary of Interior's standards and guidelines for cultural resources inventory. No artifacts or features were identified during the survey of the project area.

The project APE was subject to a 100% survey with transects spaced no more than 10 meters apart and oriented in cardinal directions. Survey was aided through the use of a 3rd Generation Apple IPad and georeferenced maps and a Trimble GeoExplorer 6000 series Global Positioning System (GPS) receiver with sub-decimeter accuracy.

Opportunistic inspection of natural and artificial subsurface erosional exposures suggests that this area has a low potential to contain intact subsurface cultural deposits. Less than one-third of the ground surface was directly visible due to the presence of low-laying non-native grasses throughout the area. The entirety of the project area has been severely disturbed by agricultural activities, with disking visible in aerial imagery dating to 1968. Additional past disturbances to the area have included installation of a number of utilities and water drainages, as well as construction of adjacent roads and the existing Solano Community College campus.

RECOMMEDATIONS

A Phase I Inventory conducted for the proposed project has indicated that no archaeological or built-environment resources have been identified within the project APE, and that there is a very low potential for the inadvertent discovery of cultural resources during project-related activities. Based on these negative results and the highly disturbed nature of the project setting, no further cultural efforts or mitigation, including cultural construction monitoring, are recommended to be required in support of implementation of the current project.

In the unlikely event that archaeological material be identified in the area during earth moving activities, work should be temporary halted in the vicinity, and the City consulted. A qualified archaeologist will be assigned to review the unanticipated find, and evaluation efforts of this resource for CRHR listing will be initiated in consultation with the City. Should human remains be discovered, work will halt in that area and procedures set forth in the California Public Resources Code (Section 5097.98) and State Health and Safety Code (Section 7050.5) will be followed, beginning with notification to the City and County

Coroner. If Native American remains are present, the County Coroner will contact the Native American Heritage Commission to designate a Most Likely Descendent, who will arrange for the dignified disposition and treatment of the remains.

If you have any questions relating to this report and recommendations, please contact myself or Micah Hale at Dudek.

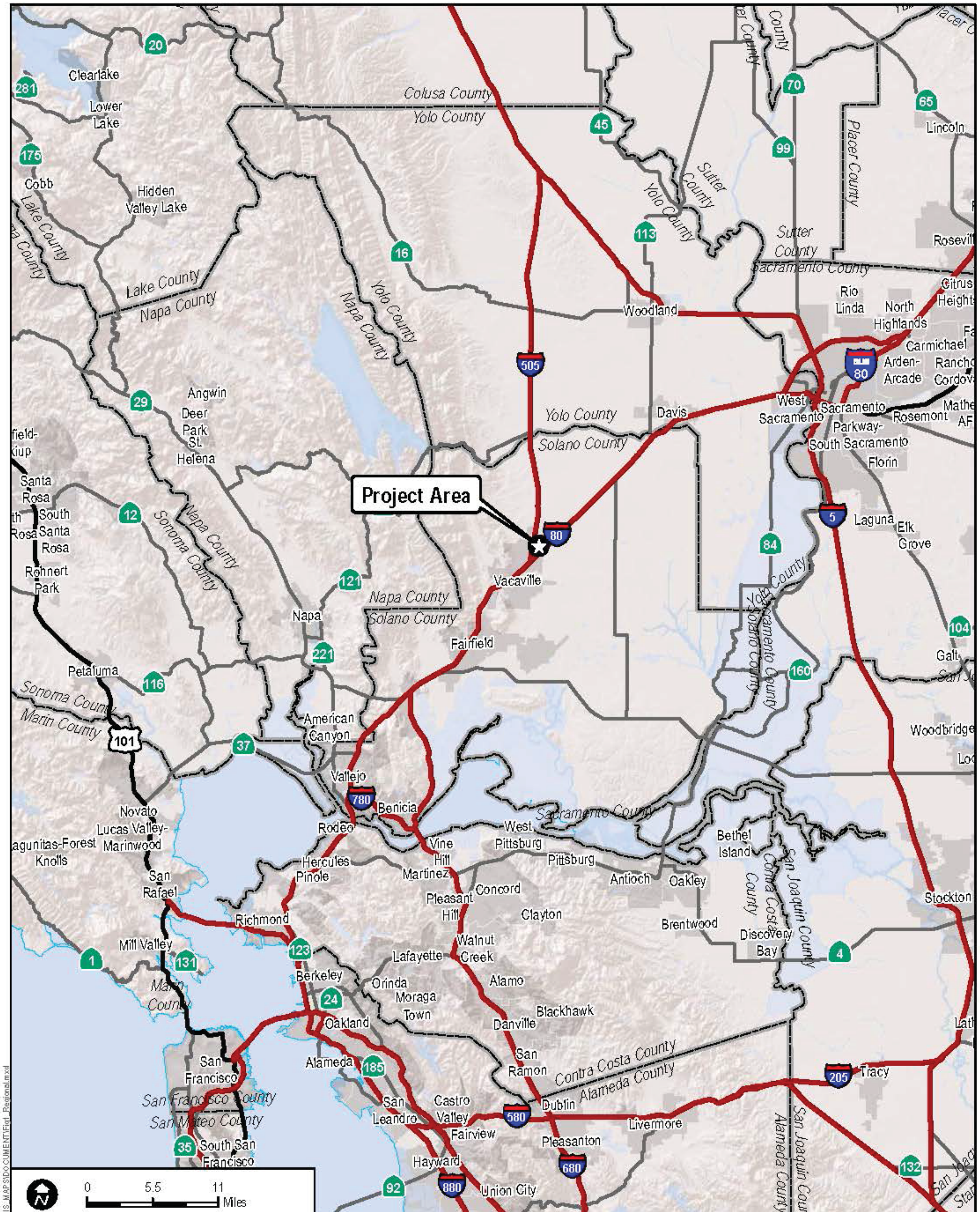
Respectfully Submitted,

Adam Giacinto, M.A., RPA
Archaeologist

Cc: Micah Hale, Dudek
Brian Grattidge, Dudek

Att: Figure 1. Regional Map
Figure 2. Project APE Map

App: Appendix A (Confidential): NWIC Records Search Results
Appendix B (Confidential): NAHC and Tribal Correspondence



DUDEK

8583

FIGURE 1
Regional Map

SOLANO COMMUNITY COLLEGE VACAVILLE CENTER

DUDEK

8583

SOURCE: Bing 2015

FIGURE 2

Project Area of Potential Effects

SOLANO COMMUNITY COLLEGE VACAVILLE CENTER

APPENDIX A (CONFIDENTIAL)

NWIC Records Search Results

APPENDIX B (CONFIDENTIAL)

NAHC and Tribal Correspondence

APPENDIX D

Geotechnical Report

GEOTECHNICAL ENGINEERING REPORT

SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS

WKA No. 7305.01

October 13, 2006

WALLACE · KUHL & ASSOCIATES INC.

Geotechnical Engineering Report

SOLANO COMMUNITY COLLEGE -

VACAVILLE CAMPUS

Vacaville, California

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WALLACE · KUHL
& ASSOCIATES INC.

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Remediation Services

Construction Inspection

Materials Testing

Geotechnical Engineering Report

SOLANO COMMUNITY COLLEGE -
VACAVILLE CAMPUS

Vacaville, California

WKA No. 7305.01

October 13, 2006

INTRODUCTION

We have completed a geotechnical engineering investigation for the planned Phase 1 of the Solano Community College campus in Vacaville, California (see Figures 1 and 2). The purposes of our work have been to investigate the site, soil, groundwater, and seismic conditions at the site, and to prepare this geotechnical engineering report for use by the other members of the design team to prepare design documents. Our work has been performed in accordance with the conditions of our proposal to Solano Community College care of Kitchell CEM dated July 11, 2006.

Work Scope

Our scope of work included the following:

- Site reconnaissance;
- Review of historic aerial photographs, topographic maps and groundwater maps of the area;
- Review of seismic activity within 100 miles of the site;
- Subsurface exploration, including performance of three soil borings to a maximum depth of approximately 51½ feet below the existing ground surface;
- Collection of bulk samples of near-surface soils;
- Laboratory testing of selected soil samples;
- Engineering analyses; and,
- Preparation of this report.

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Figures and Attachments

The following Figures are included with this report:

Figure	Title	Figure	Title
1	Vicinity Map	36	Epicenter Map
2	Site Plan	37	Attenuation Charts
3-32	Logs of Borings	38, 39	Probability of Exceedance vs. Acceleration
33	Boring Log Key		
34	Geologic Map	40	Geologic Cross Section
35	Fault Map		

A list of cited references follows the main body of this report.

Appendix A contains general information regarding this investigation, descriptions of the field exploration and laboratory testing programs, and the results of laboratory tests that do not appear on the logs of borings. Appendix B contains Guide Earthwork Specifications for use in preparing contract documents. Appendix C contains the output of our liquefaction analyses.

Proposed Development

The Solano Community College will expand to a new campus in Vacaville. Preliminary plans prepared by KMD Architects indicate the first phase of construction of the new college will include an administration building, and two associated buildings. We understand the complete development of the campus is a long-term plan that will include ten or more additional buildings, parking lots, bicycle paths, sidewalks, small retaining wall structures, light fixtures, landscaping areas, and athletic fields. Other facilities possibly included in the long-term development plan are an amphitheater, aquatics facility, athletics facilities, and an entry monument. We anticipate buildings may range from one- to three stories and mostly will be wood-frame construction but also may include concrete masonry or steel frame structures. Additionally we assume all of the structures will utilize slab-on-grade ground-level floors.

Building plans and grading plans were not available at the time of this report; however, based on our site exploration we anticipate maximum excavations and fills of around two to three feet for general development of the site. Specific areas requiring larger fill depths are also discussed in this report.

FINDINGS

Site Description

The new Vacaville campus of Solano Community College will be constructed north of the Vaca Valley Parkway between New Horizons Way and Crescent Drive in Vacaville, California. The site of the College is an approximately 68 acre, irregularly shaped property bounded to the west by New Horizons Way; to the south by Vaca Valley Parkway and existing office building development; to the east by Crescent Drive, beyond which is new residential subdivision construction; and to the north by fallow farmland and the intersection of New Horizons Way and Crescent Drive.

Portions of the site have recently undergone mass grading and installation of streets and utilities for an abandoned subdivision project. At the time of our investigation in August 2006, Akerly Drive, McKevitt Avenue, and Nelson Avenue of the subdivision were paved, but are not connected to New Horizons Way or Crescent Drive. Unimproved areas of the site had been either disced or supported varying concentrations of low vegetation. Some mature trees and landscaping lined the installed roads.

The site is divided by an east-west trending pair of ditches approximately five feet deep, originally excavated for the Solano Irrigation District. The ditches were dry with a low growth of volunteer vegetation at the time of our exploration, and chain link and barbed-wire fencing lines the southern edge of the southerly ditch.

The southeast corner of the site was occupied by end dump piles of soil and debris and an access road from Crescent Drive. This area extended between the existing development to the south of the site and Akerly Drive.

The campus site is mostly flat and level, with some small landscape berms from the previous site development project. Based upon our review of the topographic map of the *Allendale Quadrangle*, published by the United States Geologic Survey (dated 1980), the elevation of the site is approximately +92 feet relative to mean sea level (msl). The site is located at approximately 38.394° north latitude and 121.940° west longitude.

Subsurface Soil Conditions

Our subsurface exploration consisted of the drilling and sampling of 30 test borings to a maximum depth of approximately 51½ feet below existing ground elevation between July 23 and July 28, 2006.

Apart from the fill import material located in the southeast corner, surface soils across the site consist of sandy silts and silty clays. The surficial variation is identified by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) as Clear Lake clay, a high-plasticity Unified Soil Classification System (USCS) CH material, and San Ysidro sandy loam, USCS materials ML and SM.

The surficial silts and clays are underlain by clayey sands of varying thickness between approximately five and 17 feet below site grades. Below the clayey sands, our borings typically encountered stiff clayey silts and silty clays to the maximum depth explored of approximately 51½ feet. Soils encountered below approximately 20 to 26 feet below site grades in borings D1 and D2 are consistent with the Tehama Formation of weathered sandstones and siltstones (Helley and Harwood, 1985). Boring D1 encountered a zone of indurated high plasticity clays between 28 and 33 feet, and a zone of variably cemented clayey sands below 43 feet to the maximum depth explored.

For further information regarding the soils encountered at a particular location, please refer to the logs of borings, Figures 3 through 32; the geologic map, Figure 34; and the geologic cross section, Figure 40.

Ground Water

Ground water was encountered in boring D1 and D2 at depths of approximately 19 feet and 17 feet below existing grades, respectively. Prior to backfilling the borings, ground water was observed in D1 at 11 feet below existing site grade, but was not observed to rise in boring D2. Borings were backfilled with neat cement according to Solano County regulations.

Regional Geology

According to the *Geologic Map of the Late Cenozoic Deposits of the Southern Sacramento Valley* (Helley and Harwood, 1985), the site surface soils consist of young and old alluvial and basin deposits, and are underlain by late Tertiary-aged sandstones and siltstones associated with the Tehama Formation. A cross section of the subsurface materials encountered at the site is included with this report as Figure 40.

Geologic Structure

The Great Valley of California is generally considered to be an elongated sedimentary trough, approximately 450 miles long and 50 miles wide, which has been filled by a thick sequence of Jurassic to Holocene continental and marine sediments. The sediments have been folded into an asymmetric syncline, the axis of which lies immediately east of the interior Coast Ranges (Bailey, 1966).

Surface elevations within the Great Valley generally range from several feet below mean sea level to more than 1000 feet above sea level. The major topographical feature in the Sacramento Valley is the Sutter Buttes (a volcanic remnant), which rise approximately 1980 feet above the surrounding valley floor.

Earthquake Ground Motion – General

Our seismic hazard analysis consisted of two parts, a probabilistic seismic hazard analysis (PSHA) and a deterministic seismic hazard analysis (DSHA).

Earthquake Ground Motion – PSHA

A PSHA is a mathematical process based on probability and statistics that is used to estimate the mean number of events per year (Annual Frequency of Exceedance) in which the level of some ground motion parameter exceeds a specified risk level. The mathematical computations of probability and statistics are based on work by Cornell (1968). The commercial computer program *FRISKSP* ver. 4.00 was used to make the mathematical computations for this analysis. The software program *FRISKSP* is based on earlier work of McGuire (1978) but has been updated and modified to analyze earthquake sources as 3-D planes using modern ground shaking attenuation relationships.

The seismic source model used for the PSHA and following DSHA computation was the CGS Statewide Database of faults (CDMG OFR 96-08; Petersen et al., 1996; Cao et al., 2003). A search radius of 100 miles was specified for this analysis. Review of the CGS database indicates that 61 seismogenic sources are located within a radius of 100 miles of the site coordinates (USGS Allendale 7-1/2 minute quadrangle, 38.394° north latitude and 121.940° west longitude). The "Maximum Moment Magnitude" presented in Appendix A of CGS OFR 96-08 and the CGS California Fault Parameters web page are taken to represent the maximum earthquake of each of the 60 seismogenic sources utilized in our analysis.

The PSHA computations were performed for peak horizontal ground acceleration (PHGA) utilizing the attenuation relationship of Boore et al. (1997) and Boore (2005). The PSHA computations require that the site be categorized according to material type in the upper 30 meters of the site. An average shear wave velocity of approximately 250 meters/second for the upper 30 meters of soil was assumed for this analysis, corresponding with NEHRP S_D type soils (Boore et al., 1997). The specified risk level for this analysis was the Upper Bound Earthquake (UBE) Ground Motion (i.e., ~949 year ARP) and the Design Basis Earthquake (DBE) Ground Motion (i.e., ~475 year ARP). See the discussion below.

Upper Bound Earthquake (UBE) Ground Motion

The Upper Bound Earthquake Ground Motion is defined by the 2001 California Building Code (CBC) §1629A.2.6 as "the motion having a 10% probability of being exceeded in a

100-year period or maximum level of motion which may ever be expected at the building site within the known geologic framework." Criteria for determining the Upper Bound Earthquake Ground Motion include the seismic history of the vicinity, the geologic province in which the faults under consideration are located, fault lengths, faulting mechanisms and regional geologic structure.

We analyzed the cumulative effect of fault activity within a 100-mile radius to include the influence of San Francisco Bay Area faults (including the San Andreas Fault), as well as western Coast Ranges and eastern Sierra Nevada faults. The results of our analyses indicate that the site has a 10 percent probability of exceeding 0.77g horizontal ground acceleration in 100 years (Figure 38).

Design Basis Earthquake (DBE) Ground Motion

The Design Basis Ground Motion is defined by the 2001 California Building Code (CBC) §1627A as "that ground motion which has a 10% chance of being exceeded in 50 years as determined by a site-specific hazard analysis or from a hazard map." Criteria for determining the Design Basis Ground Motion include the regional seismicity and known past seismic activity, the types of faults considered, and the seismic recurrence factor for faults contributing the most significant ground-motion hazard to the site. Our analyses indicate the site has a 10% probability of exceeding 0.58g horizontal ground acceleration in 50 years (Figure 38).

Earthquake Ground Motion – DSHA

A DSHA involves the development of a particular earthquake scenario upon which a ground motion evaluation is based. As a result, a DSHA is not time dependent, that is, a DSHA is independent of the recurrence interval or probability of the earthquake ground motions (Kramer, 1996). The DSHA computations performed for this project make the following conservative assumptions: a) the specified earthquake is the maximum earthquake believed capable of occurring under the current tectonic regime and b) the site-to-source distance is the closest horizontal distance from the site to a point on the surface of the Earth directly above the earthquake rupture, r_{jb}, as defined by Joyner and Boore (1981).

The DSHA computations were performed for median peak horizontal ground acceleration (PHGA) plus one sigma (84^{th} percentile) using the attenuation relationship of Boore et al. (1997) and Boore (2005). This attenuation relationship takes into consideration style of faulting or fault type (i.e., strike-slip, dip-slip, etc.) and site geologic conditions. The largest estimated 84^{th} percentile PHGA is 1.02g and is associated with an a 6.6 M_w earthquake in Segment 4 of the Great Valley Fault System, located less than 1.2 miles (2km) from the site.

Using the *Revised 2002 California Probabilistic Seismic Maps* (Cao, et al, 2003), we have prepared Table 1 containing faults and fault systems within about 100 miles of the site that are considered capable of producing earthquakes with greater than a 6.5 moment magnitude (M_W).

According to the *Fault Activity Map of California and Adjacent Areas*, prepared by the DMG (Jennings, 1994), the closest fault to the site is indicated to be the Vaca Valley Fault, located less than 1.2 miles (2km) from the site.

The site of the new campus for Solano Community College is not located across a mapped trace of any fault, nor was there any indication of surface rupture or fault-related surface disturbance at the site during our site reconnaissance or review of aerial photographs. It should be noted that the "Great Valley" fault system is considered a zone of active seismicity for modeling purposes, and not a conventional fault.

The site is not located within an Alquist-Priolo Earthquake Fault Zone (DMG Special Publication 42, 1997).

Faults Influential to the Solano Community College Vacaville Campus

Fault Name	Maximum Magnitude (M_W)	Distance To Site Miles (Kilometers)
GREAT VALLEY 4	6.6	0.0 (0.0)
GREAT VALLEY 5	6.5	6.6 (10.6)
CONCORD/GV (CON+GVS+GVN)	6.7	12.9 (20.8)
HUNTING CREEK – BERRYESSA	7.1	14.6 (23.5)
GREAT VALLEY 3	6.9	19.0 (30.5)
WEST NAPA	6.5	21.6 (34.7)
MOUNT DIABLO (MTD)	6.7	30.9 (49.7)
HAYWARD (HS+HN+RC)	7.3	33.8 (54.4)
GREENVILLE (GN)	6.7	35.7 (57.4)
CALAVERAS (CS+CC+CN)	6.9	40.0 (64.4)
HAYWARD (HS)	6.7	41.8 (67.3)
MAACAMA – GERBERVILLE	7.5	42.8 (68.8)
COLLAYOMI	6.5	48.3 (77.7)
BARTLETT SPRINGS FAULT SYSTEM	7.6	48.3 (77.7)
FOOTHILLS FAULT SYSTEM 1	6.5	48.8 (78.5)
GREAT VALLEY 7	6.7	50.8 (81.7)
GREENVILLE (GS+GN)	6.9	51.1 (82.2)
GREAT VALLEY 2	6.4	51.8 (83.3)
SAN ANDREAS (SAS+SAP+SAN+SAO)	7.9	51.9 (83.5)
POINT REYES	7.0	54.2 (87.3)
SAN GREGORIO (SGS+SGN)	7.4	56.7 (91.2)
FOOTHILLS FAULT SYSTEM 2	6.5	60.3 (97.0)
GREAT VALLEY 1	6.7	64.4 (103.6)
CALAVERAS (CS+CC)	6.4	65.9 (106.1)
FOOTHILLS FAULT SYSTEM 3	6.5	66.6 (107.2)
MONTE VISTA – SHANNON	6.7	68.2 (109.7)
GREAT VALLEY 8	6.6	77.7 (125.0)
SAN ANDREAS (SAS)	7.0	84.2 (135.5)
ORTIGALITA	7.1	85.4 (137.4)
FOOTHILLS FAULT SYSTEM 4	6.5	88.0 (141.6)
ZAYANTE-VERGELES	7.0	90.2 (145.1)

CONCLUSIONS

Expansive Soils

Based on our laboratory testing, the sandy silts and silty clays identified across the surface of the site possess medium potential for expansion with increasing moisture content (see Figures A1 and A2) and are considered capable of exerting moderate expansion pressures on building foundations, interior floor slabs and exterior flatwork. Recommendations to mitigate the effects of potentially expansive clays, including construction of interior pad areas and exterior flatwork with granular materials, or lime treatment of native soils, are provided in later sections of this report.

Bearing Capacity

Our work indicates that the upper 12 inches of surface soils at the site have been disturbed during previous site uses. These materials are not considered capable of supporting building foundations in their present condition. These materials must be processed and compacted if they are intended for building support. Our findings indicate the native undisturbed soils and engineered fills composed of native soils or approved imported soils constructed in accordance with our recommendations will be capable of supporting the planned improvements. Recommendations for preparation of building pad areas, including stripping, scarification and recompaction are included in this report.

Suitability of On-site Soils for Use in Engineered Fill Construction

In our opinion, the on-site soils encountered in our test borings are considered suitable for use as engineered fill materials if they are free of debris, organics and are at a workable moisture content. However, due to their expansive property, untreated native soils are not considered suitable for use within the upper 12 inches of subgrades supporting buildings or exterior concrete flatwork.

The end dump fill materials observed in the southeast corner of the site are not suitable for use as engineered fill. Significant processing and mixing, including possible hand-picking of debris, would be required before these materials could be approved by our representative for use in engineered fill construction. In addition, the import materials would require documentation that they are "Clean Imported Fill Material" in accordance with the Department of Toxic Substance Control (DTSC) Information Advisory dated October 2001.

Excavation Conditions

The existing fills and native soils at the site should be readily excavatable with conventional construction equipment. Cut slopes, foundation excavations and shallow trenches for utilities less than five feet in depth should stand vertically for the short period of time required for construction. Excavations or trenches that exceed five feet in depth and that are entered by workers must be sloped, braced, or shored to conform to current OSHA requirements.

Ground Water

Based upon the ground water depths encountered during our field exploration, we conclude that a permanent ground water level should not be a significant factor in the design or performance of the proposed campus improvements. Ground water levels that rose from initial encounter in our borings were likely caused by artesian pressures on ground water below the less permeable sandstone and shale layers encountered at approximately 20 feet below surface grades. It is our opinion that shallow utility trenches (less than ten feet) will be unaffected by ground water.

Seasonal Water

Infiltrating surface water during the winter and spring months will create saturated surface and shallow subsurface soil conditions. It is likely that grading operations attempted following the onset of winter rains and prior to prolonged drying periods will be hampered by high soil moisture contents. Such soils, intended for use as engineered fill, will require a prolonged period of dry weather, considerable aeration or chemical treatment to reach a moisture content suitable for proper compaction.

Preliminary Soil Corrosion Potential

Four samples of the surface soil were submitted to Sunland Analytical Labs for testing to determine pH, resistivity, sulfate and chloride concentrations to help evaluate the potential for corrosive attack upon buried structure. The test results for the samples revealed minimum resistivities of 1070 and 1610 ohm-centimeters (Ω-cm), with soil pH from 6.52 and 7.61 Sulfates were recorded between 3.5 and 16.8 parts per million (ppm) and chlorides between 9.2 and 81.3 ppm. Results of testing performed by Sunland Analytical Lab are contained in Appendix A on Figures A14 and A17.

Caltrans[1] considers a site to be corrosive to structural elements if one or more of the following conditions exist for the representative soil sample taken at the site: Chloride concentration is greater than or equal to 500 ppm, sulfate concentration is greater than or equal to 2000 ppm, or the pH is 5.5 or less.

Caltrans defines areas as either corrosive or non-corrosive based on the above information. Table 19-A-4 of the 1997 UBC, *Requirements for Concrete Exposed to Sulfate-Containing Solutions,* indicates the sulfate exposure for the samples tested are *Negligible.* Based on this table, ordinary Type I/II Portland cement is indicated to be suitable for use on this project, assuming a minimum cover is maintained over the reinforcement.

Wallace-Kuhl & Associates, Inc. are not corrosion engineers. Therefore, if it is desired to further define the soil corrosion potential at the site, a corrosion engineer could be consulted.

Seismic Hazards

No active or potentially active faults are shown to pass through the proposed campus of Solano Community College as indicated by the published geologic maps or aerial photographs that we reviewed. The community college site is not located within an Alquist-Priolo Fault Study Zone.

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[1] California Department of Transportation, Division of Engineering Services, Materials Engineering and Testing Services, Corrosion Technology Branch, *Corrosion Guidelines,* Version 1.0, September 2003.

The Solano Community College new Vacaville campus is located within a seismically active area and design of the structures should be in conformance with the 2001 edition of the California Building Code (Title 24 of the California Code of Regulations, Chapter 16; California amendments to the 1997 edition of the Uniform Building Code). Seismic Zone 4, should be used to prevent significant damage from ground shaking during seismic events resulting from movement on any of the faults or fault systems discussed in this report. A soil profile type S_D, as referenced in Table 16A-J of Chapter 16 of the 2001 CBC is considered appropriate for this site. The site is not located within 15 km of a Type A or Type B fault source as defined by CBC Table 16A-U.

	2001 CBC Table/Figure	Factor/Coefficient	Value
Seismic Zone	Figure 16A-2	Zone	4
Seismic Zone Factor	Table 16A-I	Z	0.40
Soil Profile Type	Table 16A-J	S_D	--
Seismic Coefficient	Table 16A-Q	C_a	$0.44*N_a$
Seismic Coefficient	Table 16A-R	C_v	$0.64*N_v$
Near-Source Factor	Table 16A-S	N_a	1.0
Near-Source Factor	Table 16A-T	N_v	1.0

Liquefaction Potential

Our soil borings indicate that surface soils at the site consist of stiff sandy clays, dense clayey sands and stiff clayey silts to depths between ten and twenty feet below ground surface. These soils are generally considered nonliquefiable, and were above the encountered ground water table. However, in boring D2, we encountered some zones of silty and clayey sands of significantly low blowcounts to be potentially liquefiable. Underlying these, to our maximum depths explored, we encountered generally nonliquefiable variably cemented sandy silts, silty sands, and silty clays consistent with weathered portions of Helley and Harwood's (1985) Tehama formation sandstones and siltstones. These indurated deposits were characterized by high blowcounts to the maximum depth explored of approximately 51½ feet below ground surface.

Our probabilistic analysis (NEHRP Site Class D with an average shear wave velocity of an assumed 250 meters/second) indicates the site has a 10% probability of exceeding 0.20g horizontal ground acceleration in 100 years, at the mean plus one standard deviation confidence level, after applying the appropriate magnitude weighting factor (see results of the PSHA with the MWF, Figure 21).

Our liquefaction analysis was performed using the computer program Liquefy2 (Ver 1.5), with the following input values. The printout of the liquefaction analysis is appended to this report as Appendix C. We have conservatively assumed a ground water table at ten feet below ground surface to encompass the potentially liquefiable soils. Samples were obtained using a two-inch inside-diameter split spoon sampler (known as the Modified California Sampler (MCS)) and blowcount values of MCS were correlated to the Standard Penetration Test (SPT) values by a factor of 0.64, by LaCroix and Horn (1973).

Liquefaction Analysis Input Parameters

<table>
<tr><th colspan="2">USCS / Base of Layer (feet)</th><th>SPT Field Value (blows/ft)**</th><th>Liquefaction Susceptibility Index</th><th>Wet Unit Weight (pcf)</th><th>Fines Content (%)</th><th>D50 (mm)</th><th>Depth of SPT (feet)</th></tr>
<tr><td>CL</td><td>3</td><td>11.5</td><td>0</td><td>107</td><td>55*</td><td>0.005*</td><td>1.5</td></tr>
<tr><td>SC</td><td>5½</td><td>11.5</td><td>1</td><td>127</td><td>20*</td><td>0.02</td><td>5</td></tr>
<tr><td>CL</td><td>10½</td><td>14.1</td><td>0</td><td>127</td><td>55*</td><td>0.005</td><td>5</td></tr>
<tr><td>SM</td><td>11½</td><td rowspan="2">11.5</td><td>1</td><td>128</td><td>16.2</td><td rowspan="2">0.23</td><td rowspan="2">10</td></tr>
<tr><td>SC</td><td>13</td><td colspan="3">Layers merged for model simplicity</td></tr>
<tr><td>CL</td><td>16</td><td>11.5</td><td>0</td><td>128</td><td>55*</td><td>0.005</td><td>10</td></tr>
<tr><td>SM</td><td>19½</td><td>21.8</td><td>1</td><td>125</td><td>15</td><td>0.02</td><td>15</td></tr>
<tr><td>ML</td><td>51½</td><td>33.9</td><td>0</td><td>117</td><td>90</td><td>0.003</td><td>25</td></tr>
</table>

* Assumed value based on USCS soil type.

** MCS N*0.64 per LaCroix and Horn

A factor of safety of 1.3 or greater against liquefaction potential in generally considered acceptable. Based upon our analysis of liquefaction potential, there is a factor of safety of 0.52 for the soils located in the zone located approximately 10½ feet to 13 feet below grade and a factor of safety of 0.83 for soils located between 16 and 19½ feet below grade. We have calculated a factor of safety of greater than 1.3 (considered nonliquefiable) for the remaining soils within approximately 51½ feet of the surface of the site.

Seismically Induced Settlement

Based on the analysis of the zones between 10½ and 13 feet, and 16 and 19½ feet below grade, and the factor of safety against liquefaction, Ishihara and Yoshimine (1992) indicate that clean sands of equivalent SPT blowcounts $(N_1)_{60\_cs}$ of 14.7 and 25.5 could experience a volumetric strains as high as 2.7% and 1.0%, respectively. For these layer thicknesses, this means possible post-liquefaction total settlements of roughly 1.23 inches. From this, we estimate possible differential settlements of ¾ inches across 50 feet.

Ishihara compared sites for their evidence of liquefaction-associated damage. He found that sites with thick layers of nonliquefiable soils overlying layers of liquefiable materials typically experienced minimal or no ground damage. While this case applies for the site of the new Vacaville campus of Solano Community College, foundations of future buildings may require increased strength to prevent liquefaction induced settlement associated damage.

The site is generally flat and level, and with no significant slopes, basins or canyons nearby, we consider the potential for lateral spreading induced damage to the future campus to be low.

RECOMMENDATIONS

The recommendations presented below are appropriate for typical construction in the late spring through fall months. The on-site soils likely will be saturated by rainfall in the winter and early spring months, and will not be compactable without drying by aeration or the addition of lime *(or a similar product) to dry the soils. Should the construction schedule require work during wet conditions, additional recommendations can be provided, as conditions dictate.*

Site Clearing and Preparation

Initially, the site should be cleared of existing pavements including curbs, gutters, and associated sidewalks; underground utilities to be relocated or abandoned; trees; vegetation; fencing; and all other items designated for removal. Depressions resulting from clearing operations, as well as any loose, saturated, or organically contaminated soils should be cleaned out to firm soils as identified by our representative. Existing utility trenches to be abandoned should be excavated and backfilled with compacted native materials. Depressions and trenches should be backfilled with engineered fill in accordance with the recommendations contained in this report. We recommend the specifications contain a provision for unit prices (per cubic yard) for removal of unsuitable materials.

The existing Solano County irrigation ditches should be cleared of all existing vegetation and rubbish, rubble or other debris. These materials should be disposed of off-site. Discing of the organics may be a suitable alternate to stripping, depending on the quantity and condition of the organics at the time of grading; however, discing should be allowed only with prior approval by our office.

The resulting ditch should then be widened to allow access with compaction equipment, if necessary, scarified to a minimum depth of 12 inches, brought to a uniform moisture content at least equal to the optimum moisture, and compacted to at least 90 percent of the maximum dry density per ASTM D1557 specifications. Compaction operations should be accomplished with a heavy, self-propelled sheepsfoot-type compactor (such as a Caterpillar 815 or equivalent).

Following site clearing, areas to receive fill or that will be left at or near grade should be stripped of remaining vegetation. Strippings may be used in future landscape areas or be removed from the site. Strippings will not be allowed within five feet of building foundations or pavement areas. The resulting areas should be scarified to a depth of 12 inches, moisture conditioned to at least the optimum moisture content and thoroughly compacted to at least 90 percent of the maximum density, based upon ASTM D1557 specifications.

Engineered Fill Placement

Engineered fill consisting of native or imported soils, should be placed in lifts that do not exceed six inches in compacted thickness. Each lift should be thoroughly moisture conditioned to at least the optimum moisture content and uniformly compacted to at least 90 percent of the ASTM D1557 maximum dry density.

The upper 12 inches of the building pad subgrades and subgrades supporting exterior slabs-on-grade should be composed of select, non-expansive, granular fill, or native soils treated with high-calcium or dolomitic quicklime at a rate of at least four pounds per cubic foot of treated soil. Building pads shall extend at least five feet beyond the edge of the building foundations.

Select fill for use under slabs-on-grade should be compactable, granular soils, with less than five percent of the material greater than one-inch in size, with a plasticity index less than 15 and an expansion index less than 20. Imported granular materials should be compacted to 90% of maximum dry density as determined by ASTM D1557 at or above the optimum water content. Lime stabilized soils should be compacted to at least 92 percent relative compaction at a moisture content at least two percent above the optimum moisture content.

All on-site soils may be used as fill provided they are free of organic material, debris and other deleterious material and free of rock and other particles greater than four inches in largest dimension. The (untreated) native or on site fill soils are <u>not</u> suitable for use within the upper 12 inches of building pad construction.

Imported soil (other than that used for the upper twelve inches of the building pad or concrete flatwork subgrades), if required, should be essentially granular material with non-plastic fines (Plasticity Index of 15 or less), contain no particles greater than four inches in maximum dimension, and have less than five percent of the material greater than one-inch in maximum size. Our firm must approve import material before being transported to the project site.

In addition, all fill imported to the site should be documented to be "Clean Imported Fill Material" in accordance with the Department of Toxic Substance Control (DTSC) Information Advisory dated October 2001.

Foundations

The new administration buildings may be supported upon shallow continuous perimeter and continuous or isolated spread foundations extending at least 18 inches into the prepared building pad. A minimum 12-inch width should be maintained for continuous foundations and a 24-inch width for isolated spread foundations. Foundations so established may be sized for maximum allowable soil pressures of 2000 pounds per square foot (psf) for dead plus live load with a one-third increase for total load, including the short-term effects of seismic or wind forces. The weight of the foundation concrete extending below lowest adjacent soil grade may be disregarded in sizing computations.

To reduce the potential for moisture migration beneath the buildings, it is important that perimeter foundations be continuous around the entire structure. Continuous foundations should be reinforced with a minimum of two No. 4 rebar, placed one each near the top and bottom of the foundation, to provide structural continuity, mitigate cracking and to allow the foundation the capability of spanning isolated soil irregularities. The project structural engineer should evaluate the need for additional reinforcement, given the potential for total settlements of up to one inch and differential settlements of up to ½ inch across 50 feet, and additional seismic induced settlements of up to 1¼ inches total and ¾ inches differential across 50 feet. Therefore, the building should be designed to tolerate up to 2½ inches of total settlement and 1¼ inches of differential settlement across 50 feet.

Resistance to lateral displacement of foundations may be computed using an allowable friction factor of 0.30, which may be multiplied by the effective vertical load on each foundation. Additional lateral resistance can be achieved by considering *passive* soil resistance against the vertical projection of the foundations equivalent to a fluid weighing 300 pounds per cubic foot (pcf). These two modes of resistance (friction and *passive* pressure) should not be added unless the frictional component is reduced by one half since mobilization of resistive forces may occur at different magnitudes of horizontal movement.

Interior Floor Slab Support

Concrete slabs-on grade can be supported upon the soil subgrades prepared in accordance with the recommendations in this report and maintained in that condition. Interior slab-on-grade floors should be at least five inches thick and contain, as a minimum, chaired No. 3 reinforcing bars on 24-inch center-on-center spacing, located at mid-slab depth. This slab reinforcement is suggested as a guide "minimum" only for cracking control; final reinforcement and joint spacing should be determined by the structural engineer. The potential for total settlements on the order of 2½ inches and differential settlements on the order of 1¼ inches across 50 feet should be considered in designing the reinforcement of interior slab-on-grade concrete.

Conventional floor slabs *may* be underlain by a layer of free-draining gravel serving as a deterrent to migration of capillary moisture. If used, the gravel layer should be at least four inches thick and graded such that 100 percent passes a one-inch sieve and none passes a No. 4 sieve. *The gravel layer is not to be considered part of the 12 inch granular (or lime treated) building pad.* Additional moisture protection *may* be provided by placing a plastic vapor retarder (at least 10-mils thick) directly over the gravel. If used, the vapor retarder should generally conform to ASTM E1745 specifications.

Floor slab construction practice over the past 20 years or more has included placement of a thin layer of sand over the vapor retarder membrane. The intent of the sand is to aid in the proper curing of the slab concrete. However, recent debate over excessive moisture vapor emissions from floor slabs includes concern of water trapped within the sand. As a consequence, we consider use of the sand layer as optional. The concrete curing benefits should be weighed against efforts to reduce slab moisture vapor transmission.

The recommendations presented above should mitigate significant soils-related cracking of the slab-on-grade floor. Also important to the performance and appearance of a Portland cement concrete slab is the quality of the concrete, the workmanship of the concrete contractor, the curing techniques utilized and spacing of control joints.

Floor Slab Moisture Penetration Resistance

It is considered likely that floor slab subgrade soils will become wet to near-saturated at some time during the life of the structure. This is a certainty when slab subgrades are constructed during the wet seasons or when constantly wet ground or poor drainage conditions exist adjacent to structure. For this reason, it should be assumed that all slabs intended for moisture-sensitive floor coverings or materials require protection against moisture or moisture vapor penetration. Standard practice includes the gravel, vapor retarder membrane and sand, as discussed above. However, the gravel and membrane offer only a limited, first-line of defense against soil-related moisture. Recommendations contained in this report concerning foundation and floor slab design are presented as *minimum* requirements, only from the geotechnical engineering standpoint.

It is emphasized that we are not slab moisture proofing or moisture protection experts. We are expressly stating that we make no guarantee nor provide any assurance that use of the sub-slab gravel and vapor retarder membrane will reduce slab moisture penetration to any specific amount or level, particularly those required by floor covering manufacturers or to avoid damage to other building components. The design team should consider all available measures for slab moisture protection. It is commonly accepted that the quality and thickness of the concrete slab are of primary importance to reducing moisture and moisture vapor penetration.

Light Pole Foundations

Light poles may be supported on drilled, cast-in-place piers. We anticipate that lateral loads on the piers will represent the governing design parameter. The piers should be at least 24 inches in diameter and extend at least four feet below lowest adjacent soil grade. For lateral load considerations, the piers may be sized using a passive earth pressure equivalent to a fluid pressure of 300 psf per foot of depth, acting over an area equal to 1½ times the pier diameter. If concrete flatwork will completely surround the piers, a "constrained" condition may be assumed for design. For downward vertical load considerations, an allowable skin friction value of 250 psf for dead plus live load may be used; this value may be increased by one-third for the short-term effects of wind or seismic forces. The weight of foundation concrete extending below lowest adjacent soil grade should be included in sizing computations. Pier foundations should be structurally isolated from any adjacent concrete flatwork by a felt strip or similar material.

Uplift capacity of the piers can be evaluated using the weight of the pier and frictional resistance of 250 psf applied over the shaft area of the pier. Increased uplift resistance can be achieved by increasing the diameter of the pier or increasing the length.

Reinforcement and concrete should be placed in the pier excavations as soon as possible after excavation is completed to minimize the chances of sidewall caving into the excavations. We suggest a maximum elapsed time of two hours between completion of the pier drilling and the start of concrete placement.

Our representative should be present during pier drilling and construction operations to verify adequate depth of penetration and verify uniformity of the soils. Concrete and reinforcing steel should not be placed in any pier excavation until approved by our representative.

<u>Retaining Wall Design</u>

Retaining walls that will be allowed to rotate slightly about their base (unrestrained at the top or sides) should be capable of resisting "active" lateral earth pressures equal to an equivalent fluid pressure of 45 psf per foot of wall backfill for horizontal backfill conditions and an equivalent fluid pressure of 60 psf per foot of wall backfill for backfills sloping up to 2:1 (horizontal:vertical). Retaining walls that are fixed at the top should be capable of resisting "at-rest" lateral earth pressures equal to an equivalent fluid pressure of 65 psf per foot of wall backfill. These values do not include the effect of hydrostatic forces and assume the wall backfill is fully drained. The surcharge effect of vehicles or other loading also must be included in the wall design.

Retaining wall foundations should extend at least 18 inches below lowest adjacent soil grade and may be designed in accordance with the recommendations contained in the <u>Building Foundations</u> section of this report.

Retaining walls should be provided with a drainage blanket consisting of Class 2 permeable material (Caltrans Specification Section 68-1.025) at least one foot wide extending from the base of wall to within one foot of the top of the wall. The top foot above the drainage layer should consist of compacted on-site materials. Weep holes or perforated PVC pipe should be provided at the base of the wall to collect accumulated water. Drain pipes, if used, should slope to discharge at no less than a one percent fall to suitable drainage facilities. Open-graded ½- to ¾-inch crushed rock may be used in lieu of the Class 2 permeable material, if the rock and drain pipe are completely enveloped in an approved non-woven geotextile filter fabric.

Structural backfill materials for retaining walls (other than the drainage layer) should be free of significant quantities of rubbish, rubble, organics and rock over three inches in size. Structural backfill should be placed in lifts not exceeding 12 inches in compacted thickness, and should be mechanically compacted to at least 90 percent relative compaction, except for the upper six inches of backfill supporting pavements or concrete flatwork, which should be compacted to at least 95 percent. Care should be exercised during the backfilling operation to avoid the development of excessive lateral forces against the wall.

Exterior Flatwork Construction

Exterior slab-on-grade concrete should be supported on a compacted layer of non-expansive granular soil or lime-treated native soils, compacted in accordance with the recommendations of this report. Exterior flatwork should be at least five inches thick and contain, as a minimum, chaired No. 3 reinforcing bars on 24-inch center-on-center spacing, located at mid-slab depth.

Uniform moisture conditioning of subgrade soils is important to reduce the risk of non-uniform moisture withdrawal from the concrete and the possibility of plastic shrinkage cracks. Practices recommended by the Portland Cement Association for proper placement and curing of concrete should be followed during exterior concrete flatwork construction. Flatwork should be independent of the building foundations and felt strips should be used to separate concrete slabs from the adjacent structure.

Lime-Treated Soils

High calcium or dolomitic quicklime may be used to amend on-site clayey soils to improve the subgrade quality in pavement and exterior flatwork areas. Lime-treatment of soils may also be used to reduce the moisture content of soils that are too wet to compact to the specified degree of compaction.

If lime is to be specified for amendment of subgrades supporting exterior slabs-on-grade, we recommend that at least four percent (4%) high calcium or dolomitic quicklime by dry weight of soil treated be used in the upper 12 inches of the areas. Not less than 4 pounds of lime should be used to achieve a four percent mix. Where lime-treatment of soils is used strictly to dry the soils to a workable moisture content, the stabilization contractor should determine the amount of lime, but the amount should not be less than three pounds of lime per cubic foot of soil treated.

Lime-treated soils should be compacted to at least 92 percent of the ASTM D1557 dry unit weight at not less than two percent over the optimum moisture content.

Surface Drainage

Due to the moderately expansive nature of the native clay soils, performance of the building foundations, slab-on-grade floors and exterior flatwork is highly dependent upon proper control of surface water on the site. The ground adjacent to the structure should be sloped away from the structure at a gradient no less than two percent for a distance of at least five feet, where possible. Consideration should be given to using full roof gutters, with downspouts from roof drains discharging onto paved surfaces leading away from the structure or connected to non-perforated PVC piping directed to an appropriate drainage point away from the structure. Ponding of surface water must be avoided near foundations. Ground adjacent to the structures should not be left fallow; it should either be paved or landscaped with irrigated landscaping. Landscape berms, if planned, should not be constructed in such a manner to promote drainage toward the building. Additionally, fallow ground adjacent to pavements that do not utilize a full-depth curb could cause cracking of the outer several feet pavement due to seasonal wetting and drying movement of the fallow ground.

To reduce moisture migration beneath the structures, we recommend building perimeter foundations be continuous around the entire structure. Alternatively, an asphalt concrete pavement or slab-on-grade concrete abutting the building perimeter and extending at least 10 feet horizontally from the building would be effective in controlling moisture content variations beneath the building. If a horizontal barrier is selected, no subgrade landscaping, planters or fallow ground should be located in this zone.

Trench Backfill

Utility trench backfill composed of native soils should be thoroughly moisture conditioned to at least two percent above the optimum moisture content and mechanically compacted to at least 90 percent of the ASTM D1557 maximum dry density. Imported granular soils should be compacted to at least 90 percent relative compaction at not less than the optimum moisture content. Backfill should be accomplished in lifts no greater than six inches in compacted thickness for native soils and no greater than 12 inches in thickness for imported sand.

We recommend only native soils (in lieu of select gravel or sand backfill) be used as backfill within trenches that cross from landscaped areas to pavement or building areas, to reduce the potential for water to migrate under the improvements. The native backfill should be used for a distance of at least five feet on both sides of the boundary between the pavement or slab and the landscaped area.

Underground utilities parallel to foundation lines should be avoided within five feet of foundations. Underground utility trenches should not be located below the zone extending downward and outward from the bottom of spread foundations at a 1:1 slope.

Pavement Design

The recommended pavement section alternatives presented below have been designed using procedures that are in general conformance with the applicable portions of the Caltrans *Highway Design Manual.* Considering the results of the Resistance ("R") value test and expected variation in subgrade quality, we have used an R-value of 5 to represent the subgrade soils at the site.

PAVEMENT DESIGN ALTERNATIVES
R-value = 5

Traffic Index (TI)	Traffic Condition	Type B Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)	Portland Cement Concrete (inches)
4.5	Automobile Parking and Traffic	2½*	10	--
		--	5	6
6.0	Automobile Travel Lanes/ Light Truck Traffic	2½	15	--
		3½*	13	--
		--	6	6

* asphalt thickness includes Caltrans safety factor.

Should lime treatment be chosen as an option for pavement subgrade soils, an R-Value of 50 is considered appropriate for design, assuming at least 12 inches of soils are treated with at least 4.2 pounds of lime (a four percent mix). The following table presents asphalt section thicknesses for lime-treated subgrade.

PAVEMENT DESIGN ALTERNATIVES
R-value = 50

Traffic Index (TI)	Traffic Condition	Type B Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)	Portland Cement Concrete (inches)
4.5	Automobile Parking and Traffic	2½	4	---
		---	4	5
6.0	Automobile Travel Lanes	2½	5	--
		3.0*	4	--
		---	4	5

* asphalt thickness includes Caltrans safety factor.

We emphasize that the performance of a pavement is critically dependent upon uniform compaction of the subgrade soils, as well as all engineered fill and utility trench backfill within the limits of the pavements. The upper six inches of pavement subgrade should be compacted to at least 95 percent of the ASTM D1557 maximum dry density at not less than the optimum moisture content. **Final subgrade preparation should be performed after all underground utilities located within the limits of the pavements are complete and just prior to placement of the aggregate base.** If the pavement subgrade soils are allowed to desiccate, they must be re-moisture conditioned and recompacted prior to aggregate base placement, regardless of previous compaction effort. Class 2 aggregate base should be compacted to at least 95 percent of the ASTM D1557 maximum dry density.

Materials, quality and construction of the structural section of the pavement should conform to the applicable provisions of the City of Vacaville and Caltrans Standard Specifications, latest editions.

We recommend using Portland cement concrete pavement in areas subjected to concentrated heavy wheel loading, such as entry driveways and in front of trash enclosures. A minimum five inch thickness should be used in these areas, supported by a minimum of six inches of aggregate base. Portland cement concrete should have a minimum compressive strength of 3500 pounds per square inch at 28 days. Reinforcing for crack control, if desired, should consist of at least No. 3 reinforcing bar placed on maximum 24-inch centers, each way, throughout the slab. Reinforcing must be located at mid-slab depth. The concrete pavement should be gradually thickened by two inches starting approximately two feet from the edge for increased strength near the edges. Concrete curing and joint spacing should conform to current Portland Cement Association and American Concrete Institute guidelines.

Efficient drainage of all surface water to avoid infiltration and saturation of the supporting aggregate base and subgrade soils is important to the performance of pavements. Consideration should be given to using full-depth curbs between landscaped or fallow areas and pavements to serve as a cut-off for water that could migrate into the pavement base materials. Where drop inlets or other surface drainage features are to be constructed, we strongly recommend that weep holes be provided at the base/subgrade level to allow free drainage of collected water.

Construction Testing and Observation

Site preparation should be accomplished in accordance with the recommendations of this section and the *Guide Earthwork Specifications* provided in Appendix B. Representatives of Wallace-Kuhl & Associates, Inc., should be present during site preparation and all grading operations to observe and test the fill to verify compliance with our recommendations and the job specifications. These services are beyond the scope of work authorized for this investigation.

In the event that Wallace-Kuhl & Associates, Inc., is not retained to provide geotechnical engineering observation and testing services during construction, the Geotechnical Engineer retained to provide this service in conformance with Section 3317.1, 3317.3 and 3317.8 of the 2001 edition of the CBC, should indicate in writing that they agree with the recommendations of this report, or prepare supplemental recommendations as necessary. A final report by the "Soils Engineer" should be prepared upon completion of the project as required by CBC Section 3318.1.2. Please be aware that the title Soils Engineer is restricted in the State of California to a Civil Engineer authorized by the State of California to use the title "Geotechnical Engineer."

LIMITATIONS

Our recommendations are based upon the information provided regarding the proposed construction, combined with our analysis of site conditions revealed by the field exploration and laboratory testing programs. We have used our best engineering judgment based upon the information provided and the data generated from our investigation. If the proposed construction is modified or resited; or, if it is found during construction that subsurface conditions differ from those we encountered at our boring locations, we should be afforded the opportunity to review the new information or changed conditions to determine if our conclusions and recommendations must be modified.

We emphasize that this report is applicable only to the proposed construction and the investigated site. This report should not be utilized for construction on any other site. This report is considered valid for the proposed construction for a period of three years following the date it was issued. We understand the long-term aspect of the Solano Community College construction may extend beyond that time, and may include changes to current plans. If construction has not started within three years, we must reevaluate the recommendations of this report and update the report, if necessary.

We would appreciate the opportunity to review the final plans and specifications to determine if the intent of our recommendations has been implemented in those documents.

Wallace - Kuhl & Associates, Inc.

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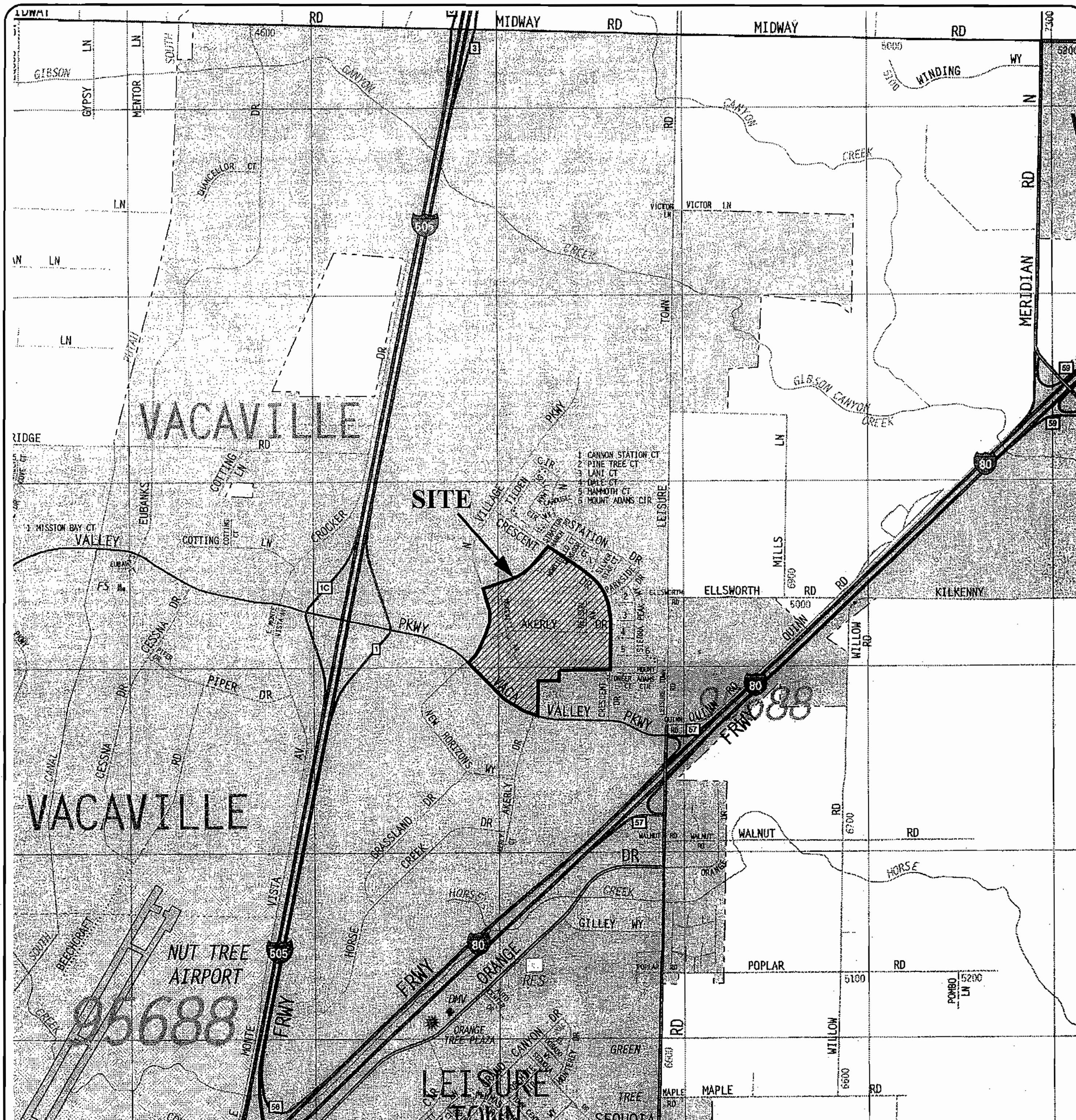
Mitch A. Tyler
Senior Engineer

cf:MJW:MAT



Adapted from the Thomas Guide
Sacramento and Solano Counties
Street Guide and Directory, 2005 edition.

0 1000 2000
SCALE IN FEET

WALLACE-KUHL & ASSOCIATES, INC.

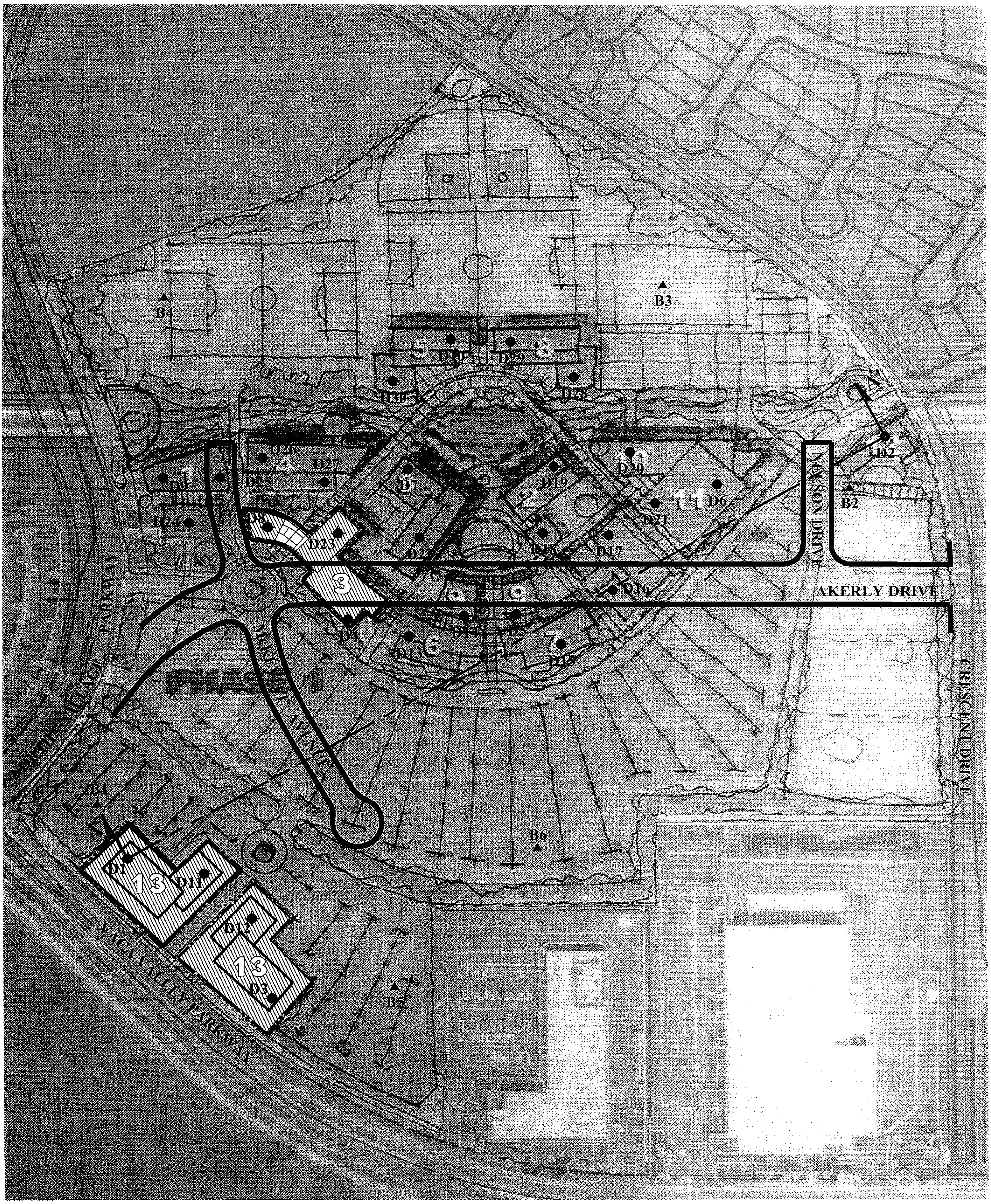
VICINITY MAP

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE	1
DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01



Note:

Adapted from an undated Master Plan Option 2 drawing, prepared by KMD, and Vacaville City Assessor's Maps, Book 133, Pages 3 and 18.

Legend:

- Approximate soil boring location
- Approximate bulk sample location
- Existing streets installed under previous development plan
- Geologic Cross-section A-A'
- Phase 1 Administration Buildings

WALLACE-KUHL & ASSOCIATES, INC.	**SITE PLAN** SOLANO COMMUNITY COLLEGE VACAVILLE CAMPUS Vacaville, California	FIGURE 2

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D1	DRILL RIG/METHOD:
DATE DRILLED:	8/23/06	CME 75/6 INCH
LOGGED BY:	MJW	HOLLOW STEM AUGERS

DEPTH (feet)	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	SOIL DESCRIPTION AND REMARKS
0						ML	Grayish brown, sandy silt
						CL	Brown, sandy, silty clay
5	D1-1I	56				SC	Yellowish brown, cemented, clayey sand
						SM	Light brown, silty sand
10	D1-2I	18	98	14.1	GSD		f
						SC	Light brown with black mottling, cemented, clayey sand
15	D1-3I	57			TX		
							i
						CL/ ML	Light grayish brown, silty clay
20	D1-4I	40	88	33.5			
						CL	Grayish brown, sandy clay
25	D1-5I	29					
						CH	Grayish brown, silty clay weathered claystone of the Tehama Formation
30							

(Continued on figure 3b)

WALLACE-KUHL & ASSOCIATES, INC.

LOG OF BORING D1

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 3a

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D1	DRILL RIG/METHOD:
DATE DRILLED:	8/23/06	CME 75/6 INCH
LOGGED BY:	MJW	HOLLOW STEM AUGERS

(Continued from figure 3a)

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
30		D1-6I	46			PI	CH		Grayish brown, silty clay weathered claystone of the Tehama Formation
							CL		Grayish brown, sandy, silty clay weathered claystone of the Tehama Formation sandy
35		D1-7I	66	109	20.5				
									variably cemented
40		D1-8I	87/11"						
							SC		Grayish brown, clayey sand weathered sandstone of the Tehama Formation
45		D1-9I	90/10"	108	17.9				
50		D1-10I	31	101	220	10.9% <#200			
55									
60									

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. For an explanation of the symbols used in the boring log, see Figure 33.

WALLACE-KUHL & ASSOCIATES, INC.

LOG OF BORING D1

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 3b

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D2	DRILL RIG/METHOD:
DATE DRILLED:	8/23/06	CME 75/6 INCH
LOGGED BY:	MJW	HOLLOW STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Dark brown, silty clay
		D2-1I	18	98	9.3	TR			
							SC		Brown, clayey sand
5		D2-2I	22	108	17.9	3.9 (TSF) UCC	CL/ SC		Grayish brown with rust mottling, sandy clay/clayey sand
									increasing sandy
10							SM		Brown, silty sand
		D2-3I	18	107	19.3	GSD			
							SC		Brown with black mottling, clayey sand
							CL		Grayish brown with black mottling, sandy clay
15		D2-4I	34				SM		Light grayish brown, silty fine sand
									∇i
20							ML		Gray, variably cemented, sandy silt
		D2-5I	56	90	32.7				siltstone of the Tehama Formation
									grayish brown, clayey
25		D2-6I	53	90	29.9				
									variably clayey
30									

(Continued on figure 4b)

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LOG OF BORING D2

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 4a

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
									(Continued from figure 4a)
30		D2-7I	45			PI	ML		Grayish brown, cemented, variably clayey, sandy silt
									weathered siltstone of the Tehama Formation
35		D2-8I	52	88	33.6	90.5 <#200			
40		D2-9I	53						
45		D2-10I	34	89	33.3	95% <#200			
50		D2-11I	29	85	36.3	1.1 (TSF) UCC			
55									
60									

BORING NUMBER: D2
DATE DRILLED: 8/23/06
LOGGED BY: MJW

DRILL RIG/METHOD:
CME 75/6 INCH
HOLLOW STEM AUGERS

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D2

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 4b

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D3	DRILL RIG/METHOD:
DATE DRILLED:	8/24/06	CME 75/6 INCH
LOGGED BY:	HML	SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							SC		Grayish brown, silty, clayey fine sand
		D3-1I	5	104	13.8				
							CL		Brown, fine sandy, silty clay
5		D3-2I	27	110	16.4				
10		D3-3I	15				SM		Brown, clayey, silty fine sand
15		D3-4I	30	99	26.0	2.7 (TSF) UCC	CL		Yellowish brown, variably cemented, very fine sandy, silty clay no cementation on drive 4
20		D3-5I	27						variably cemented
25									
30									

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D3

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 5

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D4	DRILL RIG/METHOD:
DATE DRILLED:	8/24/06	CME 75/6 INCH
LOGGED BY:	HML	SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Grayish brown, fine sandy, silty clay
		D4-1I	12						
5							SC		Light brown, silty, clayey fine sand
		D4-2I	37	116	13.0	38.1% <#200			
10		D4-3I	42						less clayey fine to coarse sand
15							ML		Light brown, variably cemented, very fine sandy, clayey silt
		D4-4I	36	82	37.6				∇i
20		D4-5I	53						
25									
30									

Notes:

1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D4

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 6

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER: D5
DATE DRILLED: 8/24/06
LOGGED BY: HML

DRILL RIG/METHOD:
CME 75/6 INCH
SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	SOIL DESCRIPTION AND REMARKS
0							CL	Grayish brown to brown, fine sandy, silty clay
		D5-1I	19	100	8.0	1.7 (TSF) UCC		
5		D5-2I	15	109	14.5			
							SC	Brown, silty, clayey fine to coarse sand
10		D5-3I	15					
							ML	Light brown, variably cemented, very fine sandy, clayey silt
15		D5-4I	47	91	30.7			
								∇i
20		D5-5I	75/11"					
25								
30								

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D5

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 7

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER: D6
DATE DRILLED: 8/24/06
LOGGED BY: HML

DRILL RIG/METHOD:
CME 75/6 INCH
SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Grayish brown to brown, fine sandy, silty clay
		D6-1I	14	110	15.6	6.4 (TSF) UCC			
									increasing sandy
5		D6-2I	26						
							SC		Brown, silty, clayey, fine to medium sand
10		D6-3I	31	108	18.7				∇i
15		D6-4I	55				ML		Light brown, fine sandy, clayey silt
20		D6-5I	90/10"						
25									
30									

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D6

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 8

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D7	DRILL RIG/METHOD:
DATE DRILLED:	8/24/06	CME 75/6 INCH
LOGGED BY:	HML	SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0		D7-1II D7-1I	8			46.7% <#200	SC		Grayish brown to brown, silty, clayey very fine sand
									brown, very clayey
5		D7-2I	14	107	17.9				
							CL		Light brown, very fine sandy, silty clay
10		D7-3I	20				ML		Yellowish brown to light brown, very fine sandy, clayey silt
15		D7-4I	55	87	33.5				∇i
20		D7-5I	43						
25									
30									

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D7

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 9

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Grayish brown, fine sandy, silty clay
		D8-1I	15	104	17.7	3.6 (TSF) UCC			
5		D8-2I	23						
							SC		Light brown, silty, clayey fine sand
10							SM		Light brown, clayey, silty fine sand
		D8-3I	55	106	18.6				
							ML		Light brown, very fine sandy, clayey silt
15		D8-4I	83/11"						
									∇i
20		D8-5I	56	84	37.1				
25									
30									

BORING NUMBER: D8
DATE DRILLED: 8/24/06
LOGGED BY: HML

DRILL RIG/METHOD:
CME 75/6 INCH
SOLID STEM AUGERS

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D8

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 10

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D9	DRILL RIG/METHOD:
DATE DRILLED:	8/24/06	CME 75/6 INCH
LOGGED BY:	HML	SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Grayish brown, fine sandy, silty clay
		D9-1I	8	105	17.2	1.5 (TSF) UCC			
5							SC		Brown, silty, clayey fine sand
		D9-2I	11	108	15.3				
							ML		Light brown, very fine sandy, clayey silt
10		D9-3I	30						
15		D9-4I	54						
20		D9-5I	44						▽i variably cemented
25									
30									

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D9

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 11

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D10	DRILL RIG/METHOD:
DATE DRILLED:	8/24/06	CME 75/6 INCH
LOGGED BY:	HML	SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Brown, fine sandy, silty clay
		D10-1I	8	106	17.3				
5							SC		Light brown to yellowish brown, silty, clayey fine sand
		D10-2I	21						
10									
		D10-3I	22	105	19.7				increasing clayey
							ML		Light brown, to yellowish brown, very fine sandy, clayey silt
15									
		D10-4I	58						
									∇i
20									
		D10-5I	67						increasing clayey
25									
30									

Notes:

1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D10

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 12	
DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06
WKA NO. 7305.01	

BORING NUMBER:	D11	DRILL RIG/METHOD:
DATE DRILLED:	8/25/06	CME 55/6 INCH
LOGGED BY:	HML	SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							ML		Grayish brown, fine sandy silt
		D11-1I	14	121	14.7		CL		Brown to yellowish brown, fine sandy, silty clay
							SC		Brown to yellowish brown, clayey fine sand
5		D11-2I	21	100	11.8	1.8 (TSF) UCC			
									yellowish brown, increasing clayey
10		D11-3I	17						
15									
20									
25									
30									

Notes:

1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D11

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 13	
DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D12	DRILL RIG/METHOD:
DATE DRILLED:	8/25/06	CME 55/6 INCH
LOGGED BY:	HML	SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							ML		Grayish brown, clayey, fine sandy silt
		D12-1I	15	108	19.1		CL		Brown, fine sandy, silty clay
5		D12-2I	29						
							SC		Light brown to brown, silty, clayey, fine sand
10		D12-3I	26	113	15.5				
15									
20									
25									
30									

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D12

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 14

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D13	DRILL RIG/METHOD:
DATE DRILLED:	8/25/06	CME 55/6 INCH
LOGGED BY:	HML	SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Grayish brown to brown, fine sandy, silty clay
		D13-1I	10	111	14.0	5.4 (TSF) UCC			
5							SC		Yellowish brown, silty, clayey fine sand
		D13-2I	19	112	15.0				
10									
		D13-3I	18						fine to coarse sand
							ML		Light brown to yellowish brown, very fine sandy, clayey silt
15									
		D13-4I	54						
20									
25									
30									

Notes:

1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D13

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 15

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Grayish brown to brown, silty, very fine sandy clay
		D14-1I	14	107	11.8	3.2 (TSF) UCC			
5		D14-2I	24	110	16.7				less sandy
							SC		Light brown to yellowish brown, silty, clayey fine sand
10		D14-3I	13						
15									
20									
25									
30									

BORING NUMBER: D14
DATE DRILLED: 8/25/06
LOGGED BY: HML

DRILL RIG/METHOD:
CME 55/6 INCH
SOLID STEM AUGERS

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D14

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 16

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER: D15
DATE DRILLED: 8/25/06
LOGGED BY: HML

DRILL RIG/METHOD:
SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							SM		Light brown, clayey, silty very fine sand FILL
							CL		Dark grayish brown to light brown, very fine sandy, silty clay
		D15-1I	11	106	19.2	2.7 (TSF) UCC			
5									
		D15-2I	40	110	17.4				
							SC		Light brown to grayish brown, silty, clayey fine sand
10									
		D15-3I	26						fine to coarse sand
15									
20									
25									
30									

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D15

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 17

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0									4" asphalt concrete over 10" aggregate base
							CL		Brown to light brown, fine sandy, silty clay
		D16-1I	20	104	17.8	3.5 (TSF) UCC			
5		D16-2I	26	104	17.8				
10		D16-3I	10						trace fine sand to coarse gravel
							ML		Light brown, very fine sandy, clayey silt
15		D16-4I	25	90	32.4				
20									
25									
30									

BORING NUMBER: D16
DATE DRILLED: 8/25/06
LOGGED BY: HML

DRILL RIG/METHOD:
SOLID STEM AUGERS

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D16

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 18

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D17	DRILL RIG/METHOD:
DATE DRILLED:	8/25/06	CME 55/6 INCH
LOGGED BY:	HML	SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Grayish brown to brown, very fine sandy, silty clay
		D17-1I	11	107	16.1	2.5 (TSF) UCC			
5									increasing sandy
		D17-2I	22	111	16.6				
10									
		D17-3I	25				SC		Light brown, silty, clayey fine sand
15									
20									
25									
30									

Notes:

1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D17

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 19

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D18	DRILL RIG/METHOD:
DATE DRILLED:	8/25/06	CME 55/6 INCH
LOGGED BY:	HML	SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Dark grayish brown to yellowish brown, very fine sandy, silty clay
		D18-1I	13	103	20.5	1.6 (TSF) UCC			
5		D18-2I	18	98	18.5				increasing sandy
							ML		Light brown to yellowish brown, variably cemented, very fine sandy, clayey silt
10		D18-3I	47						
15		D18-4I	60						
20									
25									
30									

Notes:

1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D18

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 20

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D19	DRILL RIG/METHOD:
DATE DRILLED:	8/25/06	CME 55/6 INCH
LOGGED BY:	HML	SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Grayish brown to brown, fine sandy, silty clay
		D19-1I	12						
5		D19-2I	16	103	17.3				
							SC		Brown to yellowish brown, silty, clayey fine sand
10		D19-3I	25						coarse sand to fine gravel
15									
20									
25									
30									

Notes:

1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D19

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 21

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D20	DRILL RIG/METHOD:
DATE DRILLED:	8/25/06	CME 55/6 INCH
LOGGED BY:	HML	SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Grayish brown to brown, fine sandy, silty clay
		D20-1I	12	106	18.5	1.8 (TSF) UCC			
5		D20-2I	14						
							SC		Brown, silty, clayey fine sand
10		D20-3I	13						
15									
20									
25									
30									

Notes:

1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D20

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 22

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D21
DATE DRILLED:	8/25/06
LOGGED BY:	HML

DRILL RIG/METHOD:
CME 55/6 INCH
SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Grayish brown to brown, fine sandy, silty clay
		D21-1I	11						
5							SC		Light brown, silty, clayey fine sand
		D21-2I	36	116	14.2				
10									
		D21-3I	22						
15									
20									
25									
30									

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D21

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 23

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Grayish brown to brown, fine sandy, silty clay
		D22-1I	11	97	9.7	1.2 (TSF) UCC			
5		D22-2I	24						
							SM		Light brown, clayey, silty fine sand
10		D22-3I	17				CL		Light brown, very fine sandy, silty clay
15									
20									
25									
30									

BORING NUMBER: D22
DATE DRILLED: 8/25/06
LOGGED BY: HML

DRILL RIG/METHOD:
CME 55/6 INCH
SOLID STEM AUGERS

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D22

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 24

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER: D23
DATE DRILLED: 8/25/06
LOGGED BY: HML

DRILL RIG/METHOD:
CME 55/6 INCH
SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Grayish brown to brown, fine sandy, silty clay
		D23-1I	15	112	13.6				
							SC		Brown, silty, clayey fine sand
5									
		D23-2I	14	107	11.6				
10									
							CL		Light brown, silty clay
		D23-3I	15						
15									
20									
25									
30									

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D23

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 25

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER: D24
DATE DRILLED: 8/28/06
LOGGED BY: MJW

DRILL RIG/METHOD:
CME 55/6 INCH
SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Gray, sandy clay
		D24-1I	11	112	13.4	6.4			
							SC		Light brown with rust mottling, variably cemented, clayey sand
5		D24-2I	29	113	14.3				
10									fine to coarse sand
		D24-3I	46						
15		D24-4I	55						
20									
25									
30									

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D24

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 26

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER: D25
DATE DRILLED: 8/28/06
LOGGED BY: MJW

DRILL RIG/METHOD:
CME 55/6 INCH
SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0									3" asphalt concrete over 22" aggregate base
5		D25-1I	7						loose silty gravel, aggregate base
							CL		Brown, gravelly, sandy clay
10		D25-2I	14	87	31.9		ML		Light brown, clayey silt
15									
20									
25									
30									

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D25

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 27

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D26	DRILL RIG/METHOD:
DATE DRILLED:	8/28/06	CME 55/6 INCH
LOGGED BY:	MJW	SOLID STEM AUGERS

DEPTH (feet)	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	SOIL DESCRIPTION AND REMARKS
0						CL	Dark brown, silty clay
	D26-1I	12	107	17.5	2.7 (TSF) UCC		
						SC	Light brown, with rust mottling, clayey sand
5	D26-2I	31					
						ML	Light brown, clayey silt
10	D26-3I	22	80	39.4			fine sandy
15	D26-4I	34					
20							
25							
30							

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D26

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 28

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D27	DRILL RIG/METHOD:
DATE DRILLED:	8/28/06	CME 55/6 INCH
LOGGED BY:	MJW	SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Dark brown, sandy clay
4							SC		Light brown, clayey sand
5		D27-1I	33						
10		D27-2I	73	110	18.9				
15									
20									
25									
30									

Notes:

1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D27

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 29

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER: D28
DATE DRILLED: 8/28/06
LOGGED BY: MJW

DRILL RIG/METHOD:
CME 55/6 INCH
SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Dark brown, silty clay
		D28-1I	13	109	13.3	4.1			
									increasing sandy
							SC		Light brown, with black mottling, clayey sand
5		D28-2I	26	114	15.4				
							SM		Brown, silty medium sand
10									increasing coarse sand
		D28-3I	13						
							ML		Light brown, clayey, fine sandy silt
15		D28-4I	78/11"						
20									
25									
30									

Notes:
1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D28

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 30

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D29	DRILL RIG/METHOD:
DATE DRILLED:	8/28/06	CME 55/6 INCH
LOGGED BY:	MJW	SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Dark brown, silty clay
5		D29-1I	19	109	18.8				light brown
							SC		Light brown, clayey sand
10		D29-2I	29						
15									
20									
25									
30									

Notes:

1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D29

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 31

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

BORING NUMBER:	D30	DRILL RIG/METHOD:
DATE DRILLED:	8/28/06	CME 55/6 INCH
LOGGED BY:	MJW	SOLID STEM AUGERS

DEPTH (feet)	SAMPLER	SAMPLE NUMBER	BLOWS/FT.	DRY UNIT WT. (PCF)	MOISTURE CONTENT (%)	OTHER TESTS	USCS	GRAPHIC LOG	SOIL DESCRIPTION AND REMARKS
0							CL		Dark brown, silty clay
		D30-1I	13	17.3	108	1.8 (TSF) UCC			
5		D30-2I	21				SC		Brown with black mottling, clayey sand
							ML		Light brown, fine sandy, clayey silt
10		D30-3I	57	86	34.6				
15									
20									
25									
30									

Notes:

1. This log depicts conditions only at the boring location, see Figure 2, and only on the date of field exploration.
2. Ground water was not encountered in the boring.
3. For an explanation of the symbols used in the boring log, see Figure 33.

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LOG OF BORING D30

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 32

DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS		SYMBOL	CODE	TYPICAL NAMES
COARSE GRAINED SOILS (More than 50% of soil > no. 200 sieve size)	GRAVELS (More than 50% of coarse fraction > no. 4 sieve size)	GW		Well graded gravels or gravel - sand mixtures, little or no fines
		GP		Poorly graded gravels or gravel - sand mixtures, little or no fines
		GM		Silty gravels, gravel - sand - silt mixtures
		GC		Clayey gravels, gravel - sand - clay mixtures
	SANDS (50% or more of coarse fraction < no. 4 sieve size)	SW		Well graded sands or gravelly sands, little or no fines
		SP		Poorly graded sands or gravelly sands, little or no fines
		SM		Silty sands, sand - silt mixtures
		SC		Clayey sands, sand - clay mixtures
FINE GRAINED SOILS (50% or more of soil < no. 200 sieve size)	SILTS & CLAYS LL < 50	ML		Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL		Organic silts and organic silty clays of low plasticity
	SILTS & CLAYS LL ≥ 50	MH		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH		Inorganic clays of high plasticity, fat clays
		OH		Organic clays of medium to high plasticity, organic silty clays, organic silts
HIGHLY ORGANIC SOILS		Pt		Peat and other highly organic soils
ROCK		RX		Rocks, weathered to fresh

OTHER SYMBOLS

= Drive Sample: 2-1/2" O.D. Modified California sampler

= Drive Sample: no recovery

= SPT Sample

= Initial Water Level

= Final Water Level

= Estimated or gradational material change line

= Observed material change line

Laboratory Tests

PI = Plasticity Index

EI = Expansion Index

UCC = Unconfined Compression Test

TR = Triaxial Compression Test

GR = Gradational Analysis (Sieve)

K = Permeability Test

GRAIN SIZE CLASSIFICATION

CLASSIFICATION	RANGE OF GRAIN SIZES	
	U.S. Standard Sieve Size	Grain Size in Millimeters
BOULDERS	Above 12"	Above 305
COBBLES	12" to 3"	305 to 76.2
GRAVEL coarse (c) fine (f)	3" to No. 4 3" to 3/4" 3/4" to No. 4	76.2 to 4.76 76.2 to 19.1 19.1 to 4.76
SAND coarse (c) medium (m) fine (f)	No. 4 to No. 200 No. 4 to No. 10 No. 10 to No. 40 No. 40 to No. 200	4.76 to 0.074 4.76 to 2.00 2.00 to 0.420 0.420 to 0.074
SILT & CLAY	Below No. 200	Below 0.074

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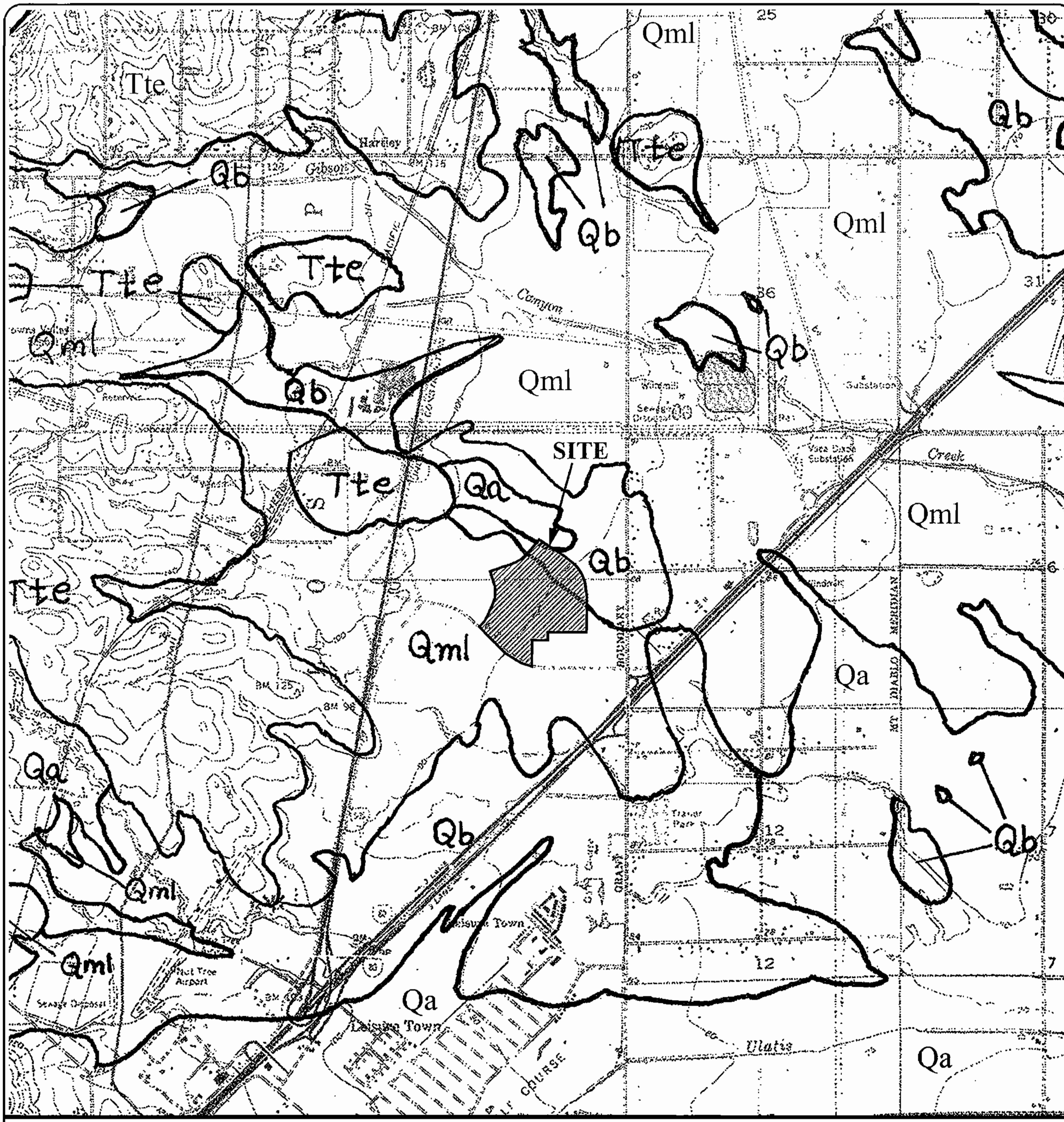
UNIFIED SOIL CLASSIFICATION SYSTEM

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 33	
DRAWN BY	MAH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06
WKA NO. 7305.01	



Adapted from the Geologic Map of the Late Cenozoic Deposits of the Southern Sacramento Valley, compiled by Helley & Harwood, 1985.

Legend:

Qa	Alluvium (Holocene)
Qb	Basin Deposits, Undivided (Holocene)
Qml	Modesto Formation, Lower member-Unconsolidated (Pleistocene)
Tte	Tehama Formation (Pliocene)

0 ¼ ½

SCALE IN MILES

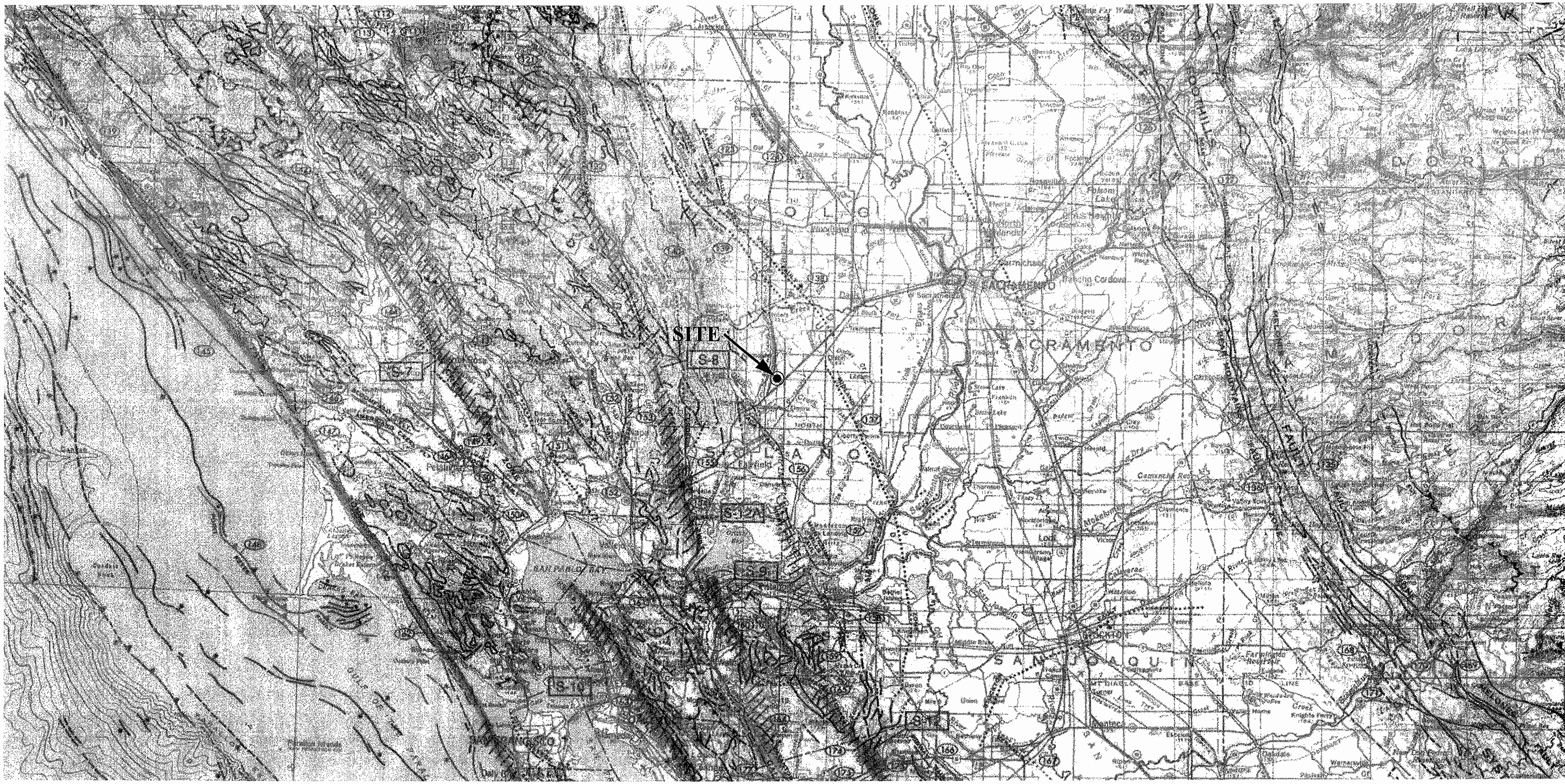
WALLACE-KUHL & ASSOCIATES, INC.

GEOLOGIC MAP

SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS

Vacaville, California

FIGURE	34
DRAWN BY	HCS
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06
WKA NO.	7305.01



Adapted from Jennings, 1994

0 6 12
Approx. scale in miles

WALLACE-KUHL
& ASSOCIATES, INC.

FAULT MAP

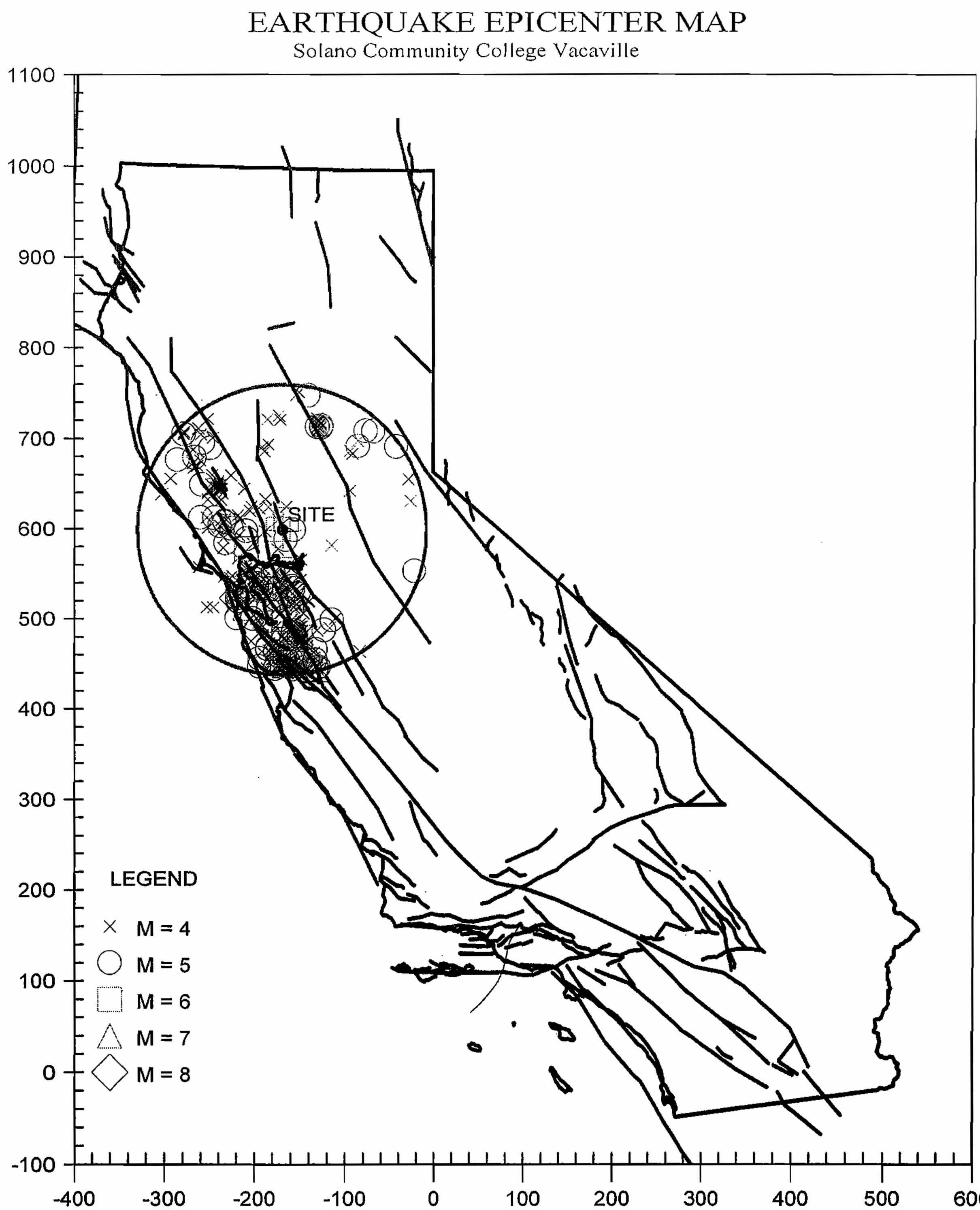
SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS

Vacaville, California

FIGURE 35

DRAWN BY	HCS
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01



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EPICENTER MAP

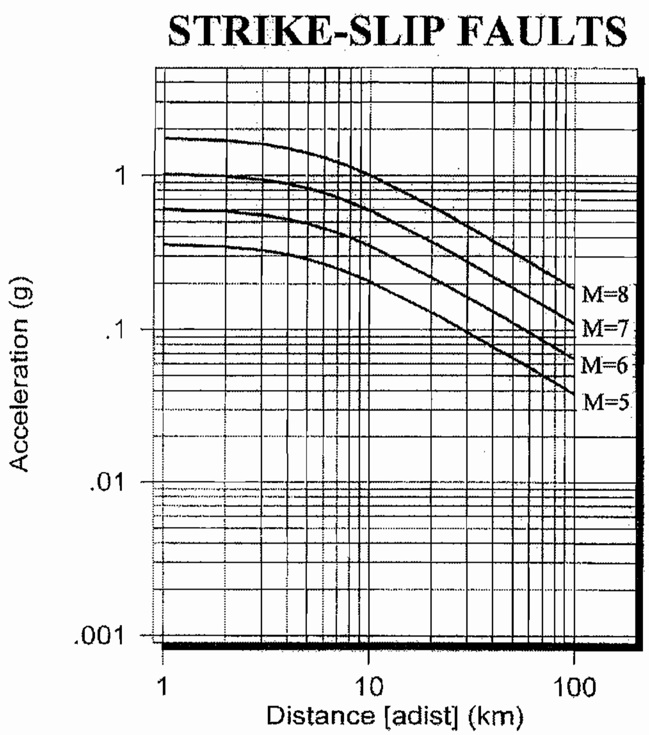
SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS

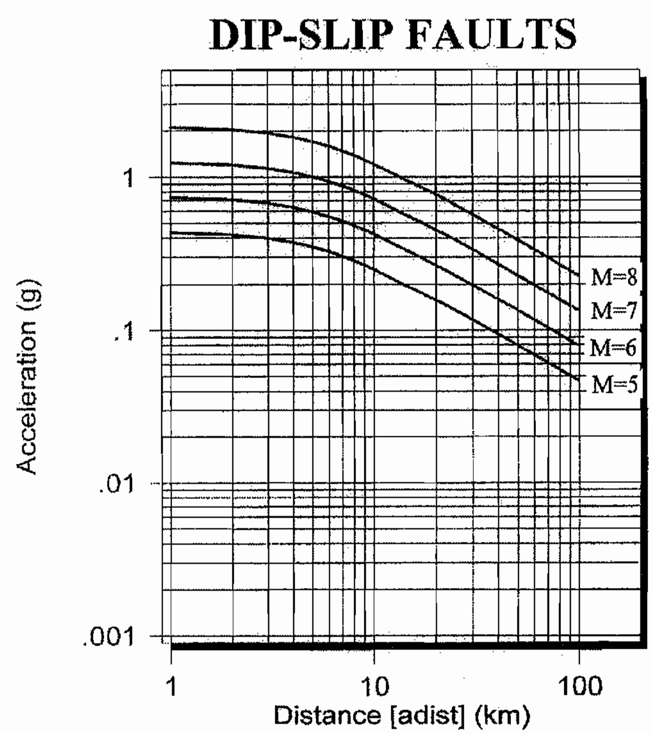
Vacaville, California

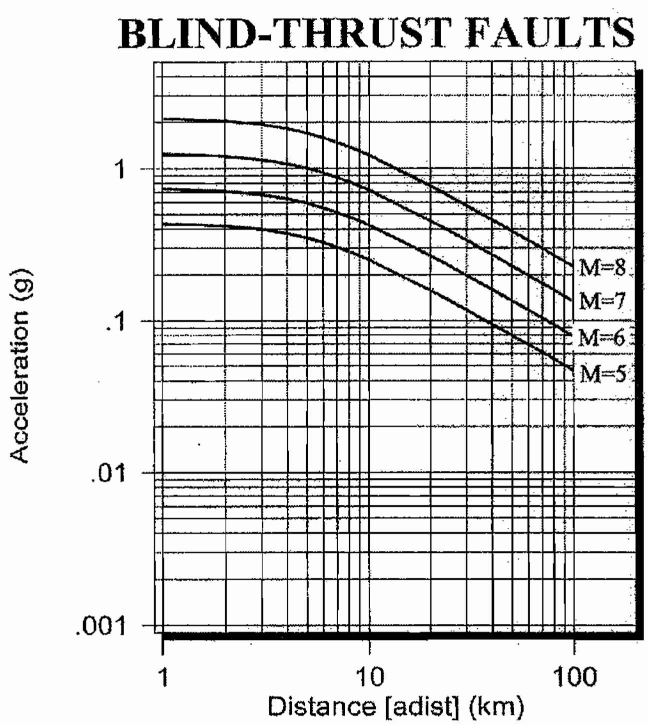
FIGURE 36

DRAWN BY	HCS
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01







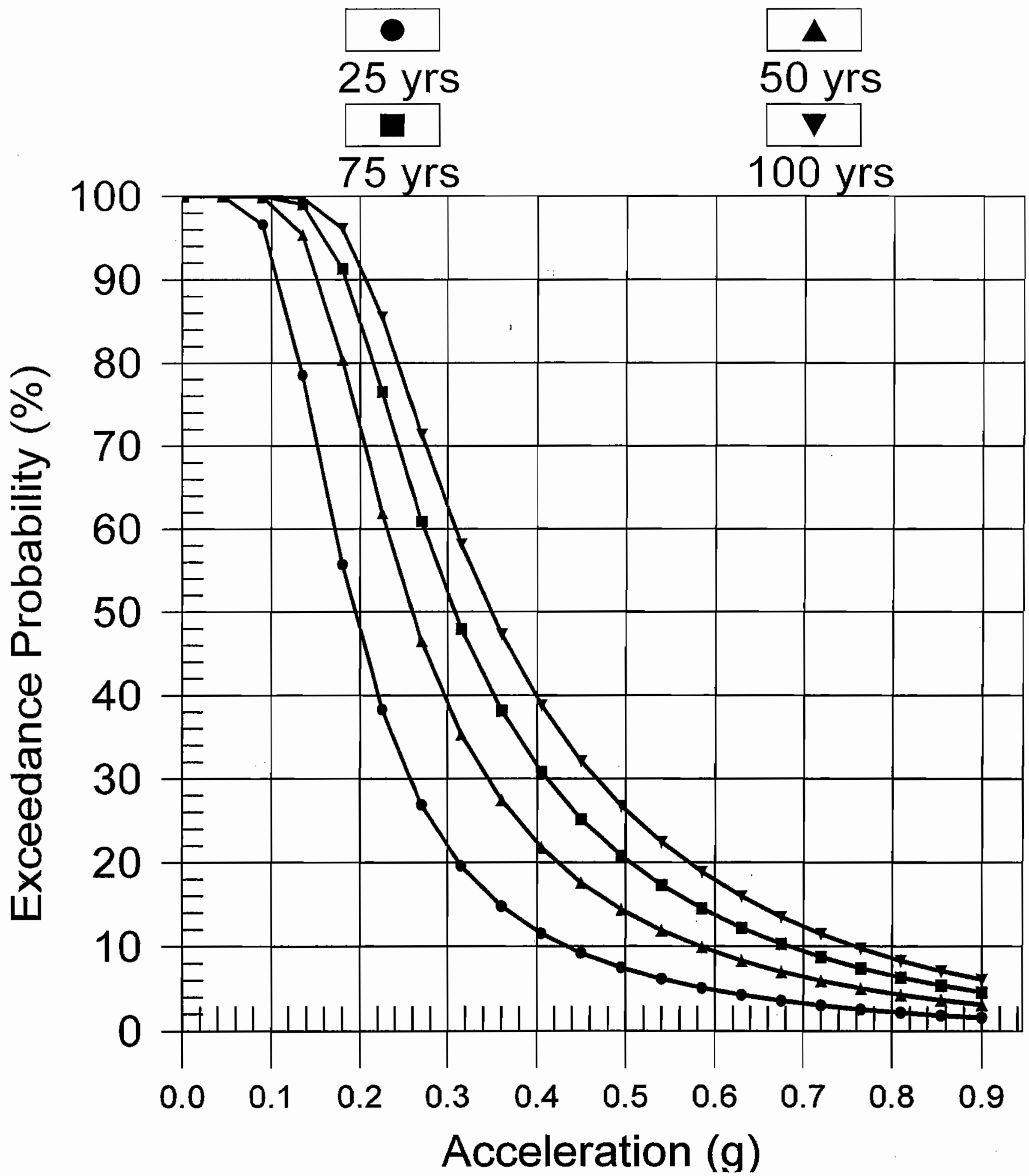
GROUND MOTION ATTENUATION

(Boore et al, 1997)
Site Class D (250 m/s)
mean+sigma

WALLACE-KUHL & ASSOCIATES, INC.	**ATTENUATION CHARTS** SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS Vacaville, California	FIGURE 37 DRAWN BY: HCS CHECKED BY: MJW PROJECT MGR: MAT DATE: 10/06 WKA NO. 7305.01

PROBABILITY OF EXCEEDANCE

BOORE ET AL(1997) NEHRP D (250)1



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PROBABILITY OF EXCEEDANCE vs. ACCELERATION

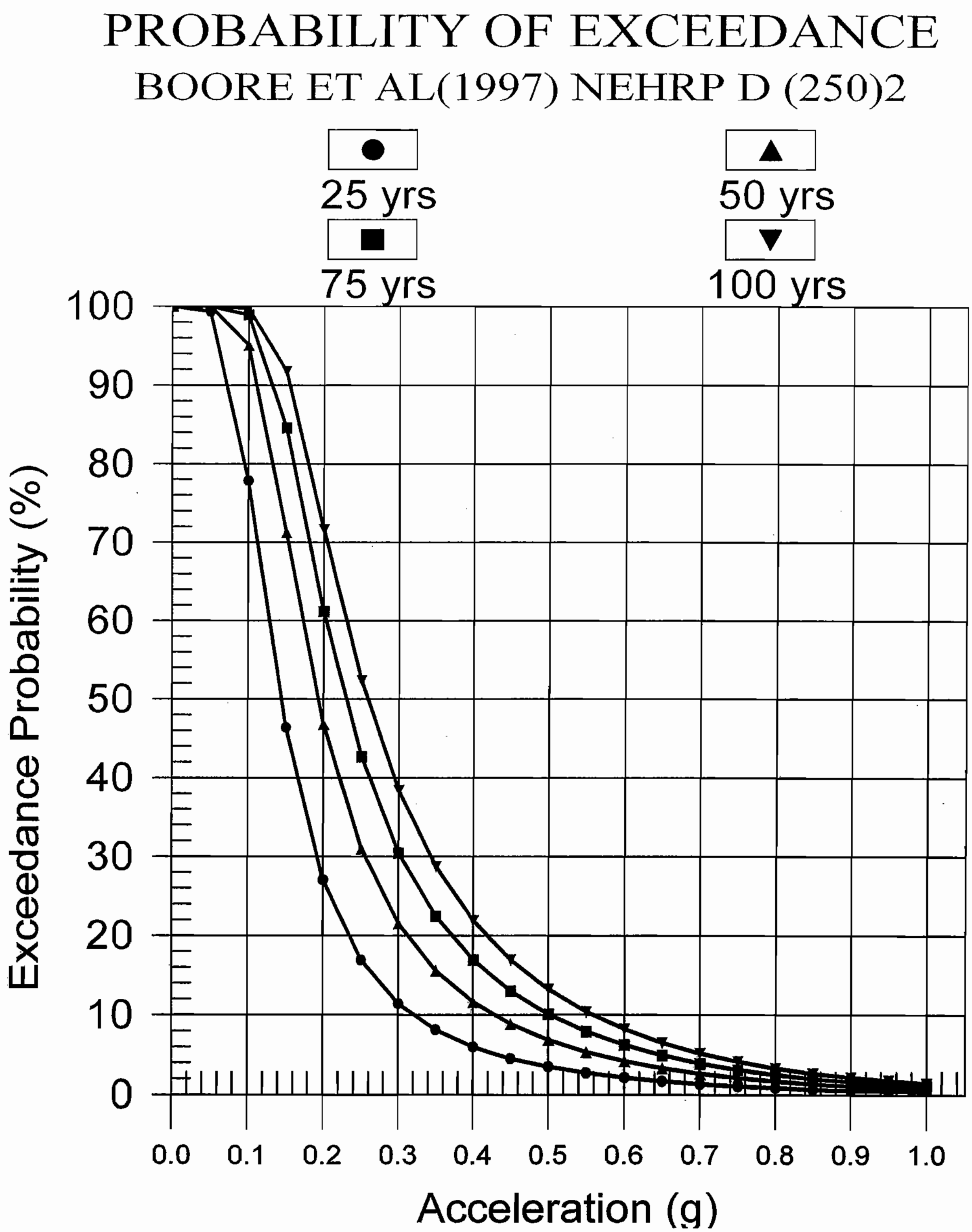
SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS

Vacaville, California

FIGURE 38

DRAWN BY	HCS
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01



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PROBABILITY OF EXCEEDANCE vs. ACCELERATION (MWF)

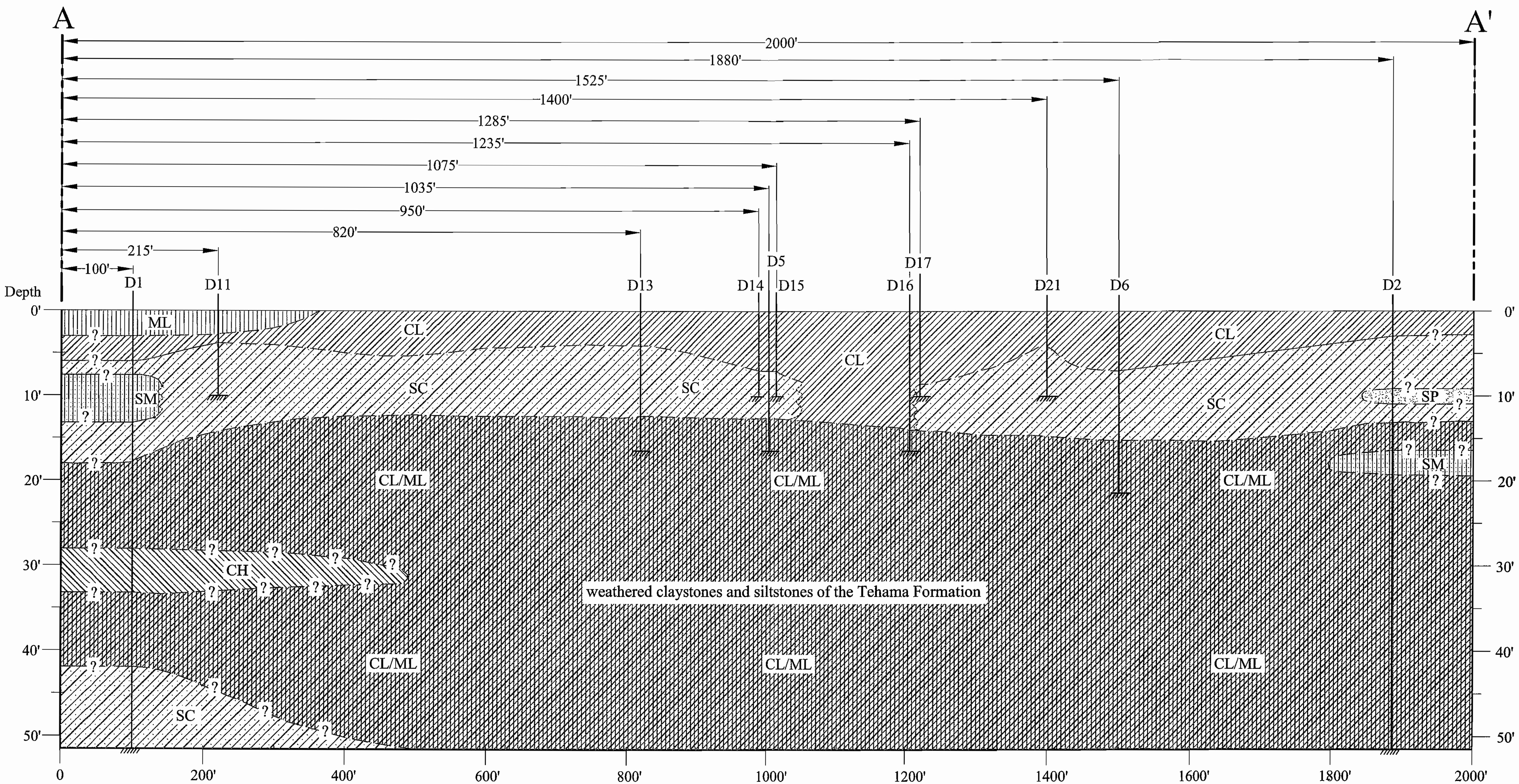
SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS

Vacaville, California

FIGURE 39

DRAWN BY	HCS
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01



SECTION A-A'

WALLACE-KUHL & ASSOCIATES, INC.

GEOLOGIC CROSS-SECTION

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE 40	
DRAWN BY	HCS
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06
WKA NO. 7305.01	

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APPENDICES

WALLACE • KUHL
& ASSOCIATES INC.

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APPENDIX A

APPENDIX A

A. GENERAL INFORMATION

The preparation of a geotechnical engineering report for the proposed new science building for the Solano Community College – Vacaville Campus located north of Vaca Valley Parkway in Vacaville, California, was authorized by Mr. Frank Kitchen, Director of Facilities for Solano Community College. Authorization was for an investigation as described in our proposal letter of July 11, 2006, sent to our client, Solano Community College, care of Mr. Lester Young of Kitchell CEM, whose mailing address is 4000 Suisun Valley Road, Fairfield, California 94534; telephone (707) 864-7189; facsimile (707) 207-0423.

The architectural consultant for this project is KMD Architects, whose mailing address is 222 Vallejo Street, San Francisco, CA 94111; telephone (415) 398-5191; facsimile (415) 394-7158.

In performing this investigation, we made reference to a Master Plan Option 2 drawing by KMD and Vacaville City Assessors Maps, Book 133, Pages 3 and 18.

B. FIELD EXPLORATION

Test borings were drilled on August 23, 24, 25 and 28, 2006, utilizing CME-75 and CME-55 truck-mounted drill rigs. At the approximate locations indicated on Figure 2, 30 exploratory borings were drilled and sampled to maximum depths of approximately 10, 15, 20, and 50 feet below grade. The borings were drilled using six-inch diameter hollow stem augers and six-inch solid stem augers.

At various intervals, relatively undisturbed soil samples were recovered with a 2½-inch O.D., 2-inch I.D., California sampler driven by a 140-pound hammer freely falling 30 inches. The number of blows of the hammer required to drive the 18-inch long sampler each 6-inch interval was recorded. The sum of the blows required to drive the sampler the lower 12-inch interval is designated the penetration resistance or "blow count" for that particular drive. Selected bulk bag samples were also collected from the borings and taken to our laboratory for soil classification and additional testing.

The samples collected from the borings were retained in 2-inch diameter by 6-inch long, thin-walled brass tubes contained within the sampler. Immediately after recovery, the field engineer visually classified the soil in the tubes and the ends of the tubes were sealed to preserve the natural moisture contents.

C. LABORATORY TESTING

Selected undisturbed samples of the soils were tested to determine dry unit weight (ASTM D2937), natural moisture content (ASTM D2216), and unconfined compressive strength (ASTM D2216). The results of the compressive strength, moisture content, and dry unit weight tests are included on the boring logs at the depth each sample was obtained.

The shear strength of two samples was evaluated by triaxial compression testing (ASTM D4767); the results of the triaxial compression testing are presented on Figures A1 and A2.

Four bulk samples of the subgrade soils were tested to determine their Expansion Index (ASTM D4829) values. The results of the Expansion Index testing are presented on Figures A3 through A6.

Three representative bulk samples of the anticipated pavement subgrade soils were subjected to Resistance-value testing in accordance with California Test 301. Results of the Resistance-value test, which were used in the pavement design, are contained on Figures A7 and A8.

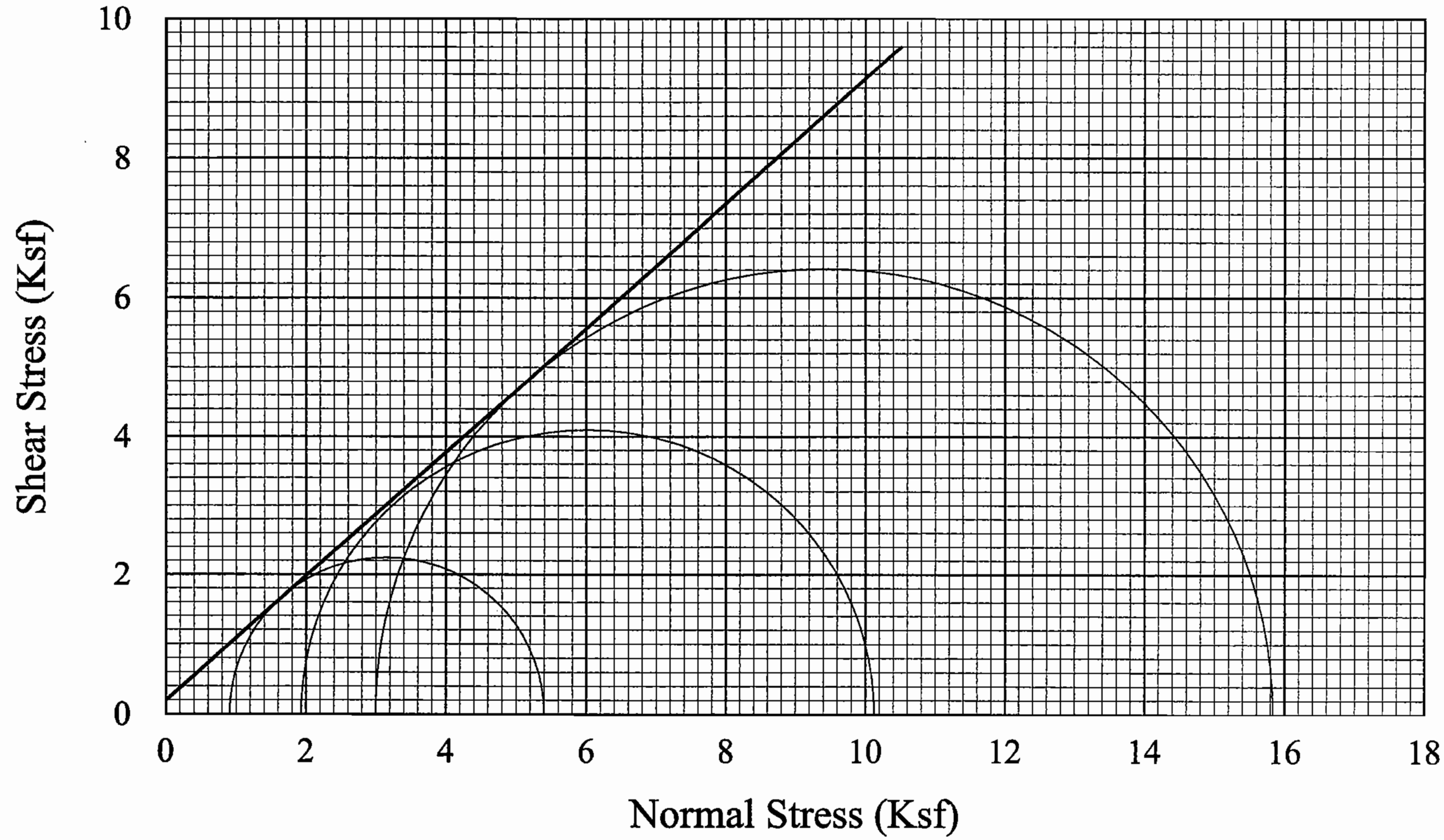
Five samples of soil were analyzed for their grain size distribution, by sieve analysis and hydrometer (ASTM D422). The results of these analyses are presented on Figures A9 through A12.

Four samples of the soils were tested to determine the Atterberg Limits (ASTM D4318). The results of the Atterberg Limits are included as Figures A13 and A14.

Four representative samples of the near-surface soil were submitted to Sunland Analytical to determine the soil pH and minimum resistivity (California Test 643), sulfate concentration (California Test 417) and chloride concentration (California Test 422). Results from these tests are included as Figures A15 through A18.

TRIAXIAL COMPRESSION TEST

ASTM D4767-04



SAMPLE NO. :	D1-3I
SAMPLE CONDITION :	Undisturbed
SAMPLE DESCRIPTION :	Light brown with black mottling, cemented, clayey sand

DRY DENSITY (PCF) :	114
INITIAL MOISTURE (%) :	15.3
FINAL MOISTURE (%) :	15.3
ANGLE OF INTERNAL FRICTION (ø) :	42°
COHESION (PSF) :	143

WALLACE-KUHL & ASSOCIATES, INC.

TRIAXIAL COMPRESSION TEST

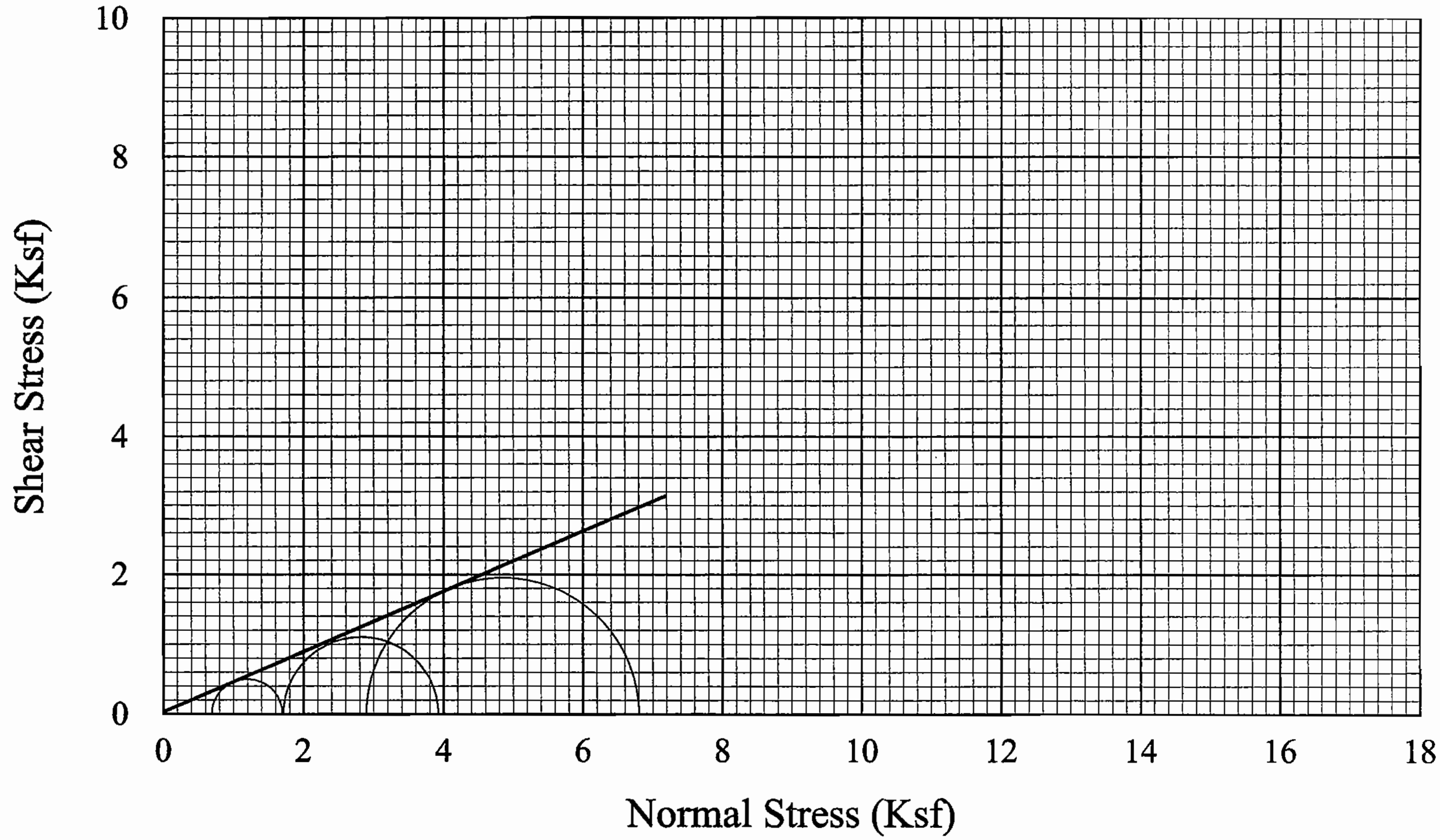
SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE	A1
DRAWN BY	TLH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06
WKA NO.	7305.01

TRIAXIAL COMPRESSION TEST

ASTM D4767-04



SAMPLE NO. :	D2-1I
SAMPLE CONDITION :	Undisturbed
SAMPLE DESCRIPTION :	Dark brown, silty clay

DRY DENSITY (PCF) :	98
INITIAL MOISTURE (%) :	9.3
FINAL MOISTURE (%) :	15
ANGLE OF INTERNAL FRICTION (ø) :	23°
COHESION (PSF) :	6

WALLACE-KUHL & ASSOCIATES, INC.

TRIAXIAL COMPRESSION TEST

SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS

Vacaville, California

FIGURE	A2
DRAWN BY	TLH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06
WKA NO.	7305.01

EXPANSION INDEX TEST RESULTS

UBC Standard No. 18-2

ASTM D4829

MATERIAL DESCRIPTION: Brown, silty clay

LOCATION: B2

Sample Depth	Pre-Test Moisture (%)	Post-Test Moisture (%)	Dry Density (pcf)	Expansion Index *
0-2'	10.7	21.2	106	**60**

CLASSIFICATION OF EXPANSIVE SOIL **

EXPANSION INDEX	POTENTIAL EXPANSION
0 - 20	Very Low
21 - 50	Low
51 - 90	**Medium**
91 - 130	High
Above 130	Very High

* Corrected to 50% Saturation

** From UBC Table 18-I-B

WALLACE-KUHL & ASSOCIATES, INC.

EXPANSION INDEX TEST RESULTS

SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS

Vacaville, California

FIGURE A3	
DRAWN BY	TLH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

EXPANSION INDEX TEST RESULTS

UBC Standard No. 18-2

ASTM D4829

MATERIAL DESCRIPTION: Brown, sandy, silty clay

LOCATION: B3

Sample Depth	Pre-Test Moisture (%)	Post-Test Moisture (%)	Dry Density (pcf)	Expansion Index *
0-2'	9.7	18.5	109	**40**

CLASSIFICATION OF EXPANSIVE SOIL **

EXPANSION INDEX	POTENTIAL EXPANSION
0 - 20	Very Low
21 - 50	**Low**
51 - 90	Medium
91 - 130	High
Above 130	Very High

* Corrected to 50% Saturation

** From UBC Table 18-I-B

WALLACE-KUHL & ASSOCIATES, INC.	**EXPANSION INDEX TEST RESULTS** SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS Vacaville, California	FIGURE A4

DRAWN BY	TLH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

EXPANSION INDEX TEST RESULTS

UBC Standard No. 18-2

ASTM D4829

MATERIAL DESCRIPTION: Brown, fine sandy, silty clay

LOCATION: D12

Sample Depth	Pre-Test Moisture (%)	Post-Test Moisture (%)	Dry Density (pcf)	Expansion Index *
3'-5'	13.0	19.9	114	**61**

CLASSIFICATION OF EXPANSIVE SOIL **

EXPANSION INDEX	POTENTIAL EXPANSION
0 - 20	Very Low
21 - 50	Low
51 - 90	**Medium**
91 - 130	High
Above 130	Very High

* Corrected to 50% Saturation

** From UBC Table 18-I-B

WALLACE-KUHL & ASSOCIATES, INC.	**EXPANSION INDEX TEST RESULTS** SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS Vacaville, California	FIGURE A5 DRAWN BY: TLH CHECKED BY: MJW PROJECT MGR: MAT DATE: 10/06 WKA NO. 7305.01

EXPANSION INDEX TEST RESULTS

UBC Standard No. 18-2

ASTM D4829

MATERIAL DESCRIPTION: Dark gray, silty clay

LOCATION: B4

Sample Depth	Pre-Test Moisture (%)	Post-Test Moisture (%)	Dry Density (pcf)	Expansion Index *
0-2'	13.0	22.8	104	**84**

CLASSIFICATION OF EXPANSIVE SOIL **

EXPANSION INDEX	POTENTIAL EXPANSION
0 - 20	Very Low
21 - 50	Low
51 - 90	**Medium**
91 - 130	High
Above 130	Very High

* Corrected to 50% Saturation

** From UBC Table 18-I-B

WALLACE-KUHL & ASSOCIATES, INC.

EXPANSION INDEX TEST RESULTS

SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS

Vacaville, California

FIGURE A6

DRAWN BY	TLH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

RESISTANCE VALUE TEST RESULTS
(California Test 301)

MATERIAL DESCRIPTION: Grayish brown to brown, fine sandy silty clay

LOCATION: D23 (1'-4')

Specimen No.	Dry Unit Weight (pcf)	Moisture @ Compaction (%)	Exudation Pressure (psi)	Expansion Pressure (dial)	Expansion Pressure (psf)	R Value
1	112	17.0	604	23	100	5

Sample extruded, therefore R-Value = 5

MATERIAL DESCRIPTION: Brown, clayey fine sand

LOCATION: B1 (0-2')

Specimen No.	Dry Unit Weight (pcf)	Moisture @ Compaction (%)	Exudation Pressure (psi)	Expansion Pressure (dial)	Expansion Pressure (psf)	R Value
1	114	13.8	199	3	13	18
2	116	13.0	255	14	61	34
3	115	11.7	366	8	35	45

R-Value at 300 psi exudation pressure = 40

RESISTANCE VALUE TEST RESULTS
(California Test 301)

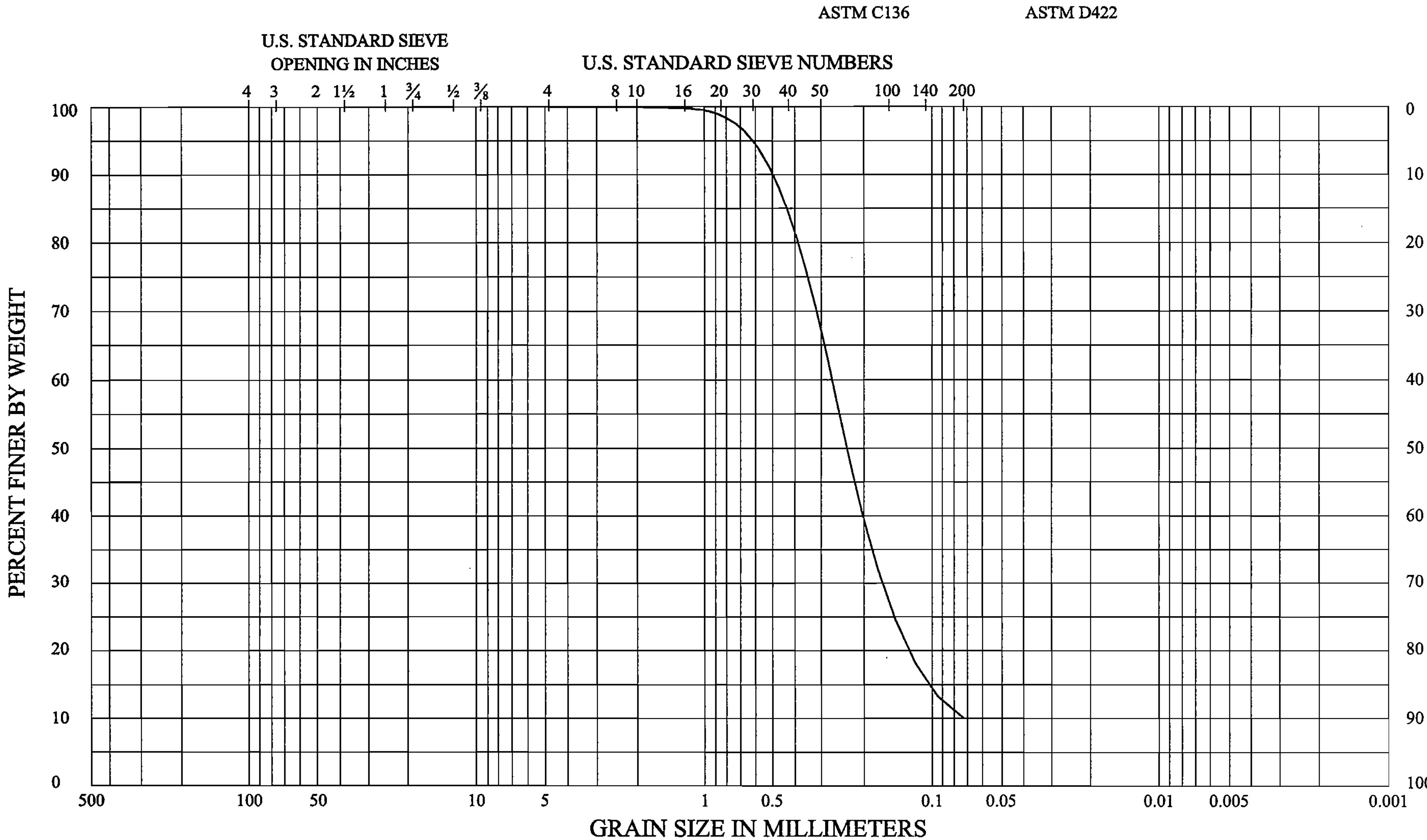
MATERIAL DESCRIPTION: Brown, fine sandy clay

LOCATION: B6 (0-1½')

Specimen No.	Dry Unit Weight (pcf)	Moisture @ Compaction (%)	Exudation Pressure (psi)	Expansion Pressure (dial)	Expansion Pressure (psf)	R Value
1	115	14.3	143	13	56	10
2	116	13.7	183	24	104	28
3	113	13.1	342	21	91	17

R-Value at 300 psi exudation pressure = 28

WALLACE-KUHL & ASSOCIATES, INC.	**RESISTANCE VALUE TEST RESULTS** SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS Vacaville, California	FIGURE A8	
		DRAWN BY	TLH
		CHECKED BY	MJW
		PROJECT MGR	MAT
		DATE	10/06
		WKA NO. 7305.01	



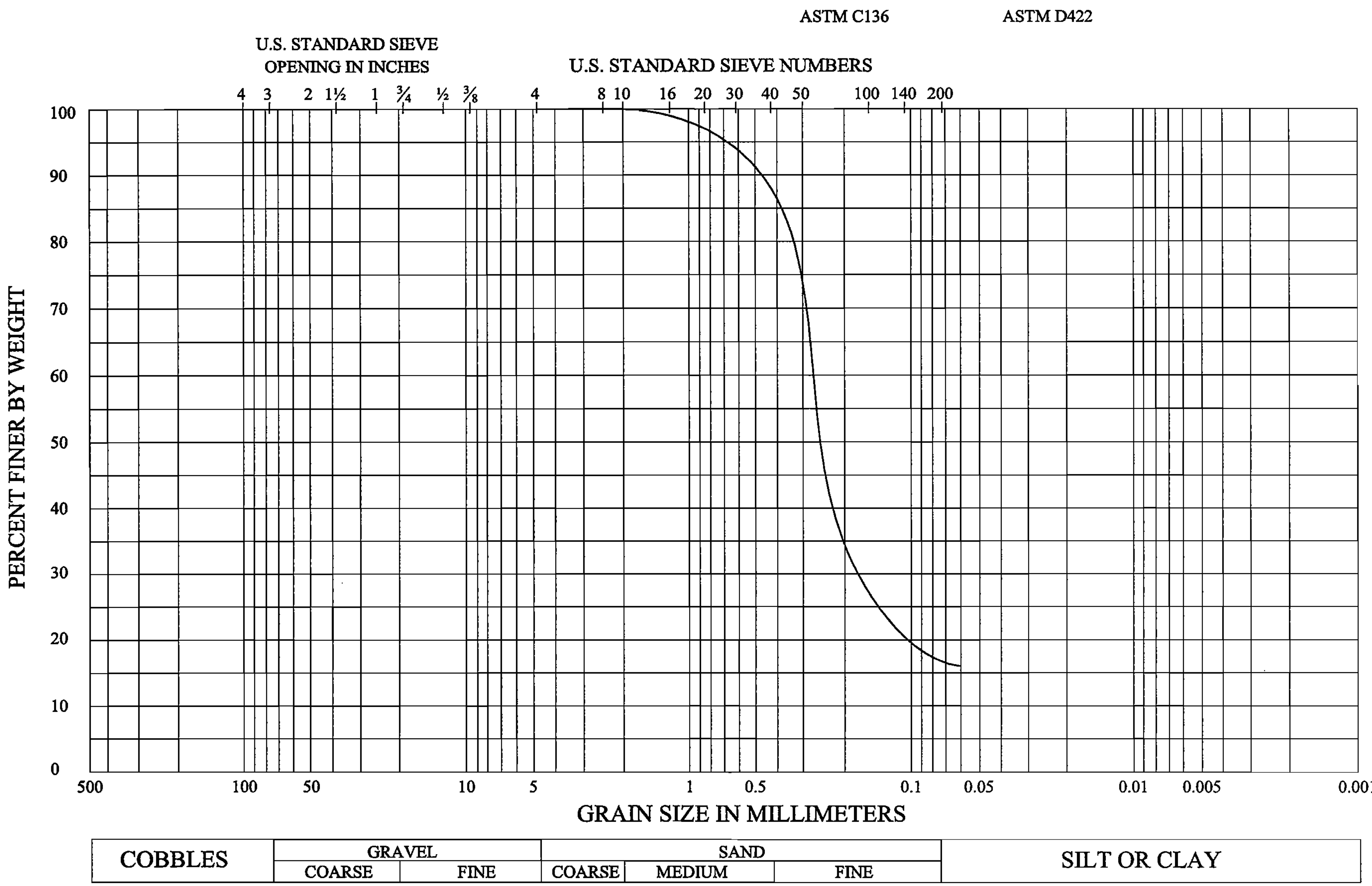
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO. D1-2I

WALLACE-KUHL & ASSOCIATES, INC.	**SIEVE ANALYSIS** SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS Vacaville, California	FIGURE A9

DRAWN BY	TLH
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01



SAMPLE NO. D2-3I

WALLACE-KUHL & ASSOCIATES, INC.

SIEVE ANALYSIS

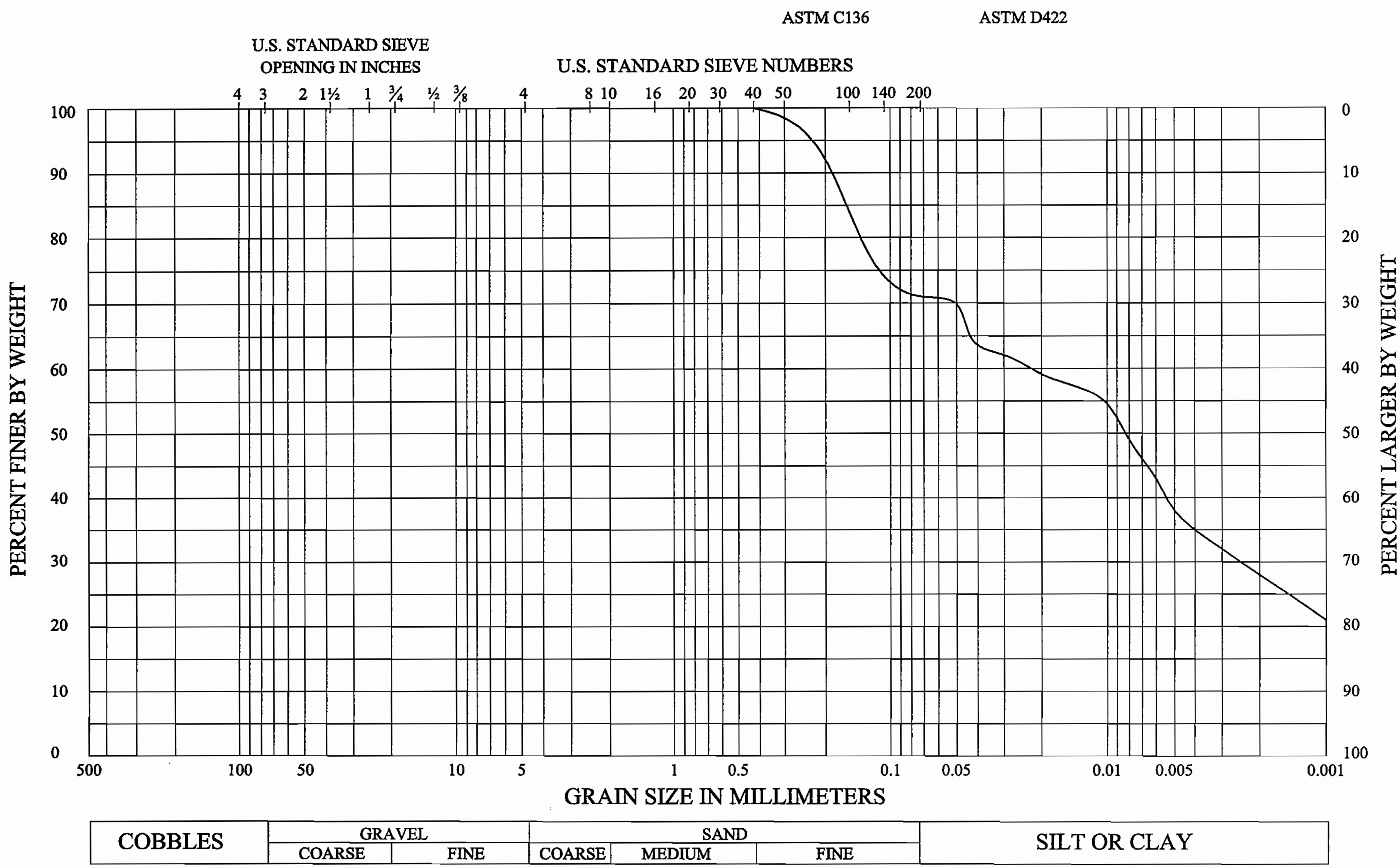
SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE A10

DRAWN BY	MJW
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01



SAMPLE NO. D1-5I

WALLACE-KUHL & ASSOCIATES, INC.

HYDROMETER ANALYSIS

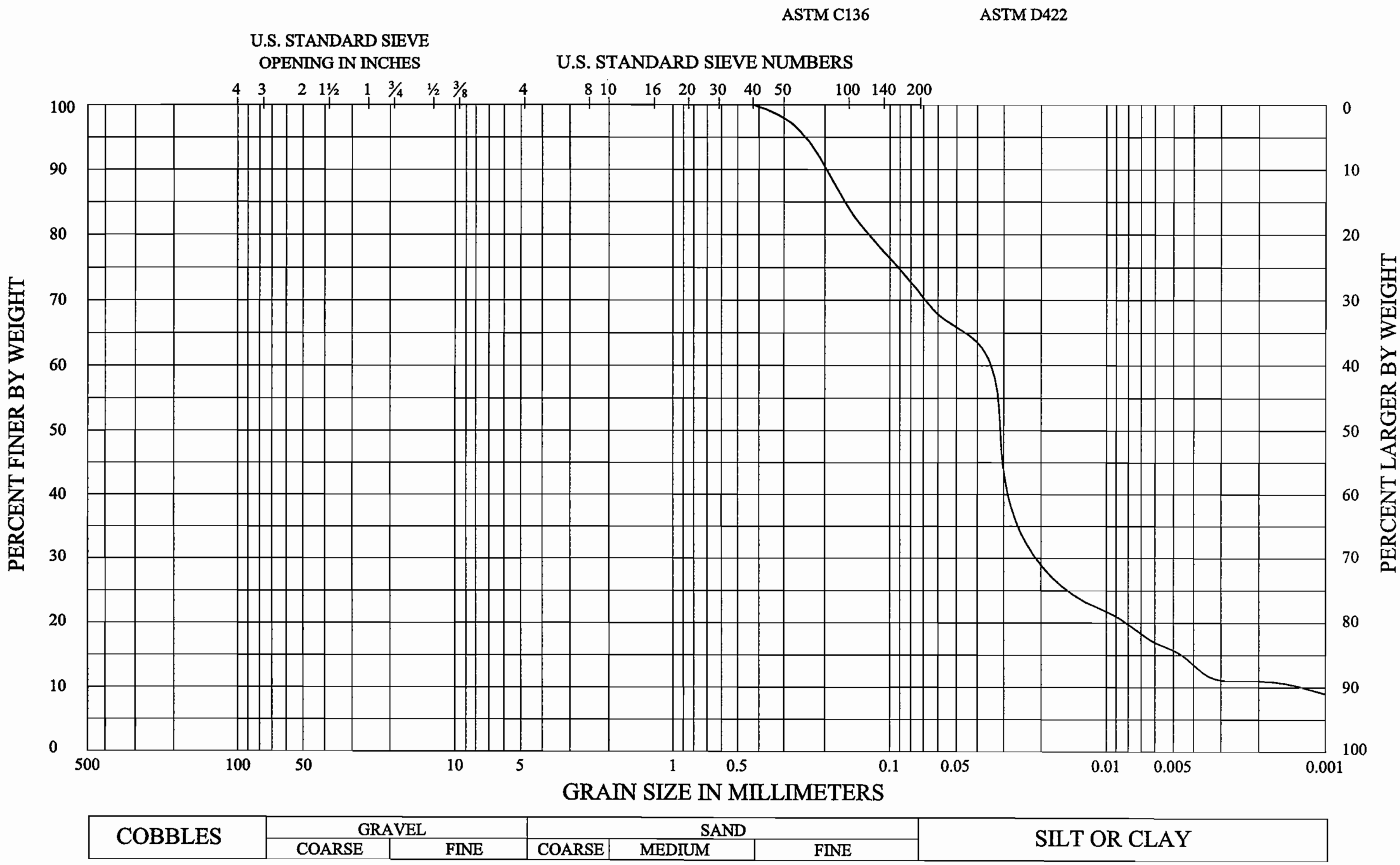
SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

FIGURE A11

DRAWN BY	HCS
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01



SAMPLE NO. D2-9I

WALLACE-KUHL & ASSOCIATES, INC.

HYDROMETER ANALYSIS

SOLANO COMMUNITY COLLEGE- VACAVILLE CAMPUS

Vacaville, California

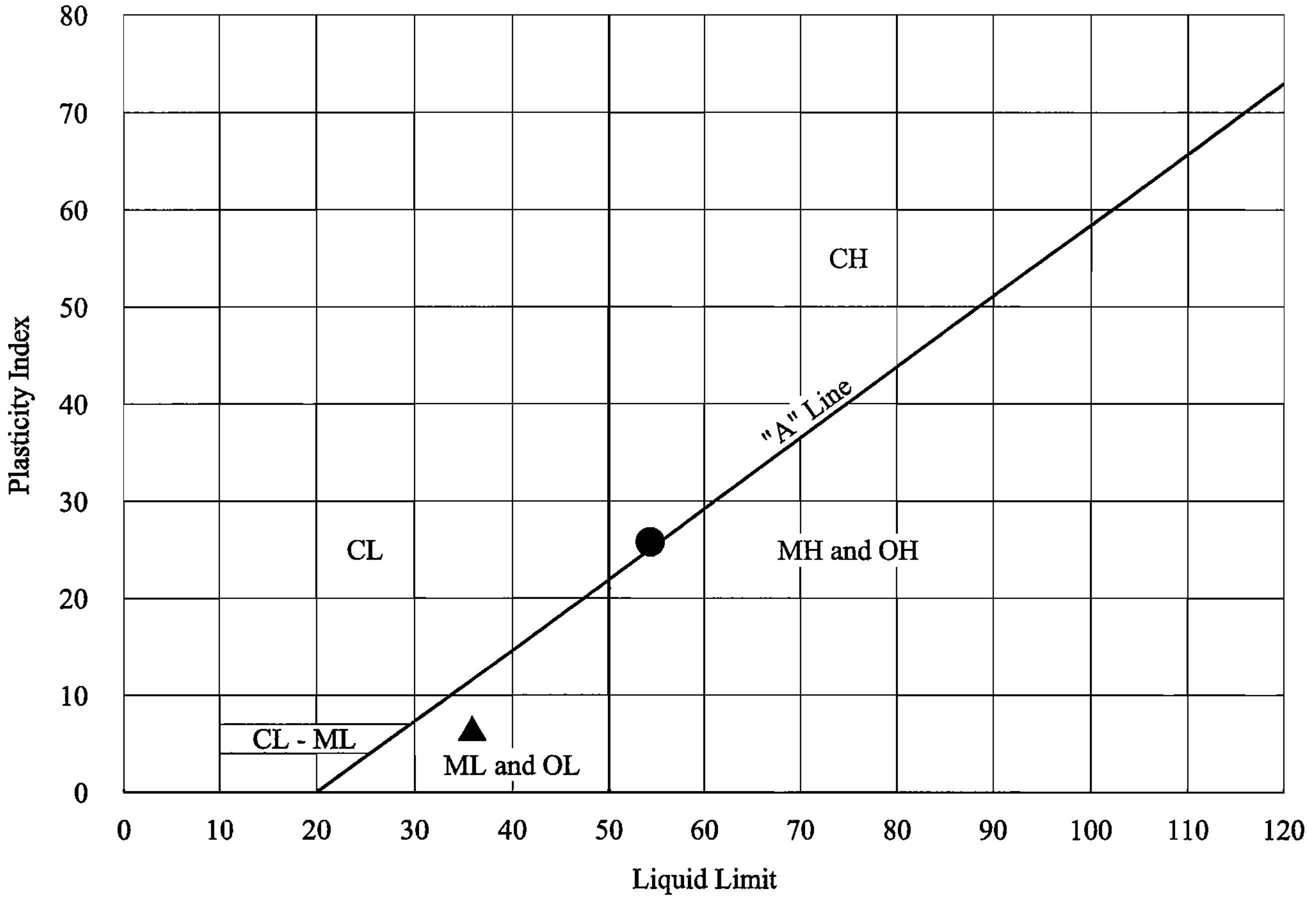
FIGURE A12

DRAWN BY	HCS
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06

WKA NO. 7305.01

ATTERBERG LIMITS

ASTM D4318



KEY SYMBOL	LOCATION (SEE FIGURE NO. 2)	SAMPLE DEPTH	NATURAL WATER CONTENT (%)	ATTERBERG LIMITS		PASSING No. 200 SIEVE (%)	UNIFIED SOIL CLASSIFI-CATION SYMBOL
				LIQUID LIMIT (%)	PLASTICITY INDEX (%)		
●	D1-6I	31'	---	54	26	---	CH
▲	D2-7I	31'	---	36	6	---	ML

WALLACE-KUHL & ASSOCIATES, INC.

ATTERBERG LIMITS

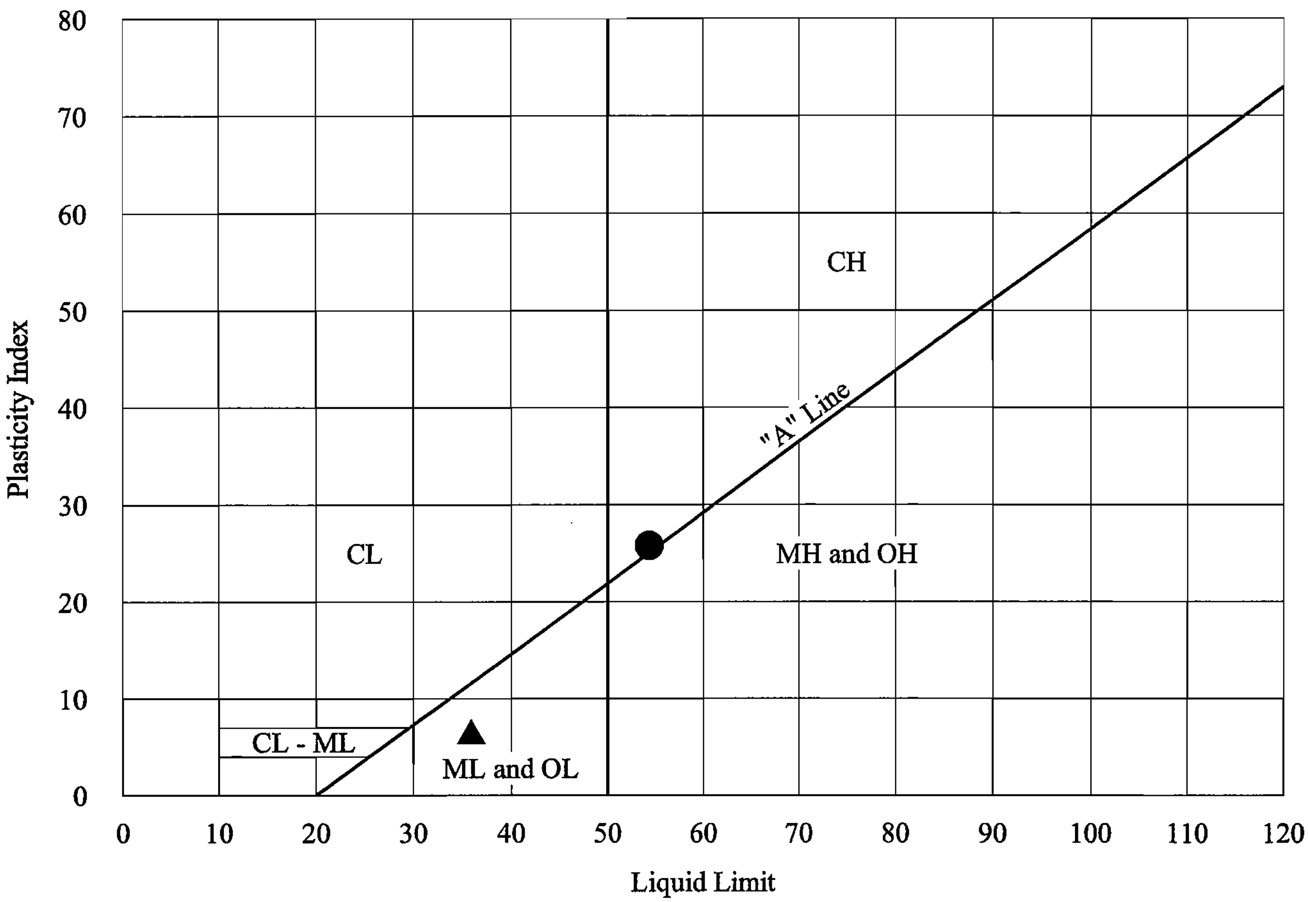
SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS

Vacaville, California

FIGURE A13	
DRAWN BY	HCS
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06
WKA NO. 7305.01	

ATTERBERG LIMITS

ASTM D4318



KEY SYMBOL	LOCATION (SEE FIGURE NO. 2)	SAMPLE DEPTH	NATURAL WATER CONTENT (%)	ATTERBERG LIMITS		PASSING No. 200 SIEVE (%)	UNIFIED SOIL CLASSIFI-CATION SYMBOL
				LIQUID LIMIT (%)	PLASTICITY INDEX (%)		
●	D1-6I	31'	---	54	26	---	CH
▲	D2-7I	31'	---	36	6	---	ML

WALLACE-KUHL & ASSOCIATES, INC.

ATTERBERG LIMITS

SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS

Vacaville, California

FIGURE A14	
DRAWN BY	HCS
CHECKED BY	MJW
PROJECT MGR	MAT
DATE	10/06
WKA NO. 7305.01	

Sunland Analytical

11353 Pyrites Way, Suite 4
Rancho Cordova, CA 95670
(916) 852-8557

Date Reported 09/01/2006
Date Submitted 08/29/2006

To: Martin Walker
Wallace-Kuhl & Associates
P.O. Box 1137
West Sacramento, Ca 95691

From: Gene Oliphant, Ph.D. \ Randy Horney RH
General Manager \ Lab Manager

The reported analysis was requested for the following location:
Location : 7503.01P/SOLANO COMM Site ID : D12 2-4.5.
Your purchase order number is 1049.
Thank you for your business.

* For future reference to this analysis please use SUN # 48709-97008.

EVALUATION FOR SOIL CORROSION

Soil pH	6.52			
Minimum Resistivity	1.61	ohm-cm (x1000)		
Chloride	81.3	ppm	00.00813	%
Sulfate	16.8	ppm	00.00168	%

METHODS
pH and Min.Resistivity CA DOT Test #643
Sulfate CA DOT Test #417, Chloride CA DOT Test #422

Sunland Analytical

11353 Pyrites Way, Suite 4
Rancho Cordova, CA 95670
(916) 852-8557

Date Reported 09/01/2006
Date Submitted 08/29/2006

To: Martin Walker
Wallace-Kuhl & Associates
P.O. Box 1137
West Sacramento, Ca 95691

From: Gene Oliphant, Ph.D. \ Randy Horney RH
General Manager \ Lab Manager

The reported analysis was requested for the following location:
Location : 7503.01P/SOLANO COMM Site ID : D13 3-5.
Your purchase order number is 1049.
Thank you for your business.

* For future reference to this analysis please use SUN # 48709-97009.

EVALUATION FOR SOIL CORROSION

Soil pH	7.57		
Minimum Resistivity	1.61	ohm-cm (x1000)	
Chloride	11.2 ppm	00.00112	%
Sulfate	3.5 ppm	00.00035	%

METHODS
pH and Min.Resistivity CA DOT Test #643
Sulfate CA DOT Test #417, Chloride CA DOT Test #422

WALLACE-KUHL & ASSOCIATES, INC.	**CORROSION TEST RESULTS** SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS Vacaville, California	FIGURE A16	
		DRAWN BY	TLH
		CHECKED BY	MJW
		PROJECT MGR	MAT
		DATE	10/06
		WKA NO. 7305.01	

Sunland Analytical

11353 Pyrites Way, Suite 4
Rancho Cordova, CA 95670
(916) 852-8557

Date Reported 09/01/2006
Date Submitted 08/29/2006

To: Martin Walker
Wallace-Kuhl & Associates
P.O. Box 1137
West Sacramento, Ca 95691

From: Gene Oliphant, Ph.D. \ Randy Horney RA
General Manager \ Lab Manager

The reported analysis was requested for the following location:
Location : 7503.01P/SOLANO COMM Site ID : D23 1-4.
Your purchase order number is 1049.
Thank you for your business.

* For future reference to this analysis please use SUN # 48709-97010.

EVALUATION FOR SOIL CORROSION

Soil pH	7.61		
Minimum Resistivity	1.07	ohm-cm (x1000)	
Chloride	12.1 ppm	00.00121	%
Sulfate	6.3 ppm	00.00063	%

METHODS
pH and Min.Resistivity CA DOT Test #643
Sulfate CA DOT Test #417, Chloride CA DOT Test #422

WALLACE-KUHL & ASSOCIATES, INC.	CORROSION TEST RESULTS SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS Vacaville, California	FIGURE A17
		DRAWN BY: TLH
		CHECKED BY: MJW
		PROJECT MGR: MAT
		DATE: 10/06
		WKA NO. 7305.01

Sunland Analytical

11353 Pyrites Way, Suite 4
Rancho Cordova, CA 95670
(916) 852-8557

Date Reported 09/01/2006
Date Submitted 08/29/2006

To: Martin Walker
Wallace-Kuhl & Associates
P.O. Box 1137
West Sacramento, Ca 95691

From: Gene Oliphant, Ph.D. \ Randy Horney
General Manager \ Lab Manager

The reported analysis was requested for the following location:
Location : 7503.01P/SOLANO COMM Site ID : D30-1II.
Your purchase order number is 1049.
Thank you for your business.

* For future reference to this analysis please use SUN # 48709-97011.

EVALUATION FOR SOIL CORROSION

Soil pH	6.62		
Minimum Resistivity	1.39	ohm-cm (x1000)	
Chloride	9.2 ppm	00.00092	%
Sulfate	5.0 ppm	00.00050	%

METHODS
pH and Min.Resistivity CA DOT Test #643
Sulfate CA DOT Test #417, Chloride CA DOT Test #422

APPENDIX B

APPENDIX B

GUIDE EARTHWORK SPECIFICATIONS

SOLANO COMMUNITY COLLEGE - VACAVILLE CAMPUS

Vacaville, California

WKA No. 7305.01

PART I: GENERAL

1.1 SCOPE

a. General Description

This item shall include all clearing and grubbing, preparation of land to be filled, filling, spreading, compaction, observation and testing of the fill, and all subsidiary work necessary to complete the grading of the building and pavement areas to conform with the lines, grades and slopes as shown on the accepted Drawings.

b. Related Work Specified Elsewhere

(1) Trenching and backfilling for sanitary sewer system: Section ____.

(2) Trenching and backfilling for storm sewer system: Section ____.

(3) Trenching and backfilling for underground water, natural gas, and electrical supplies: Section ____.

c. Geotechnical Engineer

Where specific reference is made to "Geotechnical Engineer," this designation shall be understood to include both them and their representative.

1.2 PROTECTION

a. Adequate protection measures shall be provided to protect workers and passers-by the site. Streets and adjacent property shall be fully protected throughout the operations.

b. In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for working conditions at the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours.

c. Any construction review of the Contractor's performance conducted by the Geotechnical Engineer is not intended to include review of the adequacy of the Contractor's safety measures in, on or near the construction site.

d. Adjacent streets, parking lots, sidewalks and properties shall be kept free of mud, dirt or similar nuisances resulting from earthwork operations.

e. Surface drainage provisions shall be made during the period of construction in a manner to avoid creating a nuisance to adjacent areas.

f. The site and adjacent influenced areas shall be watered as required to suppress dust nuisance.

1.3 GEOTECHNICAL REPORT

a. A Geotechnical Engineering Report (WKA No. 7305.01, dated October 13, 2006) has been prepared for this site by Wallace - Kuhl & Associates, Geotechnical Engineers of West Sacramento, California [(916) 372-1434]. A copy is available for review with our client, the Solano Community College or at the office of Wallace - Kuhl & Associates.

b. The information contained in this report was obtained for design purposes only. The contractors are responsible for any conclusions they may draw from this report; should they prefer not to assume such risk, they should employ their own experts to analyze available information and/or to make additional borings upon which to base their conclusions, all at no cost to the Owner.

1.4 EXISTING SITE CONDITIONS

The Contractors shall acquaint themselves with all site conditions. If unshown active utilities are encountered during the work, the Architect shall be promptly notified for instructions. Failure to notify will make the Contractor liable for damage to these utilities arising from Contractors' operations subsequent to their discovery of such unshown utilities.

1.5 SEASONAL LIMITS

Fill material shall not be placed, spread or rolled during unfavorable weather conditions. When the work is interrupted by heavy rains, fill operations shall not be resumed until field tests indicated that the moisture contents of the subgrade and fill materials are satisfactory.

PART II: PRODUCTS

2.1 MATERIALS

a. All fill shall be approved local materials from required excavations, supplemented by imported fill, if necessary. Approved local materials are defined as local soils free from significant quantities of rubble, rubbish and vegetation, and having been tested and approved by the Geotechnical Engineer prior to use. Clods, rocks or hard lumps exceeding four inches (4") in final size shall not be allowed in the upper two feet (2') of any fill supporting buildings, pavement areas or other structures.

b. Materials to be lime-stabilized shall be on-site clayey soils free from significant quantities of rubble, rubbish and vegetation and shall have been tested and approved by the Geotechnical Engineer.

c. Imported fill materials (if necessary) shall be approved by the Geotechnical Engineer and be granular, compactable soils with a Plasticity Index not exceeding fifteen (15) and a three inch (3") maximum particle size. Imported soils used in pavement areas shall have a Resistance-value of at least ten (10) when tested in accordance with California Test 301. Imported soils shall meet the requirements of DTSC's Information Advisory, dated October 2001 for "Clean Imported Fill Material".

d. Capillary barrier material under floor slabs shall be provided to the thickness shown on the Drawings. This material shall be clean gravel or crushed rock of one-inch (1") maximum size, with no material passing a number four (#4) sieve.

e. Lime shall be high-calcium or dolomitic quicklime conforming to the definitions in ASTM Designation C977-92A. When sampled by the Geotechnical Engineer from the lime spreader or during the spreading operations, the sample of lime shall conform to the following requirements:

High-calcium quicklime shall contain not less than 113 percent (113%) calcium hydroxide Ca(OH), as determined by California Test Method 414.

Dolomitic quicklime shall contain not less than fifty-seven percent (57%) calcium oxide, Ca0, and not less than ninety-five percent (95%) combined calcium oxide, Ca0, and magnesium oxide, Mg0, as determined by California Test 404.

When dry sieved in a mechanical sieve shaker for 10 minutes ±30 seconds, a 250 gram test sample of quicklime shall conform to the following grading requirements:

Sieve Size	Percentage Passing
3/8	98 - 100
No. 100	0 - 25
No. 200	0 - 15

In addition to the above, the use of alternative lime products which are of equal quality and of the required characteristics for the purpose intended will be permitted, subject to the following requirements: the burden of proof as to quality and suitability of alternatives shall be upon the Contractor and/or Supplier and they shall furnish test data and all information necessary as required by the Geotechnical Engineer. Written request for alternatives, accompanied by complete data as to the quality and suitability of the material shall be made in ample time to permit testing and approval without delaying the work. The Geotechnical Engineer shall be the sole judge as to the quality and suitability of alternatives and his decision shall be final.

Lime from more than one source or of more than one type may be used on the same project but the different limes shall not be mixed.

The lime shall be protected from moisture until used and shall be sufficiently dry to flow freely when handled.

A Certificate of Compliance in accordance with Caltrans Specification 6-1.07 shall be furnished with each delivery of lime and shall be submitted to the Engineer with a certified copy of the weight of each delivery.

f. Water for use in subgrade stabilization shall be clean and potable and shall be added during mixing, remixing and compaction operations, and during the curing period to keep the cured material moist until covered.

g. Aggregate base, asphalt concrete and related asphaltic seal coats, tack coat, etc., shall comply with the appropriate provisions of the State of California (Caltrans) Standard Specifications, latest edition.

h. Capillary barrier material under floor slabs shall be provided to the thickness shown on the Drawings. This material shall be clean crushed rock of one-inch (1") maximum size, with no material passing a Number four (#4) sieve.

PART III: EXECUTION

3.1 LAYOUT AND PREPARATION

Lay out all work, establish grades, locate existing underground utilities, set markers and stakes, set up and maintain barricades and protection of utilities--all prior to beginning actual earthwork operations.

3.2 CLEARING, GRUBBING, AND PREPARING BUILDING PAD AND PAVEMENT AREAS

a. The site shall be cleared of pavements, utilities to be relocated or abandoned, demolition debris, fences, vegetation and other items encountered during site work and deemed unacceptable by the Geotechnical Engineer, shall be removed and disposed of so as to leave the disturbed areas with a neat and finished appearance, free from unsightly debris. Trees designated to be removed shall included the entire rootball and all roots larger than one-half inch (½") in diameter. Excavations and depressions resulting from the removal of such items, as well as existing excavations and loose soil deposits, as determined by the Geotechnical Engineer, shall be cleaned out to firm, undisturbed soil and backfilled with suitable materials in accordance with these specifications.

b. The surfaces receiving fill shall be stripped of vegetation; or, they shall be thoroughly disced provided that a compactable mixture of soil containing minor amounts of vegetation can be attained which is free of clumps, layers or pockets of vegetation. If proper compaction of the disturbed surface soils cannot be achieved, those materials shall be excavated, to a depth satisfactory to the Geotechnical Engineer, so that a firm base for support of engineered fill can be attained.

c. All loose fill soils and/or saturated materials shall be scraped to expose firm soil, or a minimum of 12 inches, as determined by the Geotechnical Engineer, to remove existing site disturbance, and the resulting excavations shall be backfilled with suitable materials in accordance with these specifications.

d. The surfaces upon which fill is to be placed shall be plowed or scarified to a depth of at least twelve inches (12"), until the surface is free from ruts, hummocks or other uneven features which would tend to prevent uniform compaction by the selected equipment.

e. When the moisture content of the subgrade is less than the optimum moisture content, as defined by the ASTM D1557 Compaction Test, water shall be added until the proper moisture content is achieved.

f. When the moisture content of the subgrade is too high to permit the specified compaction to be achieved, the subgrade shall be aerated by blading or other methods until the moisture content is satisfactory for compaction.

g. After the foundations for fill have been cleared, moisture conditioned, and plowed or scarified, they shall be recompacted in place to a depth of at least six inches (6") to a minimum of ninety-five percent (90%) of the ASTM D1557 maximum dry density.

h. The building pad areas shall be defined as extending at least five feet (5') beyond the proposed building lines.

3.3 CONSTRUCTION OF UNTREATED SUBGRADES

a. The selected soil fill material shall be placed in layers which, when compacted, do not exceed six inches (6") in thickness. Each layer shall be spread evenly and shall be thoroughly mixed during the spreading to promote uniformity of material in each layer. Native (untreated) or existing on-site fill soils shall not be used within the upper twelve inches (12") of building pad or exterior flatwork subgrades.

b. When the moisture content of fill material is less than the optimum moisture content, as defined by the ASTM D1557 Compaction Test, water shall be added until the proper moisture content is achieved.

c. When the moisture content of the fill material is too high to permit the specified degree of compaction to be achieved, the fill material shall be aerated by blading or other methods until the moisture content is satisfactory.

d. After each layer has been placed, mixed and spread evenly, it shall be thoroughly compacted to not less than ninety percent (90%) of maximum dry density as determined by the ASTM D1557 Compaction Test. Compaction shall be undertaken with equipment capable of achieving the specified density and shall be accomplished while the fill material is at the required moisture content. Each layer shall be compacted over its entire area until the desired density has been obtained.

e. The fill operations shall be continued until the fills have been brought to the slopes and grades shown on the accepted Drawings.

3.4 LIME-STABILIZED SUBGRADE CONSTRUCTION

a. The material to be treated shall be placed at a moisture content at least two percent (2%) over optimum moisture as defined by the ASTM D1557 Compaction Test.

b. Material to be treated shall be scarified and thoroughly broken up to the full depth and width to be stabilized. The material to be treated shall contain no rocks or solids larger than one and one-half inches (1-1/2") in maximum dimension.

c. Lime shall be added to the material to be treated at a rate of four percent (4%), measured as a percentage of the weight of dry soil being treated, but shall not be less than 4.2 pounds per cubic foot of soil treated.

Lime shall be spread by equipment that will uniformly distribute the required amount of lime for the full width of the prepared material. The rate of spread per linear foot of blanket shall not vary more than five percent (5%) from the designated rate.

The spread lime shall be prevented from blowing by suitable means selected by the Contractor. Quicklime shall not be used to make lime slurry. The spreading operations shall be conducted in such a manner that a hazard is not present to construction personnel or the public. All lime spread shall be thoroughly ripped in, or mixed into, the soil the same day lime spreading operations are performed. The distance which lime may be spread upon the prepared material ahead of the mixing operation will be determined by the Geotechnical Engineer.

No traffic other than the mixing equipment will be allowed to pass over the spread lime until after the completion of mixing.

Mixing equipment shall be equipped with a visual depth indicator showing mixing depth, an odometer or footmeter to indicate travel speed and a controllable water additive system for regulating water added to the mixture.

Mixing equipment shall be of the type that can mix the full depth of the treatment specified and leave a relatively smooth bottom of the treated section. Mixing and re-mixing, regardless of equipment used, will continue until the material is uniformly mixed (free of streaks or pockets of lime), moisture is at approximately two percent (2%) over optimum and the mixture complies with the following requirements:

Sieve Size	Minimum Percent Passing
1-1/2"	100
1"	95
No. 4	60

Non-uniformity of color reaction when the treated material, exclusive of one inch or larger clods, is tested with the standard phenolphthalein alcohol indicator, will be considered evidence of inadequate mixing.

Lime-treated material shall not be mixed or spread while the atmospheric temperature is below 35°F. The entire mixing operation shall be completed within seventy-two (72) hours of the initial spreading of lime, unless otherwise permitted by the Geotechnical Engineer.

d. The treated mixture shall be spread to the required width, grade and cross-section. The maximum compacted thickness of a single layer may be determined by the Contractor provided they can demonstrate to the Geotechnical Engineer that his equipment and method of operation will provide uniform distribution of the lime and the required compacted density throughout the layer. If the Contractor is unable to achieve uniformity and density throughout the thickness selected, they shall rework the affected area using thinner lifts until a satisfactory treated subgrade meeting the distribution and density requirements is attained, as determined by the Geotechnical Engineer, at no additional cost to the Owner.

The finished thickness of the lime-treated material shall not vary more than one-tenth foot (0.1') from the planned thickness at any point.

The lime-treated soils shall be compacted to a relative compaction of not less than ninety percent (92%) as determined by the ASTM D1557 Compaction Test.

Initial compaction shall be performed by means of a sheepsfoot or segmented wheel roller. Final rolling shall be by means of steel-tired or pneumatic-tired rollers.

Areas inaccessible to rollers shall be compacted to meet the minimum compaction requirement by other means satisfactory to the Geotechnical Engineer.

Final compaction shall be completed within thirty-six (36) hours of final mixing.

The surface of the finished lime-treated material shall be the grading plane and at any point shall not vary more than eight one hundredths of a foot (0.08') foot above or below the grade established by the Civil Engineer except that when the lime-treated material is to be covered by material which is paid for by the cubic yard the surface of the finished lime-treated material shall not extend above the grade established by the Civil Engineer.

Before final compaction, if the treated material is above the grade tolerance specified in this section, uncompacted excess material may be removed and used is areas inaccessible to mixing equipment. After final compaction and trimming, excess material shall be removed and disposed of. The trimmed and completed surface shall be rolled with steel or pneumatic-tired rollers. Minor indentations may remain in the surface of the finished material so long as no loose material remains in the indentations.

At the end of each day's work, a construction joint shall be made in thoroughly compacted material and with a vertical face. After a part-width section has been completed, the longitudinal joint against which additional material is to be placed shall be trimmed approximately three inches (3") into treated material, to the neat line of the section, with a vertical edge. The material so trimmed shall be incorporated into the adjacent material to be treated.

An acceptable alternate to the above construction joints, if the treatment is performed with cross shaft rotary mixers, is to actually mix three inches (3") into the previous day's work to assure a good bond to the adjacent work.

e. The surface of each compacted layer of lime-treated material shall be kept moist until covered by a subsequent layer of lime-treated soil, aggregate base or other material for a period not to exceed three (3) days.

No equipment or traffic shall be permitted on the lime-treated material during the first three (3) days after treatment, unless otherwise permitted by the Geotechnical Engineer. Asphalt concrete shall not be placed within seven (7) days following application of the curing seal, unless otherwise permitted by the Geotechnical Engineer.

f. Breaking up existing material, mixing, spreading, compacting and finishing the lime-treated material will be measured by the square yard for lime treatment.

g. Items of work, measured as specified in Section 3.4(f), will be paid for at the contract prices per square yard for lime treatment including lime; per ton for lime and flyash only if a separate contract item; and, per ton for asphaltic emulsion (curing seal).

The above contract prices and payments shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in constructing the lime-treated subgrade, complete in place, as shown on the plans, specified in these specifications and the special provisions, and as directed by the Geotechnical Engineer.

3.5 FINAL SUBGRADE PREPARATION USING UNTREATED SOILS

a. Imported soils used to complete the final building pad subgrades (upper 12 inches of pad subgrade) shall be brought to a uniform moisture content no lower than optimum moisture (per ASTM D1557) and shall be uniformly compacted to not less than ninety percent (90%), as defined by that test.

b. The upper six inches (6") of any untreated final pavement subgrades shall be uniformly compacted to at least ninety-five (95%) percent of the ASTM D1557 maximum dry density.

3.6 TESTING AND OBSERVATION

a. All grading operations, including lime-treatment of the subgrades, shall be tested and observed by the Geotechnical Engineer, serving as the representative of the Owner.

b. Field density tests shall be made by the Geotechnical Engineer after compaction of each layer of fill. Additional layers of fill shall not be spread until the field density tests indicate that the minimum specified density has been obtained.

c. Earthwork shall not be performed without the notification or approval of the Geotechnical Engineer. The Contractor shall notify the Geotechnical Engineer at least two (2) working days prior to commencement of any aspect of the site earthwork.

d. If the Contractor should fail to meet the technical or design requirements embodied in this document and on the applicable plans, they shall make the necessary readjustments until all work is deemed satisfactory, as determined by the Geotechnical Engineer and the Architect/Engineer. No deviations from the specifications shall be made except upon written approval of the Geotechnical Engineer or Architect/Engineer.

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APPENDIX C

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*                          *
*      L I Q U E F Y 2     *
*                          *
*       Version 1.50       *
*                          *
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EMPIRICAL PREDICTION OF
EARTHQUAKE-INDUCED LIQUEFACTION POTENTIAL

JOB NUMBER: 7305.01 DATE: 10-05-2006

JOB NAME: Solano CC D2

SOIL-PROFILE NAME: 7305.LDW

BORING GROUNDWATER DEPTH: 10.00 ft

CALCULATION GROUNDWATER DEPTH: 10.00 ft

DESIGN EARTHQUAKE MAGNITUDE: 6.60 Mw

SITE PEAK GROUND ACCELERATION: 0.568 g

BOREHOLE DIAMETER CORRECTION FACTOR: 1.00

SAMPLER SIZE CORRECTION FACTOR: 1.00

N60 HAMMER CORRECTION FACTOR: 1.00

MAGNITUDE SCALING FACTOR METHOD: Idriss (1998, in press)

  Magnitude Scaling Factor: 1.245

rd-CORRECTION METHOD: Idriss (1998, in press)

FIELD SPT N-VALUES ARE CORRECTED FOR THE LENGTH OF THE DRIVE RODS.

  Rod Stick-Up Above Ground: 3.0 ft

CN NORMALIZATION FACTOR: 1.044 tsf

MINIMUM CN VALUE: 0.6

File Name: 7305.OUT

SOIL NO.	CALC. DEPTH (ft)	TOTAL STRESS (tsf)	EFF. STRESS (tsf)	FIELD N (B/ft)	FC DELTA N1_60	C N	CORR. (N1)60 (B/ft)	LIQUE. RESIST RATIO	r d	INDUC. STRESS RATIO	LIQUE. SAFETY FACTOR
1	0.25	0.013	0.013	12	~	*	*	*	*	*	**
1	0.75	0.040	0.040	12	~	*	*	*	*	*	**
1	1.25	0.067	0.067	12	~	*	*	*	*	*	**
1	1.75	0.094	0.094	12	~	*	*	*	*	*	**
1	2.25	0.120	0.120	12	~	*	*	*	*	*	**
1	2.75	0.147	0.147	12	~	*	*	*	*	*	**
2	3.25	0.176	0.176	12	4.92	*	*	*	*	*	**
2	3.75	0.208	0.208	12	4.92	*	*	*	*	*	**
2	4.25	0.240	0.240	12	4.92	*	*	*	*	*	**
2	4.75	0.272	0.272	12	4.92	*	*	*	*	*	**
2	5.25	0.303	0.303	12	4.92	*	*	*	*	*	**
3	5.75	0.335	0.335	14	~	*	*	*	*	*	**
3	6.25	0.367	0.367	14	~	*	*	*	*	*	**
3	6.75	0.399	0.399	14	~	*	*	*	*	*	**
3	7.25	0.430	0.430	14	~	*	*	*	*	*	**
3	7.75	0.462	0.462	14	~	*	*	*	*	*	**
3	8.25	0.494	0.494	14	~	*	*	*	*	*	**
3	8.75	0.526	0.526	14	~	*	*	*	*	*	**
3	9.25	0.557	0.557	14	~	*	*	*	*	*	**
3	9.75	0.589	0.589	14	~	*	*	*	*	*	**
3	10.25	0.621	0.613	14	~	~	~	~	~	~	~~
4	10.75	0.653	0.629	12	3.38	1.314	14.7	0.160	0.975	0.373	0.53
4	11.25	0.685	0.646	12	3.38	1.314	14.7	0.160	0.972	0.381	0.52
4	11.75	0.717	0.662	12	3.38	1.314	14.7	0.160	0.969	0.387	0.52
4	12.25	0.749	0.679	12	3.38	1.314	14.7	0.160	0.966	0.394	0.51
4	12.75	0.781	0.695	12	3.38	1.314	14.7	0.160	0.963	0.399	0.50
5	13.25	0.813	0.711	12	~	~	~	~	~	~	~~
5	13.75	0.845	0.728	12	~	~	~	~	~	~	~~
5	14.25	0.877	0.744	12	~	~	~	~	~	~	~~
5	14.75	0.909	0.761	12	~	~	~	~	~	~	~~
5	15.25	0.941	0.777	12	~	~	~	~	~	~	~~
5	15.75	0.973	0.793	12	~	~	~	~	~	~	~~
6	16.25	1.004	0.809	22	3.55	1.165	25.5	0.294	0.941	0.431	0.85
6	16.75	1.036	0.825	22	3.55	1.165	25.5	0.294	0.938	0.435	0.84

File Name: 7305.OUT

SOIL NO.	CALC. DEPTH (ft)	TOTAL STRESS (tsf)	EFF. STRESS (tsf)	FIELD N (B/ft)	FC DELTA N1_60	C N	CORR. (N1)60 (B/ft)	LIQUE. RESIST RATIO	r d	INDUC. STRESS RATIO	LIQUE. SAFETY FACTOR
6	17.25	1.067	0.841	22	3.55	1.165	25.5	0.294	0.935	0.438	0.84
6	17.75	1.098	0.856	22	3.55	1.165	25.5	0.294	0.932	0.441	0.83
6	18.25	1.129	0.872	22	3.55	1.165	25.5	0.294	0.929	0.444	0.82
6	18.75	1.161	0.888	22	3.55	1.165	25.5	0.294	0.926	0.447	0.82
6	19.25	1.192	0.903	22	3.55	1.165	25.5	0.294	0.923	0.450	0.82
7	19.75	1.222	0.918	34	~	~	~	~	~	~	~~
7	20.25	1.251	0.932	34	~	~	~	~	~	~	~~
7	20.75	1.281	0.945	34	~	~	~	~	~	~	~~
7	21.25	1.310	0.959	34	~	~	~	~	~	~	~~
7	21.75	1.339	0.973	34	~	~	~	~	~	~	~~
7	22.25	1.368	0.986	34	~	~	~	~	~	~	~~
7	22.75	1.398	1.000	34	~	~	~	~	~	~	~~
7	23.25	1.427	1.013	34	~	~	~	~	~	~	~~
7	23.75	1.456	1.027	34	~	~	~	~	~	~	~~
7	24.25	1.485	1.041	34	~	~	~	~	~	~	~~
7	24.75	1.515	1.054	34	~	~	~	~	~	~	~~
7	25.25	1.544	1.068	34	~	~	~	~	~	~	~~
7	25.75	1.573	1.082	34	~	~	~	~	~	~	~~
7	26.25	1.602	1.095	34	~	~	~	~	~	~	~~
7	26.75	1.632	1.109	34	~	~	~	~	~	~	~~
7	27.25	1.661	1.123	34	~	~	~	~	~	~	~~
7	27.75	1.690	1.136	34	~	~	~	~	~	~	~~
7	28.25	1.719	1.150	34	~	~	~	~	~	~	~~
7	28.75	1.749	1.164	34	~	~	~	~	~	~	~~
7	29.25	1.778	1.177	34	~	~	~	~	~	~	~~
7	29.75	1.807	1.191	34	~	~	~	~	~	~	~~
7	30.25	1.836	1.205	34	~	~	~	~	~	~	~~
7	30.75	1.866	1.218	34	~	~	~	~	~	~	~~
7	31.25	1.895	1.232	34	~	~	~	~	~	~	~~
7	31.75	1.924	1.246	34	~	~	~	~	~	~	~~
7	32.25	1.953	1.259	34	~	~	~	~	~	~	~~
7	32.75	1.983	1.273	34	~	~	~	~	~	~	~~
7	33.25	2.012	1.286	34	~	~	~	~	~	~	~~
7	33.75	2.041	1.300	34	~	~	~	~	~	~	~~

File Name: 7305.OUT

SOIL NO.	CALC. DEPTH (ft)	TOTAL STRESS (tsf)	EFF. STRESS (tsf)	FIELD N (B/ft)	FC DELTA N1_60	C N	CORR. (N1)60 (B/ft)	LIQUE. RESIST RATIO	r d	INDUC. STRESS RATIO	LIQUE. SAFETY FACTOR
7	34.25	2.070	1.314	34	~	~	~	~	~	~	~~
7	34.75	2.100	1.327	34	~	~	~	~	~	~	~~
7	35.25	2.129	1.341	34	~	~	~	~	~	~	~~
7	35.75	2.158	1.355	34	~	~	~	~	~	~	~~
7	36.25	2.187	1.368	34	~	~	~	~	~	~	~~
7	36.75	2.217	1.382	34	~	~	~	~	~	~	~~
7	37.25	2.246	1.396	34	~	~	~	~	~	~	~~
7	37.75	2.275	1.409	34	~	~	~	~	~	~	~~
7	38.25	2.304	1.423	34	~	~	~	~	~	~	~~
7	38.75	2.334	1.437	34	~	~	~	~	~	~	~~
7	39.25	2.363	1.450	34	~	~	~	~	~	~	~~
7	39.75	2.392	1.464	34	~	~	~	~	~	~	~~
7	40.25	2.421	1.478	34	~	~	~	~	~	~	~~
7	40.75	2.451	1.491	34	~	~	~	~	~	~	~~
7	41.25	2.480	1.505	34	~	~	~	~	~	~	~~
7	41.75	2.509	1.519	34	~	~	~	~	~	~	~~
7	42.25	2.538	1.532	34	~	~	~	~	~	~	~~
7	42.75	2.568	1.546	34	~	~	~	~	~	~	~~
7	43.25	2.597	1.559	34	~	~	~	~	~	~	~~
7	43.75	2.626	1.573	34	~	~	~	~	~	~	~~
7	44.25	2.655	1.587	34	~	~	~	~	~	~	~~
7	44.75	2.685	1.600	34	~	~	~	~	~	~	~~
7	45.25	2.714	1.614	34	~	~	~	~	~	~	~~
7	45.75	2.743	1.628	34	~	~	~	~	~	~	~~
7	46.25	2.772	1.641	34	~	~	~	~	~	~	~~
7	46.75	2.802	1.655	34	~	~	~	~	~	~	~~
7	47.25	2.831	1.669	34	~	~	~	~	~	~	~~
7	47.75	2.860	1.682	34	~	~	~	~	~	~	~~
7	48.25	2.889	1.696	34	~	~	~	~	~	~	~~
7	48.75	2.919	1.710	34	~	~	~	~	~	~	~~
7	49.25	2.948	1.723	34	~	~	~	~	~	~	~~
7	49.75	2.977	1.737	34	~	~	~	~	~	~	~~
7	50.25	3.006	1.751	34	~	~	~	~	~	~	~~
7	50.75	3.036	1.764	34	~	~	~	~	~	~	~~
7	51.25	3.065	1.778	34	~	~	~	~	~	~	~~

APPENDIX E

Hazards Assessment

MEMORANDUM

To: Brian Grattidge
From: Nicole Peacock, Lydia Dorrance
Subject: Hazards Assessment for Solano Community College Vacaville Center
Date: March 26, 2015
Attachment(s): A – EDR Radius Report
B – Historical Aerial Photographs
C – Sanborn Fire Insurance Maps

This hazards assessment was conducted to identify potential environmental impacts of the proposed project at the Solano Community College District (SCCD) Vacaville Center campus (project site). This assessment is based on review of regulatory files searched by Environmental Data Resources (EDR), regulatory files available from Solano County, and a review of historical aerial photographs and topographic maps. Current handling of hazardous materials at the project site and potential future handling of hazardous materials associated with operations at the proposed Biotechnology and Science Building and other building related site improvements were also reviewed in the context of relevant environmental regulations and guidance.

The project site is located at the northeast and northwest corners of North Village Parkway and Vaca Valley Parkway in Vacaville, California (Figure 2 of MND). The project site consists of an approximately 65-acre area that encompasses six parcels (Assessor Parcel Numbers 133-190-520; 133-030-17; 133-180-13, -14, -15, -16) and is bordered by residential and vacant land to the north, Vaca Valley Parkway and business parks to the south, residential land to the east and vacant land and industrial business parks to the west.

Two structures are currently present on the project site: an approximately 36,359-square foot classroom building east of North Village Parkway and an approximately 16,500-square foot classroom building west of North Village Parkway, which is referred to as Vacaville Workforce Development (Vacaville Annex). The structures are surrounded by parking and associated landscaping. The remainder of the project site consists of vacant land.

EDR Report Review

Dudek reviewed a computerized government records search conducted by EDR on February 12, 2015 (Attachment A). The EDR Radius Report listed nine sites within the American Society for Testing and Materials (ASTM) standard one-mile search radius of the project site.

The project site was listed in the EDR report, however, it was not listed in databases that indicate a release has occurred, nor was it listed in the databases compiled pursuant to Government Code Section 65962.5. The project site was listed in the Resource Conservation and Recovery Act Small Quantity Generator (RCRA-SQG), Facility Index System (FINDS), Hazardous Waste Information System (HAZNET) and National Pollution Discharge Elimination System (NPDES) databases. These databases are associated with permitting and the storage, handling and disposal of hazardous materials.

RCRA SQGs handle greater than 100 kilograms (kg) but less than 1,000 kg of hazardous waste during any calendar month and accumulate no more than 6,000 kg of hazardous waste at any time. No violations associated with the RCRA-SQG database were reported for the project site. According to the RCRA-SQG database listing, the hazardous waste materials generated at the project site as of August 2010 included heavy metals (barium, cadmium, chromium, lead, mercury and silver), halogenated and non-halogenated solvents, ignitable, corrosive and reactive materials, waste and mixed oil and other organic and inorganic solids. According to the HAZNET database listing, in 2012 and 2013, 0.0395 tons (79 lbs) and 0.023 tons (46 lbs), respectively, of hazardous waste generated at the project site was disposed of at offsite treatment, storage and disposal (TSD) facilities. Dudek asked site personnel to describe chemical storage at the site in quantities greater than 5 gallons. A response from site personnel has not yet been received.

The NPDES listing for the project site is associated with storm water discharges during construction at the project site between October 2013 and June 2014.

Eight additional sites were listed within the EDR search radius. Five of these sites were listed in regulatory databases associated with permitting and/or storage, handling and disposal of hazardous materials and were not listed in databases which would indicate that an unauthorized release had occurred at the site. Four of these five sites are located adjacent to the project area (Table 1). While these sites are located in close proximity to the project area, due to the lack of a known release, it is unlikely that they have impacted the environmental conditions at the project area.

Table 1
Adjacent Sites

Site Name and Address	Location	Databases
Novartis Vaca Valley Pkwy MS and T Site 3333 Vaca Valley Pkwy.	North of Vaca Valley Pkwy, less than 1/8 mile southeast of the project site	Resource Conservation and Recovery Act Non Generators (RCRA NonGen / NLR)
Genetech Incorporated 1000 New Horizons Way	South of Vaca Valley Pkwy, less than 1/8 mile south of the project site	Resource Conservation and Recovery Act-Large Quantity Generators (RCRA-LQG), FINDS
Kaiser Permanente 3700 Vaca Valley Pkwy.	At the southeast corner of Vaca Valley Pkwy and E. Akerly Dr., less than 1/8 mile southeast of the project site	Underground Storage Tank (UST), RCRA-SQG
Kaiser Permanente 1 Quality Dr.	At the southeast corner of Vaca Valley Pkwy and E. Akerly Dr., less than 1/8 mile southeast of the project site	UST

The remaining three sites listed in the EDR search either have reported releases to the environment or are listed in databases associated with a possible release to the environment.

Of these three sites, one was listed in the Leaking Underground Storage Tank (LUST) database. This site, which is approximately 0.3 miles southeast of the project site, received closure in 2005 and 2008 for two LUST cases. The case closed in 2008 involved a release of total petroleum hydrocarbons (TPH) to soil and groundwater (Solano County Department of Resource Management, 2008). No information regarding the nature of the release for the case closed in 2005 is available in the EDR report or on the California State Water Resources Control Board (SWRCB) Geotracker website. The direction of groundwater flow at the site is to the southeast or east (Solano County Department of Resource Management, 2008). Based on its closed case status and downgradient distance from the project site, it is unlikely that this site has impacted environmental conditions at the project site.

The remaining two sites were listed in the ENVIROSTOR database, which identifies sites under the California Department of Toxic Substances Control's (DTSC's) jurisdiction that have known contamination or for which there may be reasons to investigate further. These sites are discussed below.

- Vacaville Elementary School is located west of Leisure Town Road and south of Midway Road, approximately one mile north of the project site. In 2012, surface soil at this site was sampled for chlorinated pesticides and arsenic. According to the listing on the DTSC's Envirostor website, the concentrations of these constituents were found to be below levels of concern. The site received a no further action (NFA) determination from DTSC in February 2013. Due to its closed status and distance from the project site, it is unlikely that this site has impacted environmental conditions at the project site.

- Sprig Circuits, Inc, 765-A Eubanks Drive, is located approximately 0.9 miles west of the project site. In addition to the ENVIROSTOR database, this site was also listed in the RCRA-LQG database. The listing in the ENVIROSTOR database is associated with permitting and not with a release of hazardous substances to the environment. Due to distance from the project site and lack of a documented release to the environment, it is unlikely that this site has impacted environmental conditions at the project site.

The EDR report identified three sites located in Solano County that were not mapped due to limited address information. Two of the unmapped sites are located greater than one mile of the project site. The location of the remaining site cannot be identified due to insufficient address information. This site was listed in the LUST database. This site received case closure. No further information regarding the nature of the release is available from the EDR report for the unmapped site. Available address information indicates that this site is located along Leisure Town road, south-southeast of the project site, which would position the site downgradient of the project site. Based on the closed case status and downgradient location, it is unlikely that this site has impacted environmental conditions at the project site.

In addition to reviewing the EDR Radius Report, Dudek identified one site on Geotracker that was not mapped in the EDR report. This site is a closed LUST cleanup site where soil was the only affected medium. This site is located approximately 0.5 miles northwest of the project site. Due its closed case status, distance to the project site and lack of documented groundwater contamination, it is unlikely that this site has impacted environmental conditions at the project site.

Aerial Photograph and Topographic Map Review

In addition to the EDR review, Dudek also reviewed historical aerial photographs (Attachment B) and topographic maps. Sanborn Fire Insurance maps for the project site were searched, but not found by EDR (Attachment C).

Aerial Photograph Review

Dudek reviewed historical aerial photographs to determine if evidence of recognized environmental conditions can be identified on the project site. The historical aerial photographs were obtained from EDR and are included in Attachment B. The photographs reviewed were from 1937, 1957, 1968, 1970, 1984, 1993, 1998, 2005, 2006, 2009, 2010 and 2012.

- Agricultural land is visible on the project site through 1970.
- Vaca Valley Parkway and a portion of what is currently North Village Parkway are visible in the aerial photograph from 1984. What appears to be a canal or drainage is visible running east/west through the northern portion of the project site. The project site otherwise appears to be vacant land.
- The current Vacaville Annex building and associated parking is visible in the aerial photograph from 1998.
- The eastern-most portion of the project site appears to have been graded in 2005. What is currently North Village Parkway is visible running through the project site in the aerial photograph from 2006. Two small structures in the location of the current classroom building east of North Village parkway are visible on the project site in the aerial photograph from 2009. The existing classroom building and associated parking area east of North Village Parkway are visible in the aerial photographs from 2010 and 2012.

The area surrounding the project site appears to be agricultural land through 1970 and vacant land between 1984 and 1993. Commercial development south of the project site is visible beginning in 1998 and residential development to the north and east of the project site appears to have begun by 2005.

Topographic Map Review

Historical topographic maps were viewed on the website www.historicaerials.com. The historical topographic maps reviewed were from 1908, 1917, 1922, 1944, 1947, 1954, 1959, 1967, 1969, 1975, 1988 and 1994. The topographic maps show the area surrounding the project site as undeveloped land through 1994. A single rectangular structure is visible on the project site in the topographic maps from 1969 through 1988. The road that is currently Vaca Valley Parkway is visible on the topographic maps from 1975 through 1994.

Regulatory Records Review

A regulatory records request for the site was submitted on February 19, 2015 to the Solano County Department of Resource Management-Environmental Health Division, which serves as the Certified Unified Program Agency (CUPA) for Solano County. No records for the project site were located. According to Matthew Geisert, the Hazardous Materials Supervisor for Solano County Department of Resource Management-Environmental Health Division, the project site is currently registered with the CUPA as a conditionally exempt small quantity generator (CESQG). CESQGs generate less than 100 kg of hazardous waste (or 1 kg of acutely hazardous waste) in any calendar month and generate no more than 1,000 kg of hazardous waste (or 1 kg of acutely hazardous waste) at any time.

Summary of Existing Conditions

The project site currently contains two classroom buildings and vacant land. The surrounding area consists of industrial, commercial and residential development and vacant land. The portion of the project site west of North Village parkway was developed with the existing Vacaville Annex building by 1998. Development of the portion of the project site east of North Village parkway began by 2009 and appears to have been completed by 2010. Prior to the existing development the project site and surrounding land appears to have been used for agriculture as early as 1937.

The project site was identified in the EDR report as being listed in databases associated with generation and off-site disposal of hazardous materials. The project site was not listed in any databases indicative of a release of hazardous materials to the environment. Information regarding the use and disposal of hazardous materials at the project site was obtained from the EDR report and the Solano County CUPA. According to the EDR report and CUPA interview, the project site was registered as a RCRA SQG or RCRA CESQG since 2008.

Based on a review of the EDR report, it is not likely that operations or releases at surrounding sites have impacted environmental conditions at the project site. However, due to apparent historical agricultural operations on the project site, soils at the project site may contain chlorinated and/or arsenical pesticides.

Recommendations

Based on available information regarding the current handling and disposal of hazardous chemicals at the project site, it is likely that future academic operations at the project site including at the proposed Biotechnology and Science Building may also involve the storage, use and disposal of hazardous chemicals. These chemicals and other hazardous materials should be safely managed in accordance with local, state and federal regulations.

If the quantities of hazardous materials handled by the proposed project will equal or exceed 55 gallons of liquid, 500 pounds of solids and/or 200 cubic feet of a compressed gas at any time, a Hazardous Materials Business Plan (HMBP) must be prepared for the project site and submitted to the Solano County CUPA via the California Environmental Reporting System (CERS). The HMBP must include an inventory of hazardous materials, present a site map identifying locations of hazardous materials and safety equipment, and address preparedness for emergency response to incidents involving hazardous materials.

In the event that the proposed project or project construction involves the above ground storage of an aggregate quantity of 1,320 gallons or more of petroleum or petroleum products, a Spill Prevention Control and Countermeasure (SPCC) plan must be prepared and implemented.

Accumulation, management and disposal of hazardous waste is regulated by the California Department of Toxic Substances Control (DTSC) and the United States Environmental Protection Agency (EPA). Under federal regulation (RCRA), waste is classified as hazardous based on the process that generated it (listed waste) or its characteristics of ignitibility, reactivity, corrosion and/or toxicity. California mandates further criteria for hazardous waste in addition to those established under RCRA. Once classified as hazardous, waste must not accumulate longer than 90 days for large quantity generators (LQGs) and 180 days (or 270 days if the distance to the TSD is more than 200 miles) for SQGs. These accumulation times begin as soon as the waste begins accumulating. For CESQGs, hazardous waste can accumulate for 180 days (or 270 days if the distance to the TSD is more than 200 miles) once 100 kg of hazardous waste has accumulated. Waste considered acutely or extremely hazardous must be removed within 90 days for SQGs and CESQGs. Hazardous and non-hazardous waste must be stored, labeled and manifested in accordance with state and federal regulations, including those summarized in the Hazardous Waste Generator Requirements (DTSC, 2002).

Additional guidance for management of laboratory hazardous waste (LHW) is covered under California Health and Safety Code (HSC) Section 25200.3.1. Under the HSC, a laboratory is defined as a workplace where relatively small quantities of hazardous chemicals are handled or used in a manner that meets all of the following criteria:

- Chemical reactions, transfers, and handling are carried out using containers that are designed to be easily and safely manipulated by one person
- Protective laboratory practices and equipment are available and in common use to minimize the potential for laboratory worker exposure to hazardous chemicals
- The chemical procedures conducted in the laboratory meet all of the following criteria:
    - The chemical procedures are conducted for purposes of education; research; chemical analysis; clinical testing; or product development, testing, or quality control.
    - The chemical procedures are not part of the actual commercial production of chemicals or other products, and are not part of production development activities, unless the activities are conducted on the scale of a research laboratory.
    - The chemical procedures are not part of the treatment of hazardous waste, other than the treatment of laboratory hazardous waste as described in Section E of [California HSC Section 25200.3.1]

The American Chemical Society (ACS) Guidelines for Chemistry in Two-Year College Programs (ACS, 2009), recommend that chemistry programs include the following attributes with respect to chemical storage, hazardous waste management and laboratory safety:

- A written chemical hygiene plan and proper facilities and personnel for chemical waste disposal;
- Safety information and reference materials, such as material safety data sheets (MSDSs), and personal protective equipment readily available to all students and faculty;
- A policy of maximum stockroom chemical holdings, including small quantities for especially hazardous materials;
- Personnel designated to coordinate all aspects of the chemical safety program in cooperation with institutional and other departmental safety programs; and
- Segregated storage areas designated for acids, bases, reducing agents, oxidizing agents, and toxic materials. Cabinets and refrigerators that store flammable materials must meet the federal and state Occupational Safety and Health Administration (OHSA) regulations. National Fire Protection Associations (NFPA) labeling codes must be used on all reagents and storage facilities.

General guidelines for responding to a spill of hazardous materials are outlined in the Solano Community College District Incident Response Plan (Solano Community College, 2009).

Due to apparent historical agricultural activities at the project site, shallow soils may contain chlorinated and/or arsenical pesticides. Therefore, in order to assess potential human health and environmental risks associated with these chemicals, surface soil sampling for organochlorine pesticides (OCPs) and arsenic should be considered prior to development on the project site.

References

ACS, 2009. ACS Guidelines for Chemistry in Two-Year College Programs, American Chemical Society, Society Committee on Education, Spring 2009.

DTSC, 2002. Hazardous Waste Generator Requirements, Fact Sheet. January.

Solano Community College, 2009. Solano Community College District Incident Response Plan. June 13.

Solano County Department of Resource Management, 2008. Transmittal Letter, Underground Storage Tank (UST) Case Closure, Unauthorized Release, 5057-5065 Quinn Road, Vacaville, CA, SCDRM File # 29-80084-5. April 18.

ATTACHMENT A

EDR Radius Report

Solano Community College Vacaville Center
2001 North Village Parkway
Vacaville, CA 95688

Inquiry Number: 4207212.2s
February 12, 2015

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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GEOCHECK ADDENDUM

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

2001 NORTH VILLAGE PARKWAY
SOLANO County, CA 95688

COORDINATES

Latitude (North):	38.3941000 - 38˚ 23' 38.76''
Longitude (West):	121.9415000 - 121˚ 56' 29.40''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	592437.5
UTM Y (Meters):	4249866.5
Elevation:	95 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	38121-D8 ALLENDALE, CA
Most Recent Revision:	1978

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20120522
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
SOLANO COMMUNITY COLLEGE 2001 N VILLAGE PKWY VACAVILLE, CA 95688	FINDS	N/A
SOLANO COMMUNITY COLLEGE 2001 N VILLAGE PKWY VACAVILLE, CA 95688	RCRA-SQG	CAR000211318
SOLANO COMMUNITY COLLEGE 2001 N VILLAGE PKWY VACAVILLE, CA 95688	HAZNET	N/A
SCCD VACAVILLE CENTER PARKING LOT 2001 NORTH VILLAGE PARKWAY VACAVILLE, CA 95688	NPDES	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

EXECUTIVE SUMMARY

State and tribal landfill and/or solid waste disposal site lists

SWF/LF - - - - - Solid Waste Information 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

INDIAN VCP - - - - - Voluntary Cleanup Priority Listing
VCP - - - - - Voluntary Cleanup Program Properties

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
SWRCY - - - - - Recycler Database
HAULERS - - - - - Registered Waste Tire Haulers Listing
INDIAN ODI - - - - - Report on the Status of Open Dumps on Indian Lands
WMUDS/SWAT - - - - - Waste Management Unit Database

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
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

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
US 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
RAATS	RCRA Administrative Action Tracking System
RMP	Risk Management Plans
CA BOND EXP. PLAN	Bond Expenditure Plan
UIC	UIC Listing
Cortese	"Cortese" Hazardous Waste & Substances Sites List
HIST CORTESE	Hazardous Waste & Substance Site 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
HWT	Registered Hazardous Waste Transporter Database
HWP	EnviroStor Permitted Facilities Listing
WDS	Waste Discharge System
PROC	Certified Processors Database
Financial Assurance	Financial Assurance Information Listing
MWMP	Medical Waste Management Program Listing
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
2020 COR ACTION	2020 Corrective Action Program List
PRP	Potentially Responsible Parties
COAL ASH DOE	Steam-Electric Plant Operation Data

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants

EDR US Hist Auto Stat	EDR Exclusive Historic Gas Stations
EDR US Hist Cleaners	EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST	Recovered Government Archive Leaking Underground Storage Tank
RGA LF	Recovered Government Archive Solid Waste Facilities List

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 12/09/2014 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GENENTECH INCORPORATED	***1000 NEW HORIZONS WAY***	***SW 1/8 - 1/4 (0.198 mi.)***	***8***	***17***

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 12/09/2014 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
KAISER PERMANENTE	3700 VACA VALLEY PKWY	SSE 0 - 1/8 (0.035 mi.)	B7	16

EXECUTIVE SUMMARY

State- and tribal - equivalent CERCLIS

ENVIROSTOR: 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.

A review of the ENVIROSTOR list, as provided by EDR, and dated 11/03/2014 has revealed that there are 2 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SPRIG CIRCUITS, INC.	***765-A EUBANKS DRIVE (UN***	***WNW 1/2 - 1 (0.854 mi.)***	***16***	***34***
Status: Inactive - Needs Evaluation				
VACAVILLE ELEMENTARY SCHOOL #1	***WEST OF LEISURE TOWN RD***	***N 1/2 - 1 (0.981 mi.)***	***17***	***42***
Status: No Further Action				

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 01/20/2015 has revealed that there are 3 LUST sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
LYNN & SONS YARD	***5065 QUINN RD***	***ESE 1/4 - 1/2 (0.303 mi.)***	***D13***	***31***
5057 & 5065 QUINN ROAD	5065 QUINN ROAD	ESE 1/4 - 1/2 (0.303 mi.)	D14	32
LYNN & SONS YARD	***5065 QUINN RD***	***ESE 1/4 - 1/2 (0.303 mi.)***	***D15***	***32***
Status: Completed - Case Closed				

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 01/20/2015 has revealed that there are 3 UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
KAISER PERMANENTE	3700 VACA VALLEY PKWY	SSE 0 - 1/8 (0.035 mi.)	B6	15
KAISER PERMANENTE	1 QUALITY DR	SSE 1/8 - 1/4 (0.204 mi.)	9	29
JIMMY ACKERSON/MARILEE SCHAUF	***6926 LEISURE TOWN RD***	***ENE 1/8 - 1/4 (0.226 mi.)***	***C11***	***30***

EXECUTIVE SUMMARY

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 is 1 CA FID UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
JIMMY ACKERSON/MARILEE SCHAUF	6926 LEISURE TOWN RD	ENE 1/8 - 1/4 (0.226 mi.)	C12	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 is 1 HIST UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
JIMMY ACKERSON	6926 LEISURE TOWN RD	ENE 1/8 - 1/4 (0.226 mi.)	C10	30

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 is 1 SWEEPS UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
JIMMY ACKERSON/MARILEE SCHAUF	***6926 LEISURE TOWN RD***	***ENE 1/8 - 1/4 (0.226 mi.)***	***C11***	***30***

Other Ascertainable Records

RCRA NonGen / NLR: 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.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 12/09/2014 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

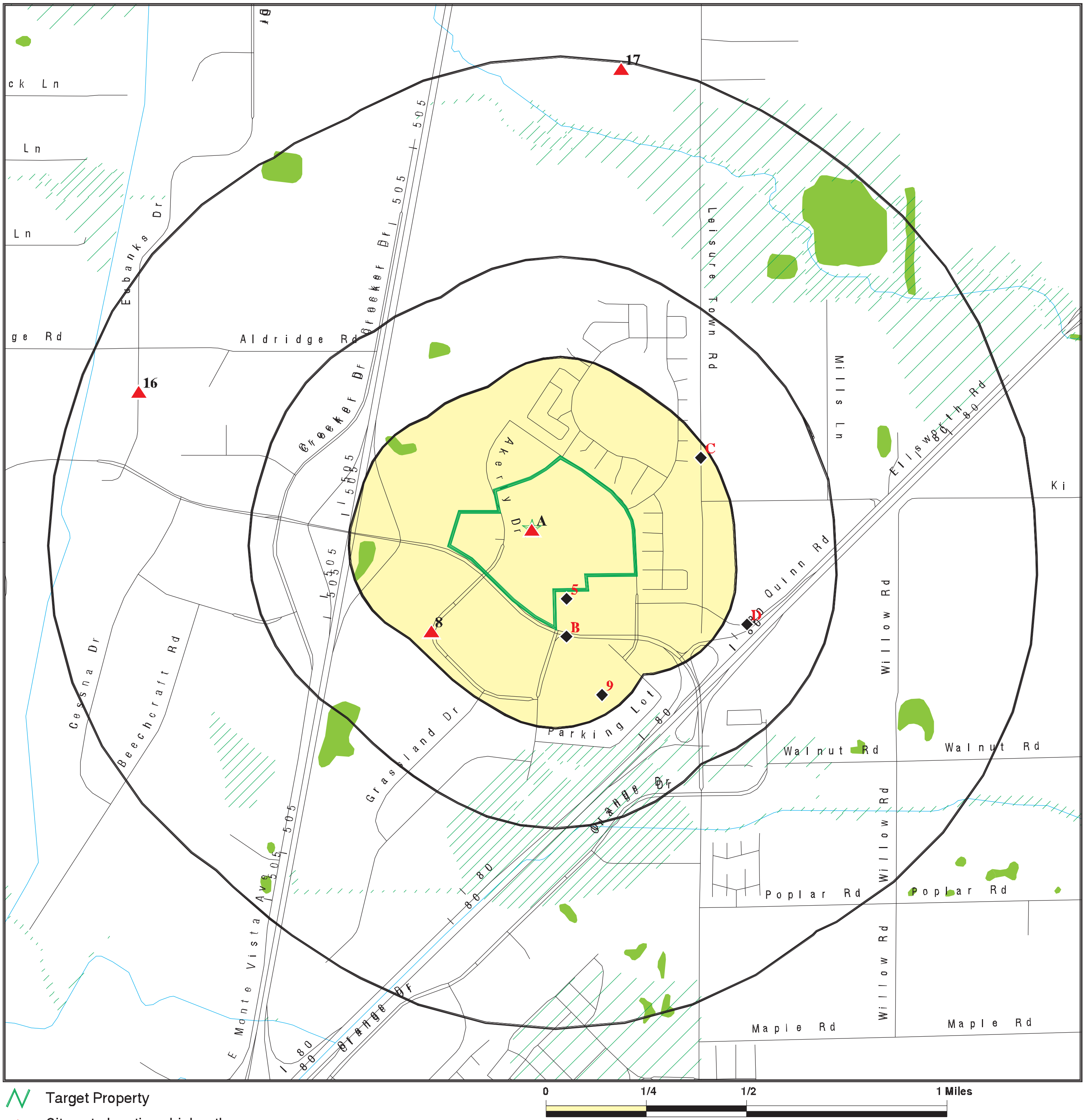
Lower Elevation	Address	Direction / Distance	Map ID	Page
NOVARTIS VACA VALLEY PKWY MS A	3333 VACA VALLEY PKWY	SSE 0 - 1/8 (0.022 mi.)	5	13

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 6 records.

Site Name	Database(s)
MAPLEWOOD SUBDIVISION	LUST
SOLANO COMMUNITY COLLEGE	HAZNET
SFPP LP ELMIRA BOOSTER STN	RCRA-SQG, SLIC
SOLANO COMMUNITY COLLEGE	RCRA-SQG
SOLANO COMMUNITY COLLEGE	FINDS
PG&E GAS DEHYDRATOR STATION, MILLA	SLIC

OVERVIEW MAP - 4207212.2S

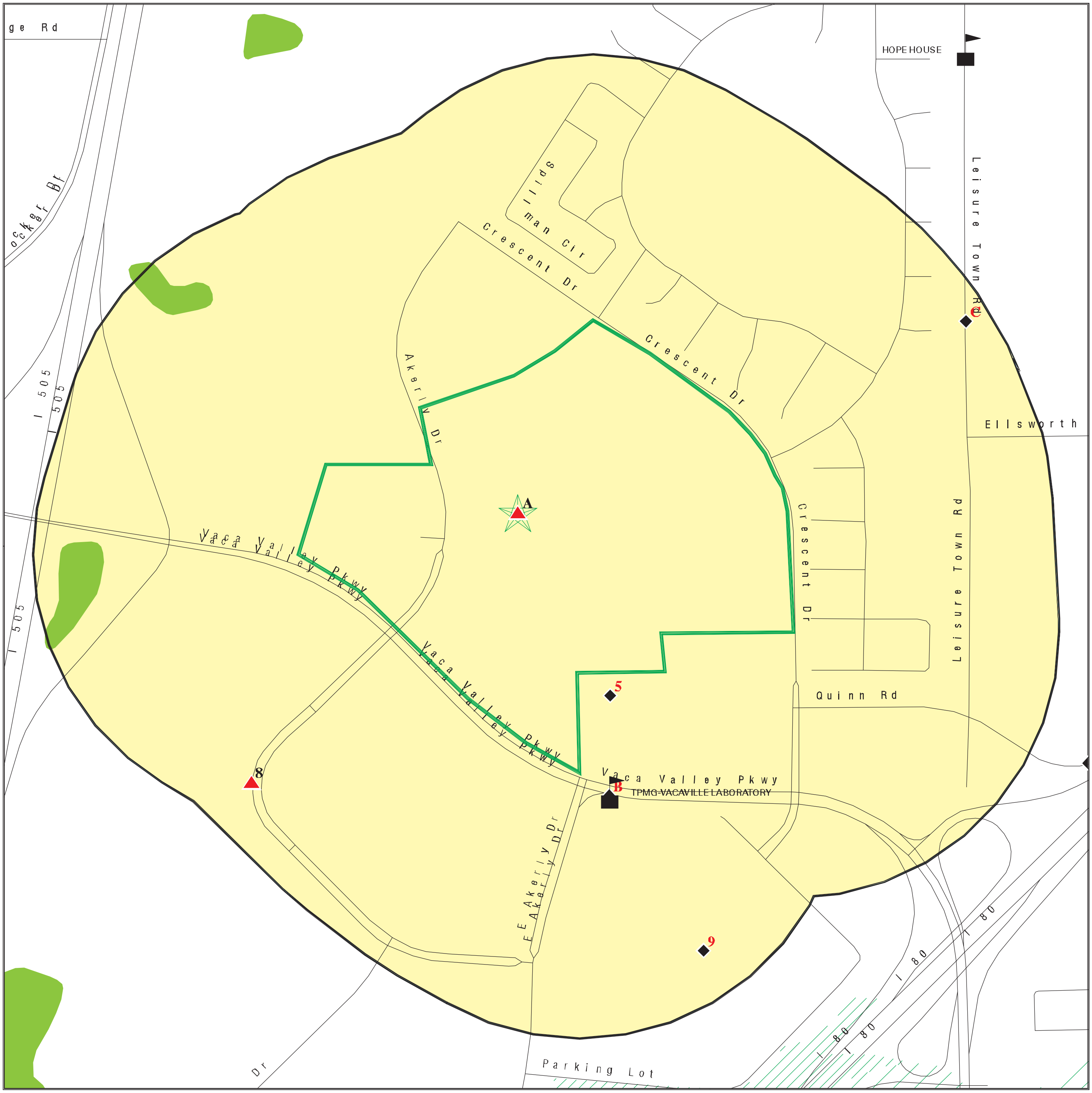


- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year 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:	Solano Community College Vacaville Center	CLIENT:	Dudek & Associates
ADDRESS:	2001 North Village Parkway	CONTACT:	Lydia Dorrance
	Vacaville CA 95688	INQUIRY #:	4207212.2s
LAT/LONG:	38.3941 / 121.9415	DATE:	February 12, 2015 7:29 pm

DETAIL MAP - 4207212.2S



- 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
- 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: Solano Community College Vacaville Center	CLIENT: Dudek & Associates
ADDRESS: 2001 North Village Parkway	CONTACT: Lydia Dorrance
Vacaville CA 95688	INQUIRY #: 4207212.2s
LAT/LONG: 38.3941 / 121.9415	DATE: February 12, 2015 7:30 pm

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	0.001		0	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		0	1	NR	NR	NR	1
RCRA-SQG	0.250	1	1	0	NR	NR	NR	2
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	0.001		0	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	2	NR	2
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	3	NR	NR	3

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
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250		1	2	NR	NR	NR	3
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								
INDIAN VCP	0.500		0	0	0	NR	NR	0
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
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	0.001		0	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	0.001		0	NR	NR	NR	NR	0
US HIST CDL	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA FID UST	0.250		0	1	NR	NR	NR	1
HIST UST	0.250		0	1	NR	NR	NR	1
SWEEPS UST	0.250		0	1	NR	NR	NR	1
Local Land Records								
LIENS 2	0.001		0	NR	NR	NR	NR	0
LIENS	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	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
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	0	NR	NR	NR	1
DOT OPS	0.001		0	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
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
FINDS	0.001	1	0	NR	NR	NR	NR	1
RAATS	0.001		0	NR	NR	NR	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
NPDES	0.001	1	0	NR	NR	NR	NR	1
UIC	0.001		0	NR	NR	NR	NR	0
Cortese	0.500		0	0	0	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
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	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001	1	0	NR	NR	NR	NR	1
EMI	0.001		0	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
HWT	0.250		0	0	NR	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	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
PRP	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR US Hist Auto Stat	0.250		0	0	NR	NR	NR	0
EDR US Hist Cleaners	0.250		0	0	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LUST	0.001		0	NR	NR	NR	NR	0
RGA LF	0.001		0	NR	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **Target** **Property**	**SOLANO COMMUNITY COLLEGE** **2001 N VILLAGE PKWY** **VACAVILLE, CA 95688**	**FINDS**	**1014671525** **N/A**

Site 1 of 4 in cluster A

Actual:
95 ft.

FINDS:

Registry ID: 110042172458

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.

A2 **Target** **Property**	**SOLANO COMMUNITY COLLEGE** **2001 N VILLAGE PKWY** **VACAVILLE, CA 95688**	**RCRA-SQG**	**1014387569** **CAR000211318**

Site 2 of 4 in cluster A

Actual:
95 ft.

RCRA-SQG:

Date form received by agency:	08/18/2010
Facility name:	SOLANO COMMUNITY COLLEGE
Facility address:	2001 N VILLAGE PKWY VACAVILLE, CA 95688
EPA ID:	CAR000211318
Mailing address:	4000 SUISUN VLY RD FAIRFIELD, CA 94534
Contact:	JEFF LEHFELDT
Contact address:	4000 SUISUN VLY RD FAIRFIELD, CA 94534
Contact country:	US
Contact telephone:	707-864-7000
Telephone ext.:	7172
Contact email:	JEFFERY.LEHFELDT@SOLANO.EDU
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:	SOLANO COMMUNITY COLLEGE
Owner/operator address:	4000 SUISUN VLY RD FAIRFIELD, CA 94534
Owner/operator country:	US
Owner/operator telephone:	707-864-7000
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	07/01/2010
Owner/Op end date:	Not reported

SOLANO COMMUNITY COLLEGE (Continued) **1014387569**

Owner/operator name:	JEFF LEHFELDT
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	District
Owner/Operator Type:	Operator
Owner/Op start date:	07/01/2010
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

Hazardous Waste Summary:

Waste code: 181
Waste name: 181

Waste code: 212
Waste name: 212

Waste code: 213
Waste name: 213

Waste code: 221
Waste name: 221

Waste code: 331
Waste name: 331

Waste code: 352
Waste name: 352

Waste code: 791
Waste name: 791

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

SOLANO COMMUNITY COLLEGE (Continued) **1014387569**

WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D035
Waste name: METHYL ETHYL KETONE

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

A3 **SOLANO COMMUNITY COLLEGE** **HAZNET** **S113803517**
Target **2001 N VILLAGE PKWY** **N/A**
Property **VACAVILLE, CA 95688**

Site 3 of 4 in cluster A

Actual:
95 ft.

HAZNET:
envid: S113803517
Year: 2013
GEPAID: CAR000211318
Contact: JEFF LEHFELDT EXT 7172

SOLANO COMMUNITY COLLEGE (Continued) **S113803517**

Telephone:	7078647172
Mailing Name:	Not reported
Mailing Address:	4000 SUISUN VALLEY RD
Mailing City,St,Zip:	FAIRFIELD, CA 945344017
Gen County:	Solano
TSD EPA ID:	NVD980895338
TSD County:	99
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.0075
Facility County:	Not reported

envid:	S113803517
Year:	2013
GEPAID:	CAR000211318
Contact:	JEFF LEHFELDT EXT 7172
Telephone:	7078647172
Mailing Name:	Not reported
Mailing Address:	4000 SUISUN VALLEY RD
Mailing City,St,Zip:	FAIRFIELD, CA 945344017
Gen County:	Solano
TSD EPA ID:	NVD980895338
TSD County:	99
Waste Category:	Not reported
Disposal Method:	Neutralization Only
Tons:	0.0005
Facility County:	Not reported

envid:	S113803517
Year:	2013
GEPAID:	CAR000211318
Contact:	JEFF LEHFELDT EXT 7172
Telephone:	7078647172
Mailing Name:	Not reported
Mailing Address:	4000 SUISUN VALLEY RD
Mailing City,St,Zip:	FAIRFIELD, CA 945344017
Gen County:	Solano
TSD EPA ID:	NVD980895338
TSD County:	99
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.005
Facility County:	Not reported

envid:	S113803517
Year:	2013
GEPAID:	CAR000211318
Contact:	JEFF LEHFELDT EXT 7172
Telephone:	7078647172
Mailing Name:	Not reported
Mailing Address:	4000 SUISUN VALLEY RD
Mailing City,St,Zip:	FAIRFIELD, CA 945344017
Gen County:	Solano
TSD EPA ID:	NVD980895338
TSD County:	99

SOLANO COMMUNITY COLLEGE (Continued) **S113803517**

Waste Category:	Not reported
Disposal Method:	Neutralization Only
Tons:	0.01
Facility County:	Not reported
envid:	S113803517
Year:	2012
GEPAID:	CAR000211318
Contact:	JEFF LEHFELDT EXT 7172
Telephone:	7078647172
Mailing Name:	Not reported
Mailing Address:	4000 SUISUN VALLEY RD
Mailing City,St,Zip:	FAIRFIELD, CA 945344017
Gen County:	Solano
TSD EPA ID:	NVD980895338
TSD County:	99
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.0145
Facility County:	Solano

Click this hyperlink while viewing on your computer to access additional CA_HAZNET: detail in the EDR Site Report.

A4	**SCCD VACAVILLE CENTER PARKING LOT**	**NPDES**	**S114406191**
Target	**2001 NORTH VILLAGE PARKWAY**		**N/A**
Property	**VACAVILLE, CA 95688**		

Site 4 of 4 in cluster A

Actual:
95 ft.

NPDES:

Npdes Number:	CAS000002
Facility Status:	Terminated
Agency Id:	0
Region:	5S
Regulatory Measure Id:	442104
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	5S48C368062
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	10/23/2013
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	06/27/2014
Discharge Name:	Solano Community College District
Discharge Address:	4000 Suisun Valley Rd
Discharge City:	Fairfield
Discharge State:	California
Discharge Zip:	94534

5 **NOVARTIS VACA VALLEY PKWY MS AND T SITE** **RCRA NonGen / NLR** **1015753085**
SSE **3333 VACA VALLEY PKWY** **CAR000234187**
< 1/8 **VACAVILLE, CA 95688**
0.022 mi.
115 ft.

Relative:
Lower

Actual:
92 ft.

RCRA NonGen / NLR:

Date form received by agency:	09/26/2014
Facility name:	NOVARTIS VACA VALLEY PKWY MS AND T SITE
Facility address:	3333 VACA VALLEY PKWY STE 1000 VACAVILLE, CA 95688
EPA ID:	CAR000234187
Mailing address:	2010 CESSNA DR VACAVILLE, CA 95688
Contact:	KEITH ZUCCA
Contact address:	2010 CESSNA DR VACAVILLE, CA 95688
Contact country:	US
Contact telephone:	707-514-5436
Contact email:	KEITH.ZUCCA@NOVARTIS.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	DAVID SERP
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:	08/01/2009
Owner/Op end date:	Not reported
Owner/operator name:	NOVARTIS PHARMACEUTICAL
Owner/operator address:	ONE HEALTH PLAZA EAST HANOVER, NJ 07936
Owner/operator country:	US
Owner/operator telephone:	862-778-8300
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	12/19/2008
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

NOVARTIS VACA VALLEY PKWY MS AND T SITE (Continued) **1015753085**

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: 01/17/2013
Site name: NOVARTIS VACA VALLEY PKWY MS AND T SITE
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: 122
Waste name: 122

Waste code: 135
Waste name: 135

Waste code: 141
Waste name: 141

Waste code: 181
Waste name: 181

Waste code: 331
Waste name: 331

Waste code: 352
Waste name: 352

Waste code: 551
Waste name: 551

Waste code: 791
Waste name: 791

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: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D007
Waste name: CHROMIUM

NOVARTIS VACA VALLEY PKWY MS AND T SITE (Continued) **1015753085**

Waste code:	D008
Waste name:	LEAD
Waste code:	D009
Waste name:	MERCURY
Waste code:	D010
Waste name:	SELENIUM
Waste code:	D011
Waste name:	SILVER
Waste code:	D022
Waste name:	CHLOROFORM
Waste code:	F003
Waste name:	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste code:	P105
Waste name:	SODIUM AZIDE
Waste code:	U044
Waste name:	CHLOROFORM
Waste code:	U080
Waste name:	METHANE, DICHLORO-
Waste code:	U154
Waste name:	METHANOL (I)
Violation Status:	No violations found

B6 **KAISER PERMANENTE** **UST** **U003641524**
SSE **3700 VACA VALLEY PKWY** **N/A**
< 1/8 **VACAVILLE, CA 95688**
0.035 mi.
187 ft. **Site 1 of 2 in cluster B**

Relative:
Lower

Actual:
91 ft.

UST:

Facility ID:	50750
Permitting Agency:	SOLANO COUNTY
Latitude:	38.3879212558486
Longitude:	-121.938578188419

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
B7 **SSE** **< 1/8** **0.035 mi.** **187 ft.**	**KAISER PERMANENTE** **3700 VACA VALLEY PKWY** **VACAVILLE, CA 94688** **Site 2 of 2 in cluster B**	**RCRA-SQG**	**1001122821** **CAR000016592**

Relative:
Lower

Actual:
91 ft.

RCRA-SQG:

Date form received by agency:	03/04/1999
Facility name:	KAISER PERMANENTE
Site name:	KAISER FOUNDATION HEALTH PLAN, INC
Facility address:	3700 VACA VALLEY PKWY VACAVILLE, CA 94688
EPA ID:	CAR000016592
Contact:	CATHY JOHNSON
Contact address:	Not reported Not reported
Contact country:	US
Contact telephone:	(707) 651-3588
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:	PERMANENTE MEDICAL GROUP
Owner/operator address:	3700 VACAVILLE PARKWAY VACAVILLE, CA 95688
Owner/operator country:	Not reported
Owner/operator telephone:	(707) 453-5000
Legal status:	Private
Owner/Operator Type:	Owner
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:	Yes
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:	11/25/1996
Site name:	KAISER PERMANENTE

KAISER PERMANENTE (Continued) **1001122821**

Classification: Small Quantity Generator

Violation Status: No violations found

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8 SW 1/8-1/4 0.198 mi. 1048 ft.	**GENENTECH INCORPORATED 1000 NEW HORIZONS WAY VACAVILLE, CA 95688**	**RCRA-LQG FINDS**	**1001126635 CAR000017004**

Relative: Higher

Actual: 97 ft.

RCRA-LQG:

Date form received by agency: 03/01/2014
Facility name: GENENTECH, INC
Facility address: 1000 NEW HORIZONS WAY
VACAVILLE, CA 95688
EPA ID: CAR000017004
Mailing address: NEW HORIZONS WAY
VACAVILLE, CA 95688
Contact: JOY L MALINOWSKI
Contact address: NEW HORIZONS WAY
VACAVILLE, CA 95688
Contact country: Not reported
Contact telephone: (707) 454-1373
Contact email: MALINOWSKI.JOY@GENE.COM
EPA Region: 09
Land type: Private
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: GENENTECH, INC.
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: 10/23/1998
Owner/Op end date: Not reported

Owner/operator name: GENENTECH, INC
Owner/operator address: NEW HORIZONS WAY
VACAVILLE, CA 95688
Owner/operator country: Not reported
Owner/operator telephone: (707) 454-1000
Legal status: Private
Owner/Operator Type: Owner

GENENTECH INCORPORATED (Continued) **1001126635**

Owner/Op start date: 10/23/1998
Owner/Op end date: Not reported

Owner/operator name: GENENTECH, INC.
Owner/operator address: SAME AS ITEM 4
SAME AS ITEM 4, CA 95688
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 10/23/1998
Owner/Op end date: Not reported

Owner/operator name: GENENTECH, INC
Owner/operator address: NEW HORIZONS WAY
VACAVILLE, CA 95688
Owner/operator country: Not reported
Owner/operator telephone: (707) 454-1373
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 10/23/1998
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

Universal Waste Summary:
Waste type: E
Accumulated waste on-site: Yes
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: Yes
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: Yes
Generated waste on-site: No

Historical Generators:
Date form received by agency: 03/16/2012
Site name: GENENTECH,INC

GENENTECH INCORPORATED (Continued) **1001126635**

Classification: Large Quantity Generator

Date form received by agency: 02/17/2010
Site name: GENENTECH, INC.
Classification: Large Quantity Generator

Date form received by agency: 02/26/2008
Site name: GENENTECH INC
Classification: Large Quantity Generator

Date form received by agency: 02/28/2006
Site name: GENENTECH, INC.
Classification: Large Quantity Generator

Date form received by agency: 03/01/2004
Site name: GENENTECH, INC.
Classification: Large Quantity Generator

Date form received by agency: 02/27/2002
Site name: GENENTECH INC
Classification: Large Quantity Generator

Date form received by agency: 10/12/2000
Site name: GENENTECH, INC.
Classification: Large Quantity Generator

Date form received by agency: 04/16/1999
Site name: GENENTECH VACAVILLE
Classification: Large Quantity Generator

Hazardous Waste Summary:
Waste code: D003
Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

GENENTECH INCORPORATED (Continued) **1001126635**

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: P105
Waste name: SODIUM AZIDE

Waste code: U002
Waste name: ACETONE (I)

Waste code: U003
Waste name: ACETONITRILE (I,T)

Waste code: U007
Waste name: ACRYLAMIDE

Waste code: U044
Waste name: CHLOROFORM

Waste code: U188
Waste name: PHENOL

Waste code: U204
Waste name: SELENIOUS ACID

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: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D003
Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

Waste code: D007
Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

GENENTECH INCORPORATED (Continued) **1001126635**

Waste code: D010
Waste name: SELENIUM

Waste code: D011
Waste name: SILVER

Waste code: D018
Waste name: BENZENE

Waste code: D039
Waste name: TETRACHLOROETHYLENE

Waste code: D040
Waste name: TRICHLOROETHYLENE

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: LABP
Waste name: LAB PACK

Waste code: P105
Waste name: SODIUM AZIDE

Waste code: U007
Waste name: ACRYLAMIDE

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: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A

GENENTECH INCORPORATED (Continued) **1001126635**

CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D007
Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: D018
Waste name: BENZENE

Waste code: D039
Waste name: TETRACHLOROETHYLENE

Waste code: D040
Waste name: TRICHLOROETHYLENE

Waste code: LABP
Waste name: LAB PACK

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: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D007
Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: D018
Waste name: BENZENE

Waste code: D039
Waste name: TETRACHLOROETHYLENE

Waste code: D040
Waste name: TRICHLOROETHYLENE

GENENTECH INCORPORATED (Continued) **1001126635**

Waste code: LABP
Waste name: LAB PACK

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: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D007
Waste name: CHROMIUM

Waste code: LABP
Waste name: LAB PACK

Waste code: P105
Waste name: SODIUM AZIDE

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: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D007
Waste name: CHROMIUM

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS

GENENTECH INCORPORATED (Continued) **1001126635**

CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: LABP
Waste name: LAB PACK

Waste code: P105
Waste name: SODIUM AZIDE

Waste code: 121
Waste name: 121

Waste code: 122
Waste name: 122

Waste code: 132
Waste name: 132

Waste code: 134
Waste name: 134

Waste code: 141
Waste name: 141

Waste code: 181
Waste name: 181

Waste code: 221
Waste name: 221

Waste code: 223
Waste name: 223

Waste code: 331
Waste name: 331

Waste code: 352
Waste name: 352

Waste code: 512
Waste name: 512

Waste code: 513
Waste name: 513

Waste code: 551
Waste name: 551

Waste code: 725
Waste name: 725

Waste code: 791
Waste name: 791

GENENTECH INCORPORATED (Continued) **1001126635**

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:	D002
Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Waste code:	D003
Waste name:	A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.
Waste code:	D004
Waste name:	ARSENIC
Waste code:	D005
Waste name:	BARIUM
Waste code:	D007
Waste name:	CHROMIUM
Waste code:	D008
Waste name:	LEAD
Waste code:	D009
Waste name:	MERCURY
Waste code:	D011
Waste name:	SILVER
Waste code:	D022
Waste name:	CHLOROFORM
Waste code:	F002
Waste name:	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

GENENTECH INCORPORATED (Continued) **1001126635**

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: LABP
Waste name: LAB PACK

Waste code: P098
Waste name: POTASSIUM CYANIDE

Waste code: P105
Waste name: SODIUM AZIDE

Waste code: U007
Waste name: ACRYLAMIDE

Waste code: D000
Waste name: Not Defined

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: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Biennial Reports:

Last Biennial Reporting Year: 2013

GENENTECH INCORPORATED (Continued) **1001126635**

Annual Waste Handled:

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.
Amount (Lbs):	31303
Waste code:	D002
Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Amount (Lbs):	35682
Waste code:	D007
Waste name:	CHROMIUM
Amount (Lbs):	120
Waste code:	F003
Waste name:	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs):	5680
Waste code:	LABP
Waste name:	LAB PACK
Amount (Lbs):	7866
Waste code:	P105
Waste name:	SODIUM AZIDE
Amount (Lbs):	24

Facility Has Received Notices of Violations:

Regulation violated:	Not reported
Area of violation:	Generators - General
Date violation determined:	01/20/2004
Date achieved compliance:	02/04/2004
Violation lead agency:	State
Enforcement action:	WRITTEN INFORMAL
Enforcement action date:	01/20/2004
Enf. disposition status:	Not reported

GENENTECH INCORPORATED (Continued) **1001126635**

Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 01/20/2004
Date achieved compliance: 02/18/2004
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 01/20/2004
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 01/20/2004
Date achieved compliance: 06/08/2004
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 01/20/2004
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 01/20/2004
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 06/08/2004
Evaluation lead agency: State

Evaluation date: 01/20/2004
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 02/18/2004
Evaluation lead agency: State

Evaluation date: 01/20/2004
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 02/04/2004
Evaluation lead agency: State Contractor/Grantee

FINDS:

Registry ID: 110002148300

GENENTECH INCORPORATED (Continued) **1001126635**

Environmental Interest/Information System

US EPA TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

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.

HAZARDOUS WASTE BIENNIAL REPORTER

STATE MASTER

CRITERIA AND HAZARDOUS AIR POLLUTANT INVENTORY

Registry ID: 110057479054

Environmental Interest/Information System

OSHA ESTABLISHMENT

9
SSE
1/8-1/4
0.204 mi.
1077 ft.

KAISER PERMANENTE
1 QUALITY DR
VACAVILLE, CA 95688

UST **U004136818**
N/A

Relative:
Lower

Actual:
90 ft.

SOLANO CO. UST:

Facility Id:	50750
Facility Status:	Active
Facility Phone:	707-624-4000

Inventory Number:	1
Inventory Type:	General Underground Tank (110)
Inventory Description:	Not reported
Permit Expire/Last Service:	ROUTINE - INITIAL (INVENTORIED), 02/28/15, 02/28/15
Last Service Date:	06/17/2014

Inventory Number:	2
Inventory Type:	General Underground Tank (110)
Inventory Description:	Not reported
Permit Expire/Last Service:	ROUTINE - INITIAL (INVENTORIED), 02/28/15, 02/28/15
Last Service Date:	06/17/2014

Inventory Number:	3
Inventory Type:	General Underground Tank (110)
Inventory Description:	Not reported

KAISER PERMANENTE (Continued) **U004136818**

Permit Expire/Last Service: ROUTINE - INITIAL (INVENTORIED), 02/28/15, 02/28/15
Last Service Date: 06/17/2014

C10 **JIMMY ACKERSON** **HIST UST** **U001614066**
ENE **6926 LEISURE TOWN RD** **N/A**
1/8-1/4 **VACAVILLE, CA 95688**
0.226 mi.
1194 ft. **Site 1 of 3 in cluster C**

Relative:
Lower

Actual:
92 ft.

HIST UST:
Region: STATE
Facility ID: 00000040130
Facility Type: Gas Station
Other Type: Not reported
Contact Name: Not reported
Telephone: 7074481956
Owner Name: JIMMY R ACKERSON
Owner Address: 6926 LEISURETOWN RD
Owner City,St,Zip: VACAVILLE, CA 95688
Total Tanks: 0001

Tank Num: 001
Container Num: #01
Year Installed: Not reported
Tank Capacity: 00000300
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Container Construction Thickness: Not reported
Leak Detection: None

C11 **JIMMY ACKERSON/MARILEE SCHAUF** **UST** **U003641608**
ENE **6926 LEISURE TOWN RD** **SWEEPS UST** **N/A**
1/8-1/4 **VACAVILLE, CA 95688**
0.226 mi.
1194 ft. **Site 2 of 3 in cluster C**

Relative:
Lower

Actual:
92 ft.

SOLANO CO. UST:
Facility Id: 80042
Facility Status: Inactive
Facility Phone: Not reported

Inventory Number: 1
Inventory Type: Underground Storage Tank (1)
Inventory Description: Not reported
Permit Expire/Last Service: PLAN / MAP CHECK - INITIAL
Last Service Date: 11/21/2008

SWEEPS UST:
Status: Not reported
Comp Number: 80042
Number: Not reported
Board Of Equalization: Not reported
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported

JIMMY ACKERSON/MARILEE SCHAUF (Continued) **U003641608**

SWRCB Tank Id: Not reported
Tank Status: Not reported
Capacity: Not reported
Active Date: Not reported
Tank Use: Not reported
STG: Not reported
Content: Not reported
Number Of Tanks: 0

C12
ENE
1/8-1/4
0.226 mi.
1194 ft.

JIMMY ACKERSON/MARILEE SCHAUF
6926 LEISURE TOWN RD
VACAVILLE, CA 95688

Site 3 of 3 in cluster C

CA FID UST **S101628042** **N/A**

Relative: **Lower**

Actual: **92 ft.**

CA FID UST:
Facility ID: 48002137
Regulated By: UTNKI
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: Not reported
Mail To: Not reported
Mailing Address: 6926 LEISURE TOWN RD
Mailing Address 2: Not reported
Mailing City,St,Zip: VACAVILLE 95688
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Inactive

D13
ESE
1/4-1/2
0.303 mi.
1602 ft.

LYNN & SONS YARD
5065 QUINN RD
VACAVILLE, CA 94585

Site 1 of 3 in cluster D

LUST **CA FID UST** **S101624183** **N/A**

Relative: **Lower**

Actual: **88 ft.**

SOLANO CO. LUST:
Region: SOLANO
Facility ID: 80084
Facility Status: Inactive
Facility Phone: Not reported
Program: 29S
Inventory Number: 1
Inventory Type: LOP - Closed Site (128)
Inventory Description: Reference date 12/7/05
Last service/permit exp: REVIEW REPORTS /POST REM MONIT
Last service date: 09/26/2008

CA FID UST:
Facility ID: 48002148
Regulated By: UTNKI
Regulated ID: 00033183

LYNN & SONS YARD (Continued) **S101624183**

Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7074251686
Mail To:	Not reported
Mailing Address:	601 PHILIP WAY
Mailing Address 2:	Not reported
Mailing City,St,Zip:	VACAVILLE 94585
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Inactive

D14 **5057 & 5065 QUINN ROAD** **LUST** **S107472823**
ESE **5065 QUINN ROAD** **N/A**
1/4-1/2 **VACAVILLE, CA**
0.303 mi.
1602 ft. **Site 2 of 3 in cluster D**

Relative: Lower

Actual: 88 ft.

LUST REG 5:

Region:	5
Status:	Case Closed
Case Number:	480229
Case Type:	Drinking Water Aquifer affected
Substance:	Not reported
Staff Initials:	JIM
Lead Agency:	Local
Program:	LUST
MTBE Code:	N/A

D15 **LYNN & SONS YARD** **LUST** **U001598658**
ESE **5065 QUINN RD** **HIST UST** **N/A**
1/4-1/2 **VACAVILLE, CA 94585**
0.303 mi.
1602 ft. **Site 3 of 3 in cluster D**

Relative: Lower

Actual: 88 ft.

LUST:

Region:	STATE
Global Id:	T0609523558
Latitude:	38.392682
Longitude:	-121.930977
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	04/23/2008
Lead Agency:	SOLANO COUNTY LOP
Case Worker:	JRB
Local Agency:	SOLANO COUNTY LOP
RB Case Number:	480229
LOC Case Number:	80084
File Location:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Diesel, Waste Oil / Motor / Hydraulic / Lubricating
Site History:	Not reported

LYNN & SONS YARD (Continued) **U001598658**

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0609523558
Contact Type:	Local Agency Caseworker
Contact Name:	JOSUWA R. BERNARDO
Organization Name:	SOLANO COUNTY LOP
Address:	675 TEXAS STREET, SUITE 5500
City:	FAIRFIELD
Email:	jbernardo@solanocounty.com
Phone Number:	7077846765

Status History:

Global Id:	T0609523558
Status:	Open - Case Begin Date
Status Date:	12/07/2005
Global Id:	T0609523558
Status:	Open - Site Assessment
Status Date:	12/07/2005
Global Id:	T0609523558
Status:	Completed - Case Closed
Status Date:	04/23/2008
Global Id:	T0609523558
Status:	Open - Verification Monitoring
Status Date:	12/13/2006

Regulatory Activities:

Global Id:	T0609523558
Action Type:	Other
Date:	12/07/2005
Action:	Leak Reported
Global Id:	T0609523558
Action Type:	ENFORCEMENT
Date:	04/23/2008
Action:	Closure/No Further Action Letter
Global Id:	T0609523558
Action Type:	ENFORCEMENT
Date:	09/26/2007
Action:	File review
Global Id:	T0609523558
Action Type:	Other
Date:	12/07/2005
Action:	Leak Discovery
Global Id:	T0609523558
Action Type:	ENFORCEMENT
Date:	04/08/2008
Action:	LOP Case Closure Summary to RB
Global Id:	T0609523558

LYNN & SONS YARD (Continued) **U001598658**

Action Type:	REMEDIATION
Date:	09/29/2005
Action:	Other (Use Description Field)
Global Id:	T0609523558
Action Type:	ENFORCEMENT
Date:	04/08/2008
Action:	File review
Global Id:	T0609523558
Action Type:	ENFORCEMENT
Date:	04/05/2007
Action:	File review
Global Id:	T0609523558
Action Type:	ENFORCEMENT
Date:	01/15/2008
Action:	File review

HIST UST:

Region:	STATE
Facility ID:	00000033183
Facility Type:	Gas Station
Other Type:	Not reported
Contact Name:	DEAN
Telephone:	7074251686
Owner Name:	LYNN & SONS
Owner Address:	601 PHILIP WAY
Owner City,St,Zip:	SUISUN CITY, CA 94585
Total Tanks:	0001
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00003000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor

16
WNW
1/2-1
0.854 mi.
4509 ft.

SPRIG CIRCUITS, INC.
765-A EUBANKS DRIVE (UNITS A,
VACAVILLE, CA 95688

RCRA-LQG **1000252519**
ENVIROSTOR **CAD980881098**

Relative:
Higher

Actual:
120 ft.

RCRA-LQG:

Date form received by agency:	05/28/2010
Facility name:	SPRIG CIRCUITS, INC.
Facility address:	765-A EUBANKS DRIVE (UNITS A, B, & B-1) VACAVILLE, CA 95688
EPA ID:	CAD980881098
Mailing address:	765-A EUBANKS DR. VACAVILLE, CA 95688
Contact:	TYLER CHRISTENSEN

SPRIG CIRCUITS, INC. (Continued) **1000252519**

Contact address: 765-A EUBANKS DR.
VACAVILLE, CA 95688
Contact country: US
Contact telephone: (707) 447-7744
Contact email: TYLER@SPRIGCIRCUITS.COIM
EPA Region: 09
Land type: Private
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: SPRIG CIRCUITS, INC.
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 10/01/1983
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

Owner/operator name: KLP PROPERTIES
Owner/operator address: 4432 PIEDMONT AVENUE
OAKLAND, CA 94611
Owner/operator country: US
Owner/operator telephone: (510) 654-4257
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 07/20/2005
Owner/Op end date: Not reported

Owner/operator name: SPRIG CIRCUITS INC
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212

SPRIG CIRCUITS, INC. (Continued) **1000252519**

Legal status: Private
Owner/Operator Type: Owner
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: 02/11/2008
Site name: SPRIG CIRCUITS, INC.
Classification: Large Quantity Generator

Date form received by agency: 02/28/2006
Site name: SPRIG CIRCUITS, INC.
Classification: Large Quantity Generator

Date form received by agency: 02/26/2004
Site name: SPRIG CIRCUITS, INC.
Classification: Large Quantity Generator

Date form received by agency: 03/04/2002
Site name: SPRIG CIRCUITS INC
Classification: Large Quantity Generator

Date form received by agency: 10/12/2000
Site name: SPRIG CIRCUITS, INC.
Classification: Large Quantity Generator

Date form received by agency: 03/04/1999
Site name: SPRIG CIRCUITS, INC.
Classification: Large Quantity Generator

Date form received by agency: 09/01/1996
Site name: SPRIG CIRCUITS INC
Classification: Large Quantity Generator

Date form received by agency: 02/28/1996
Site name: SPRIG CIRCUITS, INC.
Classification: Large Quantity Generator

Date form received by agency: 03/30/1994

SPRIG CIRCUITS, INC. (Continued) **1000252519**

Site name: SPRING CIRCUITS INC
Classification: Large Quantity Generator

Date form received by agency: 02/25/1992
Site name: SPRIG CIRCUITS INC
Classification: Large Quantity Generator

Date form received by agency: 12/20/1983
Site name: SPRIG CIRCUITS INC
Classification: Large Quantity Generator

Hazardous Waste Summary:

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D004
Waste name: ARSENIC

Waste code: D007
Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: F006
Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D004
Waste name: ARSENIC

Waste code: D007
Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

SPRIG CIRCUITS, INC. (Continued) **1000252519**

Waste code: F006
Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

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: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D004
Waste name: ARSENIC

Waste code: D007
Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: F006
Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

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: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A

SPRIG CIRCUITS, INC. (Continued) **1000252519**

CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D004
Waste name: ARSENIC

Waste code: D007
Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: F006
Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

Facility Has Received Notices of Violations:

Regulation violated: Not reported
Area of violation: Generators - Pre-transport
Date violation determined: 11/17/2010
Date achieved compliance: 03/22/2011
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: LDR - General
Date violation determined: 08/15/1988
Date achieved compliance: 11/19/1992
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/15/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: LDR - General
Date violation determined: 08/15/1988
Date achieved compliance: 11/19/1992

SPRIG CIRCUITS, INC. (Continued) **1000252519**

Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 08/21/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 17000
Final penalty amount: 17000
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 08/15/1988
Date achieved compliance: 11/19/1989
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/15/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 08/15/1988
Date achieved compliance: 11/19/1989
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 08/21/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 17000
Final penalty amount: 17000
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: LDR - General
Date violation determined: 05/19/1988
Date achieved compliance: 07/27/1989
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 06/30/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 11/17/2010
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 03/22/2011

SPRIG CIRCUITS, INC. (Continued) **1000252519**

Evaluation lead agency:	EPA
Evaluation date:	08/15/1988
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	LDR - General
Date achieved compliance:	11/19/1992
Evaluation lead agency:	State
Evaluation date:	08/15/1988
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Generators - General
Date achieved compliance:	11/19/1989
Evaluation lead agency:	State
Evaluation date:	05/19/1988
Evaluation:	FOCUSED COMPLIANCE INSPECTION
Area of violation:	LDR - General
Date achieved compliance:	07/27/1989
Evaluation lead agency:	State

ENVIROSTOR:

Facility ID:	71002695
Status:	Inactive - Needs Evaluation
Status Date:	Not reported
Site Code:	Not reported
Site Type:	Tiered Permit
Site Type Detailed:	Tiered Permit
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	NONE SPECIFIED
Lead Agency:	NONE SPECIFIED
Program Manager:	Not reported
Supervisor:	Not reported
Division Branch:	Cleanup Sacramento
Assembly:	Not reported
Senate:	Not reported
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Not reported
Latitude:	0
Longitude:	0
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	NONE SPECIFIED
Confirmed COC:	NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	CAD980881098
Alias Type:	EPA Identification Number
Alias Name:	110000886872
Alias Type:	EPA (FRS #)
Alias Name:	71002695
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	Not reported
Completed Sub Area Name:	Not reported
Completed Document Type:	Not reported

SPRIG CIRCUITS, INC. (Continued) **1000252519**

Completed Date:	Not reported
Comments:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

17
North
1/2-1
0.981 mi.
5178 ft.

VACAVILLE ELEMENTARY SCHOOL #1
WEST OF LEISURE TOWN RD./SOUTH OF MIDWAY RD.
VACAVILLE, CA 95688

SCH **S112057178**
ENVIROSTOR **N/A**

Relative:
Higher

Actual:
99 ft.

SCH:

Facility ID:	60001623
Site Type:	School Investigation
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	11
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Neal Hutchison
Supervisor:	Juan Koponen
Division Branch:	Northern California Schools & Santa Susana
Site Code:	104700
Assembly:	04
Senate:	03
Special Program Status:	Not reported
Status:	No Further Action
Status Date:	02/08/2013
Restricted Use:	NO
Funding:	School District
Latitude:	38.41077
Longitude:	-121.9374
APN:	0106-240-29
Past Use:	AGRICULTURAL - ROW CROPS
Potential COC:	Under Investigation, Arsenic, Chlordane, DDD, DDE, DDT, Endrin, Toxaphene, Dieldrin
Confirmed COC:	Arsenic, 30004-NO, 30006-NO, 30007-NO, 30008-NO, 30010-NO, 30207-NO, 31001-NO, 30023-NO
Potential Description:	NMA, SOIL
Alias Name:	New Elementary School #1
Alias Type:	Alternate Name
Alias Name:	0106-240-29
Alias Type:	APN
Alias Name:	104700
Alias Type:	Project Code (Site Code)
Alias Name:	60001623
Alias Type:	Envirostor ID Number

VACAVILLE ELEMENTARY SCHOOL #1 (Continued) **S112057178**

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	02/08/2013
Comments:	CRU memo completed by PM and forwarded to CRU.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Environmental Oversight Agreement
Completed Date:	02/21/2012
Comments:	Finalized EOA with UC signature sent back to District.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Workplan
Completed Date:	04/24/2012
Comments:	PM approved PEA workplan for Vacaville ES #1 site.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	02/07/2013
Comments:	PEA approved by DTSC on 2/7/2013 with NFA determination.
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

ENVIROSTOR:

Facility ID:	60001623
Status:	No Further Action
Status Date:	02/08/2013
Site Code:	104700
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	11
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Neal Hutchison
Supervisor:	Juan Koponen
Division Branch:	Northern California Schools & Santa Susana
Assembly:	04
Senate:	03
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	School District
Latitude:	38.41077

VACAVILLE ELEMENTARY SCHOOL #1 (Continued) **S112057178**

Longitude: -121.9374
APN: 0106-240-29
Past Use: AGRICULTURAL - ROW CROPS
Potential COC: Under Investigation Arsenic Chlordane DDD DDE DDT Endrin Toxaphene Dieldrin
Confirmed COC: Arsenic 30004-NO 30006-NO 30007-NO 30008-NO 30010-NO 30207-NO 31001-NO 30023-NO
Potential Description: NMA, SOIL
Alias Name: New Elementary School #1
Alias Type: Alternate Name
Alias Name: 0106-240-29
Alias Type: APN
Alias Name: 104700
Alias Type: Project Code (Site Code)
Alias Name: 60001623
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 02/08/2013
Comments: CRU memo completed by PM and forwarded to CRU.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 02/21/2012
Comments: Finalized EOA with UC signature sent back to District.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Workplan
Completed Date: 04/24/2012
Comments: PM approved PEA workplan for Vacaville ES #1 site.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 02/07/2013
Comments: PEA approved by DTSC on 2/7/2013 with NFA determination.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

Count: 6 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
VACAVILLE	1001217683	SFPP LP ELMIRA BOOSTER STN	LEISURE TOWN RD AND S P R R T	95688	RCRA-SQG, SLIC
VACAVILLE	S107261691	MAPLEWOOD SUBDIVISION	LEISURE TOWN RD	95687	LUST
VACAVILLE	S106230514	PG&E GAS DEHYDRATOR STATION, MILLA	ROBBIN RD AND RADIO STATION RD		SLIC
VACAVILLE	1011917323	SOLANO COMMUNITY COLLEGE	1951 N VILLAGE PKWY	95688	FINDS
VACAVILLE	1011861664	SOLANO COMMUNITY COLLEGE	1951 N VILLAGE PKWY	95688	RCRA-SQG
VACAVILLE	S113803451	SOLANO COMMUNITY COLLEGE	1951 N VILLAGE PKWY	95688	HAZNET

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: 12/16/2014
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32

Source: EPA
Telephone: N/A
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 04/20/2015
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 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

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: 12/16/2014
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32

Source: EPA
Telephone: N/A
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 04/20/2015
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

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 12/16/2014
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32

Source: EPA
Telephone: N/A
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 04/20/2015
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: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 94

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 01/09/2015
Next Scheduled EDR Contact: 03/09/2015
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: 07/21/2014
Date Data Arrived at EDR: 10/07/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 01/09/2015
Next Scheduled EDR Contact: 04/20/2015
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: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 94

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 01/09/2015
Next Scheduled EDR Contact: 03/09/2015
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: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
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: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
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: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
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: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
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: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 09/18/2014
Date Data Arrived at EDR: 09/19/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 12/03/2014
Next Scheduled EDR Contact: 03/16/2015
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: 09/18/2014
Date Data Arrived at EDR: 09/19/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 12/03/2014
Next Scheduled EDR Contact: 03/16/2015
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: 12/03/2014
Date Data Arrived at EDR: 12/12/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 48

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 11/17/2014
Next Scheduled EDR Contact: 03/02/2015
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: 09/29/2014
Date Data Arrived at EDR: 09/30/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 37

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
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: 11/03/2014
Date Data Arrived at EDR: 11/04/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 38

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/03/2015
Next Scheduled EDR Contact: 05/18/2015
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: 11/03/2014
Date Data Arrived at EDR: 11/04/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 38

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/03/2015
Next Scheduled EDR Contact: 05/18/2015
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: 11/17/2014
Date Data Arrived at EDR: 11/19/2014
Date Made Active in Reports: 12/24/2014
Number of Days to Update: 35

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 11/19/2014
Next Scheduled EDR Contact: 03/02/2015
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

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 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 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 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

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 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 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: 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: 01/20/2015
Date Data Arrived at EDR: 01/21/2015
Date Made Active in Reports: 02/05/2015
Number of Days to Update: 15

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 01/21/2015
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Quarterly

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

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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

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: 01/20/2015
Date Data Arrived at EDR: 01/21/2015
Date Made Active in Reports: 02/05/2015
Number of Days to Update: 15

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 01/21/2015
Next Scheduled EDR Contact: 03/30/2015
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

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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 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: 11/04/2014
Date Data Arrived at EDR: 11/07/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 10

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 09/23/2014
Date Data Arrived at EDR: 11/25/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 65

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/06/2014
Date Data Arrived at EDR: 10/29/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 19

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 07/30/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 10

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
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: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 184

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/30/2015
Next Scheduled EDR Contact: 05/11/2015
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: 11/10/2014
Date Data Arrived at EDR: 11/14/2014
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 87

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 11/03/2014
Date Data Arrived at EDR: 11/05/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 12

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

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: 01/08/2015
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 05/11/2015
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: 01/20/2015
Date Data Arrived at EDR: 01/21/2015
Date Made Active in Reports: 01/27/2015
Number of Days to Update: 6

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 01/21/2015
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

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: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 12/23/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Quarterly

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: 07/30/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 10

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Semi-Annually

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: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 01/27/2014
Number of Days to Update: 271

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/30/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 09/23/2014
Date Data Arrived at EDR: 11/25/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 65

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
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: 11/04/2014
Date Data Arrived at EDR: 11/07/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 10

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
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: 11/13/2014
Date Data Arrived at EDR: 11/18/2014
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 83

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

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: 10/06/2014
Date Data Arrived at EDR: 10/29/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 8

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
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: 11/03/2014
Date Data Arrived at EDR: 11/05/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 12

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

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: 11/10/2014
Date Data Arrived at EDR: 11/14/2014
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 87

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
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: 01/12/2015
Next Scheduled EDR Contact: 04/27/2015
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: 09/29/2014
Date Data Arrived at EDR: 10/01/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 36

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 12/31/2014
Next Scheduled EDR Contact: 04/13/2015
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: 11/03/2014
Date Data Arrived at EDR: 11/04/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 38

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/03/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Quarterly

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

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: 12/22/2014
Date Data Arrived at EDR: 12/22/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 38

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/22/2014
Next Scheduled EDR Contact: 04/06/2015
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: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 12/15/2014
Date Data Arrived at EDR: 12/15/2014
Date Made Active in Reports: 01/26/2015
Number of Days to Update: 42

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/15/2014
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 12/01/2014
Date Data Arrived at EDR: 12/01/2014
Date Made Active in Reports: 01/23/2015
Number of Days to Update: 53

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 11/12/2014
Next Scheduled EDR Contact: 03/02/2015
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: 02/02/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Varies

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: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: No Update Planned

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: 11/10/2014	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 12/01/2014	Telephone: 202-307-1000
Date Made Active in Reports: 02/09/2015	Last EDR Contact: 11/25/2014
Number of Days to Update: 70	Next Scheduled EDR Contact: 03/16/2015
	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	Source: Department of Toxic Substance Control
Date Data Arrived at EDR: 08/03/2006	Telephone: 916-323-3400
Date Made Active in Reports: 08/24/2006	Last EDR Contact: 02/23/2009
Number of Days to Update: 21	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: 11/03/2014	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 11/04/2014	Telephone: 916-323-3400
Date Made Active in Reports: 12/12/2014	Last EDR Contact: 02/03/2015
Number of Days to Update: 38	Next Scheduled EDR Contact: 05/18/2015
	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	Source: State Water Resources Control Board
Date Data Arrived at EDR: 08/30/1995	Telephone: 916-227-4364
Date Made Active in Reports: 09/26/1995	Last EDR Contact: 01/26/2009
Number of Days to Update: 27	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: 06/30/2014	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 09/02/2014	Telephone: 916-255-6504
Date Made Active in Reports: 09/24/2014	Last EDR Contact: 01/12/2015
Number of Days to Update: 22	Next Scheduled EDR Contact: 04/27/2015
	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: 11/10/2014
Date Data Arrived at EDR: 12/01/2014
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 70

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/25/2014
Next Scheduled EDR Contact: 03/16/2015
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: 12/24/2014
Next Scheduled EDR Contact: 03/16/2015
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: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 01/30/2015
Next Scheduled EDR Contact: 05/11/2015
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: 12/15/2014
Date Data Arrived at EDR: 12/18/2014
Date Made Active in Reports: 01/23/2015
Number of Days to Update: 36

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 12/05/2014
Next Scheduled EDR Contact: 03/23/2015
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: 12/08/2014
Date Data Arrived at EDR: 12/09/2014
Date Made Active in Reports: 01/23/2015
Number of Days to Update: 45

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 12/09/2014
Next Scheduled EDR Contact: 03/23/2015
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: 09/30/2014
Date Data Arrived at EDR: 10/01/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 36

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 12/30/2014
Next Scheduled EDR Contact: 04/13/2015
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: 10/27/2014
Date Data Arrived at EDR: 10/29/2014
Date Made Active in Reports: 12/10/2014
Number of Days to Update: 42

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 01/28/2015
Next Scheduled EDR Contact: 05/11/2015
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: 01/20/2015
Date Data Arrived at EDR: 01/21/2015
Date Made Active in Reports: 02/05/2015
Number of Days to Update: 15

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 01/21/2015
Next Scheduled EDR Contact: 03/30/2015
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: 01/20/2015
Date Data Arrived at EDR: 01/21/2015
Date Made Active in Reports: 02/05/2015
Number of Days to Update: 15

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 01/21/2015
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: 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: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
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: 02/03/2015
Next Scheduled EDR Contact: 05/18/2015
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: 01/15/2015
Next Scheduled EDR Contact: 04/27/2015
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: 06/06/2014	Source: U.S. Army Corps of Engineers
Date Data Arrived at EDR: 09/10/2014	Telephone: 202-528-4285
Date Made Active in Reports: 09/18/2014	Last EDR Contact: 12/12/2014
Number of Days to Update: 8	Next Scheduled EDR Contact: 03/23/2015
	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: 12/31/2013	Source: Department of Justice, Consent Decree Library
Date Data Arrived at EDR: 01/24/2014	Telephone: Varies
Date Made Active in Reports: 02/24/2014	Last EDR Contact: 12/24/2014
Number of Days to Update: 31	Next Scheduled EDR Contact: 04/13/2015
	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: 11/25/2013	Source: EPA
Date Data Arrived at EDR: 12/12/2013	Telephone: 703-416-0223
Date Made Active in Reports: 02/24/2014	Last EDR Contact: 12/12/2014
Number of Days to Update: 74	Next Scheduled EDR Contact: 03/23/2015
	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	Source: Department of Energy
Date Data Arrived at EDR: 10/07/2011	Telephone: 505-845-0011
Date Made Active in Reports: 03/01/2012	Last EDR Contact: 11/26/2014
Number of Days to Update: 146	Next Scheduled EDR Contact: 03/09/2015
	Data Release Frequency: Varies

US 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: 12/30/2014	Source: Department of Labor, Mine Safety and Health Administration
Date Data Arrived at EDR: 12/31/2014	Telephone: 303-231-5959
Date Made Active in Reports: 01/29/2015	Last EDR Contact: 12/30/2014
Number of Days to Update: 29	Next Scheduled EDR Contact: 03/16/2015
	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: 12/31/2011	Source: EPA
Date Data Arrived at EDR: 07/31/2013	Telephone: 202-566-0250
Date Made Active in Reports: 09/13/2013	Last EDR Contact: 01/29/2015
Number of Days to Update: 44	Next Scheduled EDR Contact: 03/09/2015
	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: 12/31/2012
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 14

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 12/22/2014
Next Scheduled EDR Contact: 04/06/2015
Data Release Frequency: Every 4 Years

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: 11/19/2014
Next Scheduled EDR Contact: 03/09/2015
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: 11/19/2014
Next Scheduled EDR Contact: 03/09/2015
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: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
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: 07/31/2014
Date Data Arrived at EDR: 10/29/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 8

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 01/09/2015
Next Scheduled EDR Contact: 04/27/2015
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: 07/01/2014
Date Data Arrived at EDR: 10/15/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 33

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 01/16/2015
Next Scheduled EDR Contact: 04/27/2015
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: 12/29/2014
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 21

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 12/04/2014
Next Scheduled EDR Contact: 03/23/2015
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: 10/07/2014
Date Data Arrived at EDR: 10/08/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 04/20/2015
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: 08/16/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 12/09/2014
Next Scheduled EDR Contact: 03/23/2015
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

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 08/01/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

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: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/19/2013
Number of Days to Update: 52

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 11/26/2014
Next Scheduled EDR Contact: 03/09/2015
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

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 11/17/2014
Date Data Arrived at EDR: 11/19/2014
Date Made Active in Reports: 12/29/2014
Number of Days to Update: 40

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 11/19/2014
Next Scheduled EDR Contact: 03/02/2015
Data Release Frequency: Quarterly

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 11/19/2014
Date Data Arrived at EDR: 12/15/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 45

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 12/15/2014
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Varies

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: 12/29/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 02/03/2015
Number of Days to Update: 36

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
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: 12/18/2014
Next Scheduled EDR Contact: 04/06/2015
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: 06/28/2014
Date Data Arrived at EDR: 07/03/2014
Date Made Active in Reports: 08/21/2014
Number of Days to Update: 49

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 12/22/2014
Next Scheduled EDR Contact: 03/23/2015
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: 12/23/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 11/10/2014
Date Data Arrived at EDR: 11/12/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 30

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
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: 12/31/2013
Date Data Arrived at EDR: 10/15/2014
Date Made Active in Reports: 11/19/2014
Number of Days to Update: 35

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 01/16/2015
Next Scheduled EDR Contact: 04/27/2015
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: 12/31/2012
Date Data Arrived at EDR: 03/25/2014
Date Made Active in Reports: 04/28/2014
Number of Days to Update: 34

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 12/24/2014
Next Scheduled EDR Contact: 04/06/2015
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: 01/15/2015
Next Scheduled EDR Contact: 04/27/2015
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: 11/18/2014
Next Scheduled EDR Contact: 02/02/2015
Data Release Frequency: Varies

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: 11/19/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 11/14/2014
Next Scheduled EDR Contact: 02/23/2015
Data Release Frequency: Varies

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 12/29/2015
Next Scheduled EDR Contact: 04/13/2015
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: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 12/15/2014
Date Data Arrived at EDR: 12/15/2014
Date Made Active in Reports: 01/26/2015
Number of Days to Update: 42

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/15/2014
Next Scheduled EDR Contact: 03/30/2015
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: 11/19/2014
Date Data Arrived at EDR: 11/21/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 69

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 11/11/2014
Next Scheduled EDR Contact: 03/02/2015
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: 11/24/2014
Date Data Arrived at EDR: 11/25/2014
Date Made Active in Reports: 12/30/2014
Number of Days to Update: 35

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/25/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Quarterly

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: 01/12/2015
Date Data Arrived at EDR: 01/13/2015
Date Made Active in Reports: 02/03/2015
Number of Days to Update: 21

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 01/13/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Quarterly

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: 01/15/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Varies

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: 11/13/2014
Date Data Arrived at EDR: 12/09/2014
Date Made Active in Reports: 01/26/2015
Number of Days to Update: 48

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 12/09/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Varies

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: 01/30/2015
Next Scheduled EDR Contact: 05/11/2015
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: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 12/12/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 10/28/2014
Date Data Arrived at EDR: 10/30/2014
Date Made Active in Reports: 12/10/2014
Number of Days to Update: 41

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

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: 11/17/2014
Date Data Arrived at EDR: 11/18/2014
Date Made Active in Reports: 12/29/2014
Number of Days to Update: 41

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 11/26/2014
Next Scheduled EDR Contact: 03/02/2015
Data Release Frequency: Varies

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/16/2014
Date Data Arrived at EDR: 10/31/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 17

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 02/06/2015
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Annually

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/16/2014
Date Data Arrived at EDR: 10/31/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 17

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 02/06/2015
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Annually

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: 01/15/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: N/A

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 11/25/2014
Date Data Arrived at EDR: 11/26/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive 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 Exclusive 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. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

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 Exclusive 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. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

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 RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
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: 10/21/2014
Date Data Arrived at EDR: 11/07/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 35

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 10/21/2014
Date Data Arrived at EDR: 11/07/2014
Date Made Active in Reports: 12/15/2014
Number of Days to Update: 38

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List

Cupa Facility List

Date of Government Version: 12/08/2014
Date Data Arrived at EDR: 12/11/2014
Date Made Active in Reports: 01/23/2015
Number of Days to Update: 43

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 12/05/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing
Cupa facility list.

Date of Government Version: 11/20/2014
Date Data Arrived at EDR: 11/24/2014
Date Made Active in Reports: 01/07/2015
Number of Days to Update: 44

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 10/06/2014
Date Data Arrived at EDR: 10/07/2014
Date Made Active in Reports: 11/19/2014
Number of Days to Update: 43

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 01/12/2015
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 06/11/2014
Date Data Arrived at EDR: 06/13/2014
Date Made Active in Reports: 07/07/2014
Number of Days to Update: 24

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
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: 11/17/2014
Date Data Arrived at EDR: 11/19/2014
Date Made Active in Reports: 01/06/2015
Number of Days to Update: 48

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 02/02/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List
Cupa Facility list

Date of Government Version: 11/03/2014
Date Data Arrived at EDR: 11/04/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 38

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 02/02/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 11/19/2014
Date Data Arrived at EDR: 11/21/2014
Date Made Active in Reports: 12/29/2014
Number of Days to Update: 38

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 02/02/2015
Next Scheduled EDR Contact: 05/18/2015
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: 12/31/2014
Date Data Arrived at EDR: 01/16/2015
Date Made Active in Reports: 02/05/2015
Number of Days to Update: 20

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Semi-Annually

HUMBOLDT COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 12/11/2014
Date Data Arrived at EDR: 12/15/2014
Date Made Active in Reports: 01/23/2015
Number of Days to Update: 39

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 11/26/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

IMPERIAL COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 11/03/2014
Date Data Arrived at EDR: 11/04/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 38

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 09/10/2013
Date Data Arrived at EDR: 09/11/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 33

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 11/19/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 07/22/2014
Date Data Arrived at EDR: 11/12/2014
Date Made Active in Reports: 12/19/2014
Number of Days to Update: 37

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
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: 11/21/2014
Date Data Arrived at EDR: 11/25/2014
Date Made Active in Reports: 12/30/2014
Number of Days to Update: 35

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 11/21/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/20/2015
Date Data Arrived at EDR: 01/21/2015
Date Made Active in Reports: 02/05/2015
Number of Days to Update: 15

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 01/19/2015
Next Scheduled EDR Contact: 05/04/2015
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: 12/18/2014
Next Scheduled EDR Contact: 04/06/2015
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 03/31/2014
Date Data Arrived at EDR: 06/06/2014
Date Made Active in Reports: 07/17/2014
Number of Days to Update: 41

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 01/12/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/19/2015
Date Data Arrived at EDR: 01/20/2015
Date Made Active in Reports: 02/05/2015
Number of Days to Update: 16

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 01/20/2015
Next Scheduled EDR Contact: 05/04/2015
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: 01/19/2015
Next Scheduled EDR Contact: 05/04/2015
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/07/2014
Date Data Arrived at EDR: 02/25/2014
Date Made Active in Reports: 03/25/2014
Number of Days to Update: 28

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 01/19/2015
Next Scheduled EDR Contact: 05/04/2015
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 10/20/2014
Date Data Arrived at EDR: 10/22/2014
Date Made Active in Reports: 12/15/2014
Number of Days to Update: 54

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 02/02/2015
Next Scheduled EDR Contact: 05/04/2015
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: 12/01/2014
Date Data Arrived at EDR: 12/11/2014
Date Made Active in Reports: 01/27/2015
Number of Days to Update: 47

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/08/2015
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/27/2015
Number of Days to Update: 12

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 01/12/2015
Next Scheduled EDR Contact: 04/27/2015
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: 10/02/2014
Date Data Arrived at EDR: 10/03/2014
Date Made Active in Reports: 11/20/2014
Number of Days to Update: 48

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 11/26/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 10/08/2014
Date Data Arrived at EDR: 10/22/2014
Date Made Active in Reports: 12/15/2014
Number of Days to Update: 54

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 11/25/2014
Date Data Arrived at EDR: 11/26/2014
Date Made Active in Reports: 12/29/2014
Number of Days to Update: 33

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 11/21/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List
CUPA Facility List

Date of Government Version: 12/01/2014
Date Data Arrived at EDR: 12/05/2014
Date Made Active in Reports: 01/23/2015
Number of Days to Update: 49

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 11/26/2014
Next Scheduled EDR Contact: 03/16/2015
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 12/18/2014
Date Data Arrived at EDR: 12/19/2014
Date Made Active in Reports: 01/23/2015
Number of Days to Update: 35

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 11/26/2014
Next Scheduled EDR Contact: 03/09/2015
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	Source: Napa County Department of Environmental Management
Date Data Arrived at EDR: 12/06/2011	Telephone: 707-253-4269
Date Made Active in Reports: 02/07/2012	Last EDR Contact: 11/25/2014
Number of Days to Update: 63	Next Scheduled EDR Contact: 03/16/2015
	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	Source: Napa County Department of Environmental Management
Date Data Arrived at EDR: 01/16/2008	Telephone: 707-253-4269
Date Made Active in Reports: 02/08/2008	Last EDR Contact: 11/25/2014
Number of Days to Update: 23	Next Scheduled EDR Contact: 03/16/2015
	Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 09/16/2014	Source: Community Development Agency
Date Data Arrived at EDR: 09/18/2014	Telephone: 530-265-1467
Date Made Active in Reports: 09/25/2014	Last EDR Contact: 02/06/2015
Number of Days to Update: 7	Next Scheduled EDR Contact: 05/18/2015
	Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups

Petroleum and non-petroleum spills.

Date of Government Version: 11/01/2014	Source: Health Care Agency
Date Data Arrived at EDR: 11/12/2014	Telephone: 714-834-3446
Date Made Active in Reports: 12/12/2014	Last EDR Contact: 02/09/2015
Number of Days to Update: 30	Next Scheduled EDR Contact: 05/25/2015
	Data Release Frequency: Annually

List of Underground Storage Tank Cleanups

Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 11/01/2014	Source: Health Care Agency
Date Data Arrived at EDR: 11/12/2014	Telephone: 714-834-3446
Date Made Active in Reports: 12/12/2014	Last EDR Contact: 02/09/2015
Number of Days to Update: 30	Next Scheduled EDR Contact: 05/25/2015
	Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities

Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 11/01/2014	Source: Health Care Agency
Date Data Arrived at EDR: 11/10/2014	Telephone: 714-834-3446
Date Made Active in Reports: 12/15/2014	Last EDR Contact: 02/09/2015
Number of Days to Update: 35	Next Scheduled EDR Contact: 05/25/2015
	Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 12/08/2014	Source: Placer County Health and Human Services
Date Data Arrived at EDR: 12/09/2014	Telephone: 530-745-2363
Date Made Active in Reports: 01/26/2015	Last EDR Contact: 12/05/2014
Number of Days to Update: 48	Next Scheduled EDR Contact: 03/23/2015
	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: 10/08/2014	Source: Department of Environmental Health
Date Data Arrived at EDR: 10/10/2014	Telephone: 951-358-5055
Date Made Active in Reports: 11/20/2014	Last EDR Contact: 12/22/2014
Number of Days to Update: 41	Next Scheduled EDR Contact: 01/05/2015
	Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 10/08/2014	Source: Department of Environmental Health
Date Data Arrived at EDR: 10/10/2014	Telephone: 951-358-5055
Date Made Active in Reports: 11/25/2014	Last EDR Contact: 12/22/2014
Number of Days to Update: 46	Next Scheduled EDR Contact: 04/06/2015
	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: 11/03/2014	Source: Sacramento County Environmental Management
Date Data Arrived at EDR: 01/07/2015	Telephone: 916-875-8406
Date Made Active in Reports: 02/03/2015	Last EDR Contact: 01/07/2015
Number of Days to Update: 27	Next Scheduled EDR Contact: 04/20/2015
	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: 11/03/2014	Source: Sacramento County Environmental Management
Date Data Arrived at EDR: 01/09/2015	Telephone: 916-875-8406
Date Made Active in Reports: 02/03/2015	Last EDR Contact: 01/05/2015
Number of Days to Update: 25	Next Scheduled EDR Contact: 04/20/2015
	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: 12/02/2014
Date Data Arrived at EDR: 12/04/2014
Date Made Active in Reports: 01/26/2015
Number of Days to Update: 53

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
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: 09/23/2013
Date Data Arrived at EDR: 09/24/2013
Date Made Active in Reports: 10/17/2013
Number of Days to Update: 23

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 12/04/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2014
Date Data Arrived at EDR: 11/21/2014
Date Made Active in Reports: 12/29/2014
Number of Days to Update: 38

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
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: 12/04/2014
Next Scheduled EDR Contact: 03/23/2015
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: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
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: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
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: 01/08/2015
Date Data Arrived at EDR: 01/12/2015
Date Made Active in Reports: 01/27/2015
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/06/2015
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 11/21/2014
Date Data Arrived at EDR: 11/24/2014
Date Made Active in Reports: 12/30/2014
Number of Days to Update: 36

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 11/21/2014
Next Scheduled EDR Contact: 03/09/2015
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: 01/09/2015
Date Data Arrived at EDR: 01/12/2015
Date Made Active in Reports: 02/03/2015
Number of Days to Update: 22

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/15/2014
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 12/15/2014
Date Data Arrived at EDR: 12/18/2014
Date Made Active in Reports: 01/26/2015
Number of Days to Update: 39

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/11/2014
Next Scheduled EDR Contact: 03/30/2015
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: 11/19/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List
Cupa facility list

Date of Government Version: 11/25/2014
Date Data Arrived at EDR: 11/26/2014
Date Made Active in Reports: 12/30/2014
Number of Days to Update: 34

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 11/21/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

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: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 11/25/2014
Next Scheduled EDR Contact: 03/16/2015
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/10/2014
Date Data Arrived at EDR: 11/10/2014
Date Made Active in Reports: 12/15/2014
Number of Days to Update: 35

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List
CUPA facility listing.

Date of Government Version: 11/24/2014
Date Data Arrived at EDR: 11/25/2014
Date Made Active in Reports: 12/31/2014
Number of Days to Update: 36

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 11/21/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 12/09/2014
Date Data Arrived at EDR: 12/11/2014
Date Made Active in Reports: 01/23/2015
Number of Days to Update: 43

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 11/26/2014
Next Scheduled EDR Contact: 03/09/2015
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: 11/17/2014	Source: Solano County Department of Environmental Management
Date Data Arrived at EDR: 11/24/2014	Telephone: 707-784-6770
Date Made Active in Reports: 01/05/2015	Last EDR Contact: 12/11/2014
Number of Days to Update: 42	Next Scheduled EDR Contact: 03/30/2015
	Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 11/17/2014	Source: Solano County Department of Environmental Management
Date Data Arrived at EDR: 12/01/2014	Telephone: 707-784-6770
Date Made Active in Reports: 01/27/2015	Last EDR Contact: 12/11/2014
Number of Days to Update: 57	Next Scheduled EDR Contact: 03/30/2015
	Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 01/06/2015	Source: County of Sonoma Fire & Emergency Services Department
Date Data Arrived at EDR: 01/09/2015	Telephone: 707-565-1174
Date Made Active in Reports: 02/05/2015	Last EDR Contact: 12/29/2014
Number of Days to Update: 27	Next Scheduled EDR Contact: 04/13/2015
	Data Release Frequency: Varies

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 01/02/2015	Source: Department of Health Services
Date Data Arrived at EDR: 01/06/2015	Telephone: 707-565-6565
Date Made Active in Reports: 02/03/2015	Last EDR Contact: 12/29/2014
Number of Days to Update: 28	Next Scheduled EDR Contact: 04/13/2015
	Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 12/08/2014	Source: Sutter County Department of Agriculture
Date Data Arrived at EDR: 12/08/2014	Telephone: 530-822-7500
Date Made Active in Reports: 01/27/2015	Last EDR Contact: 12/05/2014
Number of Days to Update: 50	Next Scheduled EDR Contact: 03/23/2015
	Data Release Frequency: Semi-Annually

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 10/28/2014	Source: Divison of Environmental Health
Date Data Arrived at EDR: 10/29/2014	Telephone: 209-533-5633
Date Made Active in Reports: 12/12/2014	Last EDR Contact: 01/26/2015
Number of Days to Update: 44	Next Scheduled EDR Contact: 05/11/2015
	Data Release Frequency: Varies

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: 10/29/2014
Date Data Arrived at EDR: 11/24/2014
Date Made Active in Reports: 12/29/2014
Number of Days to Update: 35

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/17/2014
Next Scheduled EDR Contact: 03/02/2015
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: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
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: 11/17/2014
Next Scheduled EDR Contact: 03/02/2015
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: 09/26/2014
Date Data Arrived at EDR: 10/29/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 44

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
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: 11/26/2014
Date Data Arrived at EDR: 12/15/2014
Date Made Active in Reports: 02/02/2015
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/15/2014
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 12/18/2014
Date Data Arrived at EDR: 12/23/2014
Date Made Active in Reports: 01/27/2015
Number of Days to Update: 35

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 12/18/2014
Next Scheduled EDR Contact: 04/06/2015
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 11/17/2014
Date Data Arrived at EDR: 11/18/2014
Date Made Active in Reports: 12/30/2014
Number of Days to Update: 42

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 02/02/2015
Next Scheduled EDR Contact: 05/18/2015
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: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 11/17/2014
Next Scheduled EDR Contact: 03/02/2015
Data Release Frequency: No Update Planned

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: 01/12/2015
Next Scheduled EDR Contact: 04/27/2015
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: 11/01/2014
Date Data Arrived at EDR: 11/05/2014
Date Made Active in Reports: 11/24/2014
Number of Days to Update: 19

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 02/04/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/21/2014
Date Made Active in Reports: 08/25/2014
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 01/19/2015
Next Scheduled EDR Contact: 05/04/2015
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/15/2014
Date Made Active in Reports: 08/13/2014
Number of Days to Update: 29

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 11/26/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/20/2014
Date Made Active in Reports: 08/07/2014
Number of Days to Update: 48

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 12/12/2014
Next Scheduled EDR Contact: 03/30/2015
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.

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, 2005 and 2010 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

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

SOLANO COMMUNITY COLLEGE VACAVILLE CENTER
2001 NORTH VILLAGE PARKWAY
VACAVILLE, CA 95688

TARGET PROPERTY COORDINATES

Latitude (North):	38.3941 - 38˚ 23’ 38.76’’
Longitude (West):	121.9415 - 121˚ 56’ 29.40’’
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	592437.5
UTM Y (Meters):	4249866.5
Elevation:	95 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	38121-D8 ALLENDALE, CA
Most Recent Revision:	1978

EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

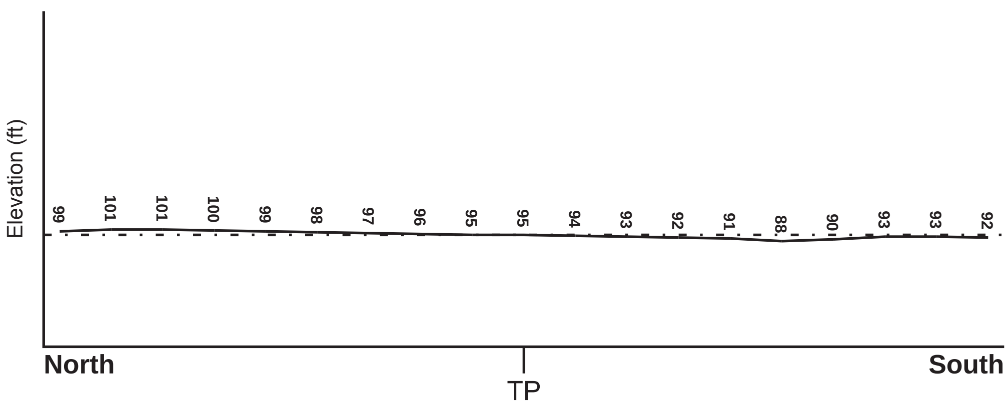
TOPOGRAPHIC INFORMATION

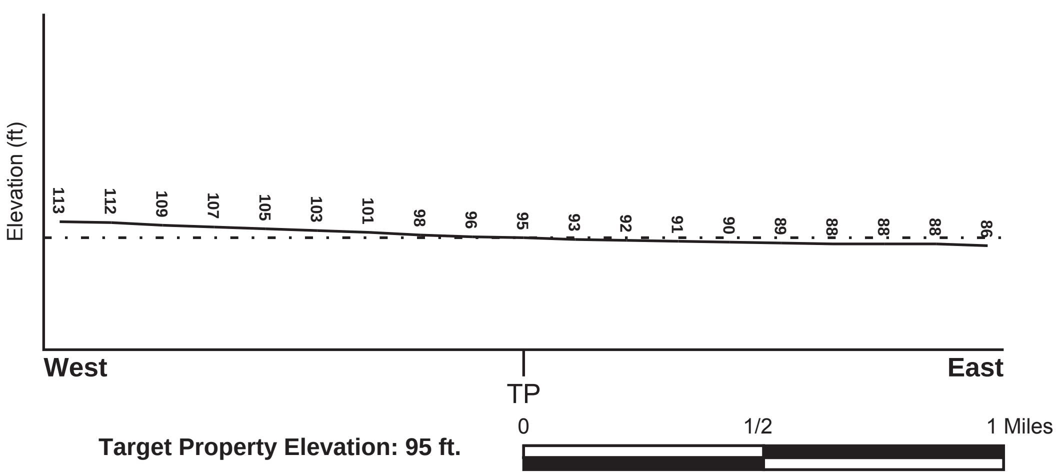
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General ESE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 95 ft.

Source: Topography has been determined from the USGS 7.5’ Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
SOLANO, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 06095C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
ALLENDALE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius: 1.25 miles
Status: Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
10	1/2 - 1 Mile NW	SW
14	1/2 - 1 Mile WNW	SE
18	1/2 - 1 Mile WNW	ESE

For additional site information, refer to Physical Setting Source Map Findings.

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

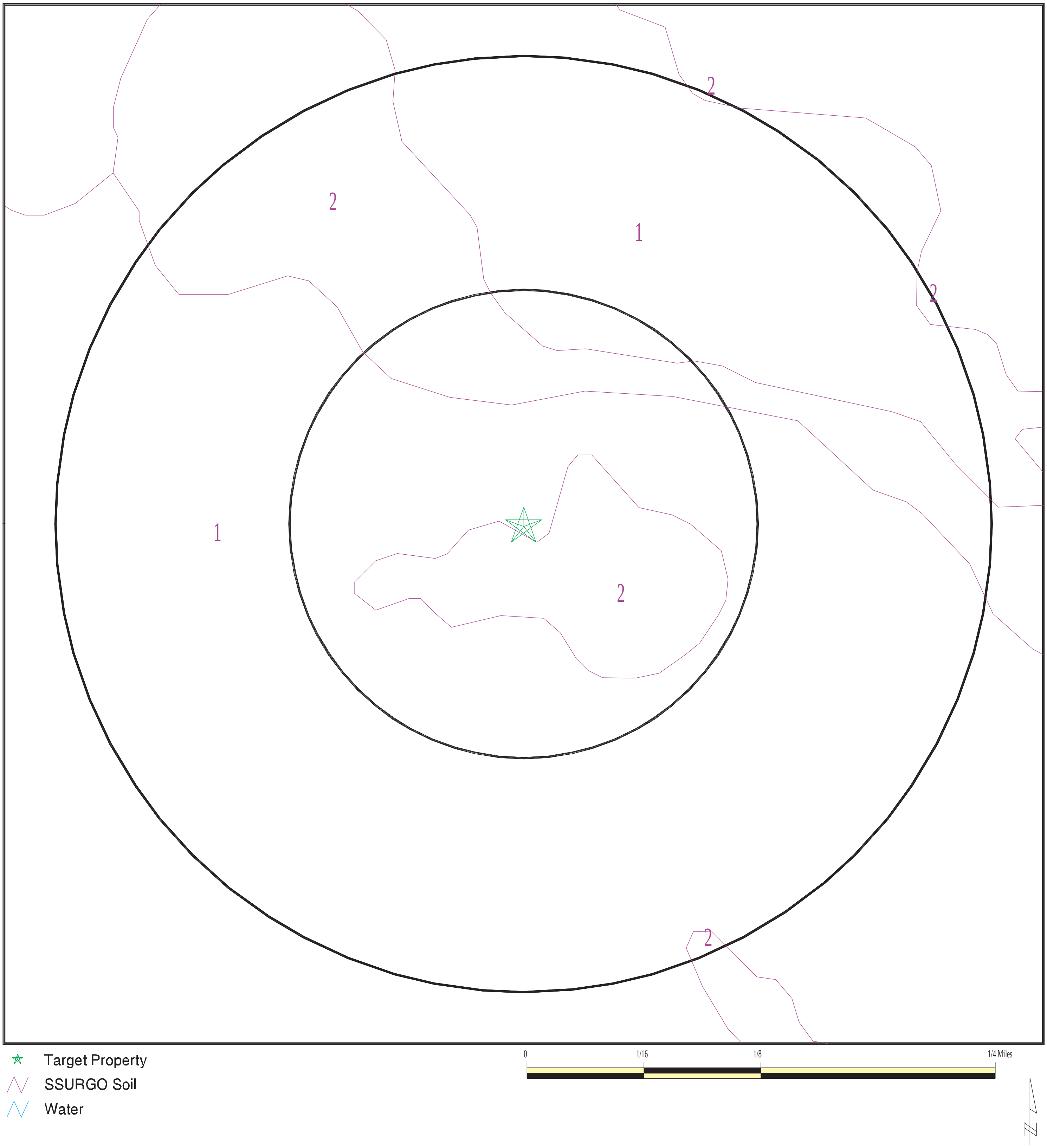
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4207212.2s



Target Property
SSURGO Soil
Water

SITE NAME: Solano Community College Vacaville Center ADDRESS: 2001 North Village Parkway Vacaville CA 95688 LAT/LONG: 38.3941 / 121.9415	CLIENT: Dudek & Associates CONTACT: Lydia Dorrance INQUIRY #: 4207212.2s DATE: February 12, 2015 7:30 pm

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: San Ysidro

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 5.6
2	14 inches	27 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.42 Min: 0.01	Max: 7.8 Min: 6.1
3	27 inches	53 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.42	Max: 7.8 Min: 6.1
4	53 inches	68 inches	stratified sandy loam to clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4

Soil Map ID: 2

Soil Component Name: Clear Lake

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 138 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	
Layer	**Upper**	**Lower**	**Soil Texture Class**	**AASHTO Group**	**Unified Soil**		**Soil Reaction (pH)**
1	0 inches	44 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 6.1
2	44 inches	59 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 7.4

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
8	USGS40000188088	1/4 - 1/2 Mile East
9	USGS40000188102	1/2 - 1 Mile ENE
13	USGS40000188109	1/2 - 1 Mile WNW
15	USGS40000188097	1/2 - 1 Mile East
C17	USGS40000188131	1/2 - 1 Mile NW
21	USGS40000188132	1/2 - 1 Mile NW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

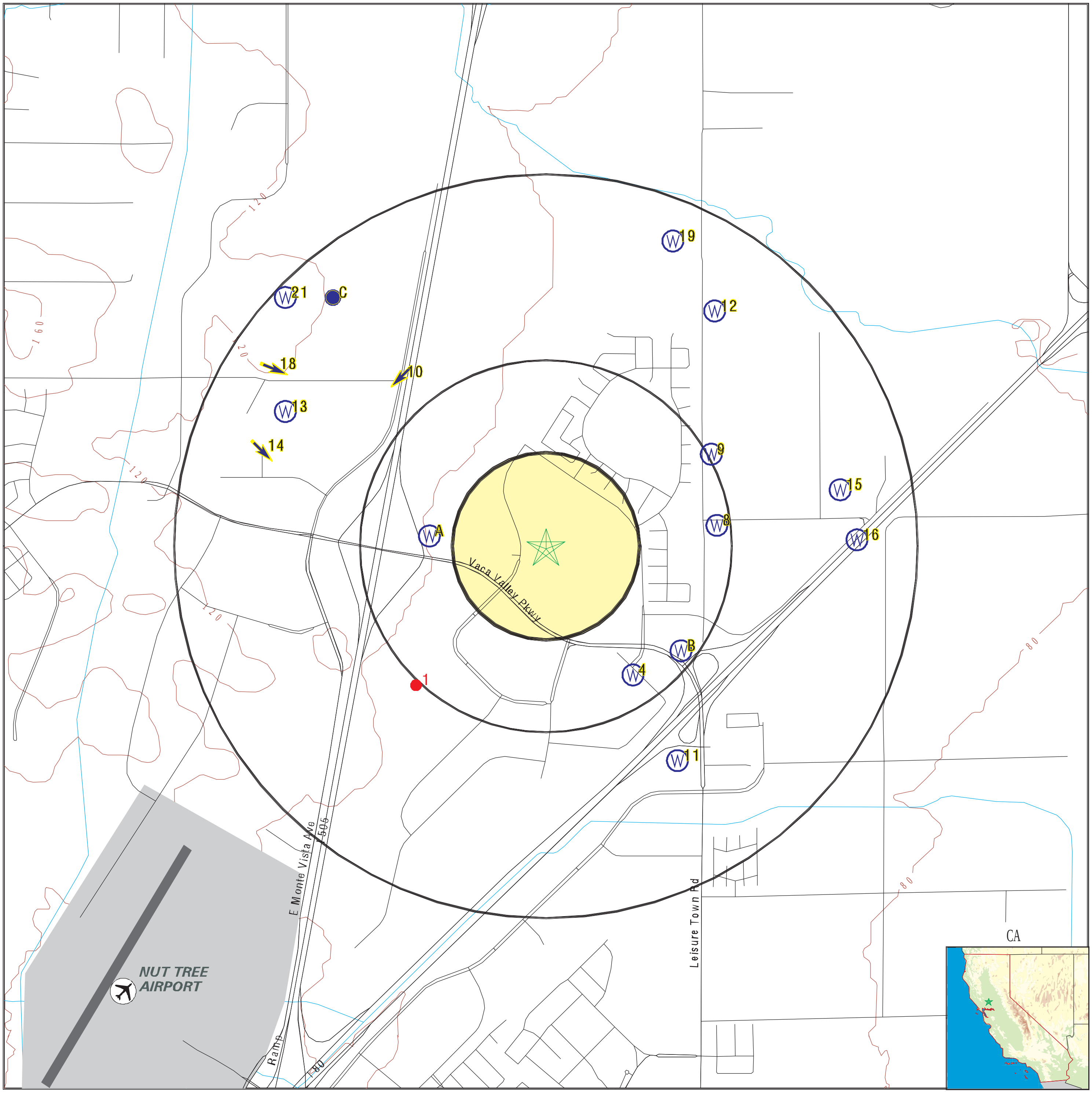
MAP ID	WELL ID	LOCATION FROM TP
A1	CADW50000031582	1/4 - 1/2 Mile West
A2	CADW50000031581	1/4 - 1/2 Mile West
A3	CADW50000031584	1/4 - 1/2 Mile West
4	20363	1/4 - 1/2 Mile SE
B5	CADW50000031571	1/4 - 1/2 Mile SE
B6	CADW50000031572	1/4 - 1/2 Mile SE
B7	CADW50000031570	1/4 - 1/2 Mile SE
11	20352	1/2 - 1 Mile SSE
12	CADW50000031602	1/2 - 1 Mile NE
16	6489	1/2 - 1 Mile East
19	CADW50000031604	1/2 - 1 Mile NNE
C20	20339	1/2 - 1 Mile NW

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CAOG9A000211026	1/2 - 1 Mile SW

PHYSICAL SETTING SOURCE MAP - 4207212.2s



0 1/4 1/2 1 Miles

- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	Solano Community College Vacaville Center	CLIENT:	Dudek & Associates
ADDRESS:	2001 North Village Parkway	CONTACT:	Lydia Dorrance
	Vacaville CA 95688	INQUIRY #:	4207212.2s
LAT/LONG:	38.3941 / 121.9415	DATE:	February 12, 2015 7:30 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation	Database	EDR ID Number
A1 **West** **1/4 - 1/2 Mile** **Higher**	**CA WELLS**	**CADW50000031582**

Latitude :	38.394498		
Longitude :	121.94727		
Site code:	383945N1219473W001	Casgem sta:	Not Reported
Local well:	MW-16-117ft	Casgem s 1:	Observation
County id:	48		
Basin cd:	5-21.66	Basin desc:	Solano
Org unit n:	North Central Region Office	Site id:	CADW50000031582

A2 **West** **1/4 - 1/2 Mile** **Higher**	**CA WELLS**	**CADW50000031581**

Latitude :	38.394498		
Longitude :	121.947271		
Site code:	383945N1219473W002	Casgem sta:	Not Reported
Local well:	MW-16-1166ft	Casgem s 1:	Observation
County id:	48		
Basin cd:	5-21.66	Basin desc:	Solano
Org unit n:	North Central Region Office	Site id:	CADW50000031581

A3 **West** **1/4 - 1/2 Mile** **Higher**	**CA WELLS**	**CADW50000031584**

Latitude :	38.394501		
Longitude :	121.947271		
Site code:	383945N1219473W003	Casgem sta:	Not Reported
Local well:	MW-16-1430ft	Casgem s 1:	Observation
County id:	48		
Basin cd:	5-21.66	Basin desc:	Solano
Org unit n:	North Central Region Office	Site id:	CADW50000031584

---

4 **SE** **1/4 - 1/2 Mile** **Lower**	**CA WELLS**	**20363**

Water System Information:

Prime Station Code:	4800797-001	User ID:	ENG
FRDS Number:	4800797001	County:	Solano
District Number:	04	Station Type:	WELL/AMBNT
Water Type:	Well/Groundwater	Well Status:	Active Untreated
Source Lat/Long:	382281.0 1215610.5	Precision:	1,000 Feet (10 Seconds)
Source Name:	WELL 01		

System Number:	4800797		
System Name:	BIRDS LANDING HUNTING PRESERVE		
Organization That Operates System:			
	Not Reported		
Pop Served:	Unknown, Small System	Connections:	Unknown, Small System
Area Served:	Not Reported		
Sample Collected:	03-AUG-12	Findings:	5.9 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	18-JUL-13	Findings:	6.3 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12-JUN-14	Findings:	. 6.1 MG/L
Chemical:	NITRATE (AS NO3)		

B5
SE
1/4 - 1/2 Mile
Lower

CA WELLS **CADW50000031571**

Latitude :	38.390031		
Longitude :	121.934805		
Site code:	383900N1219348W002	Casgem sta:	Not Reported
Local well:	MW-15-508ft	Casgem s 1:	Observation
County id:	48		
Basin cd:	5-21.66	Basin desc:	Solano
Org unit n:	North Central Region Office	Site id:	CADW50000031571

B6
SE
1/4 - 1/2 Mile
Lower

CA WELLS **CADW50000031572**

Latitude :	38.390031		
Longitude :	121.934805		
Site code:	383900N1219348W001	Casgem sta:	Not Reported
Local well:	MW-15-188ft	Casgem s 1:	Observation
County id:	48		
Basin cd:	5-21.66	Basin desc:	Solano
Org unit n:	North Central Region Office	Site id:	CADW50000031572

B7
SE
1/4 - 1/2 Mile
Lower

CA WELLS **CADW50000031570**

Latitude :	38.389996		
Longitude :	121.934782		
Site code:	383900N1219348W003	Casgem sta:	Not Reported
Local well:	MW-15-1815ft	Casgem s 1:	Observation
County id:	48		
Basin cd:	5-21.66	Basin desc:	Solano
Org unit n:	North Central Region Office	Site id:	CADW50000031570

Map ID Direction Distance Elevation	Database	EDR ID Number
8 **East** **1/4 - 1/2 Mile** **Lower**	**FED USGS**	**USGS40000188088**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-382342121555501		
Monloc name:	006N001W01M005M		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18020109	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	38.3949097
Longitude:	-121.9330209	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	88.00
Vert measure units:	feet	Vertacc measure val:	5.0
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Central Valley aquifer system		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19721027	Welldepth:	140
Welldepth units:	ft	Wellholedepth:	140
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1980-02-29	9.85	

Note: The site had been pumped recently.

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9 **ENE** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS40000188102**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-382352121555601		
Monloc name:	006N001W01E001M		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18020109	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	38.3976874
Longitude:	-121.9332988	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	89.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Central Valley aquifer system		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	19710722	Welldepth:	160
Welldepth units:	ft	Wellholedepth:	160
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

10
NW
1/2 - 1 Mile
Higher

AQUIFLOW 53095

Site ID:	Not Reported
Groundwater Flow:	SW
Shallow Water Depth:	29.46
Deep Water Depth:	31.04
Average Water Depth:	Not Reported
Date:	08/04/1994

11
SSE
1/2 - 1 Mile
Lower

CA WELLS 20352

Water System Information:

Prime Station Code:	4800738-001	User ID:	ENG
FRDS Number:	4800738001	County:	Solano
District Number:	04	Station Type:	WELL/AMBNT
Water Type:	Well/Groundwater	Well Status:	Active Untreated
Source Lat/Long:	382309.6 1215602.9	Precision:	1,000 Feet (10 Seconds)
Source Name:	WELL 01		
System Number:	4800738		
System Name:	EMIL VILLA'S HICKORY PIT		
Organization That Operates System:	Not Reported		
Pop Served:	Unknown, Small System	Connections:	Unknown, Small System
Area Served:	Not Reported		

12
NE
1/2 - 1 Mile
Lower

CA WELLS CADW50000031602

Latitude :	38.403271		
Longitude :	121.93313		
Site code:	384033N1219331W001	Casgem sta:	Not Reported
Local well:	MW-98B	Casgem s 1:	Observation
County id:	48		
Basin cd:	5-21.66	Basin desc:	Solano
Org unit n:	North Central Region Office	Site id:	CADW50000031602

13
WNW
1/2 - 1 Mile
Higher

FED USGS USGS40000188109

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-382358121571201		
Monloc name:	006N001W03A002M		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18020109	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	38.399354
Longitude:	-121.9544106	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	112.00
Vert measure units:	feet	Vertacc measure val:	5.0
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Central Valley aquifer system		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19760707	Welldepth:	280
Welldepth units:	ft	Wellholedepth:	280
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

14
WNW
1/2 - 1 Mile
Higher

AQUIFLOW **53005**

Site ID:	Not Reported
Groundwater Flow:	SE
Shallow Water Depth:	Not Reported
Deep Water Depth:	Not Reported
Average Water Depth:	54
Date:	07/11/1995

15
East
1/2 - 1 Mile
Lower

FED USGS **USGS40000188097**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-382347121553301		
Monloc name:	006N001W01F003M		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18020109	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	38.3962985
Longitude:	-121.9269096	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	84.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Central Valley aquifer system		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	19780704	Welldepth:	160
Welldepth units:	ft	Wellholedepth:	160
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1980-02-29	5.85	

16
East
1/2 - 1 Mile
Lower

CA WELLS 6489

Water System Information:

Prime Station Code:	06N/01W-01L03 M	User ID:	ENG
FRDS Number:	4800801001	County:	Solano
District Number:	04	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Untreated
Source Lat/Long:	382340.0 1215530.0	Precision:	1,000 Feet (10 Seconds)
Source Name:	WELL 01		
System Number:	4800801		
System Name:	NEILS SERVICE CENTER		
Organization That Operates System:	Not Reported		
Pop Served:	50	Connections:	Unknown, Small System
Area Served:	Not Reported		
Sample Collected:	19-MAR-12	Findings:	73. MG/L
Chemical:	CALCIUM		
Sample Collected:	19-MAR-12	Findings:	34. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	19-MAR-12	Findings:	47. MG/L
Chemical:	SODIUM		
Sample Collected:	19-MAR-12	Findings:	240. UG/L
Chemical:	BARIUM		
Sample Collected:	19-MAR-12	Findings:	60. UG/L
Chemical:	MANGANESE		
Sample Collected:	19-MAR-12	Findings:	110. UG/L
Chemical:	ZINC		
Sample Collected:	19-MAR-12	Findings:	37. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	19-MAR-12	Findings:	8400. UG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	06-MAY-13	Findings:	33. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	25-NOV-13	Findings:	5.3 MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	03-FEB-14	Findings:	1.35 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	03-FEB-14	Findings:	0.874 PCI/L
Chemical:	GROSS BETA COUNTING ERROR		
Sample Collected:	03-FEB-14	Findings:	24. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06-MAY-14	Findings:	. 6.7 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04-AUG-14	Findings:	. 36. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04-AUG-14	Findings:	. 35. MG/L
Chemical:	NITRATE (AS NO3)		

C17
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000188131**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-382413121570201		
Monloc name:	007N001W34R002M		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18020109	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	38.4035206
Longitude:	-121.9516328	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	115.00
Vert measure units:	feet	Vertacc measure val:	5.0
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Central Valley aquifer system		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19720229	Welldepth:	1000
Welldepth units:	ft	Wellholedepth:	1018
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1972-02-29	66.42	

18
WNW
1/2 - 1 Mile
Higher

AQUIFLOW **53090**

Site ID:	Not Reported
Groundwater Flow:	ESE
Shallow Water Depth:	35
Deep Water Depth:	67
Average Water Depth:	Not Reported
Date:	03/26/1997

Map ID Direction Distance Elevation	Database	EDR ID Number
19 **NNE** **1/2 - 1 Mile** **Higher**	**CA WELLS**	**CADW50000031604**

Latitude :	38.406		
Longitude :	121.9352		
Site code:	384060N1219352W001	Casgem sta:	07N01W35R001M
Local well:	Not Reported	Casgem s 1:	Unknown
County id:	48		
Basin cd:	5-21.66	Basin desc:	Solano
Org unit n:	North Central Region Office	Site id:	CADW50000031604

C20 **NW** **1/2 - 1 Mile** **Higher**	**CA WELLS**	**20339**

Water System Information:

Prime Station Code:	4800595-002	User ID:	ENG
FRDS Number:	4800595002	County:	Solano
District Number:	04	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	382415.0 1215705.0	Precision:	1,000 Feet (10 Seconds)
Source Name:	WELL 03		
System Number:	4800595		
System Name:	INTERNATIONAL HOME FOODS, INC.		
Organization That Operates System:			
	500 CROCKER RD.		
	VACAVILLE, CA 95688		
Pop Served:	700	Connections:	1
Area Served:	Not Reported		
Sample Collected:	14-SEP-06	Findings:	3. MG/L
Chemical:	NITRATE (AS NO3)		

---

21 **NW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000188132**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-382414121571201		
Monloc name:	007N001W34R001M		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18020109	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	38.4037983
Longitude:	-121.9544107	Sourcemap scale:	24000

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	120.00
Vert measure units:	feet	Vertacc measure val:	5.0
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Central Valley aquifer system		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19740628	Welldepth:	236
Welldepth units:	ft	Wellholedepth:	236
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

Map ID Direction Distance	Database	EDR ID Number
1 **SW** **1/2 - 1 Mile**	**OIL_GAS**	**CAOG9A000211026**

Districtnu:	6	Apinumber:	09520386
Blmwell:	N	Redrillcan:	Not Reported
Dryhole:	Y	Wellstatus:	P
Operatorna:	Cabeen Exploration Corp.		
Countyname:	Solano	Fieldname:	Any Field
Areaname:	Any Area		
Section:	2		
Township:	06N	Range:	01W
Basemeridi:	MD	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	38.38868		
Glong:	-121.947937		
Gissourcec:	hud		
Comments:	Status Code 006		
Leasename:	Shellhammer	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	/ /	Completion:	/ /
Gissymbol:	PDH	Site id:	CAOG9A000211026

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
95688	14	0

Federal EPA Radon Zone for SOLANO County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 95688

Number of sites tested: 8

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.200 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

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.

HYDROLOGIC INFORMATION

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, 2005 and 2010 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW® Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

ATTACHMENT B

Historical Aerial Photographs

Solano Community College Vacaville Center
2001 North Village Parkway
Vacaville, CA 95688

Inquiry Number: 4207212.5
February 17, 2015

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th Floor
Shelton, Connecticut 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Date EDR Searched Historical Sources:

Aerial Photography February 17, 2015

Target Property:

2001 North Village Parkway

Vacaville, CA 95688

Year	***Scale***	***Details***	***Source***
1937	Aerial Photograph. Scale: 1"=500'	Flight Year: 1937	USGS
1957	Aerial Photograph. Scale: 1"=500'	Flight Year: 1957	Cartwright
1968	Aerial Photograph. Scale: 1"=500'	Flight Year: 1968	USGS
1970	Aerial Photograph. Scale: 1"=500'	Flight Year: 1970	Cartwright
1984	Aerial Photograph. Scale: 1"=500'	Flight Year: 1984	USGS
1993	Aerial Photograph. Scale: 1"=500'	/DOQQ - acquisition dates: 1993	USGS/DOQQ
1998	Aerial Photograph. Scale: 1"=500'	Flight Year: 1998	USGS
2005	Aerial Photograph. Scale: 1"=500'	Flight Year: 2005	USDA/NAIP
2006	Aerial Photograph. Scale: 1"=500'	Flight Year: 2006	USDA/NAIP
2009	Aerial Photograph. Scale: 1"=500'	Flight Year: 2009	USDA/NAIP
2010	Aerial Photograph. Scale: 1"=500'	Flight Year: 2010	USDA/NAIP
2012	Aerial Photograph. Scale: 1"=500'	Flight Year: 2012	USDA/NAIP

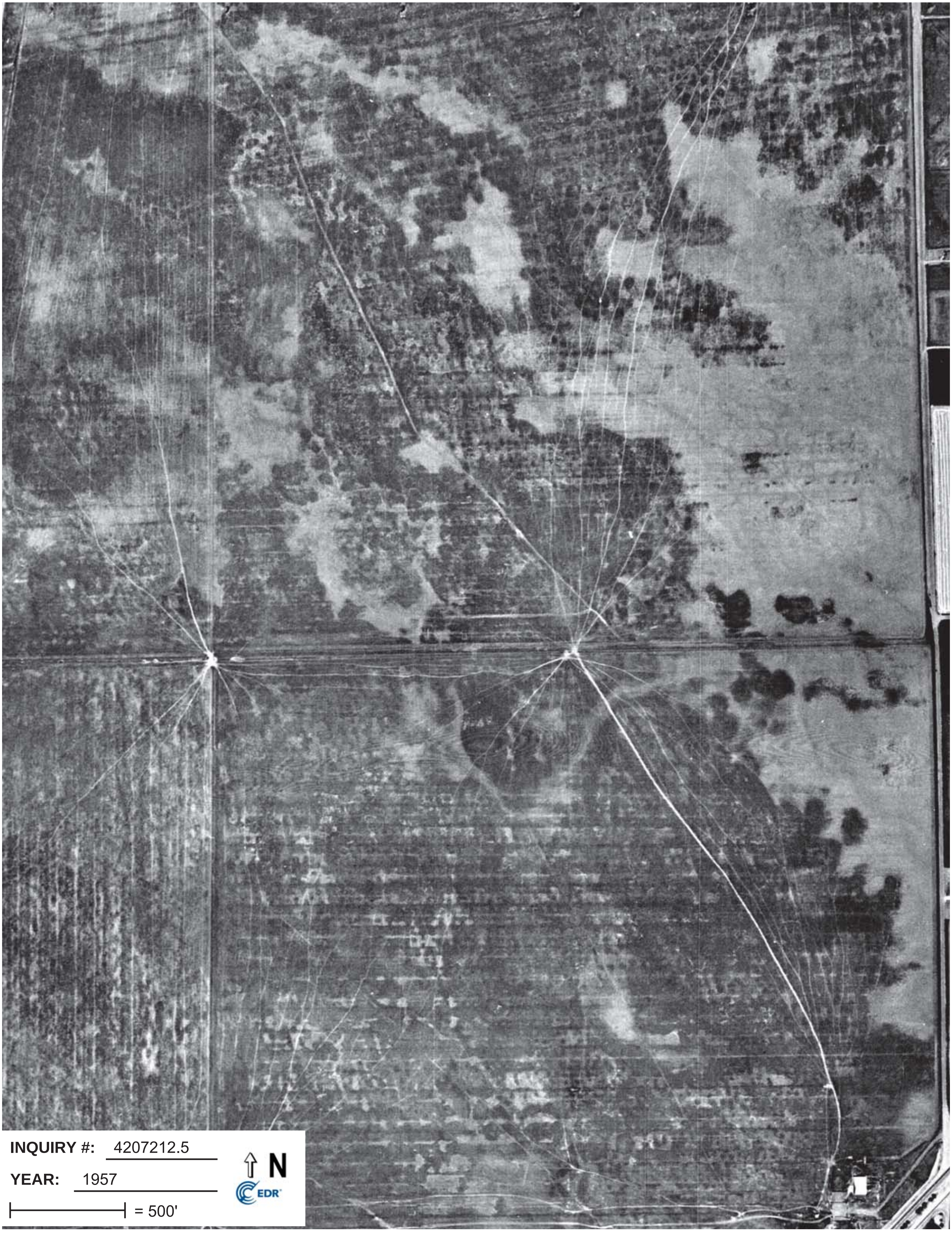
INQUIRY #: 4207212.5

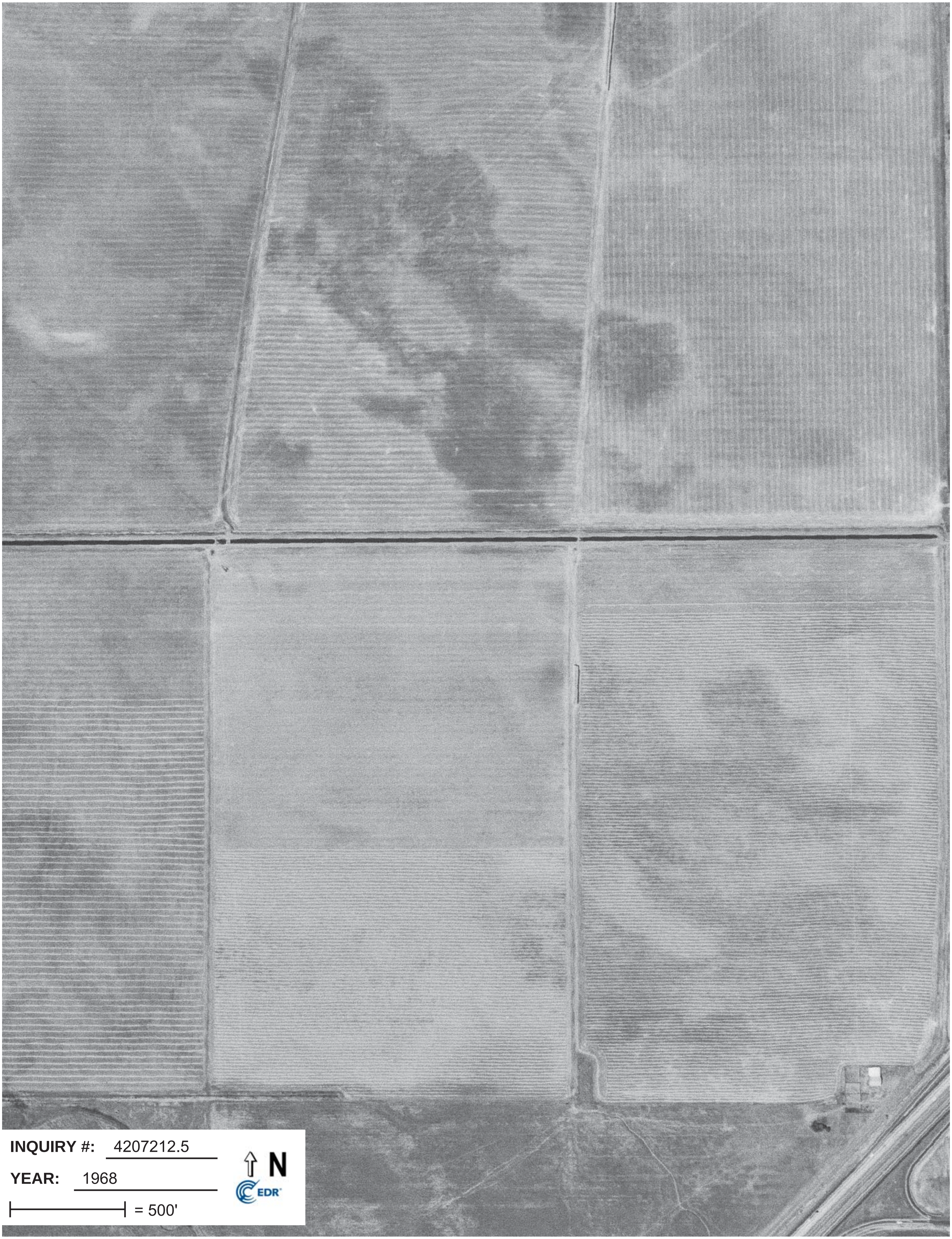
YEAR: 1937

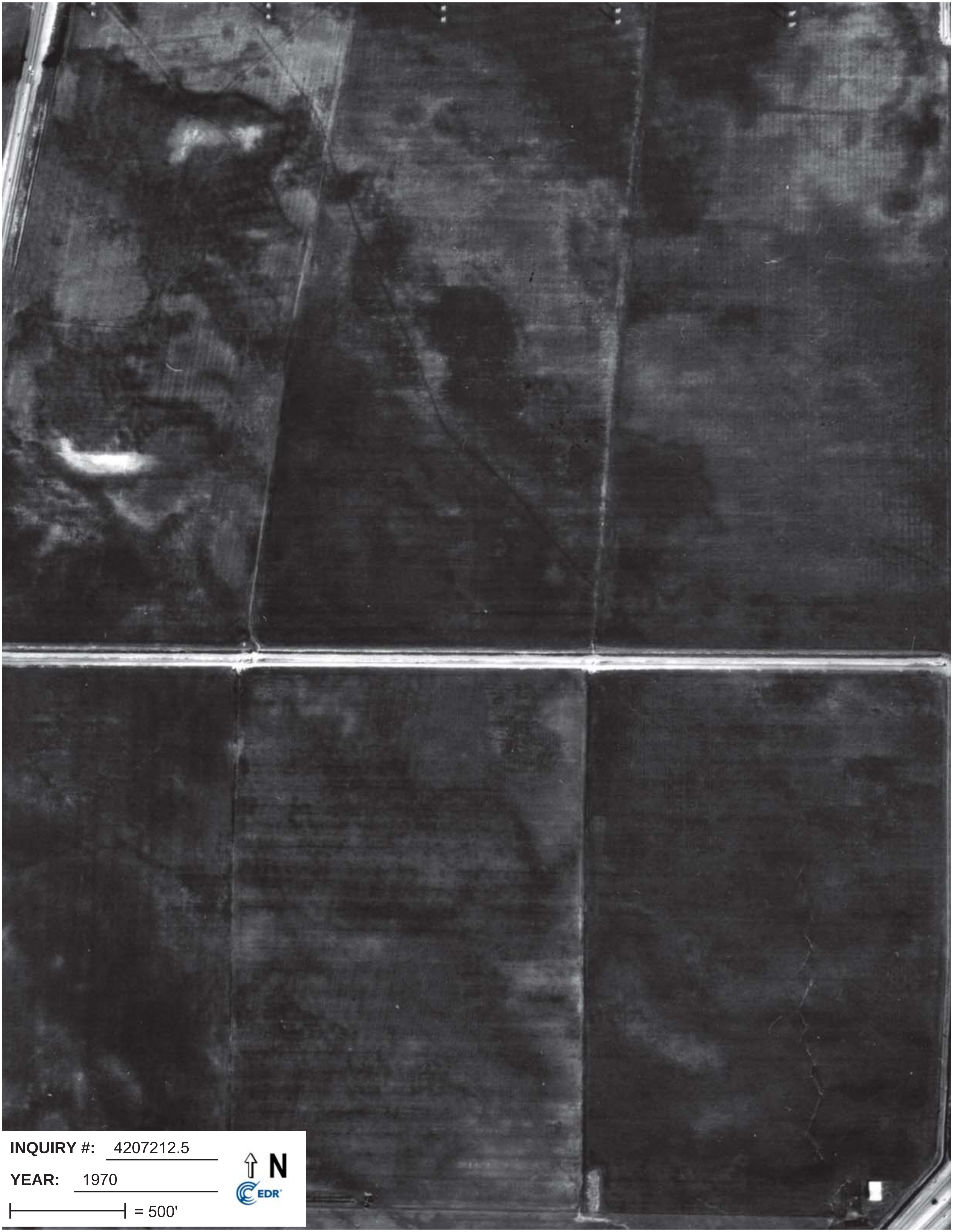
= 500'

N

EDR


INQUIRY #: 4207212.5
YEAR: 1957
= 500'
N
EDR


INQUIRY #: 4207212.5
YEAR: 1968
= 500'
N
EDR



INQUIRY #: 4207212.5

YEAR: 1970

= 500'

N


INQUIRY #: 4207212.5
YEAR: 1984
= 500'
N
EDR

INQUIRY #: 4207212.5

YEAR: 1993

= 500'

N

EDR

INQUIRY #: 4207212.5

YEAR: 1998

= 500'

N

EDR

INQUIRY #: 4207212.5

YEAR: 2005

= 500'

N

EDR


INQUIRY #: 4207212.5
YEAR: 2006
= 500'
N
EDR

INQUIRY #: 4207212.5

YEAR: 2009

= 500'

N

EDR


INQUIRY #: 4207212.5
YEAR: 2010
= 500'
N
EDR


INQUIRY #: 4207212.5
YEAR: 2012
= 500'
N
EDR

ATTACHMENT C

Sanborn Fire Insurance Maps

Solano Community College Vacaville Center
2001 North Village Parkway
Vacaville, CA 95688

Inquiry Number: 4207212.3
February 12, 2015

Certified Sanborn® Map Report

EDR®

6 Armstrong Road, 4th Floor
Shelton, Connecticut 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

2/12/15

Site Name:
Solano Community College
2001 North Village Parkway
Vacaville, CA 95688

Client Name:
Dudek & Associates
605 Third Street
Encinitas, CA 92024

EDR Inquiry # 4207212.3

Contact: Lydia Dorrance

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Dudek & Associates were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Site Name:	Solano Community College Vacaville Center
Address:	2001 North Village Parkway
City, State, Zip:	Vacaville, CA 95688
Cross Street:	
P.O. #	8583-6
Project:	Vacaville Campus Site
Certification #	94C6-4BD9-BF53

Sanborn® Library search results
Certification # 94C6-4BD9-BF53

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

The Sanborn Library LLC Since 1866™

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APPENDIX F

Noise Report

MEMORANDUM

To: Brian Grattidge
From: Jonathan Leech
Subject: Noise Assessment for Solana Community College Vacaville Center
Date: March 31, 2015
Attachment(s): Figure 1
Figure 2
A – Acoustic Definitions
Appendix A – FHWA Calculation Sheets
Appendix B – RCNM Construction Noise Sheets

This assessment was conducted to address potential noise impacts from the proposed project at the Solano Community College District (SCCD) Vacaville Center campus (project site). The project site is located at the northeast and northwest corners of North Village Parkway and Vaca Valley Parkway in Vacaville, California (Figure 2 of MND). The project site is bordered by residential and vacant land to the north, Vaca Valley Parkway and business parks to the south, residential land to the east and vacant land and industrial business parks to the west.

Two structures are currently present on the project site: an approximately 36,359-square foot classroom building east of North Village Parkway and an approximately 16,500-square foot classroom building west of North Village Parkway, which is referred to as Vacaville Workforce Development (Vacaville Annex). The structures are surrounded by parking and associated landscaping. The remainder of the project site consists of vacant land.

BACKGROUND AND TERMINOLOGY

This report is a focused noise assessment that evaluates the noise associated with the currently proposed additions to the Solano Community College Vacaville Center in the City of Vacaville, California. The additions include a new biotechnology sciences building, classroom building, and student success center. These buildings would be located immediately adjacent to the two existing structures described above. Noise-sensitive land uses in the project vicinity include residences to the north and east, along Crescent Drive. Adjacent land uses to the south and west include offices and research park, which are not generally considered to be noise-sensitive. Refer to *Figure 1* for the location of noise sensitive land uses in the project vicinity.

Vibrations, traveling as waves through air from a source, exert a force perceived by the human ear as sound. Sound pressure level (referred to as sound level) is measured on a logarithmic scale in decibels (dB) that represent the fluctuation of air pressure above and below atmospheric pressure. Frequency, or pitch, is a physical characteristic of sound and is expressed in units of cycles per second or hertz (Hz). The normal frequency range of hearing for most people extends from about 20 to 20,000 Hz. The human ear is more sensitive to middle and high frequencies, especially when the noise levels are quieter. As noise levels get louder, the human ear starts to hear the frequency spectrum more evenly. To accommodate for this phenomenon, a weighting system to evaluate how loud a noise level is to a human was developed. The frequency weighting called "A" weighting is typically used for quieter noise levels which de-emphasizes the low frequency components of the sound in a manner similar to the response of a human ear. This A-weighted sound level is called the "noise level" and is referenced in units of dBA (refer to *Attachment 1* for definitions of acoustical terms).

Since sound is measured on a logarithmic scale, a doubling of sound energy results in a 3 dBA increase in the noise level. Changes in a community noise level of less than 3 dBA are not typically noticed by the human ear (Caltrans 1980). Changes from 3 to 5 dBA may be noticed by some individuals who are extremely sensitive to changes in noise. A 5 dBA increase is readily noticeable. The human ear perceives a 10 dBA increase in sound level as a doubling of the sound level (i.e., 65 dBA sounds twice as loud as 55 dBA to a human ear).

An individual's noise exposure occurs over a period of time; however, noise level is a measure of noise at a given instant in time. The equivalent noise level L_{eq}, also referred to as the average sound level, is a single-number representing the fluctuating sound level in decibels (dB) over a specified period of time. It is a sound-energy average of the fluctuating level and is equal to a constant unchanging sound of that dB level. Community noise sources vary continuously, being the product of many noise sources at various distances, all of which constitute a relatively stable background or ambient noise environment.

Noise levels are generally higher during the daytime and early evening when traffic (including airplanes), commercial, and industrial activity is the greatest. However, noise sources experienced during nighttime hours when background levels are generally lower can be potentially more conspicuous and irritating to the receiver. In order to evaluate noise in a way that considers periodic fluctuations experienced throughout the day and night, a concept termed "community noise equivalent level" (CNEL) was developed, The CNEL scale represents a time-weighted 24-hour average noise level based on the A-weighted sound level. CNEL accounts for the increased noise sensitivity during the evening hours (7 p.m. to 10 p.m.) and nighttime hours (10 p.m. to 7 a.m.) by adding five dB to the average sound levels occurring during the evening hours and 10 dB to the sound levels occurring during nighttime hours.

PROJECT DESCRIPTION

The proposed project would include construction of the following buildings:

- Phase 1: Construction of a 31,943 square feet (gross) biotechnology science building located immediately to the north of the Vacaville Campus building
- Phase 2: Additional buildings under a Measure Q bond funding scenario, consisting of:
    - A 22,000 square foot Student Success Center to be constructed east of the existing classroom building
    - An 8,000 square foot classroom building to be constructed north of the existing Workforce Development center

Phase 1 is expected to be constructed in the near-term, while Phase 2 is expected to be constructed as funding from Measure Q becomes available.

NOISE SIGNIFICANCE CRITERIA

Based on the criteria identified in Appendix G of the CEQA Guidelines, the proposed project would have a significant impact on noise if it would result in:

1. The 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.
2. The exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.
3. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
4. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

The Solano Community College Vacaville Center is located within the City of Vacaville. The Vacaville General Plan Update Noise Element (Public Draft, 2014) specifies the following noise compatibility guidelines applicable to the project.

Land Use	Normally Acceptable Limit (Maximum CNEL, dB)	Conditionally Acceptable Limit (Maximum CNEL, dB)
Residential	60	70
Schools	70	70
Office, Commercial, Prof.	70	77

With respect to Significance Criteria #1, and based upon the above information, a significant impact could occur if the ambient noise level encompassing the proposed new buildings is greater than 70 dB CNEL.

With respect to Significance Criteria #2, the project would not have the potential to generate long-term ground-borne vibration or noise. Typical office or classroom structures do not include equipment or activities which produce perceptible vibration levels outside the structure. Ground vibrations from construction activities do not often reach the levels that can damage structures or affect activities that are not vibration-sensitive, although the vibrations may be felt by nearby persons in close proximity and result in annoyance (FTA 2006). As a guide, major construction activity within 200 feet and pile driving within 600 feet may be potentially disruptive to sensitive operations (Caltrans 2002). The project construction activity would not include pile driving, and the closest existing off-site structures to the construction area are located approximately 650 feet away. Consequently, groundborne vibration impacts would be less than significant, and this issue is not discussed further.

With respect to Significance Criteria #3, a "substantial" increase in ambient noise level is typically defined as a greater than 3 dB increase in the CNEL for the vicinity surrounding the proposed project (Caltrans, 1980). Therefore, a significant impact would occur if the project increased off-site ambient noise levels by more than 3 CNEL dBA.

With respect to Significance Criteria #4, construction is the most common source of temporary increases in the ambient noise levels caused by a proposed project. The City of Vacaville Noise Element (Draft, 2014) contains the following policy pertinent to construction noise, which is intended to avoid nuisance to neighbors from elevated noise during construction.

Policy NOI-P4.2 Require the following construction noise control measures:

- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction area.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Limit hours of operation of outdoor noise sources through conditions of approval.

EXISTING CONDITIONS

Transportation facilities, including major roadways and airports, typically are the principle sources of noise that dictate the ambient noise environment in urban areas. The project site is generally located between Interstate 505 (I-505) on the west and Interstate 80 (I-80) on the south and east. The Vacaville General Plan Update Noise Element (Draft, 2014) indicates the Vacaville Center campus is located outside of the *existing* and *future* 60 CNEL dBA contour for both I-505 and I-80. According to the Noise Element, the campus is also located outside of the 55 CNEL dBA contour for the Nut Tree Airport.

While they are smaller roadways that carry far fewer trips than the above-referenced freeways, Vaca Valley Parkway and North Village Parkway are located immediately adjacent to the building sites; traffic along these roadways would contribute to the noise environment encompassing the project. In addition, Crescent Drive forms the north and east boundary of the campus. Traffic on this roadway would not be anticipated to contribute substantially to the noise environment around the proposed buildings, but is a principle contributor to the ambient noise levels for the existing residential neighborhoods to the north and east.

In order to evaluate the noise levels associated with these three roadways, short-term noise measurements with manual traffic counts were conducted.

Ambient Noise Monitoring

Three noise measurements were conducted for this noise study. One measurement was conducted adjacent to Vaca Valley Parkway, east of the intersection with North Village Parkway, at the southern boundary of the campus. A second measurement was conducted adjacent to North Village Parkway, north of the intersection with Vaca Valley Parkway. A third measurement was conducted adjacent to Crescent Road, near the intersection with Stratton Ranch Road.

The measurements were made using a calibrated Larson-Davis Laboratories Model 820 (S.N. 1534) integrating sound level meter equipped with a Type 2551 ½-inch pre-polarized condenser microphone with pre-amplifier. When equipped with this microphone, the sound level meter meets the current American National Standards Institute standard for a Type 1 precision sound level meter. The sound level meter was positioned at a height of approximately five feet above the ground.

The noise measurement locations are depicted as Site 1, Site 2, and Site 3 on *Figure 2*. Site 1 is approximately 45 feet from the center line of Vaca Valley Parkway. The measured average noise level was 68 dBA. Site 2 is approximately 40 feet from the center line of North Village Parkway. The measured average noise level was 65 dBA. A third noise measurement and traffic count were collected adjacent to Crescent Drive, at site 3. Site 3 is approximately 25 feet from the centerline of Crescent Drive, and the measured average noise level was 59 dBA. *Table 1* shows the measured average noise level and concurrent traffic volumes.

Table 1
Measured Average Sound Levels at Roadways

Site	Description	Date/Time	L_{eq}[1]	Cars	MT[2]	HT[3]
1	Approximately 45 feet to center line of Vaca Valley Parkway	10/23/2014 11:05 to 11:15 a.m.	68 dB	98	7	4
2	Approximately 40 feet to center line of North Village Parkway	10/23/2014 10:45 to 10:55 a.m.	65 dB	103	0	5
3	Approximately 25 feet to center line of Crescent Drive	10/23/2014 11:30 a.m. to noon	59 dB	60	4	1

Notes: [1] Equivalent Continuous Sound Level (Time-Average Sound Level)
[2] Medium Trucks
[3] Heavy Trucks
General Notes: Temperature 72 degrees, partly cloudy, 2 mph south wind.

Traffic noise is generally assessed using software provided by the Federal Highway Administration (FHWA), the current version of which is titled Transportation Noise Model 2.5 (TNM 2.5). The worksheets in *Appendix A* are based on the FHWA TNM 2.5 model, but provide an easier to understand format than the full model input and output data sheets. Existing traffic counts were provided by the project traffic engineers (Fehr & Peers, 2015) for Vaca Valley Parkway and North Village Parkway; these traffic counts were used in the FHWA model to determine the ambient noise levels along these roadways associated with current traffic levels. Traffic counts were not provided by Fehr & Peers for Crescent Drive, and therefore Dudek assumed the traffic counted during our noise measurement would be representative of current trip levels. We took the traffic counted during the 30 minute noise measurement, doubled this to represent one hour, and used this traffic volume to represent the peak hour.

Table 2 presents the results of the noise modelling of existing traffic noise levels, at the noise measurement locations.

Table 2
Existing Ambient Noise Levels Noise Monitor Locations (dBA)

Measurement Location	Noise Source	L_{EQ} Daytime	CNEL
1	Vaca Valley Parkway	61	62
2	North Village Parkway	62	63
3	Crescent Drive	59	60

As illustrated in Table 2, the existing hourly average noise levels during the day range from 59 to 62 dBA L_{EQ} along roadways at the boundaries of the campus. The existing CNEL values range from 60 to 63 dBA along roadways at the boundaries of campus. The measurement locations are generally within 15 feet from the edge of the roadway shoulder; at greater distance from the roadways the noise levels would be lower than indicated in *Table 2*.

NOISE IMPACT ANALYSIS

Exterior Noise Exposure Levels (Noise Element Criterion)

The Existing Conditions section provides an analysis of the current ambient noise levels in the vicinity of the proposed buildings. In order to determine the maximum noise levels to which project improvements would be exposed, Dudek modeled the future traffic noise levels based upon the Fehr & Peers projections for the "Cumulative With Project" scenario. The FHWA model was again employed for this analysis; refer to *Appendix A* for the worksheets. *Table 3* summarizes the future noise levels as determined from the modelling.

Table 3
Future Ambient Noise Levels Noise Monitor Locations (dBA)

Measurement Location	Noise Source	CNEL
1	Vaca Valley Parkway	68
2	North Village Parkway	69
3	Crescent Drive[1]	67

Table Notes: [1] Traffic projections not provided by Fehr & Peers for Crescent Drive; the analysis used 5 X Existing

It should be noted that Crescent Drive traffic projections were not provided by Fehr & Peers, because the proposed project would not add trips to this roadway. However, to account for potential traffic level increases from residential development along the future northern extension of Crescent Drive, Dudek used a conceptual estimate of five times the current traffic levels. This is roughly equivalent to the percentage increase along North Village Parkway, from current traffic levels to the future levels with cumulative plus project traffic.

The Biotechnology Science Building (Phase 1) and new Classroom Building and Student Success Center (Phase 2) would be considered "School" uses in the Vacaville Noise Element (Draft, 2014). The maximum "normally acceptable" exterior noise level for school facilities is 70 CNEL dBA. The future ambient noise levels associated with roadways adjacent to the campus range from 67 to 68 CNEL dBA. Consequently, the development of the proposed buildings would be in compliance with the pertinent adopted standards for exterior noise exposure. The project would therefore have less than significant impacts with respect to adopted exterior noise exposure limits.

Increases in Ambient Noise Levels

The primary long-term noise effect of the proposed Biotechnology Science Building (Phase 1) and new Classroom Building and Student Success Center (Phase 2) would be associated with new traffic trips generated by the new space. Dudek calculated the increase in ambient noise levels for the Biotech building versus existing traffic noise, and for the Biotech building, New Classroom Building, and Student Success Center compared to the Near Term traffic noise levels. The comparison of ambient, project-related, and ambient plus project noise levels is provided in Table 4.

Table 4
Ambient Noise Level Increases Selected Receptor Locations (CNEL dBA)

Measure Location	Existing CNEL	Existing Plus Biotech	Difference	Near Term Plus Biotech, Classrooms, Student Success	Difference	Impact
1	62	62	0	63	1	No
2	63	63	0	66	3	No

Based upon the analysis of changes in traffic-related noise levels resulting from the proposed project, the noise levels along the roadways to which the project would contribute the most trips would increase by no more than 3 CNEL dBA. In addition, there are no noise sensitive land uses located adjacent to these roadway segments (e.g., residences, lodging facilities, or hospitals). Consequently, the proposed project including Phase 1 and Phase 2 would not be anticipated to result in a significant increase in the ambient noise environment over the long term.

Short-Term Construction Noise

Construction of the development proposed in the project would generate noise that could expose nearby receptors to elevated noise levels that may disrupt communication and routine activities. The magnitude of the impact would depend on the type of construction activity, equipment, duration of the construction, distance between the noise source and receiver, and intervening structures. This section of the report discusses the noise levels calculated to result from construction of the project, at nearby sensitive receptors (i.e., inns and residences).

The construction activities for the proposed improvement project will be varied by component and location. The largest assemblage of equipment would be used for the Biotechnical Sciences Building. However, for a conservative analysis of off-site construction levels, the evaluation used the same assemblage of equipment for each of the three proposed buildings. For instance, the new classroom building, while considerably smaller than the Biotech building, was assumed to require the same equipment assemblage. *Table 5* summarizes the equipment list and distances to sensitive receptors used in the analysis of construction noise levels.

Table 5
Construction Equipment List & Distances to Sensitive Receptors

Equipment Needed	(1) Man lift (1) Compressor (1) Drum mixer (1) Crane (1) Tractor (1) Front End Loader (1) Concrete Pump (3) Backhoe (1) Welder
Sensitive Receptors	Biotech to Crescent Residences: 625 feet New Class Building to Crescent Residences: 1235 feet Student Success Bld. to Crescent Residences: 1550 feet

With the noise sources identified above, a noise analysis was performed using a model developed under the auspices of the Federal Highway Administration (FHWA) called the Roadway Construction Noise Model (RCNM) (FHWA 2008). Input variables for RCNM consist of the receiver / land use types, the equipment type (i.e., backhoe, crane, truck, etc.), the number of equipment pieces, the duty cycle for each piece of equipment (i.e., percentage of hours the equipment typically works per day), and the distance from the sensitive noise. The reader is referred to Appendix B for the inputs used in the RCNM model, as well as results.

The various construction equipment types and quantities (as described above) were used for this analysis. The RCNM has default duty cycle values for the various pieces of equipment, which were derived from an extensive study of typical construction activity patterns. Those default duty cycle values were utilized for this analysis.

Table 6 presents the summary results of the construction noise analysis.

Table 6
Construction Noise Levels Summary of Results
(dBA LEQ)

Building Under Construction	Receptor	L_{EQ} Daytime (Existing)	Construction Noise Level
Biotech Science	Crescent Drive Residences	59	64
New Classroom	Crescent Drive Residences		58
Student Success	Crescent Drive Residences		56

The construction of the proposed Vacaville Center buildings must comply with Policy P3.13 of the Vacaville Noise Element, which requires all of the following measures.

- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction area.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Limit hours of operation of outdoor noise sources through conditions of approval.

The construction process would result in average construction noise levels at off-site noise-sensitive land uses that are very similar to the ambient daytime noise levels. Due to the proximity of the Biotech Sciences building site to Crescent Drive, construction noise levels could be approximately 5 dBA higher than existing daytime exterior levels, which would be noticeable but would not be expected to disrupt daytime activities inside the residences.

Average noise levels from construction activities may be mildly annoying at times, compared to existing daytime ambient noise levels. With lower ambient noise levels in the evening and at night, the construction noise would be more noticeable in these periods, and would also have a greater potential to be disruptive for residences and lodging uses in the project vicinity. It is therefore recommended to restrict construction activities to the daytime period (7 AM to 7 PM) to avoid disruption of evening time relaxation and overnight sleep periods. Refer to the recommended mitigation section, below.

Recommended Mitigations

The above analysis concludes the project would not have significant noise impacts upon vicinity noise-sensitive land uses. However, to minimize already insignificant impacts, the following measure is recommended.

- To avoid disruption during evening time relaxation and overnight sleep periods for nearby residents, construction should be limited to the daytime period between 7 AM to 7 PM.

REFERENCES

Caltrans (California Department of Transportation). 1980. Fundamentals and Abatement of Highway Traffic Noise. September 1980.

Caltrans . 1987. California Vehicle Noise Emission Levels. Report No. FHWA/CA/TL-87/03. January 1987. http://www.dot.ca.gov/hq/env/noise/pub/CA%20Vehicle%20Noise%20Emission%20Levels.pdf.

FHWA (Federal Highway Administration). 2006.

FHWA, Roadway Construction Noise Model (RCNM) (2008).

Vacaville. 2014 (Draft). 2025 General Plan, Noise Element

DUDEK

Figure 1

Vicinity Noise Sensitive Land Uses

Solano Community College Vacaville Center Noise Assessment

KEY: # Noise Measurement Location

DUDEK

Figure 2

Noise Measurement Locations

Solano Community College Vacaville Center Noise Assessment

ATTACHMENT A

ACOUSTICAL TERMS AND DEFINITIONS

ATTACHMENT A
ACOUSTICAL TERMS AND DEFINITIONS

Term	**Definition**
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.
A-Weighted Sound Level	dBA is the sound pressure level in decibels as measured on a sound level meter using the A-weighted 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.
Community Noise Equivalent Level	CNEL is the A-weighted equivalent continuous sound exposure (CNEL) level for a 24-hour period with a ten dB adjustment added to sound levels occurring during nighttime hours (10 pm to 7 am) and a five dB adjustment added to the sound levels occurring during the evening hours (7 pm to 10 pm).
Day / Night Noise Equivalent Level	Ldn is the A-weighted equivalent continuous sound exposure level for a 24-hour period with a ten dB adjustment added to sound levels occurring during nighttime hours (10 pm to 7 am).
Decibel	dB is the unit for measuring sound pressure level, equal to 10 times the logarithm to the base 10 of the ratio of the measured sound pressure squared to a reference pressure, which is 20 micro-Pascal.
Time-Average Sound Level	TAV is the sound level corresponding to a steady state sound level and containing the same total energy as a time varying signal over a given sample period. TAV is designed to average all of the loud and quiet sound levels occurring over a specific time

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APPENDIX A

FHWA Traffic Model
Noise Calculation Worksheets

FHWA - HIGHWAY TRAFFIC NOISE PREDICTION MODEL DUDEK
(modified for CNEL)

PROJECT:	SCC Vacaville Center Project	JN:	8583
ROADWAY:	Vaca Valley Parkway	DATE:	31-Mar-15
LOCATION:	**Mid Southern Property Boundary**	BY:	J. Leech

ADT	5,110	Existing	PK HR VOL	511
SPEED	40			
PK HR %	10			
DIST CTL	45			
DIST N/F	76	(M=76,P=52,S=36,C=12)	AUTO SLE DISTANCE	24.6
DIST WALL	45		MED TRUCK SLE DIST	24.3
DIST W/OB	0		HVY TRUCK SLE DIST	24.3
HTH WALL	0.0	********		
HTH OBS	5.0			
AMBIENT	0.0			
ROADWAY VIEW:				
LF ANGLE	-20			
RT ANGLE	20			
DF ANGLE	40			

SITE CONDITIONS: (10=HARD SITE, 15=SOFT SITE)

AUTOM	10.0
MED TR	10.0
HVY TR	10.0
BARRIER	0 (0=WALL,1=BERM)

ELEVATIONS:

PAD	0.0	AUTOMOBILES =	0.00
ROAD	0.0	MEDIUM TRUCKS=	2.30
		HEAVY TRUCKS =	8.01
GRADE:	0.0 %	GRADE ADJUSTM=	0.0 (TO HEAVY TRUCKS)

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9400
MEDIUM TRUCKS	0.848	0.049	0.103	0.0400
HEAVY TRUCKS	0.865	0.027	0.108	0.0200

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	58.5	56.6	54.8	48.8	58.0
MEDIUM TRUCKS	56.0	54.5	48.2	46.6	55.3
HEAVY TRUCKS	58.3	56.9	47.8	49.1	57.6
VEHICULAR NOISE	62.5	60.9	56.3	53.1	61.9

FHWA - HIGHWAY TRAFFIC NOISE PREDICTION MODEL
(modified for CNEL)

DUDEK

PROJECT:	SCC Vacaville Center Project	JN:	8583
ROADWAY:	Vaca Valley Parkway	DATE:	31-Mar-15
LOCATION:	**Mid Southern Property Boundary**	BY:	J. Leech

ADT	5,440	Existing + Project	PK HR VOL	544
SPEED	40			
PK HR %	10			
DIST CTL	45			
DIST N/F	76	(M=76,P=52,S=36,C=12)	AUTO SLE DISTANCE	24.6
DIST WALL	45		MED TRUCK SLE DIST	24.3
DIST W/OB	0		HVY TRUCK SLE DIST	24.3
HTH WALL	0.0	********		
HTH OBS	5.0			
AMBIENT	0.0			
ROADWAY VIEW:				
LF ANGLE	-20			
RT ANGLE	20			
DF ANGLE	40			

SITE CONDITIONS:		(10=HARD SITE, 15=SOFT SITE)
AUTOM	10.0	
MED TR	10.0	
HVY TR	10.0	
BARRIER	0	(0=WALL,1=BERM)

ELEVATIONS:				
PAD	0.0	AUTOMOBILES =	0.00	
ROAD	0.0	MEDIUM TRUCKS=	2.30	
		HEAVY TRUCKS =	8.01	
GRADE:	0.0 %	GRADE ADJUSTM=	0.0	(TO HEAVY TRUCKS)

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9400
MEDIUM TRUCKS	0.848	0.049	0.103	0.0400
HEAVY TRUCKS	0.865	0.027	0.108	0.0200

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	58.7	56.9	55.1	49.0	58.3
MEDIUM TRUCKS	56.3	54.8	48.4	46.9	55.6
HEAVY TRUCKS	58.6	57.1	48.1	49.4	57.8
VEHICULAR NOISE	62.8	61.2	56.6	53.3	62.1

FHWA - HIGHWAY TRAFFIC NOISE PREDICTION MODEL

(modified for CNEL)

DUDEK

PROJECT:	SCC Vacaville Center Project	JN:	8583
ROADWAY:	Vaca Valley Parkway	DATE:	31-Mar-15
LOCATION:	**Mid Southern Property Boundary**	BY:	J. Leech

ADT	6,220	Near Term + Project	PK HR VOL	622
SPEED	40			
PK HR %	10			
DIST CTL	45			
DIST N/F	76	(M=76,P=52,S=36,C=12)	AUTO SLE DISTANCE	24.6
DIST WALL	45		MED TRUCK SLE DIST	24.3
DIST W/OB	0		HVY TRUCK SLE DIST	24.3
HTH WALL	0.0	********		
HTH OBS	5.0			
AMBIENT	0.0			
ROADWAY VIEW:				
LF ANGLE	-20			
RT ANGLE	20			
DF ANGLE	40			

SITE CONDITIONS:		(10=HARD SITE, 15=SOFT SITE)
AUTOM	10.0	
MED TR	10.0	
HVY TR	10.0	
BARRIER	0	(0=WALL,1=BERM)

ELEVATIONS:				
PAD	0.0	AUTOMOBILES =	0.00	
ROAD	0.0	MEDIUM TRUCKS=	2.30	
		HEAVY TRUCKS =	8.01	
GRADE:	0.0 %	GRADE ADJUSTM=	0.0	(TO HEAVY TRUCKS)

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9400
MEDIUM TRUCKS	0.848	0.049	0.103	0.0400
HEAVY TRUCKS	0.865	0.027	0.108	0.0200

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	59.3	57.4	55.7	49.6	58.8
MEDIUM TRUCKS	56.9	55.4	49.0	47.5	56.2
HEAVY TRUCKS	59.2	57.7	48.7	49.9	58.4
VEHICULAR NOISE	63.4	61.7	57.2	53.9	62.7

FHWA - HIGHWAY TRAFFIC NOISE PREDICTION MODEL
(modified for CNEL)

DUDEK

PROJECT:	SCC Vacaville Center Project	JN:	8583
ROADWAY:	Vaca Valley Parkway	DATE:	31-Mar-15
LOCATION:	**Mid Southern Property Boundary**	BY:	J. Leech

ADT	19,330	Cumulative + Project	PK HR VOL	1,933
SPEED	40			
PK HR %	10			
DIST CTL	45			
DIST N/F	76	(M=76,P=52,S=36,C=12)	AUTO SLE DISTANCE	24.6
DIST WALL	45		MED TRUCK SLE DIST	24.3
DIST W/OB	0		HVY TRUCK SLE DIST	24.3
HTH WALL	0.0	********		
HTH OBS	5.0			
AMBIENT	0.0			
ROADWAY VIEW:				
LF ANGLE	-20			
RT ANGLE	20			
DF ANGLE	40			

SITE CONDITIONS:		(10=HARD SITE, 15=SOFT SITE)
AUTOM	10.0	
MED TR	10.0	
HVY TR	10.0	
BARRIER	0	(0=WALL,1=BERM)

ELEVATIONS:				
PAD	0.0	AUTOMOBILES =	0.00	
ROAD	0.0	MEDIUM TRUCKS=	2.30	
		HEAVY TRUCKS =	8.01	
GRADE:	0.0 %	GRADE ADJUSTM=	0.0	(TO HEAVY TRUCKS)

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9400
MEDIUM TRUCKS	0.848	0.049	0.103	0.0400
HEAVY TRUCKS	0.865	0.027	0.108	0.0200

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	64.3	62.4	60.6	54.5	63.8
MEDIUM TRUCKS	61.8	60.3	53.9	52.4	61.1
HEAVY TRUCKS	64.1	62.7	53.6	54.9	63.3
VEHICULAR NOISE	68.3	66.7	62.1	58.8	67.7

FHWA - HIGHWAY TRAFFIC NOISE PREDICTION MODEL

(modified for CNEL)

DUDEK

PROJECT:	SCC Vacaville Center Project	JN:	8583
ROADWAY:	North Village Parkway	DATE:	31-Mar-15
LOCATION:	**Mid Campus**	BY:	J. Leech

ADT	940	Existing	PK HR VOL	94
SPEED	40			
PK HR %	10			
DIST CTL	38			
DIST N/F	76	(M=76,P=52,S=36,C=12)	AUTO SLE DISTANCE	5.0
DIST WALL	38		MED TRUCK SLE DIST	2.7
DIST W/OB	0		HVY TRUCK SLE DIST	3.0
HTH WALL	0.0	********		
HTH OBS	5.0			
AMBIENT	0.0			
ROADWAY VIEW:				
LF ANGLE	-20			
RT ANGLE	20			
DF ANGLE	40			

SITE CONDITIONS: (10=HARD SITE, 15=SOFT SITE)

AUTOM	10.0
MED TR	10.0
HVY TR	10.0
BARRIER	0 (0=WALL,1=BERM)

ELEVATIONS:

PAD	0.0	AUTOMOBILES =	0.00
ROAD	0.0	MEDIUM TRUCKS=	2.30
		HEAVY TRUCKS =	8.01
GRADE:	0.0 %	GRADE ADJUSTM=	0.0 (TO HEAVY TRUCKS)

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9400
MEDIUM TRUCKS	0.848	0.049	0.103	0.0400
HEAVY TRUCKS	0.865	0.027	0.108	0.0200

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	58.0	56.1	54.4	48.3	57.6
MEDIUM TRUCKS	58.2	56.7	50.3	48.8	57.5
HEAVY TRUCKS	60.0	58.6	49.6	50.8	59.3
VEHICULAR NOISE	63.6	62.1	56.7	54.2	63.0

FHWA - HIGHWAY TRAFFIC NOISE PREDICTION MODEL

(modified for CNEL)

DUDEK

PROJECT:	SCC Vacaville Center Project	JN:	8583
ROADWAY:	North Village Parkway	DATE:	31-Mar-15
LOCATION:	**Mid Campus**	BY:	J. Leech

ADT	950	Existing + Project	PK HR VOL	95
SPEED	40			
PK HR %	10			
DIST CTL	38			
DIST N/F	76	(M=76,P=52,S=36,C=12)	AUTO SLE DISTANCE	5.0
DIST WALL	38		MED TRUCK SLE DIST	2.7
DIST W/OB	0		HVY TRUCK SLE DIST	3.0
HTH WALL	0.0	********		
HTH OBS	5.0			
AMBIENT	0.0			
ROADWAY VIEW:				
LF ANGLE	-20			
RT ANGLE	20			
DF ANGLE	40			

SITE CONDITIONS: (10=HARD SITE, 15=SOFT SITE)

AUTOM	10.0
MED TR	10.0
HVY TR	10.0
BARRIER	0 (0=WALL,1=BERM)

ELEVATIONS:

PAD	0.0	AUTOMOBILES =	0.00
ROAD	0.0	MEDIUM TRUCKS=	2.30
		HEAVY TRUCKS =	8.01
GRADE:	0.0 %	GRADE ADJUSTM=	0.0 (TO HEAVY TRUCKS)

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9400
MEDIUM TRUCKS	0.848	0.049	0.103	0.0400
HEAVY TRUCKS	0.865	0.027	0.108	0.0200

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	58.1	56.2	54.4	48.4	57.6
MEDIUM TRUCKS	58.3	56.7	50.4	48.8	57.5
HEAVY TRUCKS	60.1	58.6	49.6	50.9	59.3
VEHICULAR NOISE	63.7	62.1	56.8	54.3	63.0

FHWA - HIGHWAY TRAFFIC NOISE PREDICTION MODEL

(modified for CNEL)

DUDEK

PROJECT:	SCC Vacaville Center Project	JN:	8583
ROADWAY:	North Village Parkway	DATE:	31-Mar-15
LOCATION:	**Mid Campus**	BY:	J. Leech

ADT	1,720	Near Term + Project	PK HR VOL	172
SPEED	40			
PK HR %	10			
DIST CTL	38			
DIST N/F	76	(M=76,P=52,S=36,C=12)	AUTO SLE DISTANCE	5.0
DIST WALL	38		MED TRUCK SLE DIST	2.7
DIST W/OB	0		HVY TRUCK SLE DIST	3.0
HTH WALL	0.0	********		
HTH OBS	5.0			
AMBIENT	0.0			
ROADWAY VIEW:				
LF ANGLE	-20			
RT ANGLE	20			
DF ANGLE	40			

SITE CONDITIONS:		(10=HARD SITE, 15=SOFT SITE)
AUTOM	10.0	
MED TR	10.0	
HVY TR	10.0	
BARRIER	0	(0=WALL,1=BERM)

ELEVATIONS:				
PAD	0.0	AUTOMOBILES =	0.00	
ROAD	0.0	MEDIUM TRUCKS=	2.30	
		HEAVY TRUCKS =	8.01	
GRADE:	0.0 %	GRADE ADJUSTM=	0.0	(TO HEAVY TRUCKS)

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9400
MEDIUM TRUCKS	0.848	0.049	0.103	0.0400
HEAVY TRUCKS	0.865	0.027	0.108	0.0200

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	60.7	58.8	57.0	51.0	60.2
MEDIUM TRUCKS	60.8	59.3	53.0	51.4	60.1
HEAVY TRUCKS	62.6	61.2	52.2	53.4	61.9
VEHICULAR NOISE	66.2	64.7	59.4	56.8	65.6

FHWA - HIGHWAY TRAFFIC NOISE PREDICTION MODEL

(modified for CNEL)

DUDEK

PROJECT:	SCC Vacaville Center Project	JN:	8583
ROADWAY:	North Village Parkway	DATE:	31-Mar-15
LOCATION:	**Mid Campus**	BY:	J. Leech

ADT	4,020	Cumulative + Project	PK HR VOL	402
SPEED	40			
PK HR %	10			
DIST CTL	38			
DIST N/F	76	(M=76,P=52,S=36,C=12)	AUTO SLE DISTANCE	5.0
DIST WALL	38		MED TRUCK SLE DIST	2.7
DIST W/OB	0		HVY TRUCK SLE DIST	3.0
HTH WALL	0.0	********		
HTH OBS	5.0			
AMBIENT	0.0			
ROADWAY VIEW:				
LF ANGLE	-20			
RT ANGLE	20			
DF ANGLE	40			

SITE CONDITIONS:		(10=HARD SITE, 15=SOFT SITE)
AUTOM	10.0	
MED TR	10.0	
HVY TR	10.0	
BARRIER	0	(0=WALL,1=BERM)

ELEVATIONS:				
PAD	0.0	AUTOMOBILES =	0.00	
ROAD	0.0	MEDIUM TRUCKS=	2.30	
		HEAVY TRUCKS =	8.01	
GRADE:	0.0 %	GRADE ADJUSTM=	0.0	(TO HEAVY TRUCKS)

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9400
MEDIUM TRUCKS	0.848	0.049	0.103	0.0400
HEAVY TRUCKS	0.865	0.027	0.108	0.0200

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	64.4	62.5	60.7	54.6	63.9
MEDIUM TRUCKS	64.5	63.0	56.7	55.1	63.8
HEAVY TRUCKS	66.3	64.9	55.9	57.1	65.6
VEHICULAR NOISE	69.9	68.4	63.1	60.5	69.3

FHWA - HIGHWAY TRAFFIC NOISE PREDICTION MODEL
(modified for CNEL)

DUDEK

PROJECT:	SCC Vacaville Center Project	JN:	8583
ROADWAY:	Crescent Drive	DATE:	31-Mar-15
LOCATION:	**Intersection with Stratton Ranch**	BY:	J. Leech

ADT	1,300	Existing	PK HR VOL	130
SPEED	35			
PK HR %	10			
DIST CTL	38			
DIST N/F	76	(M=76,P=52,S=36,C=12)	AUTO SLE DISTANCE	5.0
DIST WALL	38		MED TRUCK SLE DIST	2.7
DIST W/OB	0		HVY TRUCK SLE DIST	3.0
HTH WALL	0.0	********		
HTH OBS	5.0			
AMBIENT	0.0			
ROADWAY VIEW:				
LF ANGLE	-10			
RT ANGLE	10			
DF ANGLE	20			

SITE CONDITIONS: (10=HARD SITE, 15=SOFT SITE)

AUTOM	10.0
MED TR	10.0
HVY TR	10.0
BARRIER	0 (0=WALL,1=BERM)

ELEVATIONS:

PAD	0.0	AUTOMOBILES =	0.00
ROAD	0.0	MEDIUM TRUCKS=	2.30
		HEAVY TRUCKS =	8.01
GRADE:	0.0 %	GRADE ADJUSTM=	0.0 (TO HEAVY TRUCKS)

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9400
MEDIUM TRUCKS	0.848	0.049	0.103	0.0400
HEAVY TRUCKS	0.865	0.027	0.108	0.0200

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	54.8	52.9	51.1	45.1	54.3
MEDIUM TRUCKS	55.2	53.7	47.4	45.8	54.5
HEAVY TRUCKS	57.6	56.1	47.1	48.4	56.8
VEHICULAR NOISE	60.8	59.3	53.7	51.4	60.2

FHWA - HIGHWAY TRAFFIC NOISE PREDICTION MODEL
(modified for CNEL)

DUDEK

PROJECT:	SCC Vacaville Center Project	JN:	8583
ROADWAY:	Crescent Drive	DATE:	31-Mar-15
LOCATION:	**Intersection with Stratton Ranch**	BY:	J. Leech

ADT	6,500	Future, Worst-Case Parameter	PK HR VOL	650
SPEED	35			
PK HR %	10			
DIST CTL	38			
DIST N/F	76	(M=76,P=52,S=36,C=12)	AUTO SLE DISTANCE	5.0
DIST WALL	38		MED TRUCK SLE DIST	2.7
DIST W/OB	0		HVY TRUCK SLE DIST	3.0
HTH WALL	0.0	********		
HTH OBS	5.0			
AMBIENT	0.0			
ROADWAY VIEW:				
LF ANGLE	-10			
RT ANGLE	10			
DF ANGLE	20			

SITE CONDITIONS:		(10=HARD SITE, 15=SOFT SITE)
AUTOM	10.0	
MED TR	10.0	
HVY TR	10.0	
BARRIER	0	(0=WALL,1=BERM)

ELEVATIONS:				
PAD	0.0	AUTOMOBILES =	0.00	
ROAD	0.0	MEDIUM TRUCKS=	2.30	
		HEAVY TRUCKS =	8.01	
GRADE:	0.0 %	GRADE ADJUSTM=	0.0	(TO HEAVY TRUCKS)

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9400
MEDIUM TRUCKS	0.848	0.049	0.103	0.0400
HEAVY TRUCKS	0.865	0.027	0.108	0.0200

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	61.8	59.9	58.1	52.1	61.3
MEDIUM TRUCKS	62.2	60.7	54.3	52.8	61.5
HEAVY TRUCKS	64.6	63.1	54.1	55.4	63.8
VEHICULAR NOISE	67.8	66.2	60.7	58.4	67.1

APPENDIX B

Roadway Noise Construction Model (RNCM)
Input & Results Data Sheets

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 3/31/2015

Case Description: New Building Construction

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Bio Tech (Crescent)	Residential	55	50	45

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Man Lift	No	20		74.7	625	0
Compressor (air)	No	40		77.7	625	0
Drum Mixer	No	50		80	625	0
Crane	No	16		80.6	625	0
Tractor	No	40	84		625	0
Front End Loader	No	40		79.1	625	0
Pumps	No	50		80.9	625	0
Backhoe	No	40		77.6	625	0
Backhoe	No	40		77.6	625	0
Backhoe	No	40		77.6	625	0
Welder / Torch	No	40		74	625	0

Results

Calculated (dBA)

Equipment		*Lmax	Leq
Man Lift		52.8	45.8
Compressor (air)		55.7	51.8
Drum Mixer		58.1	55.1
Crane		58.6	50.7
Tractor		62.1	58.1
Front End Loader		57.2	53.2
Pumps		59	56
Backhoe		55.6	51.6
Backhoe		55.6	51.6
Backhoe		55.6	51.6
Welder / Torch		52.1	48.1
	Total	62.1	63.8

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
New Class Bld (Crescent)	Residential	55	50	45

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Man Lift	No	20		74.7	1235	0
Compressor (air)	No	40		77.7	1235	0
Drum Mixer	No	50		80	1235	0
Crane	No	16		80.6	1235	0
Tractor	No	40	84		1235	0
Front End Loader	No	40		79.1	1235	0
Pumps	No	50		80.9	1235	0
Backhoe	No	40		77.6	1235	0
Backhoe	No	40		77.6	1235	0
Backhoe	No	40		77.6	1235	0
Welder / Torch	No	40		74	1235	0

Results

Equipment		Calculated (dBA) *Lmax	Leq
Man Lift		46.8	39.9
Compressor (air)		49.8	45.8
Drum Mixer		52.1	49.1
Crane		52.7	44.7
Tractor		56.1	52.2
Front End Loader		51.3	47.3
Pumps		53.1	50.1
Backhoe		49.7	45.7
Backhoe		49.7	45.7
Backhoe		49.7	45.7
Welder / Torch		46.1	42.2
	Total	56.1	57.8

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Student Success (Crescent)	Residential	55	50	45

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Man Lift	No	20		74.7	1550	0
Compressor (air)	No	40		77.7	1550	0
Drum Mixer	No	50		80	1550	0
Crane	No	16		80.6	1550	0
Tractor	No	40	84		1550	0
Front End Loader	No	40		79.1	1550	0
Pumps	No	50		80.9	1550	0
Backhoe	No	40		77.6	1550	0
Backhoe	No	40		77.6	1550	0
Backhoe	No	40		77.6	1550	0
Welder / Torch	No	40		74	1550	0

Results

Equipment		Calculated (dBA) *Lmax	Leq
Man Lift		44.9	37.9
Compressor (air)		47.8	43.9
Drum Mixer		50.2	47.2
Crane		50.7	42.8
Tractor		54.2	50.2
Front End Loader		49.3	45.3
Pumps		51.1	48.1
Backhoe		47.7	43.8
Backhoe		47.7	43.8
Backhoe		47.7	43.8
Welder / Torch		44.2	40.2
	Total	54.2	55.9

*Calculated Lmax is the Loudest value.

APPENDIX G

Traffic Report

Draft Transportation Analysis

Solano Community College Vacaville Campus in Vacaville, California

Prepared for:
Dudek
Solano Community College

Prepared by
FEHR & PEERS

100 Pringle Avenue
Suite 600
Walnut Creek, CA
925.930.7100

April 2015

Draft Transportation Impact Analysis

Solano Community College Vacaville Campus

in Vacaville, California

Prepared for:
Dudek
and
Solano Community College District

April 3, 2015

WC14-3181

FEHR PEERS

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EXECUTIVE SUMMARY

This report presents the results of the transportation impact analysis (TIA) conducted for the proposed Solano Community College Vacaville Campus expansion development located in northeast Vacaville, California. The project site is comprised of Solano Community College District owned lands along the north side of Vaca Valley Parkway between Akerly Drive and Interstate 505. The project site is split in two sections (east and west) by North Village Parkway. The project site is currently occupied by the following existing uses:

- The main Solano Community College Vacaville Center (Vacaville Campus), consisting of a 36,359 square feet classroom building (located on the east side of North Village Parkway)
- The Vacaville Workforce Development Center, consisting of a 16,500 square foot building with a variety of uses (located on the west side of North Village Parkway)

The proposed project would include construction of the following buildings:

- Phase 1: Construction of a 31,943 square feet (gross) biotechnology science building located immediately to the north of the Vacaville Campus building
- Phase 2: Buildout of campus under a Measure Q bond funding scenario, consisting of:
    - A 22,000 square foot Student Success Center to be constructed east of the existing classroom building
    - An 8,000 square foot classroom building to be constructed north of the existing Workforce Development center

Phase 1 is expected to be constructed in the near-term, while Phase 2 is expected to be constructed as funding from Measure Q becomes available.

Transportation impacts at ten (10) study intersections, five (5) roadway segments and five (5) freeway segments were evaluated under guidelines provided by staff from the City of Vacaville. Roadway system operations were evaluated under the following study scenarios:

- Existing Conditions
- Existing with Phase 1 Conditions
- Near Term Conditions
- Near Term with Phase 1 Conditions
- Near Term with Phase 2 Conditions

- Cumulative without Project Conditions
- Cumulative with Phase 1 Conditions
- Cumulative with Phase 2 Conditions

Impacts to pedestrians, bicyclists and the transit system were also evaluated.

PROJECT TRAFFIC ESTIMATES

Project-generated vehicle trips were estimated based on the current site's traffic generation per square foot, applying those rates to the added floor area. Phase 1 of the project is expected to generate 138 new AM peak hour trips (72 inbound, 66 outbound) and 129 new PM peak hour trips (71 inbound, 58 outbound). Phase 2 of the project is expected to generate (by itself) 131 new AM peak hour trips (68 inbound, 63 outbound) and 122 new PM peak hour trips (138 inbound, 113 outbound). Therefore, the total net new trips after construction of Phase 2 is 269 AM peak hour trips (140 inbound, 129 outbound) and 251 PM peak hour trips (138 inbound, 113 outbound).

PROJECT IMPACTS

This analysis identifies potentially significant adverse impacts of the proposed project on the surrounding transportation system and recommends measures to mitigate significant impacts for environmental clearance.

INTERSECTION IMPACTS

Intersection impacts were evaluated using impact criteria from the City of Vacaville. **Table E-1** provides a summary of intersection impacts and the post-mitigation level of significance. Mitigation measures are discussed later in this Executive Summary. Since the significant impacts can be mitigated to less than significant levels with mitigation, the project's impacts to intersection operations are ***less-than-significant with mitigation***.

TABLE E-1 INTERSECTION IMPACT SUMMARY

Intersection		Intersection Impacted Under Scenario?					Impact Less than Significant with Mitigation?
		Existing with Phase 1	Near Term with Phase 1	Near Term with Phase 2	Cumulative With Phase 1	Cumulative with Phase 2	
1	East Monte Vista Avenue-Crocker Drive/Vaca Valley Parkway	No	No	No	No	No	N/A
2	I-505 Southbound Ramps/Vaca Valley Parkway	**Yes**	**Yes**	**Yes**	No	No	**Yes**
3	I-505 Northbound Ramps/Vaca Valley Parkway	No	No	No	**Yes**	**Yes**	**Yes**
4	New Horizons Way-North Village Parkway/Vaca Valley Parkway	No	No	No	**Yes**	**Yes**	**Yes**
5	Akerly Drive/Vaca Valley Parkway	No	No	No	No	No	N/A
6	Kaiser Hospital Driveway-Crescent Drive/Vaca Valley Parkway	No	No	No	No	**Yes**	**Yes**
7	I-80 Westbound Ramps/Vaca Valley Parkway	No	No	No	No	No	N/A
8	I-80 Eastbound Ramps/Leisure Town Road	No	No	No	No	No	N/A
9	Orange Drive/Leisure Town Road	No	No	No	No	No	N/A
10	North Village Parkway/Vacaville Campus Main Driveways	No	No	No	No	No	N/A

Source: Fehr & Peers, March 2015

ROADWAY SEGMENT IMPACTS

The analysis of roadway segments under the analysis scenarios resulted in the following findings:

- All roadway segments operate acceptably with and without the project under the Existing and Near Term time horizons
- Project contributions to traffic volumes on segments projected to operate unacceptably under Cumulative without Projects Conditions result in a volume-to-capacity ratio change of less than 0.02.

Based on these findings, the project's impacts to roadway segments are ***less-than-significant***.

FREEWAY SEGMENT IMPACTS

The analysis of freeway segments under the analysis scenarios resulted in the following findings:

- All freeway segments operate acceptably with and without the project under the Existing and Near Term time horizons
- Project contributions to traffic volumes on segments projected to operate unacceptably under Cumulative without Projects Conditions result in a volume-to-capacity ratio change of less than 0.01.

Based on these findings, the project's impacts to freeway segments are ***less-than-significant***.

PEDESTRIAN, BICYCLE AND TRANSIT IMPACTS

Pedestrian and Bicycle Facilities

The proposed project could result in increased pedestrian trips across North Village Parkway at the Campus Driveway intersection. The intersection currently lacks a marked crosswalk across North Village Parkway and warning signage indicating the presence to pedestrian crossings. This presents a potentially hazardous situation as North Village Parkway is a high speed roadway, so the project causes a significant impact for pedestrians at this location. Mitigation measures to alleviate this impact include providing a marked crosswalk and warning signage at the intersection to facilitate pedestrian crossings of North Village Parkway. Implementing the mitigation measures would result in the impacts to pedestrian being ***less-than-significant with mitigation***.

Bicycle access for the site is primarily handled by Class II bike lanes along North Village Parkway. The project is not expected to disrupt any on-street/off-campus bicycle facilities, so the impacts to bicyclists are ***less-than-significant***.

Transit

The project will generate new demand for the transit services and facilities that serve the area as described in **Chapter 2**. Fixed-route bus service operates near the site with stops located within walking distance of the proposed development. While student enrollment may increase over time with the implementation of Phase 1 and Phase 2 of the project, transit capacities are not expected to be exceeded. Therefore impacts to transit are ***less-than-significant***. However, the District should coordinate with City Coach to monitor bus ridership and promote transit usage.

SITE ACCESS AND CIRCULATION

The proposed project will construct a portion of the overall Master Plan for the Vacaville Campus. The site design should promote efficient and safe vehicle, pedestrian and bicycle movements throughout the east and west campuses. It is also suggested that the District undertake a parking study to ensure that each side of campus will provide enough parking supply, so as to minimize the need for students and staff to circulate around the parking lots to find an empty parking space during periods of peak parking demand. The District should also provide amenities that will encourage bicycling and transit usage.

MITIGATION MEASURES

INTERSECTION IMPACTS

Existing and Near Term Impacts

The project is anticipated to cause a significant impact at I-505 Southbound Ramps/Vaca Valley Parkway under the Existing with Phase 1, Near Term with Phase 1 and Near Term with Phase 2 scenarios. This intersection is currently unsignalized and meets signal warrants under Existing Conditions, Near Term Conditions and all associated with Project scenarios. The mitigation measures for these intersection impacts include a fair share contribution of funding towards construction resulting in the following intersection configuration:

- Signalize intersection (westbound left turn protected phase)
- Southbound approach: 1 left turn pocket (150 feet length), 1 through-right turn shared lane
- Westbound approach: 1 left turn pocket (150 feet length), 1 through lane
- Eastbound approach: 1 through lane, 1 right-turn pocket

Construction of these improvements would result in the intersection operating at LOS C or better, so the project's impacts would be reduced to a level that is ***less-than-significant with mitigation***.

Cumulative Impacts

The project is anticipated to cause a significant impact at three intersections under Cumulative with Phase 1 Conditions and four intersections under Cumulative with Phase 2 Conditions.

- The mitigation measures for Cumulative with Phase 1 Conditions include a fair share contribution towards construction of the following improvements:New Horizons Way-North Village Parkway/Vaca Valley Parkway
    - Add new third westbound lane from Akerly Drive/Vaca Valley Parkway to New Horizons Way-North Village Parkway/Vaca Valley Parkway
    - Stripe westbound approach as 1 left turn lane, 2 through lanes and 1 through-right turn shared lane
    - Restripe southbound approach to 2 left turn lanes and 1 through-right turn shared lane
    - Restripe northbound approach to 2 left turn lanes and 1 through-right turn shared lane
- I-505 Northbound Ramps/Vaca Valley Parkway
    - Carry new third westbound lane from New Horizons Way-North Village Parkway/Vaca Valley Parkway to I-505 Northbound Ramps/Vaca Valley Parkway
    - Stripe westbound approach to 2 through lanes and 1 right turn only lane

Since the two intersections along Vaca Valley Parkway operate deficiently before project trips are added, the project shall pay a fair share percentage of construction costs for improvements at New Horizons Way-North Village Parkway/Vaca Valley Parkway and I-505 Northbound Ramps/Vaca Valley Parkway. Implementing these mitigation measures would reduce the impacts to ***less-than-significant with mitigation***.

The District shall fully sponsor improvements related to mitigating the impact at the North Village Parkway/Vacaville Campus Main Driveways intersection as the intersection operated acceptably before the addition of project trips. The mitigation measure includes the following:

- Monitor intersection operations at North Village Parkway/Vacaville Campus Main Driveways every five (5) years after occupancy of Phase 1. Monitoring consists of collecting new intersection turning movement counts and intersection LOS analysis using state-of-the-practice analysis methods.

- If intersection operations degrade to an unacceptable level, construct one of the following improvements:
    - If signal warrants are not met, roundabout or all-way stop-control
    - If signal warrants are met, signalize

Implementing this mitigation measure will result in acceptable intersection operations. Therefore, the impacts would be reduced to ***less-than-significant with mitigation***.

The mitigation measures for Cumulative with Phase 2 Conditions include the Cumulative with Phase 1 Conditions mitigation measures and the following mitigation measure:

- Kaiser Hospital Driveway-Crescent Drive/Vaca Valley Parkway
    - Modify westbound approach to include a right turn overlap phase
    - Modify northbound approach to include a right turn overlap phase

Since Kaiser Hospital Driveway-Crescent Drive/Vaca Valley Parkway operates deficiently before project trips are added, the project shall pay a fair share percentage of construction costs. Implementing these mitigation measures would reduce the impacts to ***less-than-significant with mitigation***.

PEDESTRIAN IMPACTS

As stated previously, the mitigation measure to alleviate the significant pedestrian impact at North Village Parkway/Vacaville Campus Main Driveways is to provide a marked crosswalk and warning signage. Providing this improvement would reduce the project's impact to ***less-than-significant with mitigation***.

1.0 INTRODUCTION

This report presents the results of the Transportation Impact Analysis (TIA) conducted for the proposed community college development located along North Village Parkway north of Vaca Valley Parkway in the City of Vacaville, California. This development is known as the Solano Community College Vacaville Campus Expansion, and is located on lands owned by the Solano Community College District on the east and west sides for North Village Parkway. This chapter discusses the TIA purpose, project study area, analysis scenarios and methods, criteria used to identify significant impacts, and report organization.

1.1 PURPOSE

This analysis accomplishes the following:

- Identifies potentially significant adverse impacts of the proposed project on the surrounding transportation system and recommends measures to mitigate significant impacts for environmental clearance.
- Conducts project-specific analyses such as a site design evaluation of on-site circulation and access, and parking evaluation.

The proposed project is expected to be completed in two phases:

- Phase 1: Construction of a 31,943 square feet (gross) biotechnology science building located immediately to the north of the Vacaville Campus building
- Phase 2: Buildout of campus under a Measure Q bond funding scenario, consisting of:
  - A 22,000 square foot Student Success Center to be constructed east of the existing classroom building
  - An 8,000 square foot classroom building to be constructed north of the existing Workforce Development center

Phase 1 is expected to be constructed in the near-term, while Phase 2 is expected to be constructed as funding from Measure Q becomes available. These projects will be constructed in addition to the existing uses on site, which include:

- The main Solano Community College Vacaville Center (Vacaville Campus), consisting of a 36,359 square feet classroom building (located on the east side of North Village Parkway)

- The Vacaville Workforce Development center, consisting of a 16,500 square foot building with a variety of uses (located on the west side of North Village Parkway)

Figure 1 shows the location of the project site, the surrounding transportation network, study intersections, and study roadway segments. **Figure 2** shows the conceptual site plan for the project.

This study addresses the project's impacts on the roadway system and evaluation of the project's influence on the adjacent bicycle, pedestrian, and transit network. Project impacts were evaluated following the guidelines from City of Vacaville staff via an analysis assumptions memorandum dated February 20, 2015. While the project is being performed through the Community College District (and therefore is exempt from using local guidelines), project impacts were evaluated using the City guidelines to be consistent with the project's setting.

1.2 PROJECT STUDY AREA

The project study area includes areas immediately adjacent to the site along with areas in the vicinity of the site where the project may impact the transportation network. The study area is broken down into study intersections, arterial segments and freeway segments.

1.2.1 STUDY INTERSECTIONS

Project impacts on the study area roadway facilities were determined by measuring the effect project traffic would have on intersection operations during the morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak periods. A total of ten (10) intersections, as shown on **Figure 1**, were selected as study locations. These locations (and their associated jurisdictions) include:

1. East Monte Vista Avenue-Crocker Drive/Vaca Valley Parkway (V)
2. I-505 Southbound Ramps/Vaca Valley Parkway (V/CT)*
3. I-505 Northbound Ramps/Vaca Valley Parkway (V/CT)
4. New Horizons Way-North Village Parkway/Vaca Valley Parkway (V)
5. Akerly Drive/Vaca Valley Parkway (V)
6. Kaiser Hospital Driveway-Crescent Drive/Vaca Valley Parkway (V)
7. I-80 Westbound Ramps/Vaca Valley Parkway (V/CT)
8. I-80 Eastbound Ramps/Leisure Town Road (V/CT)

9. Orange Drive/Leisure Town Road (V)

10. North Village Parkway/Vacaville Campus Main Driveways (V)*

    * Side-street stop-controlled intersection
    V = City of Vacaville intersection
    CT = Caltrans intersection

1.2.2 ROADWAY SEGMENTS

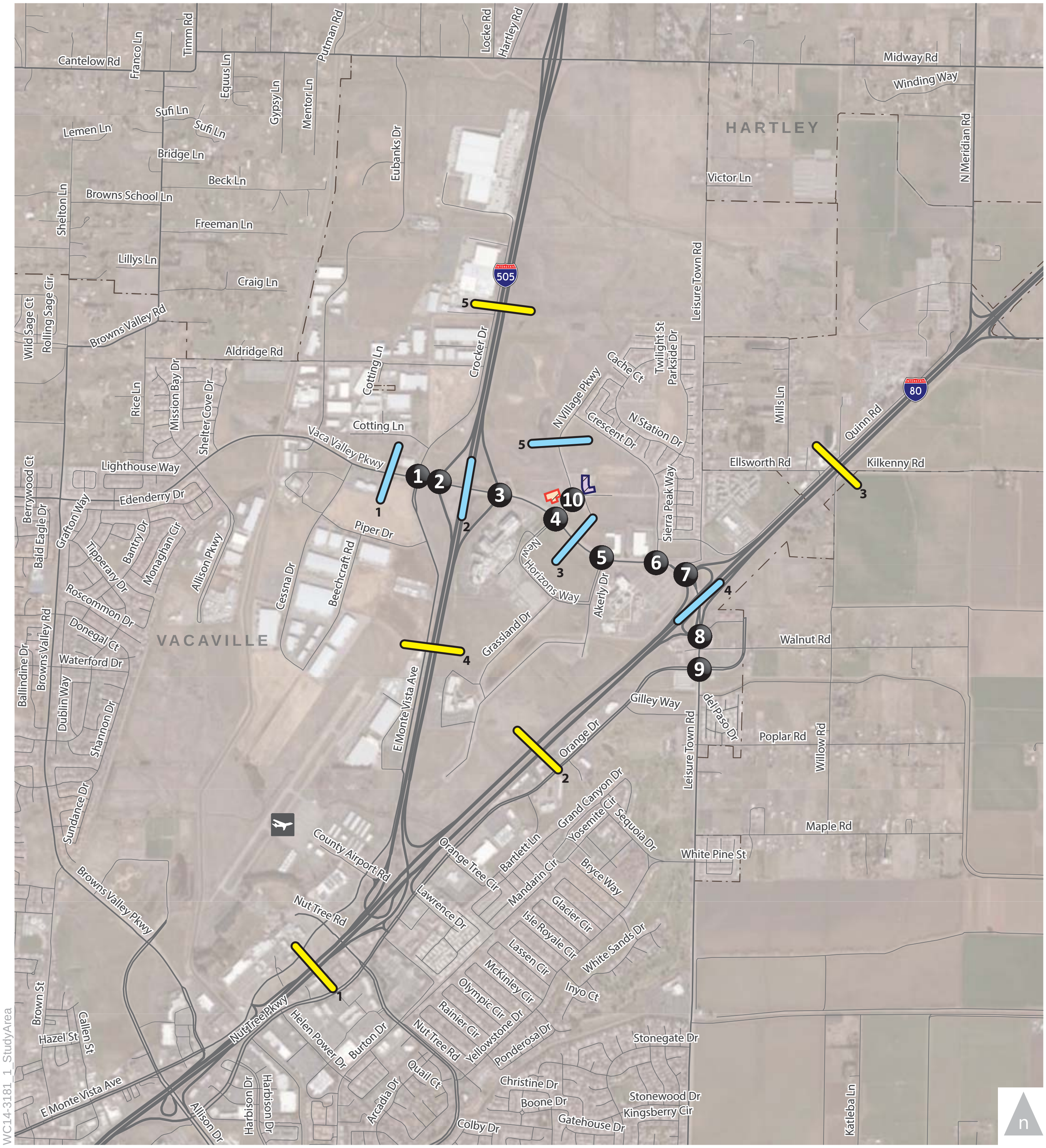
In addition to intersections near the project site, project impacts on the study area roadway facilities were determined by measuring the effect project traffic would have on overall roadway capacity during the morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak periods. A total of five (5) segments, as shown on **Figure 1**, were selected as study locations. These locations include:

1. Vaca Valley Parkway west of East Monte Vista Avenue
2. Vaca Valley Parkway/I-505 overcrossing
3. Vaca Valley Parkway between New Horizons Way and Akerly Drive
4. Vaca Valley Parkway/Leisure Town Road I-80 overcrossing
5. North Village Parkway north of Vacaville campus driveways

1.2.3 FREEWAY SEGMENTS

To assess the impacts of the project on the regional freeway network, project impacts were determined for the following five (5) freeway segments as shown on **Figure 1**. The segments were evaluated for the morning 7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak periods. These locations include:

1. I-80 between East Monte Vista Avenue and I-505
2. I-80 between I-505 and Vaca Valley Parkway
3. I-80 between Vaca Valley Parkway and Meridian Road
4. I-505 between I-80 and Vaca Valley Parkway
5. I-505 between Vaca Valley Parkway and Midway Road



LEGEND

- Study Intersection
- Workforce Development Center
- Main Vacaville Center Campus
- Freeway Segment
- Arterial Segment

Figure 1

Study Intersection, Roadway Segment and Freeway Segment Locations

WC14-3181_2_PrelimSitePlan

LEGEND

Existing Buildings | Project Phase 1 | Project Phase 2 | Other Improvements to Be Completed Later

Figure 2

SCCD Facilites Master Plan – Vacaville Site
Preliminary Site Plan

1.3 ANALYSIS SCENARIOS

The study intersections and segments were evaluated during the morning (AM) peak-hour occurring between 7:00 and 9:00 AM and the evening (PM) peak-hour occurring between 4:00 and 6:00 PM for the following scenarios:

Scenario 1: *Existing Conditions* – Existing volumes obtained from City of Vacaville count database/new traffic counts.

Scenario 2: *Existing with Phase 1 Conditions* – Existing volumes plus traffic generated by Phase 1 of the proposed project.

Scenario 3: *Near Term Conditions* – Existing volumes plus traffic generated by approved or built but not yet occupied projects in the City of Vacaville Travel Demand Model.

Scenario 4: *Near Term with Phase 1 Conditions* – Scenario 3 volumes plus traffic generated by Phase 1 of the proposed project.

Scenario 5: *Near Term with Phase 2 Conditions* – Scenario 3 volumes plus traffic generated by Phase 1 and Phase 2 of the proposed project.

Scenario 6: *Cumulative (Year 2035) without Project Conditions* – Existing volumes plus traffic generated from the buildout of the City of Vacaville General Plan and regional growth.

Scenario 7: *Cumulative with Phase 1 Conditions* – Scenario 6 volumes plus traffic generated by Phase 1 of the proposed project.

Scenario 8: *Cumulative with Phase 2 Conditions* – Scenario 6 volumes plus traffic generated by Phase 1 and Phase 2 of the proposed project.

1.4 ANALYSIS METHODS

The operations of roadway facilities are described with the term level of service ("LOS", a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver). Six levels are defined from LOS A, as the best operating conditions, to LOS F, or the worst operating conditions. LOS E represents "at-capacity" operations. When traffic volumes exceed the intersection capacity, stop-and-go conditions result, and operations are designated as LOS F.

1.4.1 SIGNALIZED INTERSECTIONS

The level of service method identified by the City of Vacaville for signalized intersections is the method described in Chapter 18 of the *2010 Highway Capacity Manual* (2010 HCM) (Transportation Research Board). This method bases signalized intersection operations on the average vehicular control delay.

Control delay includes initial deceleration delay, queue move-up time, stopped delay, and acceleration delay. The average control delay for signalized intersections is calculated using Synchro 8 analysis software and is correlated to a LOS designation as shown in **Table 1**.

TABLE 1 SIGNALIZED INTERSECTION LOS CRITERIA

Level of Service	Description	Delay in Seconds
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0
D *mid LOS-D*	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 to 55.0 *45.0*
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	> 55.0 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0

Source: 2010 Highway Capacity Manual.

1.4.2 UNSIGNALIZED INTERSECTIONS

Operations of the unsignalized study intersections (e.g., stop-sign controlled) were evaluated using the methods contained in Chapter 19 (Two-Way Stop Control) and Chapter 20 (All-Way Stop Control) of the *2010 HCM* and calculated using the Synchro 8 analysis software. LOS ratings for unsignalized intersections are based on the average control delay expressed in seconds per vehicle. At side-street stop-controlled intersections, control delay is calculated for each approach, not for the intersection as a whole. Intersection impacts are determined based on the computed control delay and LOS for the worst approach at the intersection. **Table 2** summarizes the relationship between delay and LOS for unsignalized intersections.

TABLE 2 UNSIGNALIZED INTERSECTION LOS CRITERIA

Level of Service	Description	Delay in Seconds
A	Little or no delays	≤ 10.0
B	Short traffic delays	> 10.0 to 15.0
C	Average traffic delays	> 15.0 to 25.0
D *mid-LOS D*	Long traffic delays	> 25.0 to 35.0 *30.0*
E	Very long traffic delays	> 35.0 to 50.0
F	Extreme traffic delays with intersection capacity exceeded	> 50.0

Source: 2010 Highway Capacity Manual

1.4.3 ROADWAY SEGMENTS

Roadway segments were evaluated using the City of Vacaville's roadway segment evaluation criteria. The afternoon peak direction (based on volume) is evaluated for impacts. The criteria, provided in **Table 3**, are based on roadway segment capacities and the peak direction volume on the segment. The roadway segment capacity is determined by the functional classification of the roadway and the number of lanes. The LOS C/D transition occurs at a volume-to-capacity (V/C) ratio of 0.80, and mid-LOS D occurs at a V/C ratio of 0.85. The analysis was performed for the morning and evening peak hour peak direction.

TABLE 3 ROADWAY SEGEMENT EVALUATION CRITERIA

Functional Class and Lanes	Segment LOS Transition Thresholds by Volume[1]			
	2-Way LOS C/D	Directional LOS C/D[1,2]	Directional LOS D/E[1,3]	Directional LOS E/F[1,4]
6-Lane Divided Arterial	4,500	2,700	3,038	3,375
4-Lane Divided Arterial	3,500	2,100	2,363	2,625
4-Lane Arterial	2,500	1,500	1,688	1,875
2-Lane Arterial	1,500	900	1,013	1,125
Collector	1,000	600	675	750

Notes:
1. Calculated directional capacity is based on an assumed 60%/40% peak direction/off-peak direction volume split on streets.
2. LOS C/D threshold assumed to be 80% of available capacity
3. LOS D/E threshold assumed to be 90% of available capacity
4. LOS E/F threshold assumed to be 100% of available capacity
Source: Fehr & Peers, March 2015.

1.4.4 FREEWAY SEGMENTS

Freeway segments were evaluated using the analysis methodologies in the *2010 HCM*. Freeway segments are defined as one of four types: Basic, Merge, Diverge and Weave. These methodologies are used to determine the density of traffic on the freeway, which is then correlated to a LOS designation. **Table 4** defines the traffic density and LOS relationship, and **Table 5** describes the freeway segments (by direction) and their analysis type.

TABLE 4 FREEWAY LOS CRITERIA

Level of Service	Description	Density Criteria[1]
A	Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	≤ 11.0
B	Free-flow speeds are maintained. The ability to maneuver with the traffic stream is only slightly restricted.	> 11.0 to 18.0
C	Flow with speeds at or near free-flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.	> 18.0 to 26.0
D	Speeds decline slightly with increasing flows. Freedom to maneuver with the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort.	> 26.0 to 35.0
E	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown in flow with queuing.	> 35.0 to 45.0
F	Flow has broken down due to over-capacity conditions.	> 45.0

Notes:
1. Density in passenger cars per mile per lane
Source: 2010 Highway Capacity Manual

TABLE 5 FREEWAY LANES AND SEGMENT TYPES

Segment		Facility Type	Number of Lanes	
			Northbound/Eastbound	Southbound/Westbound
1	I-80 between East Monte Vista Avenue and I-505	Diverge	4	4
2	I-80 between I-505 and Vaca Valley Parkway	Basic	4	4
3	I-80 between Vaca Valley Parkway and Meridian Road	Basic	3	4
4	I-505 between I-80 and Vaca Valley Parkway	Basic	2	2
5	I-505 between Vaca Valley Parkway and Midway Road	Basic	2	2

Source: Fehr & Peers, March 2015

1.5 IMPACT SIGNIFICANCE CRITERIA AND MITIGATION GUIDELINES

The determination of significance for project impacts is based on applicable policies, regulations, goals, and guidelines defined by the City of Vacaville. The detailed impact criteria for this study are presented below.

1.5.1 SIGNALIZED INTERSECTIONS

Significant impacts at signalized intersections are defined to occur when the addition of project traffic causes one of the following:

- Intersection operations to degrade from an acceptable level (mid-LOS D or better) to an unacceptable level (above mid-LOS D, LOS E or LOS F); or
- Exacerbates unacceptable operations (above mid-LOS D, LOS E or LOS F) by increasing the average control delay at the intersection by more than four seconds of delay.

If the first significance criterion is triggered, mitigations should be designed to provide LOS C conditions. If the second significance criterion is triggered, mitigations should be designed to provide better operations than in the without Project scenario.

1.5.2 UNSIGNALIZED INTERSECTIONS

Significant impacts at unsignalized intersections are defined to occur when the addition of project traffic causes one of the following to occur on the worst approach:

- Intersection operations to degrade from an acceptable level (mid-LOS D or better on the worst approach) to an unacceptable level (above mid-LOS D, LOS E or LOS F); or
- Exacerbates unacceptable operations (above mid-LOS D, LOS E or LOS F on the worst approach) by increasing the worst approach control delay at the intersection by more than 4.0 seconds of delay.

If significant impacts are found, the following criteria will be used to develop mitigations:

- If signal warrants are met, consider signalization
- If signal warrants are not met, consider turn prohibitions, median improvements, or other intersection control.

If the first significance criterion is triggered, mitigations should be designed to provide LOS C conditions. If the second significance criterion is triggered, mitigations should be designed to provide better operations than in the without Project scenario.

1.5.3 ROADWAY SEGMENTS

Significant impacts for roadway segments are defined to occur when the addition of project traffic causes one of the following:

- Peak direction roadway segment operations degrade from an acceptable level (mid-LOS D or better) to an unacceptable level (above mid-LOS D, LOS E or LOS F); or
- Exacerbate unacceptable operations (above mid-LOS D, LOS E or LOS F) by increasing the volume-to-capacity ratio by 0.02 or more.

If the first significance criterion is triggered, mitigations should be designed to provide LOS C conditions. If the second significance criterion is triggered, mitigations should be designed to provide better operations than in the without Project scenario.

1.5.4 FREEWAY SEGMENTS

Significant impacts at unsignalized intersections are defined to occur when the addition of project traffic causes one of the following:

- Peak direction roadway segment operations degrade from an acceptable level (LOS E or better) to an unacceptable level (LOS F); or
- Exacerbate unacceptable operations (LOS F) by increasing the volume-to-capacity ratio by 0.01 or more.

1.5.5 PEDESTRIANS AND BICYCLES

The City of Vacaville General Plan describes policies to ensure that pedestrian and bicycle facilities are safe and effective for users and that the project does not conflict with existing transportation plans, guidelines, policies, or standards as they relate to non-automotive transportation. Significant impacts to these modes of transportation would occur when:

- A project significantly disrupts existing or planned bicycle facilities or significantly conflicts with applicable non-automotive transportation plans, guidelines, policies or standards.
- A project fails to provide safe pedestrian connections between campus buildings and adjacent streets and transit facilities.

- A project significantly disrupts existing or planned pedestrian facilities or significantly conflicts with applicable non-automotive transportation plans, guidelines, policies or standards.

1.5.6 TRANSIT

Significant impacts to transit service would occur if the project or any part of the project:

- Significantly disrupts existing or planned transit facilities and services or significantly conflicts with applicable transit plans, guidelines, policies, or standards.

1.5.7 SITE DESIGN

Significant impacts relating to site design would occur if the project or any part of the project:

- Inhibits emergency vehicle access to facilities on the project site
- Includes design features that present safety hazards to pedestrians, bicyclists or motorists

1.6 REPORT ORGANIZATION

- **Chapter 2 – Existing Conditions:** describes the transportation system near the project, including the surrounding roadway network, morning and evening peak period driveway and intersection turning movement volumes, existing bicycle, pedestrian, and transit facilities, intersection levels of service, roadway segment levels of service, and freeway segment levels of service.
- **Chapter 3 – Existing with Project Conditions:** addresses Existing with Phase 1 Conditions, and discusses project vehicular, pedestrian, bicycle, and transit impacts. The relevant project information, such as the project components and project trip generation, distribution, and assignment, is also discussed in this chapter.
- **Chapter 4 – Near Term Conditions:** addresses near-term transportation conditions, including increases in without Project traffic volumes due to approved or built but not yet occupied projects. Chapter also addresses Near Term with Phase 1 Conditions and Near Term with Phase 2 Conditions, and discusses project vehicular, pedestrian, bicycle, and transit impacts.
- **Chapter 5 – Cumulative Conditions:** addresses Year 2035 Cumulative conditions, both without and with the project, and discusses cumulative project vehicular impacts.
- **Chapter 6 – Site Access, Circulation and Parking:** describes project access and circulation for all travel modes.
- **Chapter 7 – Mitigation Measures:** addresses mitigation measures to reduce impacts identified in Chapters 3, 4 and 5 to less-than-significant levels.

2.0 EXISTING CONDITIONS

This section describes the existing conditions of the roadway facilities, pedestrian and bicycle facilities, and transit service in the study area. It also presents existing traffic volumes and operations of the study intersections, roadway segments and freeway segments.

The project site is currently occupied by the following uses:

- The main Solano Community College Vacaville Center (Vacaville Campus), consisting of a 36,359 square feet classroom building (located on the east side of North Village Parkway)
- The Vacaville Workforce Development Center, consisting of a 16,500 square foot building with a variety of uses (located on the west side of North Village Parkway)

Parking for these uses is provided on both sides of North Village Parkway. Generally, most users of the Vacaville Workforce Development Center park on the west side of North Village Parkway. While many of the users of the Vacaville Campus park on the east side of North Village Parkway, some users do park on the west side and cross North Village Parkway on foot.

2.1 EXISTING TRANSPORTATION FACILITIES

2.1.1 EXISTING STREET SYSTEM

Interstate 80 (I-80), Interstate 505 (I-505), Vaca Valley Parkway and Leisure Town Road provide regional access to the project site. North Village Parkway provides local access to the project site. Descriptions of these roadways are presented below. **Figure 1** shows the location of these facilities in relation to the project site.

I-80 is an east-west freeway that runs from San Francisco to the Nevada state line via Vallejo, Vacaville and Sacramento. The facility is located south and east of the project site and provides access to campus and the project site via Vaca Valley Parkway. Near the project site, the facility is a six-to-eight lane freeway that carries an average daily volume of approximately 120,000 vehicles per day. The speed limit on the facility is 65 miles-per-hour.

I-505 is a north-south freeway that runs from I-80 in Vacaville to Interstate 5 north of Winters. The facility provides access to the project site via Vaca Valley Parkway. Near the project site, the freeway carries about 31,000 vehicles per day. The speed limit on the facility is 70 miles-per-hour.

Vaca Valley Parkway is an east-west arterial roadway that runs from Wrentham Drive in the west to I-80 in the east. The facility carries trips from Vacaville and the freeways to North Village Parkway. Near the campus, Vaca Valley Parkway carries approximately 11,400 vehicles per day. The speed limit on the facility is 40 miles-per-hour.

Leisure Town Road is a north-south arterial roadway that runs from Vanden Road in south Vacaville in the south to I-80 in the north. The facility provides access to campus and the project site via Vaca Valley Parkway. On the I-80 overcrossing near the project site, Leisure Town Road carries approximately 25,000 vehicles per day. The speed limit on the facility is 40 miles-per-hour.

North Village Parkway is a north-south roadway that runs from Vaca Valley Parkway in the south to Crescent Drive in the north. In the future, North Village Parkway will extend up to Meridian Road. Near the project site, North Village Parkway carries approximately 1,000 vehicles per day. In the short term, North Village Parkway is expected to be widened to a four lane, divided arterial from the vicinity of the project site to Crescent Drive and points north. The speed limit on the facility is 35 miles-per-hour.

2.1.2 EXISTING PEDESTRIAN FACILITIES

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals. The streets surrounding the project site all have sidewalks on at least one side of the street. Currently, sidewalks are not present in the following locations:

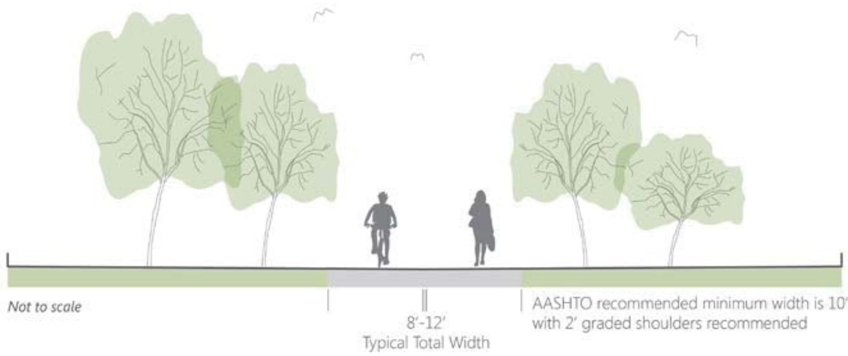
- West side of North Village Parkway north of the project site (sidewalks may be added as part of near-term improvements on North Village Parkway)
- Vaca Valley Parkway from I-505 northbound ramps to East Monte Vista Avenue/Crocker Drive
- North side of Vaca Valley Parkway west of Vacaville Workforce Development Center
- East side of Leisure Town Road/I-80 overcrossing
- East side of New Horizons Way

Immediately adjacent to the project site, marked crosswalks are missing across North Village Parkway at the Campus driveways intersection. A full set of marked crosswalks are provided at Vaca Valley Parkway/North Village Parkway-New Horizons Way. Other intersections along Vaca Valley Parkway are generally missing one or more crosswalks, which acts as an impediment to pedestrian travel.

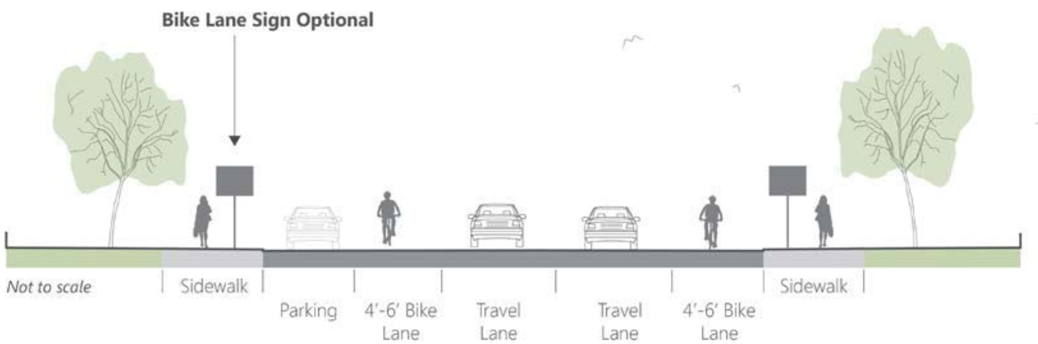
2.1.3 EXISTING BICYCLE FACILITIES

Bikeway planning and design in California typically relies on guidelines and design standards established by California Department of Transportation (Caltrans) in the *Highway Design Manual* (Chapter 1000: Bikeway Planning and Design and other design documents). Bicycle facilities comprise paths (Class I), lanes (Class II), and routes (Class III) as described below and shown on the accompanying figures.

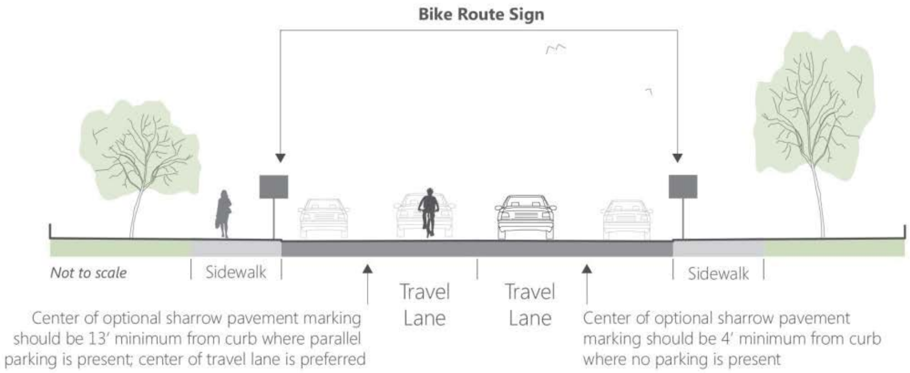
- *Class I Bikeway (Bicycle Path)* provides a completely separate right-of-way and is designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian cross-flow minimized.



- *Class II Bikeway (Bicycle Lane)* provides a restricted right-of-way and is designated for the use of bicycles with a striped lane on a street or highway. Bicycle lanes are generally four to six feet wide. Adjacent vehicle parking and vehicle/pedestrian cross-flow are permitted.



- *Class III Bikeway (Bicycle Route)* provides for a right-of-way designated by signs or pavement markings (sharrows) for shared use with pedestrians or motor vehicles. Sharrows are a type of pavement marking (bike and arrow stencil) placed to guide bicyclists to the best place to ride on the road, avoid car doors, and remind drivers to share the road with cyclists.



Near the project site, Class II bicycle facilities are provided on both sides of North Village Parkway from Vaca Valley Parkway to the campus. A northbound bike lane continues along North Village Parkway from north of campus to Crescent Drive; it is anticipated that a southbound bike lane will be provided along with the near-term roadway expansion project. According to the City of Vacaville's website, Vaca Valley Parkway is designated as a Class III bicycle facility near the project site, but aerial imagery indicates that a wide, striped shoulder is provided along westbound Vaca Valley Parkway.

2.1.4 EXISTING TRANSIT SERVICE

The project site is served by City Coach Route 4, which runs from the Nut Tree Transportation Center to the Campus. City Coach Route 1 terminates near the project site at the Kaiser Hospital. Service frequency on Route 4 is 30 minutes and service frequency on Route 1 is 60 minutes.

2.2 EXISTING INTERSECTION VOLUMES AND LANE CONFIGURATIONS

The City of Vacaville provided weekday morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak period intersection turning movement counts conducted at the study locations in Late 2011-Early 2013 on clear days with area schools in-session. Fehr & Peers verified this data with counts taken at the freeway ramp terminal study intersections in December 2014. The 2014 count data indicated that the 2014 volumes were about 9-15% higher than the 2011-2013 volumes (likely due to the improving economy).

For the study intersections, the 60-minute period with the highest traffic volumes during the count period was identified. The peak hours were determined on an intersection-by-intersection basis to be conservative (versus a network-wide peak hour). Based on the differences in the 2011-2013 and 2014 count data, the following procedure was used to generate the existing conditions volumes:

1) Use 2014 data, where available
2) Factor the 2011-2013 data by observed percent increase (9.3% for AM, 14.6% for PM)
3) Balance volumes (higher) between adjacent intersections to provide a consistent, conservative volume data set.

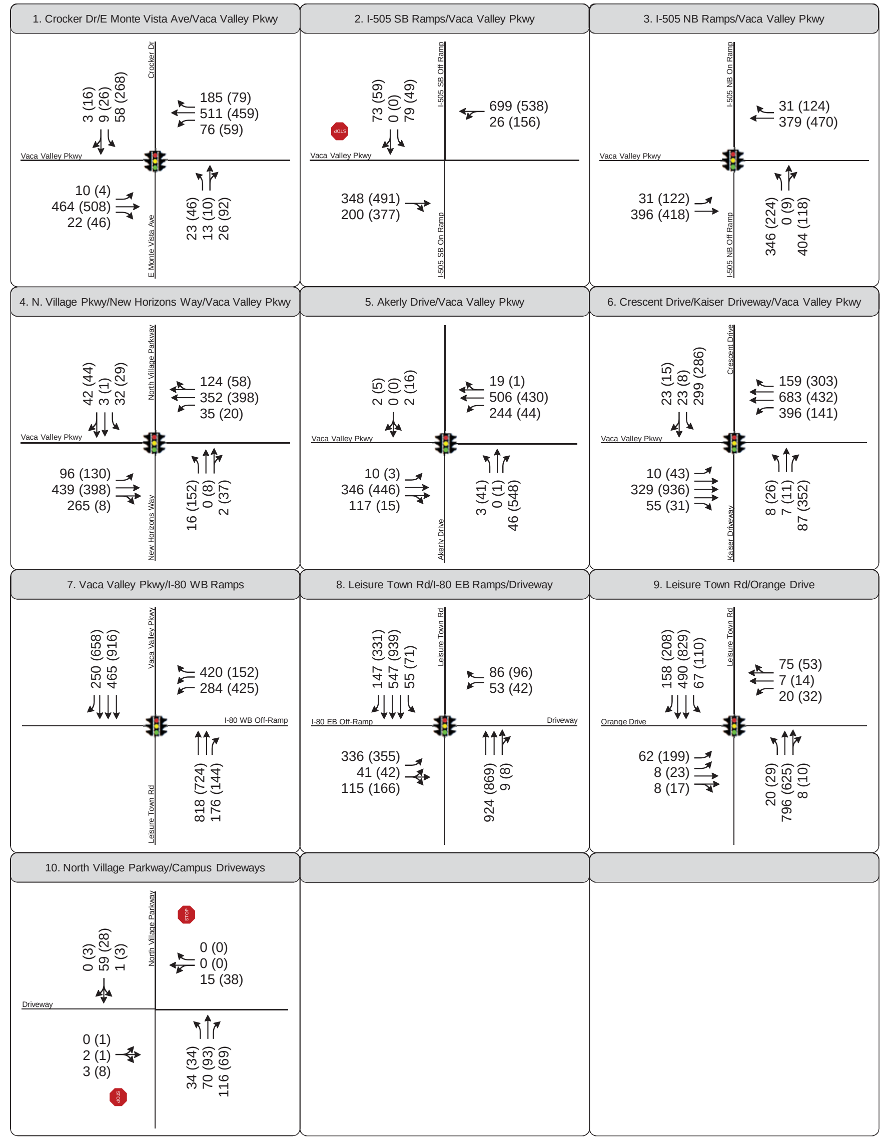
Existing lane configurations and signal controls were obtained through field observations. The peak hour volumes are presented on **Figure 3** along with the existing lane configurations and traffic controls. Detailed traffic count data are contained in **Appendix A**.

2.3 EXISTING INTERSECTION LEVELS OF SERVICE

Existing intersection lane configurations, signal timings, and peak hour turning movement volumes were used to calculate the levels of service for the key intersections during each peak hour. The results of the LOS analysis using the Synchro 8 software program for Existing Conditions are presented in **Table 6**. **Appendix B** contains the corresponding LOS calculation sheets.

The results of the LOS calculations indicate that the majority of the study intersections operate at acceptable levels of service according to their designated LOS standard. The following study intersection near the project site does not operate acceptably during the AM and/or PM peak hour.

- Intersection #2 – I-505 Southbound Ramps/Vaca Valley Parkway (LOS F for the worst approach, AM and PM Peak Hours)



XX (YY) = AM (PM) Peak Hour Traffic Volumes

Figure 3

Peak Hour Traffic Volumes, Lane Configurations, and Traffic Control
Existing Conditions

WC14-3181

TABLE 6 EXISTING INTERSECTION PEAK HOUR LEVELS OF SERVICE

Intersection		Control[1]	Peak Hour	Count Date	Existing Conditions	
					Delay[2]	LOS[3]
1	East Monte Vista Avenue-Crocker Drive/Vaca Valley Parkway	Signal	AM PM	7/2012 11/2011	15 31	B C
2	I-505 Southbound Ramps/Vaca Valley Parkway	SSSC	AM PM	12/2014 12/2014	9 **(83)** 27 **(>300)**	A **(F)** C **(F)**
3	I-505 Northbound Ramps/Vaca Valley Parkway	Signal	AM PM	12/2014 12/2014	14 14	B B
4	New Horizons Way-North Village Parkway/Vaca Valley Parkway	Signal	AM PM	9/2011 9/2011	13 19	B B
5	Akerly Drive/Vaca Valley Parkway	Signal	AM PM	9/2012 9/2012	21 13	C B
6	Kaiser Hospital Driveway-Crescent Drive/Vaca Valley Parkway	Signal	AM PM	8/2012 8/2012	32 30	C C
7	I-80 Westbound Ramps/Vaca Valley Parkway	Signal	AM PM	12/2014 12/2014	5 7	A A
8	I-80 Eastbound Ramps/Leisure Town Road	Signal	AM PM	12/2014 12/2014	12 13	B B
9	Orange Drive/Leisure Town Road	Signal	AM PM	1/2013 1/2013	14 18	B B
10	North Village Parkway/Vacaville Campus Main Driveways	SSSC	AM PM	12/2014 12/2014	3 (11) 4 (11)	A (B) A (B)

Notes: Results in **bold** denotes unacceptable operations.
1. Signal = Signalized intersection, SSSC = Side-street stop controlled intersection
2. Signalized intersection level of service based on average intersection control delay; SSSC intersection delay is reported as intersection average (worst-case approach)
3. LOS = Level of Service per 2010 HCM
Source: Fehr & Peers, March 2015.

2.4 SIGNAL WARRANT ANALYSIS

The peak-hour signal warrant (Warrant 3) from the *Manual on Uniform Traffic Control Devices* (MUTCD) was used to evaluate unsignalized intersections that operate unacceptably under Existing Conditions to determine if a traffic signal is warranted. The following unsignalized intersection operates unacceptably and meets peak hour signal warrants (see **Appendix C**):

- Intersection #2 – I-505 Southbound Ramps/Vaca Valley Parkway (AM and PM peak hours)

This analysis is intended to examine the general correlation between the current level of development in the region and the need to install new traffic signals. It estimates current traffic compared against a sub-set of the standard traffic signal warrants recommended in the Federal Highway Administration *Manual on Uniform Traffic Control Devices* and associated California MUTCD guidelines. This analysis should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated by an experienced engineer based on field-measured rather than forecast traffic data and a thorough study of traffic and roadway conditions. Furthermore, the decision to install a signal should not be based solely upon the warrants, since the installation of signals can lead to certain types of collisions. The appropriate agency should undertake regular monitoring of actual traffic conditions and accident data, and timely re-evaluation of the full set of warrants to prioritize and program intersections for signalization.

2.5 EXISTING ROADWAY SEGMENT COUNT DATA

Fehr & Peers collected mid-week roadway segment volume data at the roadway study segment locations in August 2014 and December 2014. Since these segments are coincident with the study intersections, the higher of the link volumes from the intersection analysis (post-balancing) or the roadway segment volumes were used in the Existing Conditions segment analysis. Detailed traffic count data are contained in **Appendix A**.

2.6 EXISTING ROADWAY SEGMENT LEVEL OF SERVICE

Existing roadway lane configurations, functional classifications, and peak hour peak direction segment volumes were used to calculate the levels of service for the study roadway segments during the morning and evening peak hours. The results of the LOS analysis using the City’s thresholds (presented in **Table 3**) are presented in **Table 7**.

The results of the LOS calculations indicate that the all of the study segments operate at acceptable levels of service according to their designated LOS standard.

TABLE 7 EXISTING ROADWAY SEGMENT PEAK HOUR LEVELS OF SERVICE

Segment		Functional Classification	Peak Hour	Count Date	Peak Direction	
					Volume (Dir)[1]	V/C (LOS)[2]
1	Vaca Valley Parkway west of East Monte Vista Avenue	2-lane Arterial	AM PM	8/2014 8/2014	593 (WB) 558 (EB)	0.53 (A-C) 0.50 (A-C)
2	Vaca Valley Parkway/I-505 overcrossing	2-lane Arterial	AM PM	8/2014 8/2014	865 (WB) 737 (WB)	0.77 (C) 0.66 (A-C)
3	Vaca Valley Parkway between New Horizons Way and Akerly Drive	4-lane Divided Arterial	AM PM	12/2014 12/2014	511 (WB) 511 (EB)	0.19 (A-C) 0.19 (A-C)
4	Vaca Valley Parkway/Leisure Town Road I-80 overcrossing	6-lane Divided Arterial	AM PM	8/2014 8/2014	1,002 (NB) 1,368 (SB)	0.30 (A-C) 0.41 (A-C)
5	North Village Parkway north of Vacaville campus driveways	2-lane Arterial	AM PM	12/2014 12/2014	70 (NB) 94 (NB)	0.06 (A-C) 0.08 (A-C)

Notes: Results in **bold** denotes unacceptable operations.
1. Peak direction volume (Peak direction of travel)
2. Volume to Capacity Ratio (LOS based on V/C ratio – no LOS A/B or LOS B/C thresholds identified by City, LOS designated as A-C for V/C < 0.70)
Source: Fehr & Peers, March 2015.

2.7 EXISTING FREEWAY SEGMENT COUNT DATA

Fehr & Peers collected mid-week freeway segment volume data using the Caltrans Performance Measurement System (PeMS). PeMS measures the traffic volumes along freeways on 30-second intervals and aggregates the data into five minute intervals. Using ramp terminal intersection data along the freeway corridors, the freeway segment volumes were calculated. Detailed traffic count data are contained in **Appendix A**.

2.8 EXISTING FREEWAY SEGMENT LEVEL OF SERVICE

Existing freeway lane configurations and peak hour peak direction segment volumes were used to calculate the levels of service for the study freeway segments during the morning and evening peak hours using the 2010 HCM methodology. Based on published Caltrans data, the approximate heavy vehicle percentage is 6.5%. Since this is a peak hour analysis, the analysis assumed a driver familiarity factor of 1.0, indicating that nearly all drivers are familiar with the freeway system. The results of the LOS analysis are presented in **Table 8**.

The results of the LOS calculations indicate that the all of the study segments operate at acceptable levels of service according to their designated LOS standard.

TABLE 8 EXISTING FREEWAY SEGMENT PEAK HOUR LEVELS OF SERVICE

Segment		Peak Hour	Northbound/Eastbound		Southbound/Westbound	
			Density	LOS[1]	Density	LOS[1]
1	I-80 between East Monte Vista Avenue and I-505	AM PM	22.9 24.5	C C	22.9 27.5	C C
2	I-80 between I-505 and Vaca Valley Parkway	AM PM	14.1 16.1	B B	14.4 16.3	B B
3	I-80 between Vaca Valley Parkway and Meridian Road	AM PM	18.8 23.1	C C	15.5 15.4	B B
4	I-505 between I-80 and Vaca Valley Parkway	AM PM	9.0 9.6	A A	8.0 9.5	A A
5	I-505 between Vaca Valley Parkway and Midway Road	AM PM	3.9 8.9	A A	7.5 6.4	A A

Notes: Results in **bold** denotes unacceptable operations.
1. LOS based on 2010 HCM
Source: Fehr & Peers, 2015.

3.0 EXISTING WITH PROJECT CONDITIONS

This chapter presents the impacts of the proposed project on the surrounding roadway system under Existing with Project Conditions. Since the project is expected to be constructed within a few years of approval, an additional analysis – Near Term with Project Conditions, in **Chapter 4** – supplements the Existing with Project evaluation. The Cumulative with Project Conditions analysis (presented in **Chapter 5**) will determine the project's impacts in the far-term.

In this chapter, the method used to estimate the amount of traffic generated by proposed development is described first. Then, the results of the level of service calculations for Existing with Project Conditions are presented. Existing with Project Conditions are defined as Existing Conditions with traffic generated by the proposed project. Impacts under this scenario are then identified by comparing the level of service results under Existing with Project Conditions to those under Existing Conditions. Pedestrian, bicycle, and transit impacts are also addressed in this chapter.

3.1 PROJECT TRAFFIC VOLUMES

The amount of traffic added to the roadway system by the proposed project is estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. The first step estimates the amount of traffic added to the roadway network. The second step estimates the directions of travel to and from the project site. The new trips are assigned to specific street segments and intersection turning movements during the third step. The results of the process are described in the following sections.

3.1.1 TRIP GENERATION

Trip generation is typically performed using rates from the *Trip Generation Manual, 9th Edition* from the Institute of Transportation Engineers (ITE). The *Trip Generation Manual* is a compendium of trip generation studies that allows for the estimate of trips for a given project based on collected data. However, owing to the unique transportation characteristics of a community college (surrounding land use, access to transit, bicycle mode share, socioeconomic characteristics of surrounding areas, etc.), a site-specific trip generation methodology was used, in accordance with ITE guidance to use local data where possible. To support this methodology, driveway counts were conducted at the four campus driveways (one driveway to the west campus parking lot and three driveways to the east campus parking lots). These counts were performed for 48 hours in early December 2014 under dry weather conditions and while classes were in regular session. The driveway count data is presented in **Appendix D**. Based on the count data, trip generation rates per thousand square feet of developed building area were calculated, and are presented in **Table 9.** As shown in the table, the site-specific trip generation rates were compared to the rates presented in the *Trip Generation Manual*. The site specific rates were higher on a per square foot basis than ITE rates. Therefore, this study uses the campus-specific rate.

TABLE 9 CAMPUS-SPECIFIC TRIP GENERATION RATES

Rate Source	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Vacaville Campus-Specific Rate	45.04	2.23	2.06	4.29	2.21	1.80	4.01
Trip Generation Manual Rate (Land Use Code 540 – Community College)	27.49	2.21	0.78	2.99	1.47	1.07	2.54

Notes: Trip generation rates presented as Trips/1,000 square feet gross floor area
Source: Fehr & Peers, February 2015

The trip generation calculation for the project is shown below in **Table 10** based on the trip generation rates presented in **Table 9**.

TABLE 10 PROJECT TRIP GENERATION

Phase	Size	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Phase 1 Development								
Phase 1 Biotechnology Building	31.9 ksf	1,440	72	66	138	71	58	129
Total Phase 1 Trips		**1,440**	**72**	**66**	**138**	**71**	**58**	**129**
Phase 2 Development								
Phase 2: Student Success Center (East)	22.0 ksf	990	50	46	96	49	40	89
Phase 2: Classrooms (West)	8.0 ksf	360	18	17	35	18	15	33
Total Phase 2 Trips		***1,350***	***68***	***63***	***131***	***67***	***55***	***122***
Total Net New Project Trips After Phase 2		***2,790***	***140***	***129***	***269***	***138***	***113***	***251***

Notes: Trip generation based on rates presented in Table 9.

Source: Fehr & Peers, February 2015

While it is anticipated that the Student Success Center would not generate new peak hour trips directly, the Center could shift trips into or out of the peak hours. To account for this, it has been conservatively assumed that the Center would generate trips as if it were a new trip generating use.

3.1.2 TRIP DISTRIBUTION AND ASSIGNMENT

Based on location of other community college campuses within the district, population centers, existing travel patterns in the area, and experience with previously approved projects in the area, a trip distribution pattern was developed for the project, as shown on **Figure 4**. This trip distribution patterns was then used to assign project trips through the study intersections, roadway segments and freeway segments. Based on the campus's proximity to the I-505/Vaca Valley Parkway interchange, all trips to/from I-505 north of the project site use Vaca Valley Parkway to access I-505. For trips to/from I-80 west of I-505, 90% of trips originating from/destined to this segment of I-80 use the I-505/Vaca Valley Parkway interchange; this is also due to the campus's proximity to the I-505 Vaca Valley Parkway interchange. Project trip assignment for Project Phase 1 is shown on **Figure 5**, project trip assignment for Project Phase 2 is shown on **Figure 6**, and Existing with Phase 1 volumes are shown on **Figure 7**.

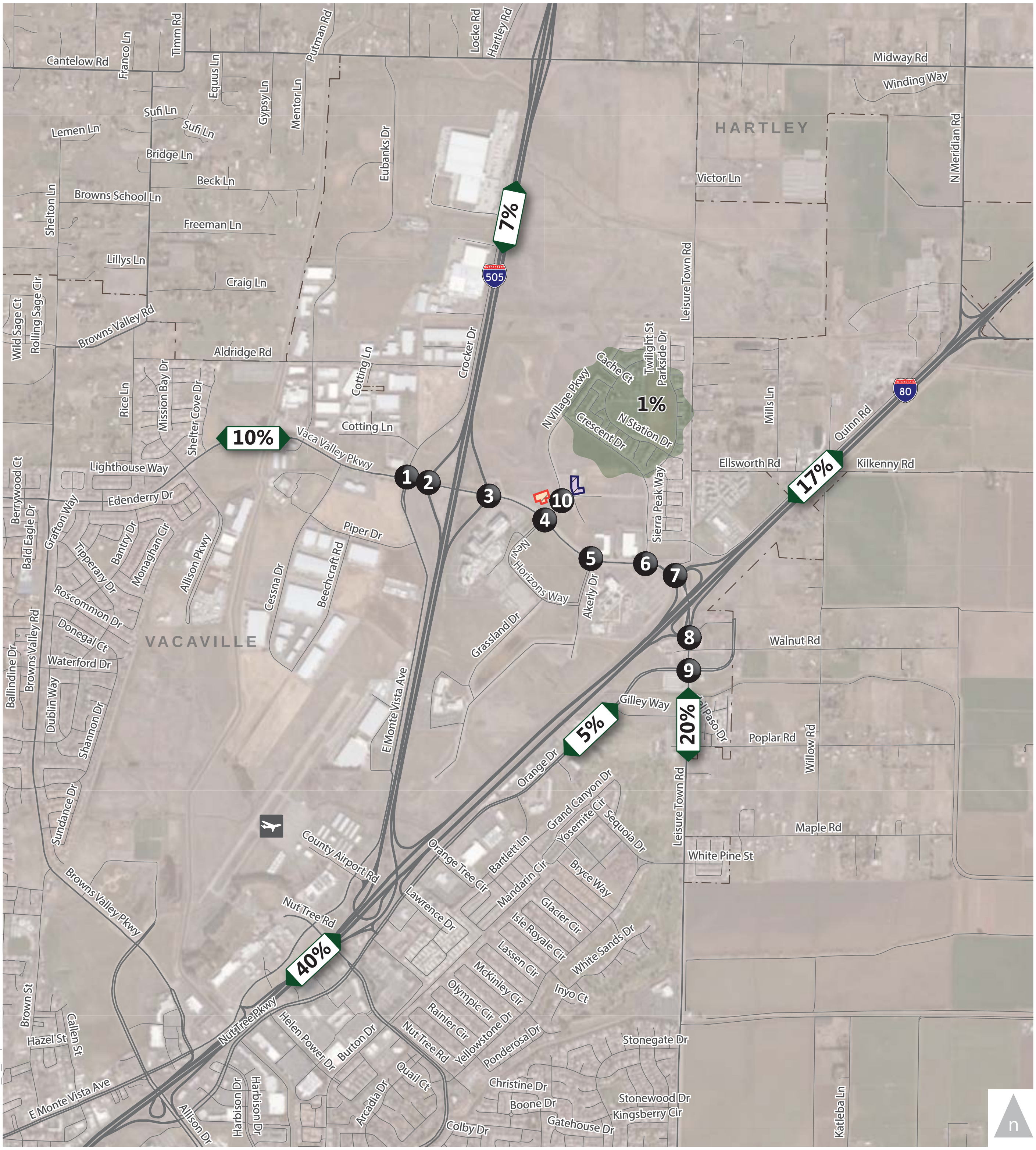
3.2 EXISTING WITH PROJECT INTERSECTION LEVELS OF SERVICE

Level of service calculations were conducted to evaluate intersection operations under Existing with Project Conditions. The results of the LOS analysis are summarized in **Table 11**.

The results for Existing Conditions are included for comparison purposes, the results of a signal warrant analysis (presented in the next section), and the determination of impact significance under various impact significance thresholds as outlined in **Chapter 1**. The corresponding LOS calculation sheets are included in **Appendix B**.

The results of the LOS calculations indicate that the majority of the study intersections will operate at acceptable levels of service according to their designated LOS standard. The following study intersection does not meet its respective LOS designation for AM and/or PM.

- Intersection #2 – I-505 Southbound Ramps/Vaca Valley Parkway (LOS F for the worst approach, AM and PM peak hours)



LEGEND

Study Intersection

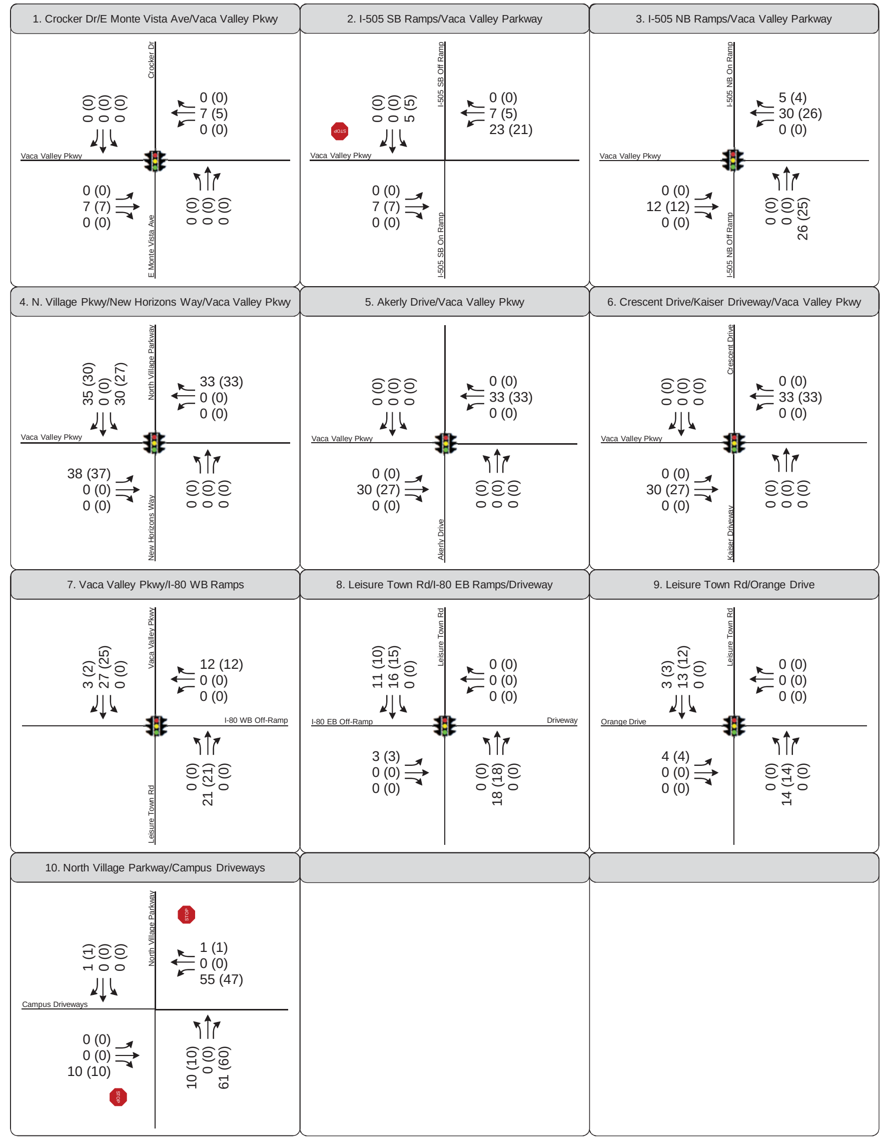
Workforce Development Center

Main Vacaville Center Campus

Trip Distribution

Figure 4

Project Trip Distribution



XX (YY) = AM (PM) Peak Hour Traffic Volumes

Figure 5
Project Phase 1
Trip Assignment

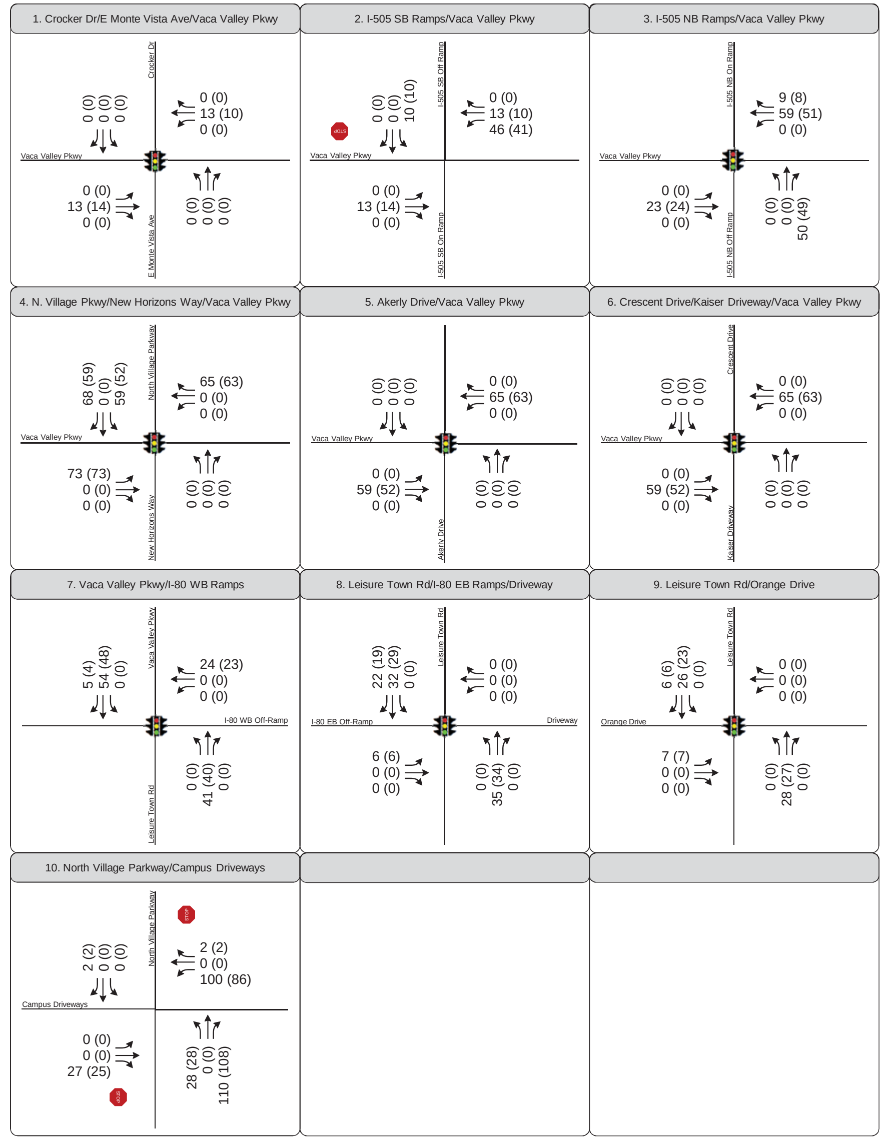


Figure 6
Project Phase 1 + Phase 2
Trip Assignment

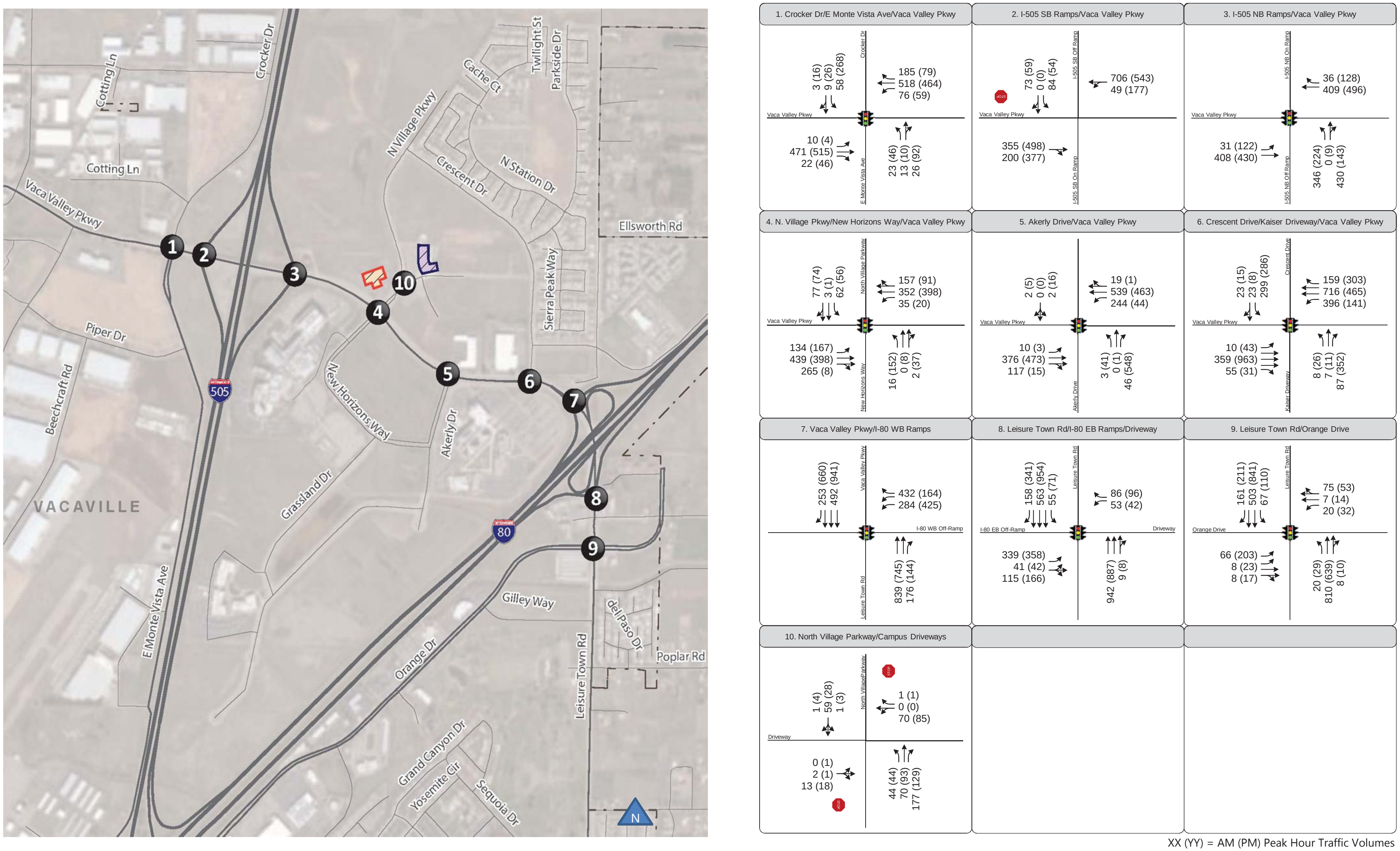


Figure 7
Peak Hour Traffic Volumes, Lane Configurations, and Traffic Control
Existing with Phase 1 Conditions

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TABLE 11 EXISTING WITH PROJECT INTERSECTION PEAK HOUR LEVELS OF SERVICE

	Intersection	Control[1]	Peak Hour	Existing Conditions		Existing with Phase 1 Conditions	
				Delay[2]	LOS[3]	Delay[2]	LOS[3]
1	East Monte Vista Avenue-Crocker Drive/Vaca Valley Parkway	Signal	AM PM	15 31	B C	15 32	B C
2	I-505 Southbound Ramps/Vaca Valley Parkway	SSSC	AM PM	9 **(83)** 27 **(>300)**	A **(F)** D **(F)**	15 **(139)** **48 (>300)**	C **(F)** **E (F)**
3	I-505 Northbound Ramps/Vaca Valley Parkway	Signal	AM PM	14 14	B B	15 15	B B
4	New Horizons Way-North Village Parkway/Vaca Valley Parkway	Signal	AM PM	13 19	B B	14 22	B C
5	Akerly Drive/Vaca Valley Parkway	Signal	AM PM	21 13	C B	22 13	C B
6	Kaiser Hospital Driveway-Crescent Drive/Vaca Valley Parkway	Signal	AM PM	32 30	C C	33 30	C C
7	I-80 Westbound Ramps/Vaca Valley Parkway	Signal	AM PM	5 7	A A	5 7	A A
8	I-80 Eastbound Ramps/Leisure Town Road	Signal	AM PM	12 13	B B	13 13	B B
9	Orange Drive/Leisure Town Road	Signal	AM PM	14 18	B B	14 18	B B
10	North Village Parkway/Vacaville Campus Main Driveways	SSSC	AM PM	3 (11) 4 (11)	A (B) A (B)	5 (12) 6 (12)	A (B) A (B)

Notes: Results in **bold** denotes unacceptable operations. **Bold and highlighted** indicates a significant impact.
1. Signal = Signalized intersection, SSSC = Side-street stop controlled intersection
2. Signalized intersection level of service based on average intersection control delay; SSSC intersection delay is reported as intersection average (worst-case approach)
3. LOS = Level of Service per 2010 HCM
Source: Fehr & Peers, March 2015.

3.3 SIGNAL WARRANT ANALYSIS

The peak-hour signal warrant (Warrant 3) from the *Manual on Uniform Traffic Control Devices* (MUTCD) was used to evaluate unsignalized intersections that operate unacceptably under Existing Conditions to determine if a traffic signal is warranted. The following unsignalized intersection operates unacceptably and meets peak hour signal warrants (see **Appendix C**):

- Intersection #2 – I-505 Southbound Ramps/Vaca Valley Parkway (AM and PM peak hours)

As discussed in **Chapter 2**, this analysis is intended to examine the general correlation between the future level of development in the region and the need to install traffic signals. Refer to **Section 2.4** for guidance on the decision making process regarding installation of traffic signals.

3.4 INTERSECTION IMPACTS

Based on the impact criteria listed in **Chapter 1**, the proposed project will have a significant impact at one study intersection within the City of Vacaville during the following peak hours:

- Intersection #2 – I-505 Southbound Ramps/Vaca Valley Parkway (AM and PM peak hours)

3.4.1 CITY OF VACAVILLE/CALTRANS SHARED INTERSECTION

I-505 Southbound Ramps/Vaca Valley Parkway (Intersection #2) – The addition of project traffic under Existing with Phase 1 Conditions exacerbates unacceptable intersection operations during the AM and PM peak hour. The project will increase the worst approach delay at the intersection by more than 4.0 seconds of delay, and therefore the project causes a **significant impact**.

Mitigation measures to alleviate the significant impact are presented in **Chapter 7**.

3.5 EXISTING WITH PROJECT ROADWAY SEGMENT LEVEL OF SERVICE

Level of service calculations were conducted to evaluate roadway segment operations under Existing with Project Conditions. The results of the LOS analysis are summarized in **Table 12**.

The results of the LOS calculations indicate that all of the study roadway segments will operate at acceptable levels of service according to their designated LOS standard.

TABLE 12 EXISTING WITH PROJECT ROADWAY SEGMENT PEAK HOUR LEVELS OF SERVICE

Segment	Functional Classification	Peak Hour	Existing Conditions		Existing with Phase 1 Conditions	
			Volume (Dir)[1]	V/C (LOS)[2]	Volume (Dir)[1]	V/C (LOS)[2]

TABLE 12 EXISTING WITH PROJECT ROADWAY SEGMENT PEAK HOUR LEVELS OF SERVICE

Segment		Functional Classification	Peak Hour	Existing Conditions		Existing with Phase 1 Conditions	
				Volume (Dir)[1]	V/C (LOS)[2]	Volume (Dir)[1]	V/C (LOS)[2]
1	Vaca Valley Parkway west of East Monte Vista Avenue	2-lane Arterial	AM PM	593 (WB) 558 (EB)	0.53 (A-C) 0.50 (A-C)	600 (WB) 565 (EB)	0.53 (A-C) 0.50 (A-C)
2	Vaca Valley Parkway/I-505 overcrossing	2-lane Arterial	AM PM	865 (WB) 737 (WB)	0.77 (C) 0.66 (A-C)	895 (WB) 763 (WB)	0.80 (C) 0.68 (A-C)
3	Vaca Valley Parkway between New Horizons Way and Akerly Drive	4-lane Divided Arterial	AM PM	511 (WB) 511 (EB)	0.19 (A-C) 0.19 (A-C)	544 (WB) 538 (EB)	0.21 (A-C) 0.20 (A-C)
4	Vaca Valley Parkway/Leisure Town Road I-80 overcrossing	6-lane Divided Arterial	AM PM	1,002 (NB) 1,368 (SB)	0.30 (A-C) 0.41 (A-C)	1,023 (NB) 1,393 (SB)	0.30 (A-C) 0.41 (A-C)
5	North Village Parkway north of Vacaville campus driveways	2-lane Arterial	AM PM	70 (NB) 94 (NB)	0.06 (A-C) 0.08 (A-C)	71 (NB) 95 (NB)	0.06 (A-C) 0.08 (A-C)

Notes: Results in **bold** denotes unacceptable operations. **Bold and highlighted** indicates a significant impact.
1. Peak direction volume (Peak direction of travel)
2. Volume to Capacity Ratio (LOS based on V/C ratio – no LOS A/B or LOS B/C thresholds identified by City, LOS designated as A-C for V/C < 0.70)
Source: Fehr & Peers, March 2015.

Since all segments will operate acceptably under Existing with Phase 1 Conditions, the project's impacts to roadway segments under Existing with Phase 1 Conditions are ***less-than-significant***.

3.6 EXISTING WITH PROJECT FREEWAY SEGMENT LEVEL OF SERVICE

Level of service calculations were conducted to evaluate freeway segment operations under Existing with Project Conditions. The results of the LOS analysis are summarized in **Table 13**.

The results of the LOS calculations indicate that all of the study freeway segments will operate at acceptable levels of service according to their designated LOS standard.

TABLE 13 EXISTING WITH PROJECT FREEWAY SEGMENT PEAK HOUR LEVELS OF SERVICE

	Segment	Peak Hour	Existing Conditions				Existing with Phase 1 Conditions			
			Northbound/Eastbound		Southbound/Westbound		Northbound/Eastbound		Southbound/Westbound	
			Density	LOS[1]	Density	LOS[1]	Density	LOS[1]	Density	LOS[1]
1	I-80 between East Monte Vista Avenue and I-505	AM PM	22.9 24.5	C C	22.9 27.5	C C	23.0 24.6	C C	23.0 27.6	C C
2	I-80 between I-505 and Vaca Valley Parkway	AM PM	14.1 16.1	B B	14.4 16.3	B B	14.1 16.1	B B	14.4 16.3	B B
3	I-80 between Vaca Valley Parkway and Meridian Road	AM PM	18.8 19.9	C C	15.5 15.4	B B	18.9 23.2	C C	15.5 15.4	B B
4	I-505 between I-80 and Vaca Valley Parkway	AM PM	9.0 9.6	A A	8.0 9.5	A A	9.2 9.7	A A	8.2 9.7	A A
5	I-505 between Vaca Valley Parkway and Midway Road	AM PM	3.9 8.9	A A	7.5 6.4	A A	4.0 8.9	A A	7.5 6.5	A A

Notes: Results in **bold** denotes unacceptable operations. **Bold and highlighted** indicates a significant impact.
1. LOS based on 2010 HCM
Source: Fehr & Peers, March 2015.

Since all freeway segments will operate acceptably under Existing with Phase 1 Conditions, the project's impacts to freeway segments under Existing with Phase 1 Conditions are ***less-than-significant***.

3.7 PEDESTRIAN, BICYCLE, AND TRANSIT IMPACTS

A project is determined to cause a significant impact to pedestrian, bicycle, or transit facilities and services based on the criteria presented in **Chapter 1**.

3.7.1 PEDESTRIAN AND BICYCLE FACILITIES

Pedestrian connections to the project site are provided by sidewalks along North Village Parkway. These connections are not anticipated to be removed with construction of Phase 1 or Phase 2. However, the construction of Phase 1 and Phase 2 could result in increased pedestrian traffic across North Village Parkway at the Campus Driveways intersection. The intersection currently does not include crosswalks for this movement, and City staff has indicated that this crossing movement is perceived as dangerous due to high speed vehicular movements. Therefore, increasing the pedestrian trips on this crossing is a **significant impact**. To mitigate this impact, a marked crosswalk and appropriate pedestrian crossing warning signs shall be provided to warn drivers of the possibility of pedestrians crossing the roadway ahead. This mitigation will reduce the safety concerns at this location, so the impact is ***less-than-significant with mitigation***.

Bicycle connections to the site are provided by Class II bicycle facilities along North Village Parkway. These connections are not anticipated to be removed with construction of Phase 1 or Phase 2. Increases in bicycle traffic due to Phase 1 or Phase 2 is expected to be accommodated using the bicycle lanes. Therefore, the impacts to bicycles for Phase 1 and Phase 2 are ***less-than-significant.*** Outside of the project, the Solano Community College District ("the District") should continue to work with the City to ensure safe and efficient bicycle access to and from the campus area.

3.7.2 TRANSIT

The project will generate new demand for the transit services and facilities that serve the area as described in **Chapter 2**. Fixed-route bus service operates near the site with stops located within walking distance of the proposed development. While student enrollment may increase over time with the implementation of Phase 1 and Phase 2 of the project, transit capacities are not expected to be exceeded. Therefore impacts to transit are ***less-than-significant***. However, the District should coordinate with City Coach to monitor bus ridership and promote transit usage.

4.0 NEAR TERM CONDITIONS

This chapter presents the results of the intersection level of service, roadway segment level of service, and freeway level of service calculations under Near Term with and without the Project. Near Term conditions, also sometimes known as Existing plus Approved Project Conditions or Background Conditions, are defined as existing volumes plus traffic generated by projects that are approved but not yet built, and built but not yet occupied. Near Term with Project Conditions are defined as Near Term Conditions plus traffic generated by the proposed project. Near Term with Project Conditions are analyzed for both Near Term with Phase 1 and Near Term with Phase 2 Conditions.

4.1 NEAR TERM TRAFFIC VOLUMES

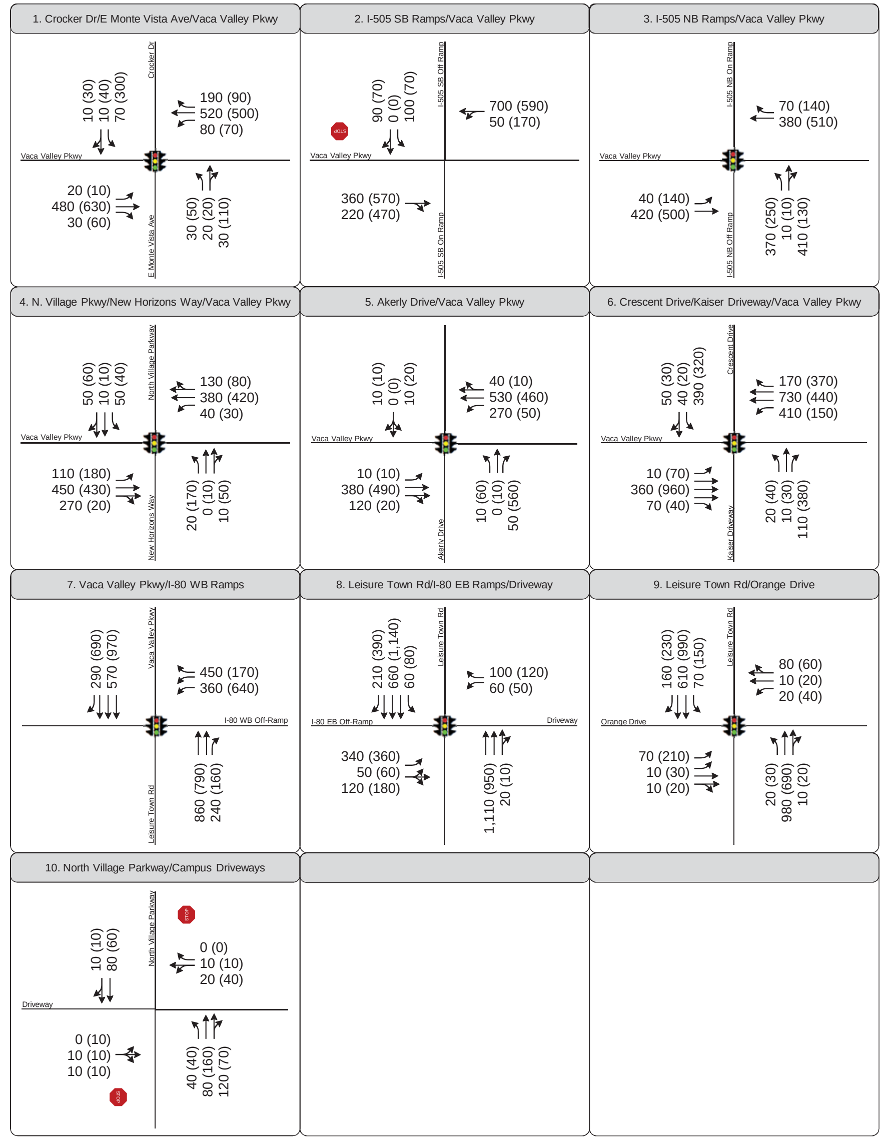
The City of Vacaville provided Fehr & Peers with model runs for the model base year (2008), Existing plus Approved Projects model year (2008 + Approved Projects) and General Plan buildout year (2035). Forecasts were developed using the difference method, which is a movement-level adjustment procedure that adds the amount of growth projected by the model to the existing volumes. The peak hour forecasts were developed using the peak hour results from the model.

The following presents the specific steps used to develop Near Term forecasts from the model:

- **Step 1** – Run the validated base year (2008) model to estimate AM and PM peak hour traffic volumes.
- **Step 2** – Run the Existing plus Approved Projects model to estimate AM and PM peak hour traffic volumes.
- **Step 3** – Develop Near Term forecasts using the following formula:

  Near Term Forecasts = Existing Peak Hour Volume + (Existing plus Approved Projects Model Peak Hour Volume – Base Year Model Peak Hour Volume)
- **Step 4** – Check for reasonableness (e.g., ensure that volumes don't drop below existing levels or grow exponentially unless there is a specific reason).

The Near Term intersection turning movement forecasts are presented in **Figure 8**.



XX (YY) = AM (PM) Peak Hour Traffic Volumes

Figure 8

Peak Hour Traffic Volumes, Lane Configurations, and Traffic Control Near Term Conditions

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4.2 NEAR TERM ROADWAY IMPROVEMENTS

Field observations conducted in December 2014 indicated that North Village Parkway is being widened from a two lane arterial north of campus to a four lane divided arterial. Accordingly, the Near Term analysis incorporates this pending improvement. The modifications are as follows:

- Intersection #10: North Village Parkway/Campus Driveways
  - Northbound approach: 1 left turn lane, 1 through lane, 1 through-right turn shared lane
  - Southbound approach: 1 through lane, 1 through-right turn shared lane (left turn prohibition retained)
- Roadway segment #5: North Village Parkway north of Campus Driveways
  - Functional classification change from 2 lane arterial to 4 lane divided arterial

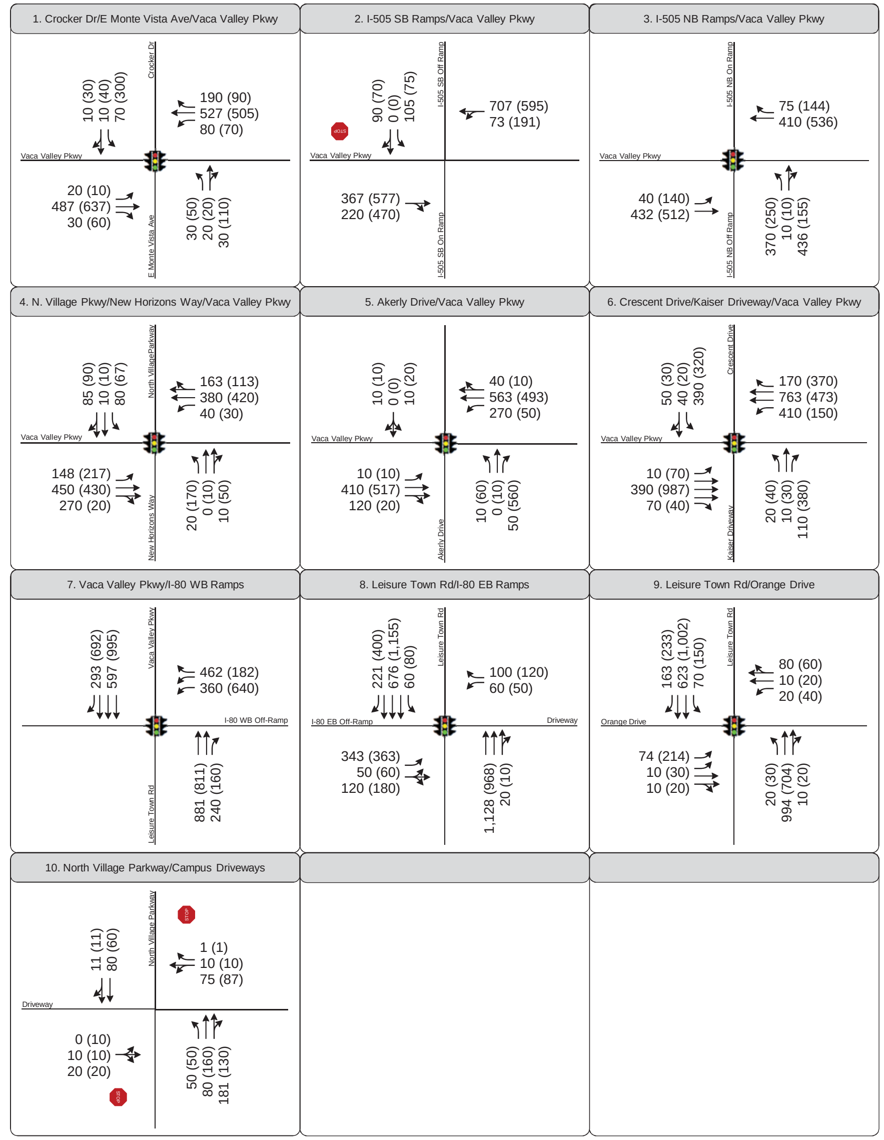
4.3 NEAR TERM WITH PROJECT TRAFFIC VOLUMES

Net new trips from the proposed project were added to the Near Term traffic projections to develop traffic volumes for Near Term with Phase 1 Conditions and Near Term with Phase 2 Conditions. The resulting volumes are shown on **Figure 9** (Near Term with Phase 1) and **Figure 10** (Near Term with Phase 2).

4.4 NEAR TERM INTERSECTION LEVELS OF SERVICE

Level of service calculations were conducted to evaluate intersection operations under Near Term Conditions, Near Term with Phase 1 Conditions, and Near Term with Phase 2 Conditions. The results of the LOS analysis are summarized in **Table 14**.

The results of a signal warrant analysis (presented in the next section), and the determination of impact significance under various impact significance thresholds as outlined in **Chapter 1** are provided after the intersection LOS table. The corresponding LOS calculation sheets are included in **Appendix B**.



XX (YY) = AM (PM) Peak Hour Traffic Volumes

Figure 9

Peak Hour Traffic Volumes, Lane Configurations, and Traffic Control
Near Term with Phase 1 Conditions

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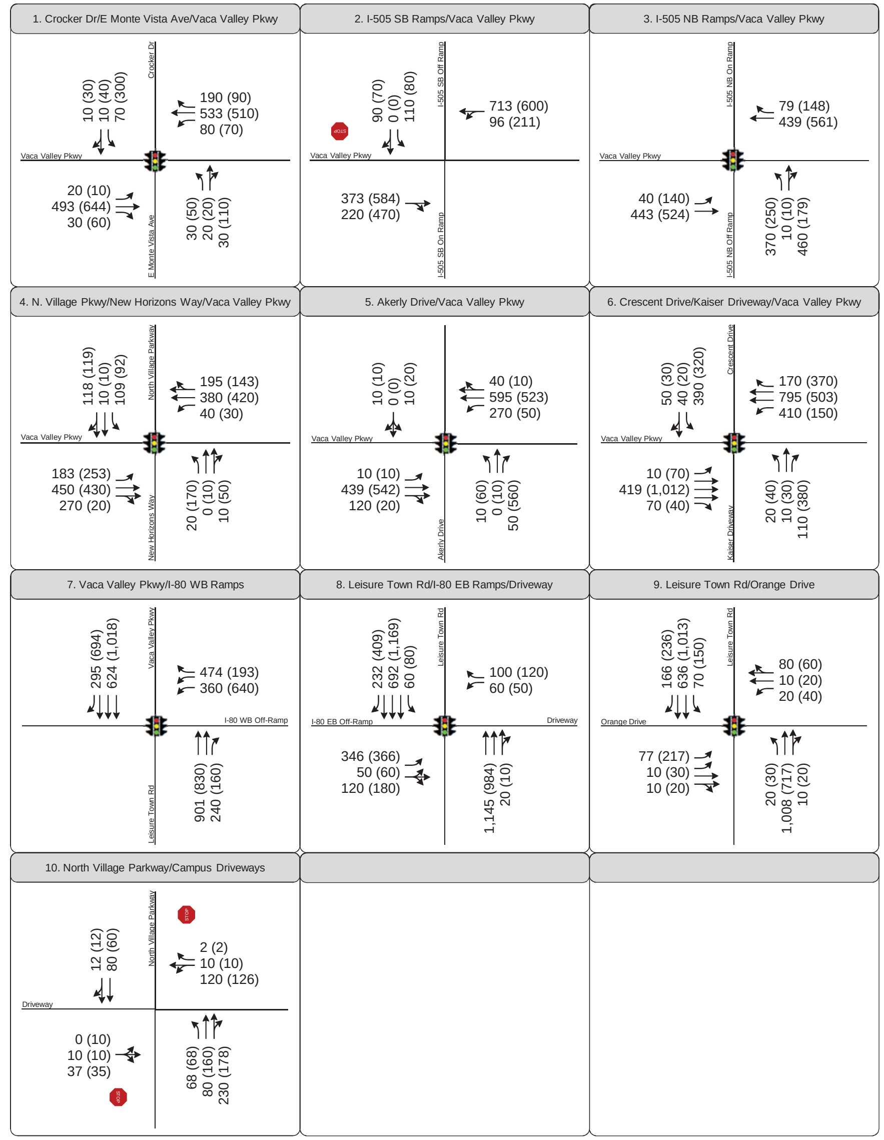

XX (YY) = AM (PM) Peak Hour Traffic Volumes

Figure 10

Peak Hour Traffic Volumes, Lane Configurations, and Traffic Control

Near Term with Phase 2 Conditions

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TABLE 14 NEAR TERM WITH PROJECT INTERSECTION PEAK HOUR LEVELS OF SERVICE

	Location	Control[1]	Peak Hour	Near Term Conditions		Near Term With Phase 1		Near Term with Phase 2	
				Delay[2]	LOS[3]	Delay[2]	LOS[3]	Delay[2]	LOS[3]
1	East Monte Vista Avenue-Crocker Drive/Vaca Valley Parkway	Signal	AM PM	17 **51**	B **D**	17 **53**	B **D**	17 **54**	B **D**
2	I-505 Southbound Ramps/Vaca Valley Parkway	SSSC	AM PM	25 **(198)** **181 (>300)**	D **(F)** **F (F)**	**39 (>300)** **>300 (>300)**	**E (F)** **F (F)**	**59 (>300)** **47 (>300)**	**F (F)** **E (F)**
3	I-505 Northbound Ramps/Vaca Valley Parkway	Signal	AM PM	16 18	B B	16 20	B B	17 22	B C
4	New Horizons Way-North Village Parkway/Vaca Valley Parkway	Signal	AM PM	14 25	B C	16 32	B C	18 44	B D
5	Akerly Drive/Vaca Valley Parkway	Signal	AM PM	32 14	C B	33 14	C B	34 14	C B
6	Kaiser Hospital Driveway-Crescent Drive/Vaca Valley Parkway	Signal	AM PM	**58** 40	**E** D	**58** 40	**E** D	**59** 40	**E** D
7	I-80 Westbound Ramps/Vaca Valley Parkway	Signal	AM PM	6 10	A A	6 10	A A	6 10	A A
8	I-80 Eastbound Ramps/Leisure Town Road	Signal	AM PM	13 14	B B	13 14	B B	14 14	B B
9	Orange Drive/Leisure Town Road	Signal	AM PM	17 22	B C	17 22	B C	17 23	B C
10	North Village Parkway/Vacaville Campus Main Driveways	SSSC	AM PM	2 (13) 3 (14)	A (B) A (B)	4 (15) 5 (17)	A (B) A (C)	6 (21) 7 (25)	A (C) A (C)

Notes: Results in **bold** denotes unacceptable operations. **Bold and highlighted** indicates a significant impact.
1. Signal = Signalized intersection, SSSC = Side-street stop controlled intersection
2. Signalized intersection level of service based on average intersection control delay; SSSC intersection delay is reported as intersection average (worst-case approach)
3. LOS = Level of Service per 2010 HCM
Source: Fehr & Peers, March 2015.

The results of the LOS calculations indicate that the majority of the study intersections will operate at acceptable levels of service according to their designed LOS standard. The following three intersections do not meet their respective LOS designation for AM and/or PM under Near Term Conditions.

- Intersection #1 – East Monte Vista Avenue-Crocker Drive/Vaca Valley Parkway (PM peak hour)
- Intersection #2 – I-505 Southbound Ramps/Vaca Valley Parkway (AM and PM peak hours)
- Intersection #6 – Kaiser Hospital Driveway-Crescent Drive/Vaca Valley Parkway (AM peak hour)

4.5 SIGNAL WARRANT ANALYSIS

The peak-hour signal warrant (Warrant 3) from the *Manual on Uniform Traffic Control Devices* (MUTCD) was used to evaluate unsignalized intersections that operate unacceptably under Near Term Conditions to determine if a traffic signal is warranted. The following unsignalized intersection operates unacceptably and meets peak hour signal warrants (see **Appendix C**):

- Intersection #2 – I-505 Southbound Ramps/Vaca Valley Parkway (AM and PM peak hours, Near Term, Near Term with Phase 1, Near Term with Phase 2)

As discussed in **Chapter 2**, this analysis is intended to examine the general correlation between the future level of development in the region and the need to install traffic signals. Refer to **Section 2.4** for guidance on the decision making process regarding installation of traffic signals.

4.6 INTERSECTION IMPACTS – NEAR TERM WITH PHASE 1 CONDITIONS

Based on the impact criteria listed in **Chapter 1**, the proposed project will have a significant impact at one (1) study intersection within the City of Vacaville during the following peak hours:

- Intersection #2 – I-505 Southbound Ramps/Vaca Valley Parkway (AM and PM peak hours)

4.6.1 CITY OF VACAVILLE/CALTRANS SHARED INTERSECTION

I-505 Southbound Ramps/Vaca Valley Parkway (Intersection #2) – The addition of project traffic under Near Term with Phase 1 Conditions exacerbates unacceptable intersection operations during the AM and PM peak hour. The project will increase the worst approach delay at the intersection by more than 4.0 seconds of delay, and therefore the project causes a **significant impact**.

Mitigation measures to alleviate the significant impact are presented in **Chapter 7**.

4.7 INTERSECTION IMPACTS – NEAR TERM WITH PHASE 2 CONDITIONS

Based on the impact criteria listed in **Chapter 1**, the proposed project will have a significant impact at one (1) study intersection within the City of Vacaville during the following peak hours:

- Intersection #2 – I-505 Southbound Ramps/Vaca Valley Parkway (AM and PM peak hours)

4.7.1 CITY OF VACAVILLE/CALTRANS SHARED INTERSECTION

I-505 Southbound Ramps/Vaca Valley Parkway (Intersection #2) – The addition of project traffic under Near Term with Phase 2 Conditions exacerbates unacceptable intersection operations during the AM and PM peak hour. The project will increase the worst approach delay at the intersection by more than 4.0 seconds of delay, and therefore the project causes a **significant impact**.

Mitigation measures to alleviate the significant impact are presented in **Chapter 7.**

4.8 NEAR TERM ROADWAY SEGMENT LEVEL OF SERVICE

Level of service calculations were conducted to evaluate roadway segment operations under Near Term Conditions, Near Term with Phase 1 Conditions, and Near Term with Phase 2 Conditions. The results of the LOS analysis are summarized in **Table 15**.

The results of the LOS calculations indicate that all of the study roadway segments will operate at acceptable levels of service according to their designated LOS standard.

TABLE 15 NEAR TERM WITH PROJECT ROADWAY SEGMENT PEAK HOUR LEVELS OF SERVICE

Segment		Functional Classification	Peak Hour	Near Term Conditions		Near Term with Phase 1 Conditions		Near Term with Phase 2 Conditions	
				Volume (Dir)[1]	V/C (LOS)[2]	Volume (Dir)[1]	V/C (LOS)[2]	Volume (Dir)[1]	V/C (LOS)[2]
1	Vaca Valley Parkway west of East Monte Vista Avenue	2-lane Arterial	AM PM	620 (WB) 700 (EB)	0.55 (A-C) 0.62 (A-C)	627 (WB) 707 (EB)	0.56 (A-C) 0.63 (A-C)	663 (WB) 714 (EB)	0.56 (A-C) 0.63 (A-C)
2	Vaca Valley Parkway/I-505 overcrossing	2-lane Arterial	AM PM	890 (WB) 810 (WB)	0.79 (C) 0.72 (C)	920 (WB) 836 (WB)	0.82 (D) 0.74 (C)	949 (WB) 841 (WB)	0.84 (D) 0.77 (C)
3	Vaca Valley Parkway between New Horizons Way and Akerly Drive	4-lane Divided Arterial	AM PM	550 (WB) 570 (EB)	0.21 (A-C) 0.22 (A-C)	583 (WB) 597 (EB)	0.22 (A-C) 0.23 (A-C)	615 (WB) 622 (EB)	0.23 (A-C) 0.24 (A-C)
4	Vaca Valley Parkway/Leisure Town Road I-80 overcrossing	6-lane Divided Arterial	AM PM	1,110 (NB) 1,640 (SB)	0.33 (A-C) 0.49 (A-C)	1,131 (NB) 1,665 (SB)	0.34 (A-C) 0.49 (A-C)	1,151 (NB) 1,688 (SB)	0.34 (A-C) 0.50 (A-C)
5	North Village Parkway north of Vacaville campus driveways	4-lane Divided Arterial	AM PM	90 (SB*) 170 (NB)	0.05 (A-C) 0.09 (A-C)	91 (SB*) 171 (NB)	0.05 (A-C) 0.09 (A-C)	92 (SB*) 172 (NB)	0.05 (A-C) 0.09 (A-C)

Notes: Results in **bold** denotes unacceptable operations. **Bold and highlighted** indicates a significant impact.
* Peak direction change versus Existing Conditions
1. Peak direction volume (Peak direction of travel)
2. Volume to Capacity Ratio (LOS based on V/C ratio – no LOS A/B or LOS B/C thresholds identified by City, LOS designated as A-C for V/C < 0.70)
Source: Fehr & Peers, March 2015.

Since all segments will operate acceptably under Near Term with Phase 1 Conditions, the project's impacts to roadway segments under Near Term with Phase 1 Conditions are ***less-than-significant***. Since all segments will operate acceptably under Near Term with Phase 2 Conditions, the project's impacts to roadway segments under Near Term with Phase 2 Conditions are ***less-than-significant***.

4.9 NEAR TERM FREEWAY SEGMENT LEVEL OF SERVICE

Level of service calculations were conducted to evaluate freeway segment operations under Near Term Conditions, Near Term with Phase 1 Conditions, and Near Term with Phase 2 Conditions. The results of the LOS analysis are summarized in **Table 16**.

The results of the LOS calculations indicate that all of the study freeway segments will operate at acceptable levels of service according to their designated LOS standard.

Since all segments will operate acceptably under Near Term with Phase 1 Conditions, the project's impacts to freeway segments under Near Term with Phase 1 Conditions are ***less-than-significant***. Since all segments will operate acceptably under Near Term with Phase 2 Conditions, the project's impacts to freeway segments under Near Term with Phase 2 Conditions are ***less-than-significant***.

4.10 PEDESTRIAN, BICYCLE, AND TRANSIT IMPACTS

The project impact to pedestrian, bicycle, and transit facilities are discussed in **Chapter 3** (Existing with Project Conditions). Like Existing with Project conditions, the impacts to pedestrian, bicycle and transit modes are expected to be ***less-than-significant*** or ***less-than-significant with mitigation*** under Near Term with Phase 1 and Near Term with Phase 2 conditions.

TABLE 16 NEAR TERM WITH PROJECT FREEWAY SEGMENT PEAK HOUR LEVELS OF SERVICE

	Segment	Peak Hour	Near Term Conditions				Near Term with Phase 1 Conditions				Near Term with Phase 2 Conditions			
			Northbound/ Eastbound		Southbound/ Westbound		Northbound/ Eastbound		Southbound/ Westbound		Northbound/ Eastbound		Southbound/ Westbound	
			Density	LOS[1]	Density	LOS[1]	Density	LOS[1]	Density	LOS[1]	Density	LOS[1]	Density	LOS[1]
1	I-80 between East Monte Vista Avenue and I-505	AM PM	23.0 26.4	C C	25.5 33.1	C D	23.1 26.6	C C	25.6 33.2	C D	23.3 26.7	C C	25.7 33.2	C D
2	I-80 between I-505 and Vaca Valley Parkway	AM PM	14.1 16.7	B B	15.0 16.3	B B	14.1 16.7	B B	15.0 16.3	B B	14.1 16.7	B B	15.0 16.3	B B
3	I-80 between Vaca Valley Parkway and Meridian Road	AM PM	19.9 23.4	C C	15.5 16.3	B B	19.9 23.5	C C	15.6 16.3	B B	20.0 23.5	C C	15.6 16.4	B B
4	I-505 between I-80 and Vaca Valley Parkway	AM PM	9.2 12.3	A B	9.7 13.3	A B	9.4 12.4	A B	9.8 13.5	A B	9.5 12.6	A B	10.0 13.6	B B
5	I-505 between Vaca Valley Parkway and Midway Road	AM PM	4.4 11.0	A B	9.0 8.0	A A	4.5 11.1	A B	9.0 8.1	A A	4.5 11.1	A B	9.1 8.1	A A

Notes: Results in **bold** denotes unacceptable operations. **Bold and highlighted** indicates a significant impact.
1. LOS based on 2010 HCM
Source: Fehr & Peers, 2015.

5.0 CUMULATIVE CONDITIONS

This chapter presents the results of the intersection level of service, roadway segment level of service and freeway segment level of service calculations under Cumulative Conditions with and without the Project. Cumulative without Project Conditions are defined as existing volumes plus traffic generated by all foreseen development projects that would affect the transportation system in the study area, including "approved but not yet built," pending development projects that have not yet been approved, and other land use growth envisioned to occur by 2035. Cumulative with Project Conditions are defined as Cumulative Conditions plus traffic generated by the proposed project. For this analysis, Cumulative with Project Conditions is comprised of the Cumulative with Phase 1 Conditions and Cumulative with Phase 2 Conditions.

5.1 CUMULATIVE TRAFFIC VOLUMES

The City of Vacaville provided Fehr & Peers with model runs for the model base year (2008), Near Term model year (2008 + Approved Development) and General Plan buildout year (2035). Forecasts were developed using the difference method, which is a movement-level adjustment procedure that adds the amount of growth projected by the model to the existing volumes. The peak hour forecasts were developed using the peak hour results from the model.

The following presents the specific steps used to develop Near Term forecasts from the model:

- **Step 1** – Run the validated base year (2008) model to estimate AM and PM peak hour traffic volumes.
- **Step 2** – Run the Year 2035 model to estimate AM and PM peak hour traffic volumes.
- **Step 3** – Develop 2035 No Project (Cumulative) forecasts using the following formula:

  Cumulative Forecasts = Existing Peak Hour Volume + (Year 2035 Model Peak Hour Volume – Base Year Model Peak Hour Volume)

- **Step 4** – Check for reasonableness (e.g., ensure that volumes don't drop below Existing or Near Term levels, or grow exponentially unless there is a specific reason).

The Cumulative intersection turning movement forecasts are presented in **Figure 11**. A large growth in vehicles in the area is expected as the area surrounding the project site is built out with residential and commercial/industrial uses.

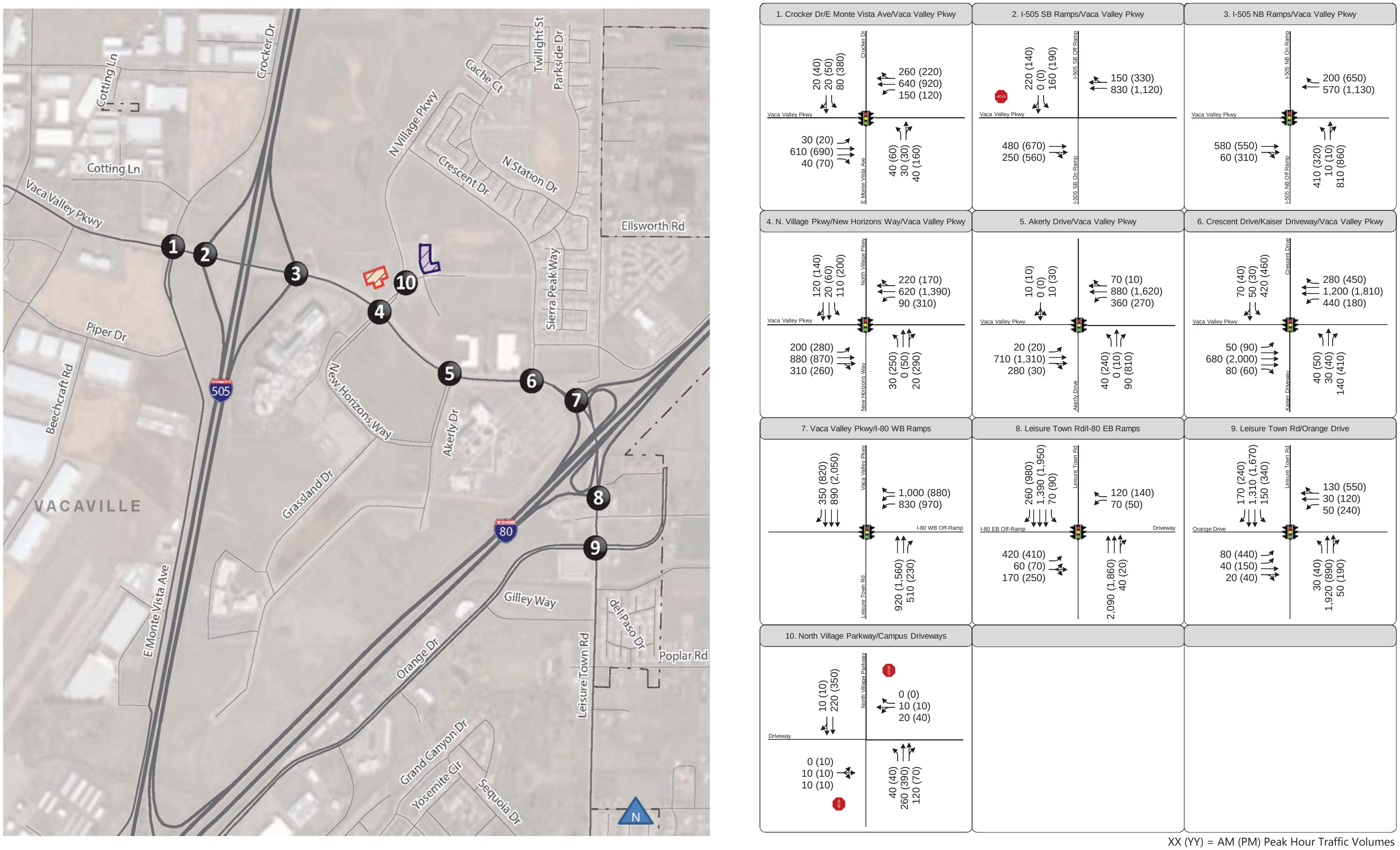

Figure 11

Peak Hour Traffic Volumes, Lane Configurations, and Traffic Control
Cumulative without Project Conditions

WC14-3181

5.2 CUMULATIVE ROADWAY IMPROVEMENTS

City staff has indicated that this analysis should assume that the Vaca Valley Parkway/I-505 overcrossing roadway segment has been widened to four lanes by Year 2035. Reviewing the model roadway network file indicates that the I-505/Vaca Valley Parkway interchange will be further modified to a partial cloverleaf interchange, with cloverleaf on-ramps added. Based on this information, we have updated the intersection analysis and roadway segment analysis to account for these improvements. The modifications are as follows:

- Roadway segment #2: Vaca Valley Parkway/I-505 overcrossing: widen to 4-lane divided arterial
- Intersection #1: East Monte Vista Avenue-Crocker Drive/Vaca Valley Parkway:
  - Eastbound approach: 1 left turn lane, 2 through lanes, 1 right turn lane
  - Westbound approach: 1 left turn lane, 1 through lane, 1 through-right turn shared lane (lane reduction after intersection retained)
- Intersection #2: I-505 Southbound Ramps/Vaca Valley Parkway:
  - Eastbound approach: 1 through lane, 1 through-right turn shared lane
  - Westbound approach: 1 through lane, 1 through-right turn shared lane (right turns onto southbound I-505 turn early onto loop on-ramp)
  - Signalize intersection
- Intersection #3: I-505 Northbound Ramps/Vaca Valley Parkway:
  - Eastbound approach: 1 through lane, 1 through-right turn shared lane (right turns onto northbound I-505 turn early onto loop on-ramp)
  - Westbound approach: 1 through lane, 1 through-right turn shared lane
- All signalized intersections were retimed for Cumulative without Project conditions

5.3 CUMULATIVE WITH PROJECT TRAFFIC VOLUMES

Net new trips from the proposed project were added to the Cumulative traffic projections to develop traffic volumes for Cumulative with Phase 1 Conditions and Cumulative with Phase 2 Conditions. The resulting volumes are shown on **Figure 12** (Cumulative with Phase 1) and **Figure 13** (Cumulative with Phase 2).