Cuesta College – San Luis Obispo County Community College District

Cuesta College North County Campus Center Project

Final Initial Study – Mitigated Negative Declaration

rincon

September 2015

Environmental Scientists Planners Engineers

Cuesta College North County Campus Center Project

Initial Study – Mitigated Negative Declaration

Prepared by:

San Luis Obispo County Community College District
Cuesta College, PO Box 8106, Attn: Facilities
San Luis Obispo, Ca 93403-8106
Terry Reece, Facilities Director
(805) 546-3283

Prepared with the assistance of:

Rincon Consultants, Inc.
1530 Monterey Street, Suite D
San Luis Obispo, CA 93401
(805) 547-0900

September 2015

This report prepared on 50% recycled paper with 50% post-consumer content.

Table of Contents

List of Figures

List of Tables

Appendices

INITIAL STUDY

1. Project Title

Cuesta College North County Campus Center Project

2. Lead Agency Name and Local Representative

San Luis Obispo County Community College District
Cuesta College, PO Box 8106, Attn: Facilities
San Luis Obispo, CA 93403-8106

Locally represented by:

Terry Reece, Facilities Director
(805) 546-3283

3. Description of Project

The proposed Cuesta College North County Campus Center. The Campus Center will include counseling, transfer assessment, financial aid, and cashier services, as well as public safety assistance programs and classroom spaces. Project would involve the construction of a two-story (53-foot tall), approximately 48,900 gross square foot (GSF), campus center building on the Cuesta College North County campus in the City of Paso Robles. The proposed project would not affect the enrollment of Cuesta College. Six existing modular classroom structures located on the project site would be demolished to accommodate the new campus center. Refer to Figures 3 and 4 for regular and enlarged site plans which show the project area and proposed replacement of existing modular classrooms with a new campus center.

The area of buildings to be demolished totals approximately 43,900 square feet, such that the project would result in a net increase in total built square footage of approximately 5,000 square feet. The maximum disturbed area would be up to 5.0 acres. Demolition would include all buildings, steps, railings, ramps, decks, and hardscape in the project area. All site furnishings, donor plaques and signage would be salvaged where possible. Within the project area planting and trees would be protected where possible, restoration would occur for affected landscaping, and on-existing storage containers would be removed and relocated (refer to Figure 5 for demolition plans). The project site is generally flat and this analysis assumes that cut and fill soil would be balanced on site during site preparation and grading. The proposed campus center would connect to existing utilities at the site.

Construction is anticipated to begin in late 2015. Funding for the project will be provided by the Measure L Bond Program which provides phased development on both Cuesta College campuses in North County as well as in San Luis Obispo.

4. Project Location

The project site is located entirely within the Cuesta College North County campus in the northeastern portion of the City of Paso Robles, California (refer to Figure 1). The Cuesta College North County campus is under the jurisdiction of the San Luis Obispo County Community College District (SLOCCCD). The campus is located north of Highway 46, adjacent to Dallons Drive on the southern boundary and Buena Vista Drive on the western boundary of the campus (refer to Figure 2). The project site is located to the west of the existing Fox Allied Health/Math & Science Building, between Parking Lot 10 and Parking Lot 11.

5. Surrounding Land Uses and Setting

North of the campus land use is rural residential. West of the campus, along Buena Vista Drive, land use consists of smaller lot single-family residential. South and east of the campus is currently undeveloped, but has been graded and is current in agricultural use.

6. Other Public Agencies Whose Approval is Required

The Trustees of the California State University Approvals

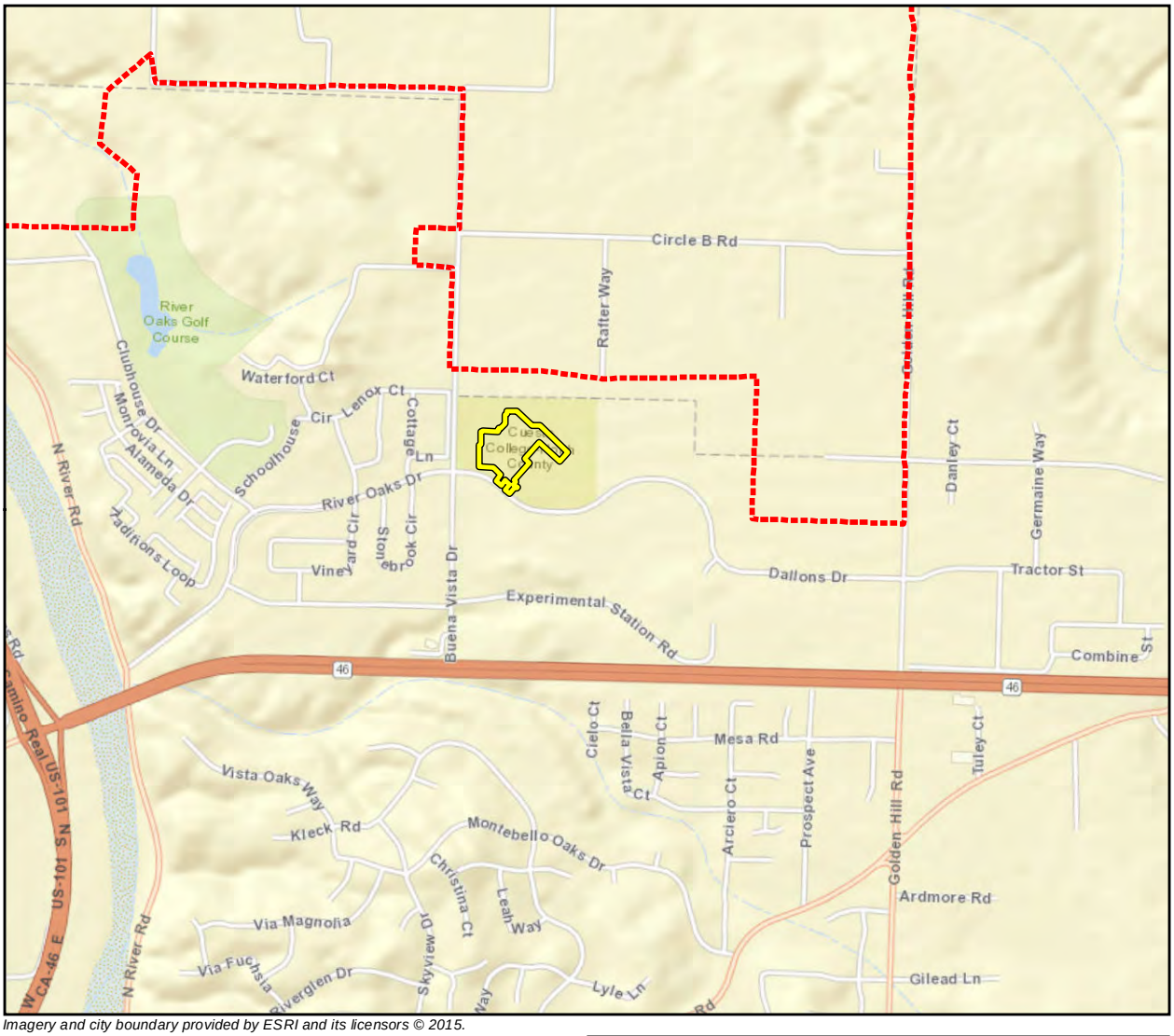
- *Schematic Plan Approval*

Division of the State Architect

- *Schematic Plan Approval*

Regional Water Quality Control Board (Region 3)

- *National Pollutant Discharge Elimination System (NPDES) permit*



Imagery and city boundary provided by ESRI and its licensors © 2015.

Project Boundary

Paso Robles City Boundary

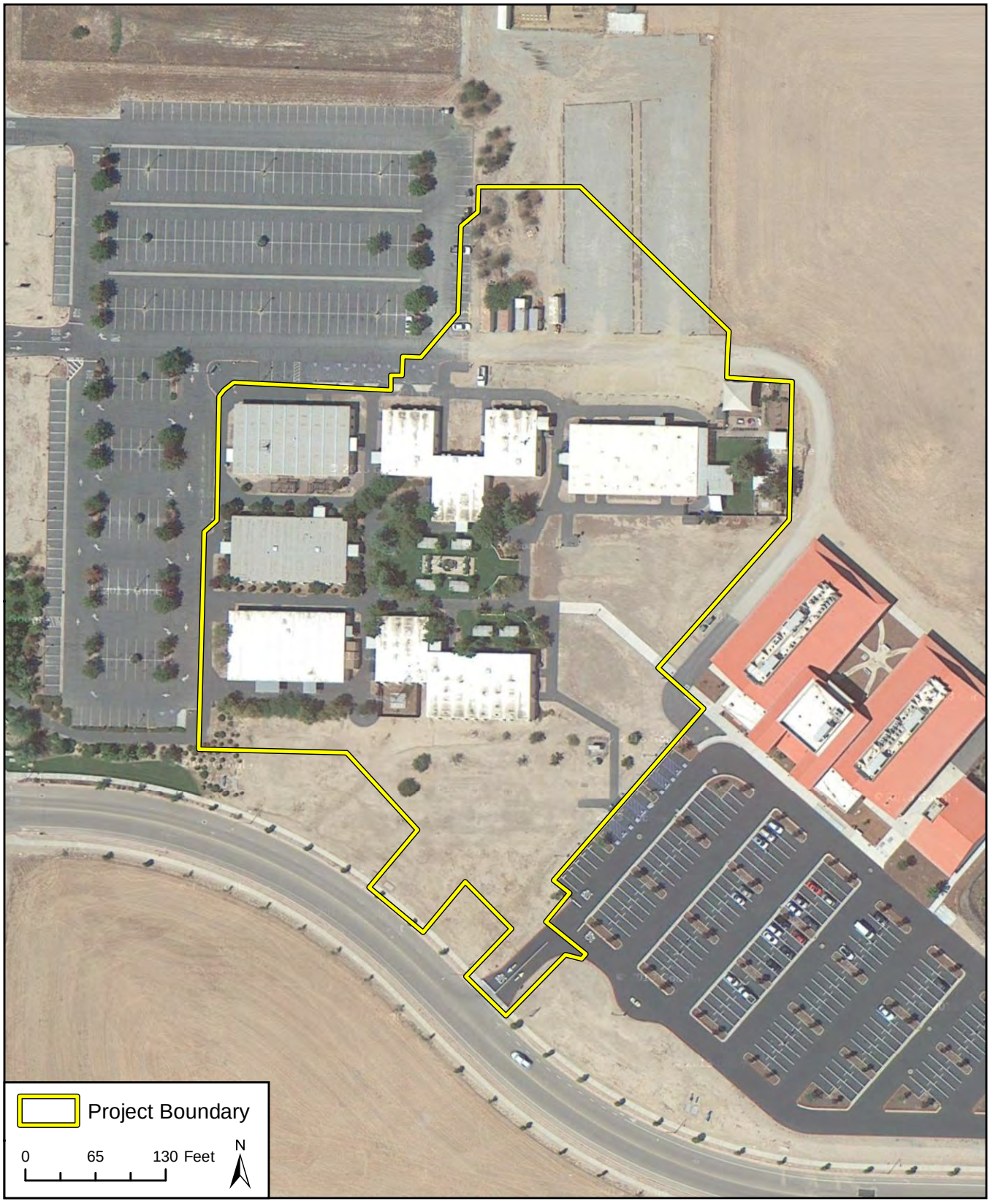
N

0 1,000 2,000

Feet

Regional Location

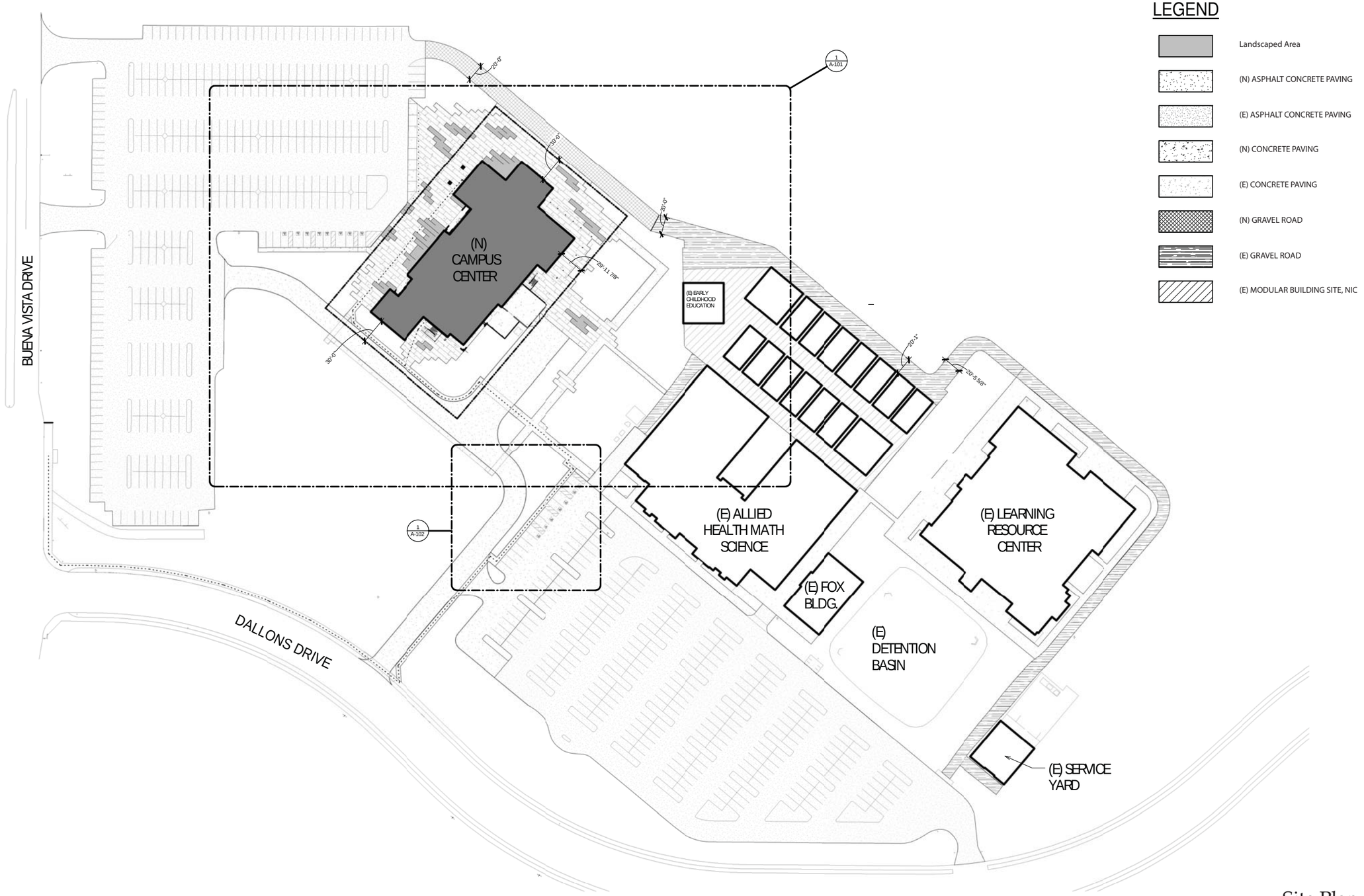
Figure 1



Imagery provided by Google and its licensors © 2015.

Project Site Location

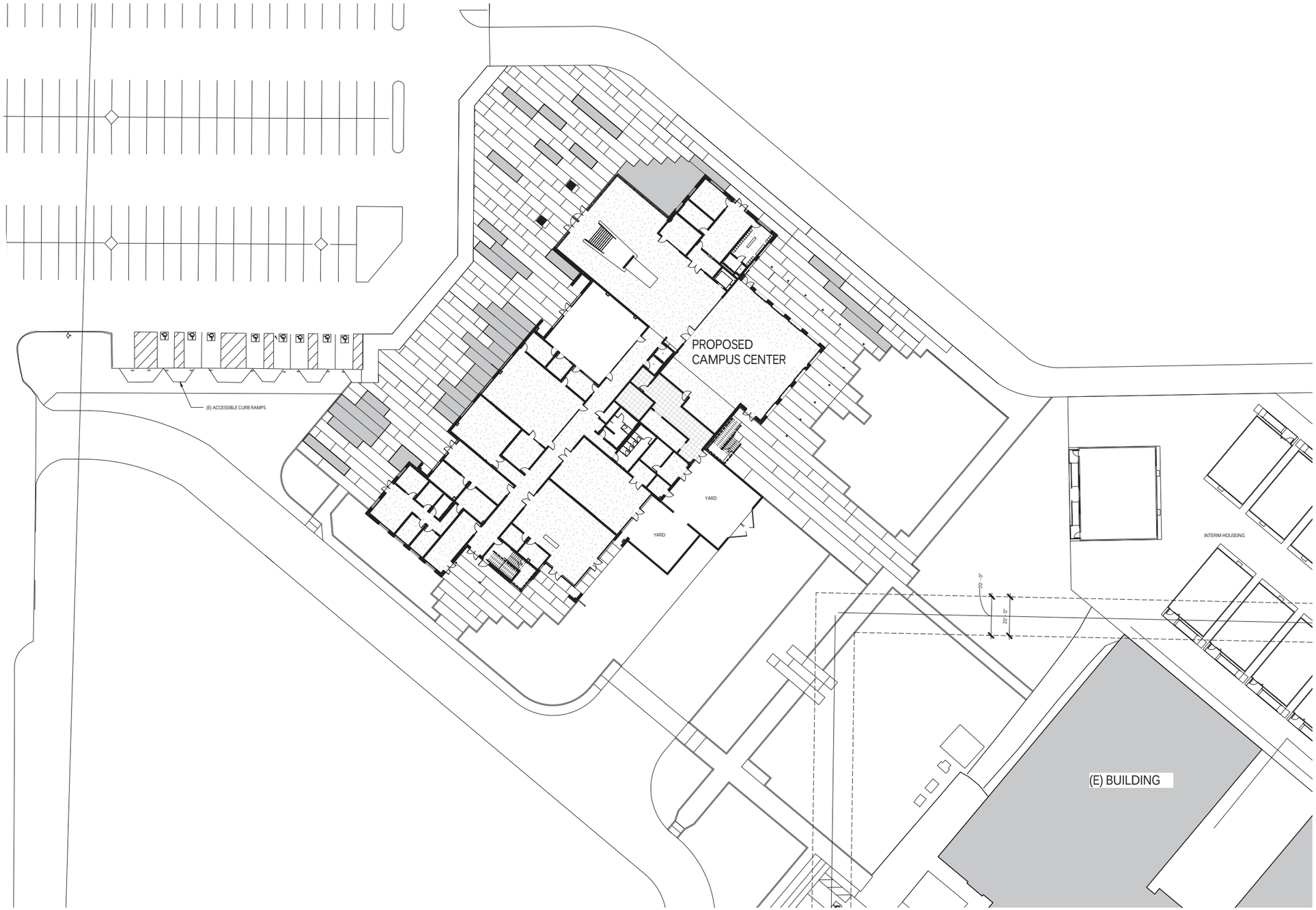
Figure 2



Site Plan

Figure 3

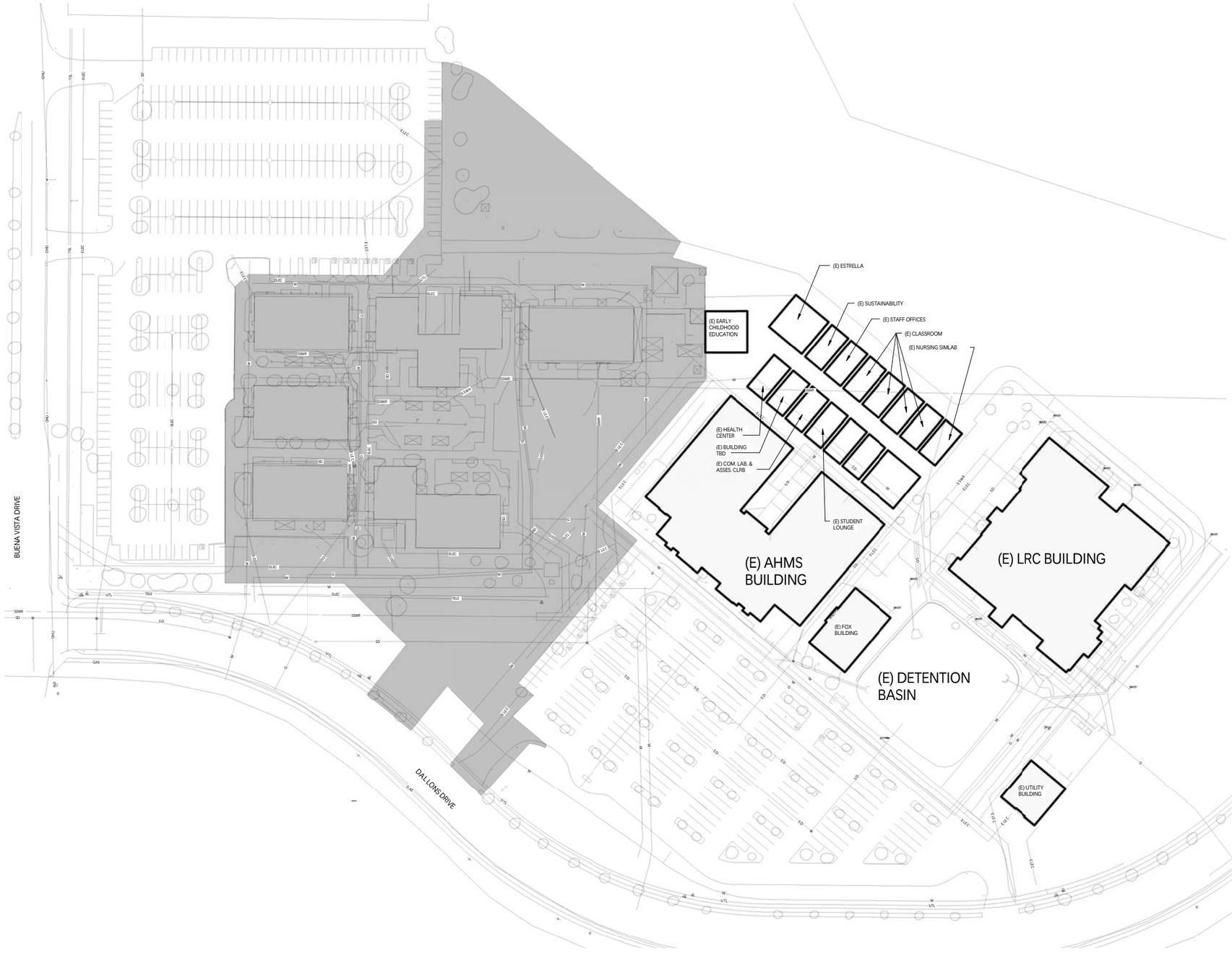
Source: PMSM Architects, 2015.



Enlarged Site Plan

Figure 4

Source: PMSM Architects, 2015.



UTILITY LINES

WATER	W
GAS	G
OIL	O
STORM DRAIN	SD
SANITARY SEWER	SSWR
UNDERGROUND TELEPHONE	TELE
UNDERGROUND UTILITY	UTL
OVERHEAD UTILITY	OHU
POWER	ELEC

SITE DEMOLITION LEGEND

AREA TO BE DEMOLISHED, SEE PLAN FOR FURTHER INFORMATION

Demolition Plan

Figure 5

Source: PMSM Architects, 2015.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is "Potentially Significant" or "Potentially Significant Unless Mitigation Incorporated" as indicated by the checklist on the following pages. A discussion, including an environmental impact analysis and a requirement for mitigation measures, is included after each issue area.

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

DETERMINATION

On the basis of this initial evaluation:

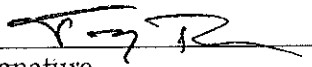
☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

■ 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 potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature

7/7/2015

Date

ENVIRONMENTAL CHECKLIST

		Potentially Significant Impact	Potentially Significant Unless 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?	☐	☐	■	☐

The California Department of Transportation (Caltrans) provides guidelines for visual review regarding proposed projects occurring on to the State Highway System (SHS). Whether sponsored by the Department or a local agency, all proposed projects on the SHS must meet the requirements of CEQA.

Rincon staff conducted a site visit at the project site on May 11, 2015. Figures 6a, 6b, and 6c depict a variety of views through the project site that show the general visual character of the existing development on and adjacent to the site.

Impact Discussion

a) Photographs of the project site shown on Figure 6a depict views through the project site from the south. Photographs of the project site shown on Figure 6b depict views through the project site from the northwest and north. Photographs of the project site shown on Figure 6c depict views through the project site from the northeast and east. Development of the proposed project would occur entirely within the Cuesta College North County campus. The proposed campus center building would be approximately 53 feet tall at its highest point, which is generally consistent with the heights of other existing two-story structures on the Cuesta College North County Campus. The proposed project would be located approximately 200 feet east of Buena Vista Drive, and the project site is partially screened from this viewpoint by existing vegetation and landscaping. There are no scenic vistas that would be blocked or interrupted by the project.

NO IMPACT

Photo 1: Taken from immediately southeast of the southeastern site boundary, adjacent to the existing parking area, facing northwest.

Photo 2: Taken from immediately south of the southwestern site boundary, adjacent to Dallons Drive, facing north.

Project Site Photographs Figure 6a

Photo 3: Taken from immediately west of the northwestern site boundary, adjacent to the existing parking area, facing southeast.

Photo 4: Taken from immediately north of the northern site boundary, facing south.

Project Site Photographs Figure 6b

Photo 5: Taken from immediately north of the northeastern site boundary, facing southwest.

Photo 6: Taken from immediately east of the eastern site boundary, adjacent to the existing building N2400, facing west.

Project Site Photographs Figure 6c

b) The proposed project would not be located along or within view of a designated State Scenic Highway (Caltrans, 2011).

NO IMPACT

c) The project site currently contains modular classrooms that would be removed to accommodate development of the proposed project. The proposed campus center building would be designed to be consistent with the scale, height, and landscaping of existing adjacent facilities on the Cuesta College North County campus. Project construction would require the removal of up to 20-30 existing landscaping trees on the project site. However, existing trees would be retained where possible, and the project would replant new trees on-site as part of the proposed landscaping. Therefore, the project would represent a long-term improvement in the existing visual character and quality of the campus. During construction activities, views of staging and construction areas would be affected by equipment, construction materials, and debris. The project would demolish six existing structures on the site and the adjacent parking lot. However, views of construction activities would be limited because the project site is internal to the campus and views of the site are generally blocked by existing structures and vegetation from most viewpoints. Due to the relatively low visual quality of the structures that would be demolished, and the temporary duration of project construction, adverse aesthetic effects during the construction period would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d) The project site is adjacent to facilities that already have night lighting appropriate to a college campus, and would replace existing facilities, which already include night lighting. The proposed uses would include similar night lighting; therefore, no substantial change in lighting would occur as a result of the project, compared to existing conditions. The proposed project would result in new sources of glare that may affect daytime visibility for offsite land uses. However, although reflective materials are anticipated to be used in the construction of the proposed facility, the new structure would be internal to the campus, and levels of glare would be similar to existing conditions.

LESS THAN SIGNIFICANT IMPACT

	Potentially Significant Impact	Potentially Significant Unless 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 Dept. 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, 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?	☐	☐	☐	■

The soil types on the project site are San Ysidro Loam (0-2 percent slopes) and Arbuckle-San Ysidro Complex (2-9 percent slopes), based on the Natural Resources Conservation Service's Web Soil Survey (U.S. Department of Agriculture [USDA] 2015). San Ysidro and Arbuckle series soils occur on old, low terraces. The San Ysidro series consists of deep, moderately well drained soils that formed in alluvium from sedimentary rocks. The San Ysidro and Arbuckle- San Ysidro soil types that underlie the project site are classified as Farmland of statewide importance.

Impact Discussion

a-e) The project site is located within the City of Paso Robles and is currently used for educational classrooms. There is no Williamson Act Contract on the project site, and the project does not involve any development that would convert agricultural land to a non-agricultural use, conflict with the existing zoning of forest land or timberland, result in the loss or conversion of forest land to non-forest uses, or interrupt ongoing agricultural activity. Therefore, the proposed project would not adversely affect agricultural, forest land, or timberland resources.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
III. AIR QUALITY				
-- 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?	☐	☐	■	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	■	☐

The Cuesta College North County campus is within the South Central Coast Air Basin (SCCAB), which includes all of San Luis Obispo, Santa Barbara, and Ventura Counties. The climate of the San Luis Obispo County area and all of the SCCAB is strongly influenced by its proximity to the Pacific Ocean and the location of the semi-permanent high pressure cell in the northeastern Pacific. The Mediterranean climate of the region produces moderate average temperatures, although extreme temperatures can be reached in the winter and summer. Local climate conditions are shown in Table 1.

Table 1
Paso Robles Climate Conditions

Average annual rainfall	15.2 inches
Average maximum temperature (Annual)	76.3°F
Average minimum temperature (Annual)	41.4°F
Warmest Month(s)	July, August
Coolest Month(s)	December
Annual mean temperature	58.9°F
Average wind speed	3.2 m/s

Source: http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca6730 and CalEEMod (2015).

Criteria Pollutant Regulation. The federal and state governments have been empowered by the federal and state Clean Air Acts to regulate the emission of airborne pollutants and have established ambient air quality standards for the protection of public health. The United States Environmental Protection Agency (U.S. EPA) is the federal agency designated to administer air quality regulation, while the California Air Resources Board (ARB) is the state equivalent under the California Environmental Protection Agency (CalEPA). Local control in air quality management is provided by ARB through multi-county and county-level Air Pollution Control Districts (APCDs). ARB establishes statewide air quality standards and is responsible for the control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. The ARB has established 15 air basins statewide. The project site is located in the San Luis Obispo County portion of the SCCAB and is under jurisdiction of the San Luis Obispo Air Pollution Control District (SLOAPCD, 2012).

Federal and state standards have been established for six criteria pollutants, including ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulates less than 10 and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$), and lead (Pb) (refer to Table 2). California air quality standards are identical to or stricter than federal standards for all criteria pollutants. Table 2 illustrates the current Federal and State Ambient Air Quality Standards.

Table 2
Current Federal and State Ambient Air Quality Standards

Pollutant	Federal Standard	California Standard
Ozone	0.075 ppm (8-hr avg)	0.09 ppm (1-hr avg) 0.070 ppm (8-hr avg)
Carbon Monoxide	9.0 ppm (8-hr avg) 35.0 ppm (1-hr avg)	9.0 ppm (8-hr avg) 20.0 ppm (1-hr avg)
Nitrogen Dioxide	0.053 ppm (annual avg)	0.18 ppm (1-hr avg) 0.03 ppm (annual avg)
Sulfur Dioxide	0.03 ppm (annual avg) 0.14 ppm (24-hr avg) 0.5 ppm (3-hr avg)	0.04 ppm (24-hr avg) 0.25 ppm (1-hr avg)
Lead	1.5 $\mu g/m^3$ (calendar quarter)	1.5 $\mu g/m^3$ (30-day avg)
Particulate Matter (PM_{10})	150 $\mu g/m^3$ (24-hr avg)	20 $\mu g/m^3$ (annual avg) 50 $\mu g/m^3$ (24-hr avg)
Particulate Matter ($PM_{2.5}$)	15 $\mu g/m^3$ (annual avg) 35 $\mu g/m^3$ (24-hr avg)	12 $\mu g/m^3$ (annual avg)

ppm= parts per million
$\mu g/m^3$ = micrograms per cubic meter
Source: California Air Resources Board, 2013.

Current Ambient Air Quality. SLOAPCD monitors air pollutant levels to assure that air quality standards are met, and if they are not met, to also develop strategies to meet the standards. Depending on whether or not the standards are met or exceeded, the air basin is classified as being in "attainment" or as "non-attainment."

Table 3 summarizes the annual air quality data for the local airshed. The ARB maintains over 60 air quality monitoring stations throughout California, including ~~ten~~ 11 stations in San Luis Obispo County. Of the 11 stations in San Luis Obispo County, nine are managed by the APCD and two are managed by ARB. The nearest monitoring station to the project site is located in the City of Paso Robles and is currently ~~owned and operated~~ managed by ARB. The station is located at 235 Santa Fe Avenue, approximately 3.5 miles south of the project site. Air quality parameters monitored at this station include: ozone (O_3), particulates less than 10 and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$), wind speed, wind direction, and ambient temperature (ATM). The data collected at this station is considered to be generally representative of the baseline air quality experienced at the project site.

The primary pollutants of concern in San Luis Obispo County are ozone (O_3) and particulate matter (PM_{10}). Table 3 provides the number of days of State or Federal exceedance in a given year, that the standard would have been exceeded had sampling occurred every day of the year. The major local sources for PM_{10} are agricultural operations, vehicle dust, grading, and dust produced by high winds. Ozone is a secondary pollutant that is not produced directly by a source, but rather is formed by a reaction between nitrogen oxides (NO_X) and reactive organic gases (ROG) in the presence of sunlight. Reductions in ozone concentrations are dependent on reducing the amount of these precursors. In San Luis Obispo County, the major sources of ROG are motor vehicles, organic solvents, the petroleum industry, and pesticides; and the major sources of NO_X are motor vehicles, public utility power generation, and fuel combustion by various industrial sources (San Luis Obispo County Clean Air Plan, 2001). According to the 2013 APCD Air Quality Report, the eastern part of the County is in non-attainment for the

Federal 8-hour ozone standard. The County, as a whole, is also in non-attainment for the State ozone and PM_{10} standards.

Table 3
Ambient Air Quality Data at the Paso Robles – Santa Fe Avenue Monitoring Station

Pollutant	2011	2012	2013
Ozone, ppm –Hourly Maximum	0.076	0.081	0.072
Number of days of State exceedances (>0.09 ppm)	0	0	0
Number of days of Federal exceedances (>0.12 ppm)	0	0	0
Ozone, ppm – Eight Hour (State)	0.068	0.070	0.067
Number of days of State exceedances (>0.070 ppm)	0	0	0
Number of days of Nation exceedances (>0.075 ppm)	0	0	0
Particulate Matter <10 microns, μg/m^3 Worst 24 Hours	113.4	61.3	~~595.6~~[1] 61.0
Number of samples of State exceedances (>50 μg/m^3)	2	2	19.4
Number of samples of Federal exceedances (>150 μg/m^3)	*	*	*

**There was insufficient (or no) data available to determine the value.*
[1] ~~CARB does not provide explanation for outlier values, second highest value for 2013 was 89.0~~
Source: CARB, Top 4 Summaries, 2011-2013, 2013 APCD Air Quality Report
Paso Robles- Santa Fe Avenue Monitoring Station

Sensitive Receptors. Certain population groups are considered more sensitive to air pollution than others. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases. The majority of sensitive receptor locations are therefore residences, schools, and hospitals. The project site is located on a school campus, which is itself a sensitive receptor. Additional specific sensitive receptors located on the North County Cuesta College campus include an existing children's center (preschool), located within the project site boundary.

Impact Discussion

a) Under state law, the SLOAPCD is required to prepare an overall plan for air quality improvement for the SCCAB, known as the Clean Air Plan (CAP). The most recent CAP was prepared in 2001. The 2001 CAP prepared by SLOAPCD addresses the attainment and maintenance of state and federal ambient air quality standards within the SCCAB. The consistency of a proposed project with the CAP is based on the following criteria:

1. *Are population projections used in the plan or project equal to or less than those used in the most recent CAP for the same area?*
2. *Is the rate of increase in vehicle trips and miles traveled less than or equal to the rate of population growth for the same area?*
3. *Have all applicable land use and transportation control measures and strategies from the CAP been included in the plan or project to the maximum extent feasible?*

The project would replace existing modular classrooms with a new campus center building, and would not increase enrollment at Cuesta College, or generate new operational vehicle trips. The project has also been designed in accordance with local control measures and strategies and

would not change existing land use or transportation. Therefore, the project would be consistent with the 2001 CAP.

LESS THAN SIGNIFICANT IMPACT

b-d) An evaluation of both short-term and long-term air pollutant emissions is provided in the paragraphs below.

Construction Emissions. The use of construction vehicles and equipment during project construction would generate temporary increases in air pollutant emissions. These impacts would primarily be associated with diesel equipment emissions and dust generated by on-site excavating and drilling. The project would not import or export material. Construction emissions (including demolition) were estimated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 based on an assumed maximum area of disturbance of 5.0 acres. Maximum quarterly emissions are shown in Table 4 (see Appendix A for complete CalEEMod results), and compared to the applicable SLOAPCD construction emissions thresholds, which are based on guidance in the SLOAPCD's *CEQA Air Quality Handbook* (April 2012).

Table 4
Construction Emissions

Pollutant of Concern	Criteria		
	Emissions[1]	Threshold	Threshold Exceeded?
ROG and NO_X (combined)	1.4 tons/quarter	2.5 tons/quarter (Tier 1)	No
Fugitive PM_{10} (dust)	<0.1 tons/quarter	2.5 tons/quarter (Tier 1)	No
DPM[2]	<0.1 tons/quarter	0.13 tons/quarter (Tier 1)	No

1. Quarterly emissions were calculated by dividing maximum annual construction emissions by 4, since construction activities would extend for a duration exceeding 90 days, as recommended by SLOAPCD.
2. The DPM estimations were derived from the "PM_{10} Exhaust" output from CalEEMod as recommended by SLOAPCD. This estimation represents a worst case scenario because it includes other PM_{10} exhaust other than DPM.
See Appendix A for CalEEMod software program output.

As shown in Table 4, construction emissions would be below quarterly thresholds set by SLOAPCD.

SLOAPCD requires that projects with grading areas that are greater than 4-acres or that are within 1,000 feet of any sensitive receptor implement dust control measures to minimize nuisance impacts and to reduce fugitive dust emissions. Project construction would require grading and excavation within a sensitive receptor area. The project must also implement SLOAPCD's construction phase idling limitations if diesel powered construction activity will occur in close proximity to sensitive receptors. Construction would be staged on the North County Cuesta College campus, which is within an existing school receptor. However, the project staging area would be predominantly used for vehicle storage when not in use (such as overnight), and equipment idling would be prohibited in the staging area. To the maximum extent practicable, no diesel equipment would be used in the staging areas. In addition,

SLOAPCD requires that projects which involve demolition of buildings where asbestos containing materials (ACM) could be encountered implement measures for proper handling, demolition, and disposal. Therefore, with implementation of applicable SLOACPD dust control measures, including prohibition of developmental burning, idling limitations, and measures for demolition of buildings containing ACM, the project would have a less than significant impact to air quality and sensitive receptors from project construction.

Operational Emissions. The project would not increase enrollment at Cuesta College, and would not result in an increase in vehicle trips that would generate new criteria pollutant emissions. Operation of the project would result in ongoing emissions associated with natural gas use and area sources, such as landscaping, consumption of consumer products, and off gassing from architectural coatings. Daily and annual operational emissions associated with the new campus center building are shown in Table 5 (see Appendix A for complete CalEEMod results), and compared to the applicable SLOAPCD operational emissions thresholds, which are based on guidance in the SLOAPCD's *CEQA Air Quality Handbook* (April 2012). In addition, the project would eliminate the emissions associated with operation of the existing modular classrooms, which would reduce net operational emissions further below the estimated levels shown in Table 5. Therefore, the project's operational emissions would not exceed the applicable SLOAPCD operational emissions thresholds.

LESS THAN SIGNIFICANT IMPACT

Table 5
Operational Emissions Comparison

Emission Source	Maximum Daily Emissions			
	Ozone Precursors (ROG + NO_X)[1]	**CO**	**Fugitive Particulate Matter (PM_{10}), Dust**	**Diesel Particulate Matter (DPM)1**
Daily Operational Emissions	1.7 lbs/day	0.3 lbs/day	<0.1 lbs/day	<0.1 lbs/day
SLOAPCD Threshold (lbs/day)	*25 lbs/day*	*550 lbs/day*	*25 lbs/day*	*1.25 lbs/day*
Threshold Exceeded?	***NO***	***NO***	***NO***	***NO***
Annual Operational Emissions	0.9 tons/year	<0.1 tons/year	<0.1 tons/year	<0.1 tons/year
Annual SLOAPCD Threshold (tons/year)	*25 tons/year*	*n/a*	*25 tons/year*	*n/a*
Threshold Exceeded?	***NO***	***n/a***	***NO***	***n/a***

Daily and annual emission thresholds are based on the California Health & Safety Code Division 26, Part 3, Chapter 10, Section 40918 and the CARB Carl Moyer Guidelines for DPM.
1. CalEEMod – use winter operational emission data to compare to operational thresholds.

e) The SLOAPCD CEQA *Air Quality Handbook* identifies multiple odor-causing sources including but not limited to; wastewater treatment plants, landfills, composting facilities, petroleum refineries and chemical manufacturing. Although the project may generate short-term minor odors during demolition and construction, the proposed project would not involve

uses that could generate substantial objectionable odors that could affect a substantial number of people.

LESS THAN SIGNIFICANT IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
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 Wildlife 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, or regulations, or by the California Department of Fish and Wildlife 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?	☐	☐	☐	■

The project site is located within the urban boundary of the City of Paso Robles on the Cuesta College North County campus, which is surrounded primarily by parks and open space use and existing rural development. The campus, and the area surrounding the project site on all sides, is developed with existing land uses and structures associated with operation of Cuesta College.

Regulatory Setting. The following is a summary of the regulatory context under which biological resources are managed at the federal, state, and local level. Agencies with responsibility for protection of biological resources within the Study Area include:

- *U.S. Fish and Wildlife Service and National Marine Fisheries Service (federally listed species, candidate and proposed species for federal listing, and migratory birds)*
- *California Department Fish and Game* (*state listed and fully-protected species, and other special status plants, wildlife and habitats, including streams, rivers, lakes and riparian vegetation*)
- *Central Coast Regional Water Quality Control Board (waters of the State)*
- *U.S. Army Corps of Engineers (waters of the United States, including wetlands)*
- *County of San Luis Obispo (special status plants, wildlife, and habitats)*
- *City of Paso Robles (special status plants, wildlife, and habitats)*

A number of Federal and State statutes provide a regulatory structure that guides the protection of biological resources.

California Department of Fish and Game Code Chapter 6. This code governs State-designated wetlands (including riparian habitat) and dictates mitigation is required to replace wetlands extent and value lost to development. A Section 1603 (Fish and Game Code) Agreement is required for any alteration to a stream or lake or their banks for purposes of development in California.

Clean Water Act. Regulatory protection for water resources throughout the United States is under the jurisdiction of the Army Corps of Engineers. Section 404 of the Clean Water Act prohibits the discharge of dredged or fill material into waters of the United States without a permit from the Corps. Delineation of wetlands and other waters of the United States is required to determine acreage affected by dredge spoil or fill disposal. Impacts to biological resources are assessed as part of the permit process by the United States Fish and Wildlife Service. Policies concerning loss of wetlands generally stress the need to compensate for wetlands lost by creating wetlands from non-wetland habitat on at least an acre-for-acre basis.

Impact Discussion

a-c) The project would be located on the Cuesta College North County campus. The project site lies within the City of Paso Robles in an area that has already been disturbed from its natural state, and the proposed project would not significantly affect biological resources. A review of the Biogeographic Information and Observation System (BIOS- http://www.dfg.ca.gov/biogeodata/bios/) and the U.S. Fish and Wildlife Service (USFWS) Critical Habitat Portal (http://criticalhabitat.fws.gov) indicates that the project site is not within the critical habitat range for any identified plant or wildlife species. No riparian or other sensitive resource habitat is present within the Cuesta College North County campus. The

project site is located approximately 4,000 feet to the west of the Salinas River. A site investigation and review of the USFWS National Wetlands Inventory indicates that no federally protected wetlands are present within the vicinity of the Cuesta College North County campus.

NO IMPACT

d) The project site is surrounded on all sides by existing development, and is not located within any wildlife movement corridors or native wildlife nursery sites. Therefore, implementation of the proposed project would not result in any impacts to wildlife movement. However, the project may indirectly impact nesting birds and their habitat within existing trees on or adjacent to the proposed project site. Project construction would require the removal of up to 20-30 existing landscaping trees on the project site. Existing trees would be retained where possible, and the project would replant new trees on-site as part of the proposed landscaping. However, removal of existing trees has the potential to impact nesting birds protected under the Migratory Bird Treaty Act. Because project construction would require the removal of existing trees, the project has the potential to impact migratory birds, and would require mitigation.

POTENTIALLY SIGNIFICANT UNLESS MITIGATION INCORPORATED

Mitigation Measures

BIO-1 **Native/Breeding Bird Protection**. To avoid impacts to nesting birds, including birds protected under the Migratory Bird Treaty Act, all initial ground disturbing activities including tree removal should be limited to the time period between August 16 and January 31 (i.e., outside the nesting season) if feasible. If initial site disturbance, grading, and vegetation removal cannot be conducted during this time period, a pre-construction survey for active nests within the project site shall be conducted by a qualified biologist at the site no more than two weeks prior to any construction activities. If an active bird nest is located, the nest site shall be fenced at a distance commensurate with the particular species and in consultation with the California Department of Fish and Wildlife (CDFW) until juveniles have fledged and when there is no evidence of a second attempt at nesting. Limits of construction to avoid a nest should be established in the field with flagging and stakes or construction fencing. Construction personnel shall be instructed on the sensitivity of the area. The project proponent shall record the results of the recommended protective measures described above to document compliance with applicable state and federal laws pertaining to protection of native birds.

BIO-2 **Tree Protection and Replacement.** Existing trees on and adjacent to the project site shall be avoided through setbacks and installation of protective fencing to the extent feasible during demolition and construction. Trees that cannot be avoided and must be removed due to the proposed project shall be replaced at

a rate of one native tree planted for every one mature tree removed. Replacement trees shall be installed on-site or at an approved off-site location under the direction of a certified arborist. A restoration and monitoring program shall be developed and implemented for a minimum of seven years or until stasis has been determined by certified arborist

Implementation of Mitigation Measures BIO-1 and BIO-2 would reduce impacts to the native bird habitat provided by specific trees to a less than significant level.

e) Development of the proposed project would require the removal and restoration of on-site landscaping, including trees and shrubs. Site plans include preserving existing landscaped areas where possible as well as planting new trees and shrubs to replace those that would be removed to accommodate the proposed project. As described above, mitigation is required for impacts related to tree removal. However, SLOCCCD does not have an adopted tree protection and replacement ordinance or policy. Therefore, the project would not conflict with any locally adopted policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

LESS THAN SIGNIFICANT IMPACT

f) The project site is not within an area covered by an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
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 as defined in §15064.5?	☐	■	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	■	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	■	☐	☐

A cultural resource may be designated as significant by National, State, or local authorities. State historic preservation regulations include the statutes and guidelines contained in CEQA (Public Resources Code Sections 20183.2 and 21084.1 and Section 15064.5 of the CEQA Guidelines).

The National Register of Historic Places (NRHP) is an official list of buildings, structures, objects, sites, and districts worthy of preservation because of their significance in American history, architecture, archeology, engineering, and culture. The NRHP recognizes resources of local, state and national significance which have been documented and evaluated according to uniform standards and criteria. A database search of the NRHP of Historic Places did not contain any historical resource listings within or in close proximity to the project site (National Parks Service [NPS], 2015).

Rincon Cultural Resource Specialists reviewed a search of the California Historical Resources Information System (CHRIS) conducted by the Central Coast Information Center (CCIC) at the University of California, Santa Barbara. The search was conducted to identify all previously conducted cultural resources work within the project site and a 0.5-mile radius around it, as well as to identify previously recorded cultural resources within or near the project site. The CHRIS records search found that one previous study included the project area and six additional previous studies have been performed within a 0.5-mile radius of the project site. The studies performed on and around the site did not identify any cultural resources on or within a 0.5-mile radius of the site. However, the study that was performed on-site in 1988 and does not adhere to the most current methodologies for cultural resources analysis.

The disposition of human remains is governed by Section 7050.5 of the California HSC and Sections 5097.94 and 5097.98 of the Public Resources Code, and falls within the jurisdiction of the Native American Heritage Commission (NAHC).

Impact Discussion

a) According to the NRHP list, there are no recognized historic buildings, objects, sites, or districts on the project site (National Park Service, 2015).

NO IMPACT

b-d) The project site is currently developed with modular classrooms, and associated campus infrastructure, including paved parking, walkways, and landscaping, and the project site is located within an area that has already undergone substantial ground disturbance during construction of previously existing facilities. Therefore, the likelihood of encountering cultural or archeological resources, unique paleontological or geologic features, or human remains on the project site is minimal. Proposed construction activities would include limited areas and depths of new site disturbances. However, the potential for encountering such resources during project construction would remain. Therefore, mitigation during the construction phase is required to reduce the project's impacts to a less than significant level.

POTENTIALLY SIGNIFICANT UNLESS MITIGATION INCORPORATED

Mitigation Measures

In order to reduce the potential for impacts to cultural resources to a less than significant level, the SLOCCCD shall implement the following measures.

CR-1 **Construction Monitoring.** A qualified archaeologist and paleontologist shall monitor all groundbreaking activities within the project site. In the event that archaeological and historic artifacts are encountered during project construction, all work in the vicinity of the find will be halted until such time as the find is evaluated by a qualified archaeologist and appropriate mitigation (e.g., curation, preservation in place, etc.), if necessary, is implemented. After the find has been appropriately mitigated consistent with Mitigation Measure CR-2 or Mitigation Measure CR-3, as appropriate, work in the area may resume.

CR-2 **Procedure for Treatment of Uncovered Cultural Resources.** If buried cultural resources are uncovered during construction, all work will be halted in the vicinity of the archaeological discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the cultural resource. In the event that any artifact or an unusual amount of bone, or shell is encountered during construction, work will be immediately stopped and relocated to another area. The lead agency will stop construction within 100 feet of the exposed resource until a qualified archaeologist/paleontologist can evaluate the find (see 36 CFR 800.11.1 and CCR, Title 14, Section 15064.5[f]). Examples of such cultural materials might include: ground stone tools such as mortars, bowls, pestles, and manos; chipped stone tools such as projectile points or choppers; flakes of stone not consistent with the immediate geology such as obsidian or fused shale; historic trash pits containing bottles and/or ceramics; or structural remains. If the resources are found to be significant, they will be avoided or will be mitigated consistent with State Historic Preservation Office (SHPO) Guidelines.

CR-3 **Procedure for Accidental Discovery of Human Remains.** In the event of an accidental discovery of any human remains, the steps and procedures specified in Health and Safety Code Section 7050.5, California Environmental Quality Act (CEQA) Section 15064.5(e), and Public Resources Code Section 5097.98 will be implemented. No further excavation or disturbance of the area where the remains are discovered and a nearby area reasonably suspected to overlie adjacent remains is allowed until the coroner is contacted and the appropriate steps taken pursuant to Health and Safety Code §7050.5 and Public Resource Code §5097.98. If the coroner determines the remains to be Native American, the coroner will contact the Native American Heritage Commission

(NAHC) within 24 hours. If Native American human remains are discovered during project construction, it will be necessary to comply with state laws relating to the disposition of Native American burials that are under the jurisdiction of the NAHC (Pub. Res. Code Section 5097). For remains of Native American origin, no further excavation or disturbance will take place in the area where the remains are discovered and a nearby area reasonably suspected to overlie adjacent remains until the most likely descendant of the deceased Native American(s) has made a recommendation to the landowner or the person responsible for the excavation work regarding means of treating or disposing of the human remains and any associated grave goods, with appropriate dignity, as provided in the Pub. Res. Code Section 5097.98; or the NAHC is unable to identify a most likely descendant or the descendant fails to make a recommendation within 48 hours after being notified. In consultation with the most likely descendant, the project archaeologist and the lead agency will determine a course of action regarding preservation or excavation of Native American human remains, and this recommendation will be implemented expeditiously. If a most likely descendent cannot be located or does not make a recommendation, the project archaeologist and the lead agency will determine a course of action regarding preservation or excavation of Native American human remains, which will be submitted to the NAHC for review prior to implementation.

Mitigation would require monitoring during construction, and ensure that any previous undiscovered cultural resources identified during construction activity would be mitigated in order to ensure that impacts to currently unknown cultural resources would remain less than significant.

	Potentially Significant Impact	**Potentially Significant Unless Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
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	☐	☐	☐	■

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VI. GEOLOGY AND SOILS				
-- Would the project:				
fault?				
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 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 1-B of the Uniform Building Code, creating substantial risks to life or property?	☐	☐	☐	■
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■

Topography: Moderately level (approximately 800 above mean sea level [msl])
Landslide Risk Potential: High (SLO County General Plan Safety Element, December 1999)
Liquefaction Potential: Low (SLO County General Plan Safety Element, September 2013)
Nearby potentially active faults?: No (SLO County General Plan Safety Element, December 1999)
Area known to contain serpentine or ultramafic rock or soils?: No (Earth Systems Pacific, 2015)
Shrink/Swell potential of soil: Low (Earth Systems Pacific, 2015)
Other notable geologic features: None

On-site soils consist of San Ysidro Loam (0-2 percent slopes) and Arbuckle-San Ysidro Complex (2-9 percent slopes), based on the Natural Resources Conservation Service's Web Soil Survey (USDA 2015). This soil type is described in Section II, *Agricultural Resources*, above. The project site is also mapped within the APCD's naturally occurring asbestos (NOA) zone (APCD CEQA Handbook, 2012). However, there are no naturally-occurring asbestos-bearing formations (serpentine or ultramafic rock) on the site (Earth Systems Pacific, 2015). The site is underlain

predominantly by a sedimentary formation, which is not an asbestos-bearing geologic unit (Earth Systems Pacific, 2015).

Regulatory Policies. California's 2010 Building Code provides guidance for new development in areas with soil or geologic challenges. The Building Code includes goals, policies, and standards to minimize the potential for loss of life and property resulting from geologic and seismic hazards.

Impact Discussion

a. i) The project site does not contain any Special Studies Zones, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map (California Geological Survey, 2010). The project site is also not identified among the areas affected by Earthquake Fault Zones (California Department of Conservation, 2012).

NO IMPACT

a. ii) The project site is in a region that experiences strong seismic ground shaking from earthquakes. The closest active fault to the site is the San Andreas Fault, located approximately 22 miles to the east of the project site. The closest fault to the site (regardless of activity) is the late Quaternary-age Rinconada Fault, located approximately 2 miles to the west of the project site (Earth Systems Pacific, 2015). However, the site is generally flat and is not in a State of California Earthquake Fault Zone (Bryant & Hart 1997 rev. 2007) or in a 2013 CBC Site Class E or F category, which pose a risk to people or structures. The project would be required to comply with the requirements of the California Building Code (CBC 2010) as adopted by the California Building Standards Commission, which requires that new building be designed to withstand ground shaking. In addition the project would replace existing modular classrooms with a new campus center, and would not result in any increase in enrollment at Cuesta College. Therefore, no people or structures involved in the project would be subject to potential exposure to adverse effects from seismic ground shaking, including the risk of loss, injury, or death with adherence to the requirements of the CBC.

LESS THAN SIGNIFICANT IMPACT

a. iii) The project site is not in a region identified as having a high potential for liquefaction (County of San Luis Obispo Landslide Hazard Map, revised September 2013; San Luis Obispo General Plan Safety Element, December 1999).

NO IMPACT

a. iv) The project site is generally flat with no significant slopes on or immediately adjacent to the site (Earth Systems Pacific, 2015). The proposed project would not create slopes or other topographic features that would increase the risk of landslides. Therefore, no people or structures involved in the project would be subject to potential exposure to adverse effects from landslides, including the risk of loss, injury, or death.

LESS THAN SIGNIFICANT IMPACT

b) The project site is generally flat, and this analysis assumes that cut and fill soil would be balanced during site preparation and grading for project construction. Because future development may disturb more than one acre, SLOCCCD would be required to comply with the National Pollutant Discharge Elimination System (NPDES) permit program. Loss of topsoil or soil erosion may occur during project grading. However, because the project site is flat, and is already developed with existing uses, construction would not require substantial grading.

According to the *Geotechnical Engineering and Geologic Hazards Report* prepared for the project (refer to Appendix B), there are no naturally occurring asbestos-bearing rock formations (serpentinite or ultramafic rock) on the site. Therefore, there is no potential for naturally-occurring asbestos to occur on the site (Earth Systems Pacific, 2015).

LESS THAN SIGNIFICANT IMPACT

c) The project site is generally flat, and the proposed project would not create slopes or other topographic features that would increase the risk of landslides. The project site does not contain any geologic units or soil that will be unstable as a result of the replacement of the existing modular classrooms with a new building (Web Soil Survey, USDA 2015).

NO IMPACT

d) The project would occur in an area where educational development is already established and would replace existing temporary structures with a campus center building. The project would be required to comply with the requirements of the CBC. The current project site is not located on expansive soil (Earth Systems Pacific, 2015).

NO IMPACT

e) The project does not propose to utilize septic tanks, septic systems, or other alternative wastewater disposal systems. The project is located where sewers are available and would be supported by existing systems.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
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 any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	■

Project implementation would generate greenhouse gas (GHG) emissions through the burning of fossil fuels or other emissions of GHGs, thereby contributing to cumulative impacts associated with climate change. The following summarizes the regulatory framework related to climate change.

In response to an increase in man-made GHG concentrations over the past 150 years, California has implemented AB 32, the "California Global Warming Solutions Act of 2006." AB 32 codifies the Statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15% reduction below 2005 emission levels), and requires ARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires ARB to adopt regulations to require reporting and verification of statewide GHG emissions.

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in CEQA documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

Pursuant to the requirements of SB 97, the Resources Agency adopted amendments to the *State CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions in March 2010. These guidelines are used in evaluating the cumulative significance of GHG emissions from the proposed project.

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change; therefore, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of

past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15355).

The significance of project GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional GHG reduction plan (such as a Climate Action Plan) (SLOAPCD, 2012). Because SLOCCCD has not adopted a Climate Action Plan or other qualified GHG reduction plan, SLOAPCD's adopted GHG CEQA thresholds have been used to evaluate the significance of potential emissions. Calculations of CO_2, CH_4, and N_2O emissions are provided to identify the magnitude of potential project effects. The analysis focuses on CO_2, CH_4, and N_2O because these comprise 98.9% of all GHG emissions by volume (IPCC, 2007) and are the GHG emissions that the project would emit in the largest quantities. Fluorinated gases, such as HFCs, PFCs, and SF_6, were also considered for the analysis. However, because the project is an educational development, the quantity of fluorinated gases would not be significant since fluorinated gases are primarily associated with industrial processes. Emissions of all GHGs are converted into their equivalent weight in CO_2 (CO_2e). Minimal amounts of other main GHGs (such as chlorofluorocarbons [CFCs]) would be emitted, but these other GHG emissions would not substantially add to the calculated CO_2e amounts. Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association (CAPCOA) *CEQA and Climate Change* white paper (January 2008) and include the use of the California Climate Action Registry (CCAR) General Reporting Protocol (January 2009).

Impact Discussion

a) GHG emissions associated with project construction and operations are discussed below.

Construction Emissions. Although construction activity is addressed in this analysis, CAPCOA does not discuss whether any of the suggested threshold approaches adequately addresses impacts from temporary construction activity. As stated in the *CEQA and Climate Change* white paper, "more study is needed to make this assessment or to develop separate thresholds for construction activity" (CAPCOA, 2008).

Construction of the proposed project would generate temporary GHG emissions primarily due to the operation of construction equipment and truck trips. Construction activity is assumed to occur over a period of approximately one year based on the CalEEMod default construction period lengths and the extent of proposed construction. For the proposed project, site grading would not involve any export or import of material. Emissions associated with the construction period were estimated using CalEEMod, based on the CalEEMod default projections for the amount of equipment that would be used onsite at one time. Complete results from CalEEMod and assumptions can be viewed in Appendix A. SLOAPCD recommends quantifying and amortizing construction-related GHG emissions over the lifetime of the project, and adding the amortized emissions to the project's operational GHG emissions. For most projects, a 50-year project lifetime is recommended. Estimated construction emissions (total, and amortized over the 50-year lifetime of the project) are shown in Table 6.

On-Site Operational Emissions. Operational emissions from energy use (electricity and natural gas use) for the proposed project were estimated using CalEEMod (see Appendix A for calculations). The default values on which CalEEMod are based include the California Energy

Commission (CEC) sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies. CalEEMod provides operational emissions of CO_2, N_2O, and CH_4. Emissions associated with area sources, including consumer products, landscape maintenance, and architectural coating, were calculated in CalEEMod based on standard emission rates from the California Air Resources Board (ARB), U.S. EPA, and emission factor values provided by SBCAPCD (CalEEMod User's Guide, 2013). Emissions from waste generation were also calculated in CalEEMod and are based on the IPCC's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste (CalEEMod User's Guide, 2013). Waste disposal rates by land use and overall composition of municipal solid waste in California was primarily based on data provided by the California Department of Resources Recycling and Recovery (CalRecycle). Emissions from water and wastewater usage calculated in CalEEMod were based on the default electricity intensity from the CEC's 2006 Refining Estimates of Water-Related Energy Use in California using the average values for Northern and Southern California. Total on-site operational emissions would be approximately 169 metric tons CO_2e/year.

Direct Emissions from Mobile Combustion. The project would not result in an increase in student enrollment, or otherwise result in an increase in operational vehicle trips. Therefore, the project would not result in operational mobile emissions.

Combined Annual Construction and Operational GHG Emissions. Table 6 shows the combined construction and operational GHG emissions associated with the proposed project. In addition, the project would eliminate the emissions associated with operation of the existing modular classrooms, which would reduce net operational emissions further below the estimated levels shown in Table 6.

Table 6
Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions (CO_2e)
Construction (total)	423 metric tons CO_2e
Construction (amortized)	8 metric tons CO_2e
Operational	
Area	<0.1 metric tons CO_2e
Energy	194 metric tons CO_2e
Mobile	0 metric tons CO_2e
Solid Waste	29 metric tons CO_2e
Water	11 metric tons CO_2e
Total (amortized)	**242 metric tons CO_2E**

Sources: See Appendix A for CalEEMod results.

As shown in Table 6, the combined annual emissions would total approximately 242 metric tons per year of CO_2e. These emissions do not exceed the adopted SLOAPCD threshold of 1,150 metric tons per year. Therefore, impacts resulting from GHG emissions would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b) CalEPA's Climate Action Team (CAT) published the 2006 CAT Report which includes GHG emissions reduction strategies intended for projects emitting less than 10,000 tons CO_2e/year. In addition, the California Attorney General's Office has developed Global Warming Measures (2008) and OPR's CEQA and Climate Change (CAPCOA, 2008) document includes GHG reduction measures intended to reduce GHG emissions in order to achieve statewide emissions reduction goals. All of these measures aim to curb the GHG emissions through suggestions pertaining to land use, transportation, renewable energy, and energy efficiency. Several of these actions are already required by California regulations, such as:

- AB 1493 (Pavley) requires the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks.
- In 2004, ARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.
- The Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989) established a 50% waste diversion mandate for California.
- Public Resources Code 25402 authorizes the CEC to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing buildings).
- California's Renewable Portfolio Standard (RPS), established in 2002, requires that all load serving entities achieve a goal of 33 percent of retail electricity sales from renewable energy sources by 2020, within certain cost constraints.
- Green Building Executive Order, S-20-04 (CA 2004), sets a goal of reducing energy use in public and private buildings by 20 percent by the year 2015, as compared with 2003 levels.

The proposed project would not conflict with state and local regulations intended to reduce GHG emissions from new development. The project would also be required to conform to Title 24 California Code of Regulations, California Plumbing Code 2013, and California's CALGREEN Code. Consistency with these state regulations and goals illustrates that the project would not conflict with the state's GHG-related legislation and would not contribute to the inability to meet reduction goals.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
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	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VIII.HAZARDS AND HAZARDOUS MATERIALS				
-- Would the project:				
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 ¼ mile of an existing or proposed school?	☐	☐	■	☐
d) Be located on a site which is included on a list of hazardous material 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?	☐	☐	■	☐

Cuesta College North County is not designated as an environmental cleanup site (California Department of Toxic Substances Control [DTSC], 2005).

The project is located within the Paso Robles Municipal Airport Influence Area (AIA) but, outside of the Airport Planning Area. Section 11010 of the California Business and Professions

Code requires that any property located within an AIA, as defined by local jurisdiction, be required to file an appropriate notice in order to properly alert prospective buyers of the existence of possible annoyances over the property caused by airport operations in the immediate area. The Airport Planning Area is developed using the elements of flight track, traffic pattern and noise impacts to define its extent. The San Luis Obispo County Airport Land Use Commission, through its adoption of an Airport Land Use Plan for the Paso Robles Airport, establishes an Airport Planning Area based on these parameters to identify the area affected by airport operations.

Within San Luis Obispo County, Cal Fire is responsible for wildland fire protection of almost 1.5 million acres. The County has contracted with Cal Fire to provide protection of structures within the rural unincorporated areas. Recent state legislation (AB X1-29) has also established a property owner fee to help offset the costs of protecting structures within the wildland areas. The project is within a 'Local Responsibility Area' (LRA), which indicates that fire protection responsibilities fall under the jurisdiction of the City of Paso Robles Emergency Services.

The Cal Fire response time map indicates that the response time to the campus is within ten minutes for a call regarding fire or life safety (SLO County, 2011). For further discussion on fire protection services, refer to Section XIV, *Public Services*.

Impact Discussion

a,c) The project would not involve the transport, use, or disposal of substantial quantities of hazardous materials. The proposed facility may involve the use of small amounts of hazardous materials such as solvents and reagents, used for cleaning purposes. However, proper handling, transportation, and disposal in accordance with federal, state, and local laws and regulations would avoid significant exposure and hazards to people and the environment from potential hazardous materials contamination.

LESS THAN SIGNIFICANT IMPACT

b) Operational use of the project would not emit or handle substantial quantities of hazardous materials in its final constructed site. Activities at the proposed campus center may involve the use of small amounts of hazardous materials such as solvents and reagents, and could generate small amounts of hazardous waste. However, proper handling, transportation, and disposal in accordance with federal, state, and local laws and regulations would avoid significant exposure and hazards to people and the environment from potential hazardous materials contamination.

Prior to project development, existing emergency response plans would be reviewed for adequacy and application to this project. Construction activities would also be subject to standard requirements for the handling of hazardous materials.

NO IMPACT

d) DTSC's Envirostor database provides information on permits and corrective action at hazardous waste facilities, as well as site cleanup projects. The project is not located on a site

which has been included on a list of hazardous material sites, and is not located within ½ mile of a site which has been included on a list of hazardous material sites.

NO IMPACT

e-f) The project site is not located within an airport safety zone, within the Paso Robles Municipal Airport Planning Area, or in the vicinity of a private airstrip, but is located within the AIA. Any property within an AIA is required to file an appropriate notice in order to properly alert prospective buyers of the existence of possible annoyances over the property caused by airport operations in the immediate area. The project does not propose any change in use of the project site and therefore, would not result in a change in safety hazard to people occupying on the project site.

LESS THAN SIGNIFICANT IMPACT

g) The proposed project would not interfere with any emergency response plan or evacuation route. No change to off-site circulation would occur.

NO IMPACT

h) Fire protection services at the Cuesta College North County campus are provided by Cal Fire and the City of Paso Robles Emergency Services Department. The Cuesta College North County campus is in an urbanized area of the City of Paso Robles, and the response time to the campus is within ten minutes. Emergency access throughout the campus is facilitated by the campus design, incorporation of fire lanes, and access to fire hydrants. The project would not result in a change in land use or any new habitable structures. Construction activities would have the potential to increase fire hazards due to the use of equipment and fuels in proximity to vegetation and other flammable matter and the potential for accidental ignition. However, the site is already used for classrooms and would be redeveloped to replace modular classrooms with a new campus center building. Therefore, there would be no change in land use from existing conditions, no change in enrollment, and no habitable structures which could expose people or structures to a new significant risk. There is existing development on and around the project site, and the project would not result in any change to fire response or performance objectives. Therefore, the project is not subject to wildland fire hazards.

LESS THAN SIGNIFICANT IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
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 or the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	■	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	■	☐
d) Substantially alter the existing drainage pattern of the site or area, including 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?	☐	☐	☐	■

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY				
-- Would the project:				
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) Result in inundation by seiche, tsunami, or mudflow?	☐	☐	☐	■

Within the 100-year Flood Hazard designation? No
Closest creek? Salinas River; approximately 0.75 miles to the west
Soil drainage characteristics: Moderately well drained

The topography of the project is generally flat with moderately-well- to well-drained soils. The on-site soils have high runoff potential and occur on 0 to 9 percent slopes. Water quality standards and requirements for the project are maintained by the Regional Water Quality Control Board.

Impact Discussion

a,f) The project would replace existing modular classrooms with a new campus center building, and would not result in any new use that would violate water quality standards or waste discharge requirements. The project would be subject to the requirements of the Regional Water Quality Control Board, further reducing potential impacts to water quality. Because future development may disturb more than one acre, SLOCCCD would be required to comply with the NPDES permit program. The NPDES program controls water pollution by regulating point sources that discharge pollutants into waters of the United States, including construction activity. Compliance with existing requirements related to water quality would ensure that impacts would remain less than significant.

LESS THAN SIGNIFICANT IMPACT

b) The project would replace existing educational structures; therefore, the project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering or the local groundwater table.

LESS THAN SIGNIFICANT IMPACT

c-e) The project site is generally flat, and the project would not result in a substantial change to the drainage pattern or area of impervious surface that currently exists on the site. The project involves replacement of existing modular classrooms with a new campus center building. The

proposed facilities would not significantly increase water use, erosion or siltation, or the rate or amount of surface runoff in a manner which would result in flooding. Existing requirements and standards of the Regional Water Quality Control Board, associated with runoff, would be maintained for the project. As described above, because future development may disturb more than one acre, the SLOCCCD would be required to comply with the NPDES permit program. The NPDES program controls water pollution by regulating point sources that discharge pollutants into waters of the United States, including construction activity. Compliance with existing requirements related to water quality would ensure that impacts would remain less than significant.

LESS THAN SIGNIFICANT IMPACT

g-h) The project would not 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, nor would it impede or redirect water flows that will cause a flood hazard to surrounding areas.

NO IMPACT

i-j) The Cuesta College North County campus is not located within a dam inundation area and is not subject to flooding risks from dam failure. The project site is located inland from the coast and is not subject to tsunami hazards. The project site is not located near any impounded bodies of water that could present hazards from seiches.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
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 an applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	■

The project site is part of Cuesta College North County campus, which is under the jurisdiction of SLOCCCD. The campus is designated for Public Facilities by the City of Paso Robles. The campus is zoned Public Facilities under the City of Paso Robles Municipal Code. There are no existing habitat conservation plans or natural community conservations on the site.

Impact Discussion

a-c) The proposed campus center would be internal to the Cuesta College North County campus, and is a replacement of development that has already been established and planned for within the surrounding area land use designations. The proposed facility is intended to accommodate the student population, and therefore would not generate additional on-campus growth that would have the potential to affect adjacent land uses. Therefore, the project would not generate additional on-campus growth that would have the potential to affect adjacent City land uses. The project would not physically divide an established community, nor would it conflict with any land use plans or policies or any habitat conservation plans.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☐	■
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?	☐	☐	☐	■

The project site does not contain any valuable mineral resources or delineated mineral resource recovery sites. According to the City of Paso Robles General Plan, important mineral deposits are those designated "MRZ-2"as classified by the State Geologist. There is no mineral resource areas identified on or in close proximity to the project site (California Department of Conservation [DOC], 2012)

Impact Discussion

a) There are no known mineral resources that would be of value to the region and the residents of the state within the project site (DOC, 2012). The project site does not contain any known important mineral resource recovery sites that have been previously delineated on a local general plan, specific plan, or other land use plan.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
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 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?	☐	☐	■	☐

Community noise levels are typically measured in terms of A-weighted decibel (dBA). A-weighting is a frequency correction that correlates overall sound pressure levels with the frequency response of the human ear. Equivalent noise level (Leq) is the average noise level on an energy basis for a specific time period. The duration of noise and the time of day at which it occurs are important factors in determining the impact of noise on communities. The Community Noise Equivalent Level (CNEL) and Day-Night Average Level (Ldn) account for the time of day and duration of noise generation. These indices are time-weighted average values equal to the amount of acoustic energy equivalent to a time-varying sound over a 24-hour period.

The project would occur near sensitive receptors, which include classrooms as well as a Children's Center. The closest sensitive receptors are adjacent to the project boundary.

Regulatory Setting. SLOCCCD has not adopted any policies and standards identifying acceptable noise levels at campus receptors. The State Office of Planning and Research's General Plan Guidelines ([OPR], 2003) include "normally acceptable," "conditionally acceptable," "normally unacceptable," and "clearly unacceptable" noise standards for schools. These thresholds, shown in Table 7, have been used for CEQA analysis broadly throughout California.

Table 7
Land Use Compatibility Matrix

Land Use Category	Normally Acceptable (L_{dn} or CNEL, dBA)	Conditionally Acceptable (L_{dn} or CNEL, dBA)	Normally Unacceptable (L_{dn} or CNEL, dBA)	Clearly Unacceptable (L_{dn} or CNEL, dBA)
Residential – Low Density, Single-Family, Duplex, Mobile Homes	50 – 60	55 – 70	70 – 75	75 – 85
Residential – Multi-Family	50 – 65	60 – 70	70 – 75	70 – 85
Transient Lodging – Motels, Hotels	50 – 65	60 – 70	70 – 80	80 – 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 – 70	60 – 70	70 – 80	80 – 85
Auditoriums, Concert Halls, Amphitheaters	NA	50 – 70	NA	65- 86
Sports Arenas, Outdoor Spectator Sports	NA	50 – 75	NA	70 – 85
Playgrounds, Neighborhood Parks	50 – 70	NA	67.5 – 75	72.5 – 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 – 70	NA	70 – 80	80 – 85
Office Buildings, Business Commercial and Professional	50 – 70	67.5 – 77.5	75 – 85	NA
Industrial, Manufacturing, Utilities, Agriculture	50 – 75	70 – 80	75 – 85	NA

NA: *Not Applicable*

Source: *Office of Planning and Research, California, General Plan Guidelines, October 2003.*

Normally Acceptable – Satisfactory, with no special noise limitation requirements.

Conditionally Acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.

Normally Unacceptable – New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulations features included in the design.

Clearly Unacceptable – New construction or development should generally not be undertaken.

Impact Discussion

a,c) The project would replace existing modular classrooms with a new campus center building. Operation of this facility would not generate any significant long-term, or permanent, noise levels beyond existing levels. The project would not increase enrollment levels, or associated vehicle traffic in the project area. Therefore, the project will not result in a substantial permanent increase in ambient noise levels above levels existing without the project.

LESS THAN SIGNIFICANT IMPACT

b) No drilling or pile driving activities would occur as part of the project. Therefore, construction activities would not expose people or structures to excessive levels of groundborne vibration commonly associated with these specific construction activities. In addition, groundborne vibration would result from movement of haul trucks throughout the site but would be relatively minor, and temporary, only occurring during the construction phase of the project. Therefore, the proposed project would not expose people or structures to excessive levels of groundborne vibration.

LESS THAN SIGNIFICANT IMPACT

d) Construction of the project would require the use of heavy equipment for the removal of the existing on-site structures, site preparation and grading, installation of new utilities, paving, and building construction for the proposed development. Development activities would also involve the use of smaller power tools, generators, and other sources of noise. During each stage of development, a different mix of equipment would be operating and noise levels would vary based on the number of pieces of equipment in operation and the location of the activity. Noise levels as a result of project construction activities could impact noise-sensitive classroom receptors located adjacent to the project site. These receptors may experience a temporary increase in noise during construction activities on the project site.

Table 8 shows typical peak noise levels associated with various types of heavy construction equipment, based on the FHWA Highway Construction Noise Handbook. As shown, peak noise levels associated with the use of individual pieces of heavy equipment can range from about 70 to 89 dBA at 50 feet from the source, depending upon the types of equipment in operation at any given time and phase of construction (FHWA, 2006).

Table 8
Typical Noise Levels Generated by Construction Equipment

Equipment	Type	Typical Lmax (dBA) 50 Feet from the Source
Air Compressor	Stationary	81
Backhoe	Mobile	80
Compactor (ground)	Mobile	83
Concrete Mixer	Stationary	85
Dozer	Mobile	82
Dump Truck	Mobile	76
Excavator	Mobile	81
Flat Bed Truck	Mobile	74
Front End Loader	Mobile	79
Generator	Stationary	81
Grader	Mobile	83
Paver	Mobile	89
Pickup Truck	Mobile	75
Pneumatic Tools	Stationary	85
Roller	Mobile	80
Saw	Stationary	70
Warning Horn	Stationary	83
Welder/Torch	Stationary	74

Source: FHWA, 2006.

Table 9 shows noise levels at various distances from construction activity, based on a standard noise attenuation rate of 6 dBA per doubling of distance from the highest-volume individual pieces of equipment shown in Table 8.

Table 9
Construction Noise Levels at Various Distances from Project Construction

Distance from Construction	Peak Noise Level from Mobile Construction Equipment at Receptor (dBA)	Peak Noise Level from Stationary Construction Equipment at Receptor (dBA)
50 feet	89	85
100 feet	83	79
150 feet	80	76
200 feet	77	73
250 feet	75	71
600 feet	68	65
700 feet	66	62
1,000 feet	63	59

As shown in Table 9, peak construction noise levels from the highest-volume individual pieces of equipment could be up to 89 dBA at 50 feet from the source, 80 dBA at 150 feet from the source, and 75 dBA at 250 feet from the source. These anticipated noise levels from construction activity exceed the "normally acceptable" noise levels of 50-70 dBA CNEL for schools shown in Table 7, above. For all receptors within 250 feet of project construction, the peak noise levels from mobile and stationary construction equipment also exceed "normally acceptable" noise levels shown in Table 7. Though construction noise is generally temporary and sporadic, and that the applicable CNEL standard is based on a 24-hour average, noise levels may exceed the applicable dBA CNEL threshold and measures to reduce noise exposure are required.

POTENTIALLY SIGNIFICANT UNLESS MITIGATION INCORPORATED

Mitigation Measures

Temporary construction impacts would be further reduced through implementation of the following noise reduction measures:

N-1 **Construction Noise Reduction.** The following requirements shall be implemented during construction of the project:

- To ensure that noise emissions from construction vehicles and other equipment are limited to the minimum feasible levels, equip all noise-producing equipment and vehicles using internal combustion engines with mufflers, and air-inlet silencers where appropriate, that meet or exceed original factory specification. Equip mobile or fixed "package" equipment (e.g., arc-welders, air compressors) with shrouds and noise-control features that are readily available for that type of equipment.
- Install a sound barrier around the project site or adjacent classrooms or other noise-sensitive receptors within 250 feet of construction activity during operation of heavy construction equipment when adjacent classes are in session or facilities are in use. Temporary noise barriers should be made of noise-resistant material sufficient to achieve a Sound Transmission Class (STC) rating of STC 30 or greater, based on sound transmission loss data taken according to ASTM Test Method E90. Such a barrier may provide as much as a 10 dB insertion loss, provided it is positioned as close as possible to the noise source or to the receptors. To be effective, the barrier must be long and tall enough to completely block the line-of-sight between the noise source and the receptors. The gaps between adjacent panels must be filled-in to avoid having noise penetrate directly through the barrier.

Project construction would represent a temporary source of noise at the project site. Mitigation Measure N-1 requires implementation of noise reduction devices and techniques during construction, and would reduce the noise levels associated with construction of the project to the maximum extent feasible. Because construction noise would be intermittent and temporary,

and would incorporate feasible noise reduction measures, construction noise impacts would be less than significant with mitigation incorporated.

e-f) The project site is not located within the Paso Robles Municipal Airport Planning Area or in the vicinity of a private airstrip, but is located within the AIA. Any property within an AIA is required to file an appropriate notice in order to properly alert prospective buyers of the existence of possible annoyances over the property caused by airport operations in the immediate area. The noise levels experienced on the campus, associated with the Paso Robles Municipal Airport, will not change as a result of the project. The project does not propose any sale or change in use of the property on which the project site exists and therefore, would not expose additional people to airport noise, or result in excessive noise beyond the current levels.

LESS THAN SIGNIFICANT IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☐	■

There are no housing units or residential uses within the Cuesta College North County campus.

Impact Discussion

a) The replacement of the existing modular classrooms with a new campus center building would not increase the enrollment capacity at Cuesta College; therefore, the project would not induce population growth, or otherwise exceed limits already established for the college.

NO IMPACT

b-c) The project site does not contain any existing housing, and the project does not propose any new residential uses. The project would not displace people because there is no existing housing on the project site.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XIV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:				
i) Fire protection?	☐	☐	■	☐
ii) Police protection?	☐	☐	☐	■
iii) Schools?	☐	☐	☐	■
iv) Parks?	☐	☐	☐	■
v) Other public facilities?	☐	☐	☐	■

The project area is served by the following public services/facilities:

Police: Cuesta College Police Department
Fire: Cal Fire/ City of Paso Robles Emergency Services (SLO County, 2011)
School District: San Luis Obispo County Community College District

Emergency services include ambulance and hospital service. Private companies based throughout the County provide ambulance service. Hospital services are provided by Twin Cities Community Hospital located in Templeton.

Impact Discussion

a. i) Fire protection services at the Cuesta College North County campus are provided by Cal Fire and the City of Paso Robles Emergency Services Department. The response time to the campus is within ten minutes. Emergency access throughout the campus is facilitated by the

campus design, incorporation of fire lanes, and access to fire hydrants. There is existing development on and around the project site, and the project would not result in any change to fire response or performance objectives. Future structures would be required to comply with applicable building and fire codes and therefore could be served by existing fire protection services in the event of an emergency. In addition, the project would not result in an increase in enrollment at Cuesta College or otherwise result in an increase in the anticipated need for fire services.

LESS THAN SIGNIFICANT IMPACT

a. ii) The project site would not expand campus enrollment, and would not lower police service ratios or increase response times.

NO IMPACT

a. iii-v) The proposed construction of the new instructional building on the Cuesta College SLO campus is intended to serve the existing student population. The project would not result in an increase in enrollment at Cuesta College, or otherwise increase the need for additional schools, parks, or other public facilities.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☐	■

Trails, neighborhood and regional parks and other recreational facilities in the project vicinity are developed and maintained by the City of Paso Robles. Recreational facilities on the Cuesta College North County campus are developed and maintained by the SLOCCCD.

Impact Discussion

a-b) The project would not increase the enrollment for Cuesta College, or otherwise increase the use of existing neighborhood and regional parks or other facilities that would cause substantial

physical deterioration to occur or be accelerated. The project would not include new recreational facilities or require the construction or expansion of recreational facilities.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC				
-- Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing a measure 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 use (e.g., farm equipment)?	☐	☐	☐	■
e) Result in inadequate emergency access?	☐	☐	☐	■
f) Conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?	☐	☐	☐	■

The existing circulation plan on the Cuesta College North County campus indicates that the campus circulation system is currently operating at acceptable levels. According to the SLOCCCD Facilities Master Plan for 2011-2012, there is one regional bus stop located

immediately adjacent to the Cuesta College North County campus (Facilities Master Plan, 2011-2021). Service to the bus stop is provided by the San Luis Obispo Regional Transit Authority (RTA), Route 9 (2015).

Impact Discussion

a-b) The project would not increase enrollment or associated vehicle trips or vehicle miles traveled; therefore, the project would not affect the performance of the existing circulation system. Any project generated vehicle trips would replace trips associated with the existing modular classrooms.

Temporary impacts to the circulation system may occur as a result of worker and truck trips during project construction. However, off-site construction trips typically occur during off-peak traffic periods, when intersections and roadways operate well within acceptable levels of service.

LESS THAN SIGNIFICANT IMPACT

c-f) The project would not result in any change to existing daily, AM peak hour, and PM peak hour traffic volumes. The proposed project would not generate any air traffic, create any traffic hazards, conflict with emergency access patterns, or conflict with any adopted transportation plans or policies. The project would be designed in accordance with existing performance and safety standards established by Cuesta College and the County of San Luis Obispo and would not conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities. The project would not result in any change to existing public transit, bikeways, or pedestrian facilities. The project would not alter site ingress or egress, sight distance, or other applicable design features.

NO IMPACT

	Potentially Significant Impact	Potentially Significant Unless 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?	☐	☐	☐	■

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS				
-- Would the project:				
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?	☐	☐	■	☐

The North County campus is served by local water and sewer providers. The City water system, managed by the Paso Robles Water Division (PRWD) serves approximately 9,200 residential, 800 commercial, and 400 irrigation customers within the City of Paso Robles, including the Cuesta College North County campus. Local water conservation measures have been created due to the large fluctuation within the system.

The City of Paso Robles Wastewater Division owns and operates 136 miles of sewers and 14 lift stations to collect wastewater from all of Paso Robles and east Templeton and transport it to a wastewater treatment plant at the north end of the City.

San Luis Obispo County currently has three permitted public landfill facilities that accept a variety of municipal solid waste: Cold Canyon, Chicago Grade, and Paso Robles. These facilities accept waste for disposal and provide recycling opportunities for the users. Waste from the project region is served by Paso Robles Landfill, is located directly off Highway 46 East, approximately 8.5 miles east of the Highway 101/46 East Junction. This landfill is under the jurisdiction of CalRecycle.

Impact Discussion

a) The project would not increase enrollment at Cuesta College, or otherwise result in an increase in wastewater from the project site. Therefore, the project would not exceed wastewater treatment requirements of the Regional Water Quality Control Board and the City of Paso Robles. Existing wastewater treatment requirements would remain effective throughout and following the project.

LESS THAN SIGNIFICANT IMPACT

b) The project would not increase enrollment at the college, or otherwise result in the need for new or expanded water or wastewater treatment facilities which could cause significant environmental impacts. Existing facilities would remain effective for provision of water and wastewater conveyance.

NO IMPACT

c) The project site is currently developed with existing modular classrooms which would be replaced with a new campus center building. The project would not result in a substantial net increase in on-site development or on-site impervious surfaces; therefore, the project would not result in an increase in stormwater runoff or a substantial change in stormwater flow. Existing stormwater drainage facilities would be used and no expansion of existing facilities would be necessary. Upon completion of the project there would be no significant change to the drainage patterns on the project site.

LESS THAN SIGNIFICANT IMPACT

d) The project would not result in the need for water entitlement or resources in addition to what currently exists on the project site. The project would not increase the enrollment capacity, and existing water entitlements and resources would be sufficient to support the project.

LESS THAN SIGNIFICANT IMPACT

e) The project would not increase the enrollment capacity at Cuesta College. Therefore, the current wastewater treatment provider would have adequate capacity to serve the project as well as existing commitments.

LESS THAN SIGNIFICANT IMPACT

f-g) The project's solid waste would be transported to Paso Robles Landfill, which has a maximum permitted throughput of 450 tons/day. The landfill has a remaining capacity of 82% as of 2007, which is over 5,000,000 cubic yards, (CalRecycle, 2015). Demolition waste from the six existing modular classroom structures would be transported to the landfill. Long-term disposal needs on the project site would be maintained at existing levels. Project plans include salvaging of all site furnishings and signage where possible, reducing the production of waste. In addition, the project would be required to comply with applicable federal, state and

local regulations regarding solid waste. Therefore, the proposed project would not be anticipated to generate additional solid waste beyond the capacity of the landfill.

LESS THAN SIGNIFICANT IMPACT

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self- sustaining levels, eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	■	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	■	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	■	☐	☐

Impact Discussion

a) The project is located in an existing developed area that does not contain known historic resources or wildlife habitat. With incorporation of the mitigation measures in this report, the project would not impact fish or wildlife populations, eliminate or reduce the number or restrict the range of a plant or animal community, or eliminate examples of major periods of California history or prehistory. Mitigation Measures BIO-1 and BIO-2 are required to reduce impacts to the native birds and their habitat provided by specific trees to a less than significant level.

POTENTIALLY SIGNIFICANT UNLESS MITIGATION INCORPORATED

b) The project would not create any significant impacts that cannot be mitigated. The project would not generate additional off-site vehicle trips that could impact the City's circulation

system, existing level of service standards, regional operation air contaminant emissions or greenhouse gas emissions standards, or noise standards, on a cumulative basis. Implementation of Mitigation Measures CR-1 and N-1 would ensure that the project would not have significant cumulatively considerable impacts.

POTENTIALLY SIGNIFICANT UNLESS MITIGATION INCORPORATED

c) The proposed project could result in potentially significant direct or indirect impacts to humans. Refer to Section XII, *Noise*, in the above analysis. However, as described in this section, all impacts would be mitigated to a less than significant level. Mitigation Measure N-1 is required to reduce project construction noise impacts on adjacent receptors to a less than significant level.

POTENTIALLY SIGNIFICANT UNLESS MITIGATION INCORPORATED

REFERENCES

Air Pollution Control District, San Luis Obispo County, CEQA Air Quality Handbook, April 2012. Available at: http://www.slocleanair.org/images/cms/upload/files/CEQA_Handbook_2012_v1.pdf

Air Pollution Control District, San Luis Obispo County, *Clean Air Plan*, 2001. Available at: http://www.slocleanair.org/business/regulations.php

Air Resources Board, California, Ambient Air Quality Standards, June 4, 2013. Available at: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf

Air Resources Board, California, Carl Moyer Program Guidelines, April 28, 2011. Available at: http://www.arb.ca.gov/msprog/moyer/guidelines/current.htm

Air Resources Board, California, Top 4 Summary, 2015. Available at: http://www.arb.ca.gov/adam/topfour/topfour1.php

California Air Pollution Control Officers Association (CAPCOA), California Emissions Estimator Model, Oct. 11, 2010. Available at: http://www.aqmd.gov/caleemod/user%27s-guide

California Air Pollution Control Officers Association (CAPCOA), *CEQA and Climate Change*, Jan. 2008. Available at: http://www.capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA-White-Paper.pdf

California Climate Action Registry, General Reporting Protocol, Jan. 2009. Available at: http://www.sfenvironment.org/sites/default/files/fliers/files/ccar_grp_3-1_january2009_sfe-web.pdf

California Department of Resources Recycling and Recovery. Solid Waste Information System. Accessed May 26, 2015. Available at: http://www.calrecycle.ca.gov/SWFacilities/Directory/40-AA-0001/Detail/

California, State of, Alquist-Priolo Earthquake Fault Zoning Map, Sept. 9, 2012. Available at: http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm

Department of Agriculture, United States, Web Soil Survey, April 26, 2015. Available at: http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

Department of Conservation, State of California, Geologic Survey, 2010. Available at: http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/index.aspx

Department of Fish and Wildlife, California, California Natural Diversity Database, 2015. Available at: https://www.dfg.ca.gov/biogeodata/cnddb/

Department of Toxic Substances Control, State of California (CA DTSC). 2015. Envirostor. Available at: http://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=80000897

Department of Transportation, State of California (Caltrans), Scenic Highway Mapping System, Sept, 7, 2011. Available at: http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm

Department of Transportation, State of California (Caltrans), Visual and Aesthetics Review, Nov. 13, 2013. Available at: http://www.dot.ca.gov/ser/vol1/sec3/community/ch27via/chap27via.htm

Earth Systems Pacific, *Geotechnical Engineering and Geologic Hazards Report*, April 1, 2015. File No.: SL-17503-SB.

El Paso de Robles, City of. December 16, 2003. General Plan. Available at: http://www.prcity.com/government/departments/commdev/planning/general-plan-final.asp

Environmental Protection Agency, California (CA EPA), Air Resources Board (ARB), *2002-07-29 Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations,* July 29, 2008. Available at: http://www.arb.ca.gov/toxics/atcm/asb2atcm.htm

Environmental Protection Agency, California (CA EPA), Oil Spills: Spill Prevention, Control, and Countermeasure (SPCC) Rule, April 24, 2015. Available at: http://www.epa.gov/oem/content/spcc/

Federal Highway Administration (FHWA), United States Department of Transportation, Construction Noise Handbook, Aug. 2006. Available at: http://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/

Fish and Wildlife Service, United States, Endangered Species, May 7, 2013. Available at: http://www.fws.gov/endangered/about/index.html

Governor's Office of Planning and Research (OPR), State of California, General Plan Guidelines, Oct. 2003. Available at: http://opr.ca.gov/docs/General_Plan_Guidelines_2003.pdf

National Park Service, United States Department of the Interior, *National Register of Historic Places*, May 7, 2015. Available at: http://nrhp.focus.nps.gov/natregsearchresult.do?briefnav&briefpage=2

Native American Heritage Commission, State of California. 2015. Available at: http://nahc.ca.gov/

Office of Emergency Services County of San Luis Obispo, *Hazardous Materials Emergency Response Plan*, November 2013. Available at: http://www.slocounty.ca.gov/OES/plans.htm

Office of Emergency Services, County of San Luis Obispo, *Local Hazard Mitigation Plan,* July 2011. Available at: http://www.slocounty.ca.gov/OES/plans.htm

Paso Robles, City of. November 19, 2013. Climate Action Plan. Available at: http://www.slocleanair.org/images/cms/upload/files/Paso_CAP_Web.pdf

Paso Robles, City of. 2015. Land Use Maps. Available at: http://www.prcity.com/government/departments/commdev/planning/land-use-maps.asp

Public Works, County of San Luis Obispo, Garbage Services. Available at: http://www.slocounty.ca.gov/PW/Franchise_Administration/Garbage_Services.htm

San Luis Obispo County Community College District (SLOCCCD). 2001. *Educational and Facilities Master Plan 2001*. Available at: http://www.cuesta.edu/aboutcc/documents/accreditation/plans/2001_Educational_facilities_master_plan.pdf

San Luis Obispo County Community College District, Facilities Master Plan, 2011-2012. http://www.cuesta.edu/aboutcc/documents/accreditation/plans/SLOCCCD_Facilities_Master_Plan_2011-2021.pdf

San Luis Obispo, County of, Biological Resources, 2015. Available at: http://www.slocounty.ca.gov/planning/environmental/Biological_Resources.htm

San Luis Obispo, County of, *Emergency Response Zones*, July 20, 2011. Available at: http://www.sloplanning.org/gis/mapimagepdf/8-response.pdf

San Luis Obispo, County of, *Fire Hazard Severity Zones in SRA*, Nov. 7, 2007. Available at: http://www.sloplanning.org/gis/mapimagepdf/CalFire_HazardMap.pdf

San Luis Obispo, County of, *General Plan: Conservation and Open Space Element*, May 2010. Available at: http://www.slocounty.ca.gov/Assets/PL/Elements/COSE.pdf

San Luis Obispo, County of, *General Plan: Noise Element*, May 5, 1992. Available at: http://www.slocounty.ca.gov/Assets/PL/Elements/Noise+Element.pdf

San Luis Obispo, County of, *Hazardous Material Business Plans*, 2015. Available at: http://www.ezsubmitslogov.org/slo/home.htm

San Luis Obispo, County of. August 2008. Los Osos Wastewater Project Development. Available at: http://www.slocounty.ca.gov/Assets/PW/LOWWP/TAC/Final+Regional+Treatment+TM+website.pdf

San Luis Obispo, County of, Natural Hazard Maps, Aug. 28, 2008. http://www.slocounty.ca.gov/planning/zoning/Map_Image_Download_Center/Natural_Hazard_Maps.htm

San Luis Obispo, County of, Safety Element Maps, Sept. 2013. Available at:http://www.slocounty.ca.gov/planning/zoning/Map_Image_Download_Center/Safety_Element_Maps.htm

San Luis Obispo, County of, *SAN LUIS OBISPO COUNTY CODE - TITLE 22, LAND USE ORDINANCE*, March 2014. Available at: http://www.slocounty.ca.gov/planning/General_Plan__Ordinances_and_Elements/Land_Use_Ordinances.htm

San Luis Obispo Regional Transit Authority, *Transportation for SLO County*. 2015. Available at: http://www.slorta.org/

Western Regional Climate Center, Period of Record Monthly Climate Summary, June 20, 2015. Available at: http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7851

This page intentionally left blank.

Appendix A

California Emissions Estimator Model (CalEEMod) Output

Cuesta College North County Campus Center Project

San Luis Obispo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	48.90	1000sqft	5.00	48,900.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2016
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 - Actual lot acreage = 5.0 acres based on project site plan.

Construction Phase -

Off-road Equipment - Default CalEEMod equipment lists for each phase of construction used.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition - Demo size estimated based on project site plans showing existing portables on site.

Grading - Grading area based on project site plans.

Vehicle Trips - Project would replace existing classrooms and would not increase campus enrollment; therefore no new vehicle trips.

Area Coating -

Operational Off-Road Equipment - no text

Table Name	Column Name	Default Value	New Value
tblGrading	AcresOfGrading	4.00	5.00
tblGrading	AcresOfGrading	0.00	5.00
tblLandUse	LotAcreage	1.12	5.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	ST_TR	11.23	0.00
tblVehicleTrips	SU_TR	1.21	0.00
tblVehicleTrips	WD_TR	27.49	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	0.4888	4.2099	3.0168	4.4100e-003	0.1346	0.2666	0.4011	0.0523	0.2499	0.3022	0.0000	396.3907	396.3907	0.0863	0.0000	398.2039
2017	0.5908	0.2312	0.1792	2.8000e-004	1.9400e-003	0.0136	0.0156	5.2000e-004	0.0127	0.0132	0.0000	25.1262	25.1262	6.6200e-003	0.0000	25.2653
Total	**1.0796**	**4.4411**	**3.1960**	**4.6900e-003**	**0.1365**	**0.2802**	**0.4167**	**0.0528**	**0.2626**	**0.3154**	**0.0000**	**421.5169**	**421.5169**	**0.0930**	**0.0000**	**423.4691**

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	0.4888	4.2099	3.0168	4.4100e-003	0.1346	0.2666	0.4011	0.0523	0.2499	0.3022	0.0000	396.3903	396.3903	0.0863	0.0000	398.2035
2017	0.5908	0.2312	0.1792	2.8000e-004	1.9400e-003	0.0136	0.0156	5.2000e-004	0.0127	0.0132	0.0000	25.1261	25.1261	6.6200e-003	0.0000	25.2653
Total	**1.0796**	**4.4411**	**3.1960**	**4.6900e-003**	**0.1365**	**0.2802**	**0.4167**	**0.0528**	**0.2626**	**0.3154**	**0.0000**	**421.5165**	**421.5165**	**0.0930**	**0.0000**	**423.4687**

	ROG	NOx	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	0.2477	1.0000e-005	8.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-003	1.6000e-003	0.0000	0.0000	1.7000e-003
Energy	6.6500e-003	0.0605	0.0508	3.6000e-004		4.5900e-003	4.5900e-003		4.5900e-003	4.5900e-003	0.0000	193.1302	193.1302	7.0200e-003	2.4000e-003	194.0209
Mobile	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
Waste						0.0000	0.0000		0.0000	0.0000	12.9041	0.0000	12.9041	0.7626	0.0000	28.9190
Water						0.0000	0.0000		0.0000	0.0000	0.7609	7.5953	8.3562	0.0785	1.9200e-003	10.5988
Total	**0.2544**	**0.0605**	**0.0516**	**3.6000e-004**	**0.0000**	**4.5900e-003**	**4.5900e-003**	**0.0000**	**4.5900e-003**	**4.5900e-003**	**13.6651**	**200.7271**	**214.3921**	**0.8481**	**4.3200e-003**	**233.5403**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2477	1.0000e-005	8.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-003	1.6000e-003	0.0000	0.0000	1.7000e-003
Energy	6.6500e-003	0.0605	0.0508	3.6000e-004		4.5900e-003	4.5900e-003		4.5900e-003	4.5900e-003	0.0000	193.1302	193.1302	7.0200e-003	2.4000e-003	194.0209
Mobile	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
Waste						0.0000	0.0000		0.0000	0.0000	12.9041	0.0000	12.9041	0.7626	0.0000	28.9190
Water						0.0000	0.0000		0.0000	0.0000	0.7609	7.5953	8.3562	0.0785	1.9100e-003	10.5976
Total	**0.2544**	**0.0605**	**0.0516**	**3.6000e-004**	**0.0000**	**4.5900e-003**	**4.5900e-003**	**0.0000**	**4.5900e-003**	**4.5900e-003**	**13.6651**	**200.7271**	**214.3921**	**0.8481**	**4.3100e-003**	**233.5391**

	ROG	NOx	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**	**0.23**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	1/28/2016	5	20	
2	Site Preparation	Site Preparation	1/29/2016	2/4/2016	5	5	
3	Grading	Grading	2/5/2016	2/16/2016	5	8	
4	Building Construction	Building Construction	2/17/2016	1/3/2017	5	230	
5	Paving	Paving	1/4/2017	1/27/2017	5	18	
6	Architectural Coating	Architectural Coating	1/28/2017	2/22/2017	5	18	

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 73,350; Non-Residential Outdoor: 24,450 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Demolition	Excavators	3	8.00	162	0.38
Grading	Excavators	1	8.00	162	0.38
Building Construction	Generator Sets	1	8.00	84	0.74
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Paving	Paving Equipment	2	8.00	130	0.36
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
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
Demolition	6	15.00	0.00	200.00	13.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	13.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	13.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	21.00	8.00	0.00	13.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	13.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	13.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 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					0.0223	0.0000	0.0223	3.3800e-003	0.0000	3.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0429	0.4566	0.3503	4.0000e-004		0.0229	0.0229		0.0214	0.0214	0.0000	37.0974	37.0974	0.0101	0.0000	37.3092
Total	**0.0429**	**0.4566**	**0.3503**	**4.0000e-004**	**0.0223**	**0.0229**	**0.0452**	**3.3800e-003**	**0.0214**	**0.0248**	**0.0000**	**37.0974**	**37.0974**	**0.0101**	**0.0000**	**37.3092**

3.2 Demolition - 2016

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	2.5700e-003	0.0325	0.0263	8.0000e-005	1.7000e-003	4.1000e-004	2.1100e-003	4.7000e-004	3.8000e-004	8.5000e-004	0.0000	6.8877	6.8877	5.0000e-005	0.0000	6.8888
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	6.8000e-004	1.0700e-003	9.5500e-003	2.0000e-005	1.4400e-003	1.0000e-005	1.4600e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2316	1.2316	7.0000e-005	0.0000	1.2331
Total	**3.2500e-003**	**0.0336**	**0.0358**	**1.0000e-004**	**3.1400e-003**	**4.2000e-004**	**3.5700e-003**	**8.5000e-004**	**3.9000e-004**	**1.2400e-003**	**0.0000**	**8.1193**	**8.1193**	**1.2000e-004**	**0.0000**	**8.1219**

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					0.0223	0.0000	0.0223	3.3800e-003	0.0000	3.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0429	0.4566	0.3503	4.0000e-004		0.0229	0.0229		0.0214	0.0214	0.0000	37.0973	37.0973	0.0101	0.0000	37.3092
Total	**0.0429**	**0.4566**	**0.3503**	**4.0000e-004**	**0.0223**	**0.0229**	**0.0452**	**3.3800e-003**	**0.0214**	**0.0248**	**0.0000**	**37.0973**	**37.0973**	**0.0101**	**0.0000**	**37.3092**

3.2 Demolition - 2016

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	2.5700e-003	0.0325	0.0263	8.0000e-005	1.7000e-003	4.1000e-004	2.1100e-003	4.7000e-004	3.8000e-004	8.5000e-004	0.0000	6.8877	6.8877	5.0000e-005	0.0000	6.8888
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	6.8000e-004	1.0700e-003	9.5500e-003	2.0000e-005	1.4400e-003	1.0000e-005	1.4600e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2316	1.2316	7.0000e-005	0.0000	1.2331
Total	**3.2500e-003**	**0.0336**	**0.0358**	**1.0000e-004**	**3.1400e-003**	**4.2000e-004**	**3.5700e-003**	**8.5000e-004**	**3.9000e-004**	**1.2400e-003**	**0.0000**	**8.1193**	**8.1193**	**1.2000e-004**	**0.0000**	**8.1219**

3.3 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					0.0478	0.0000	0.0478	0.0251	0.0000	0.0251	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1366	0.1028	1.0000e-004		7.3500e-003	7.3500e-003		6.7600e-003	6.7600e-003	0.0000	9.2193	9.2193	2.7800e-003	0.0000	9.2777
Total	**0.0127**	**0.1366**	**0.1028**	**1.0000e-004**	**0.0478**	**7.3500e-003**	**0.0552**	**0.0251**	**6.7600e-003**	**0.0319**	**0.0000**	**9.2193**	**9.2193**	**2.7800e-003**	**0.0000**	**9.2777**

3.3 Site Preparation - 2016

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	2.0000e-004	3.2000e-004	2.8600e-003	0.0000	4.3000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3695	0.3695	2.0000e-005	0.0000	0.3699
Total	**2.0000e-004**	**3.2000e-004**	**2.8600e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3695**	**0.3695**	**2.0000e-005**	**0.0000**	**0.3699**

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					0.0478	0.0000	0.0478	0.0251	0.0000	0.0251	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1366	0.1028	1.0000e-004		7.3500e-003	7.3500e-003		6.7600e-003	6.7600e-003	0.0000	9.2193	9.2193	2.7800e-003	0.0000	9.2777
Total	**0.0127**	**0.1366**	**0.1028**	**1.0000e-004**	**0.0478**	**7.3500e-003**	**0.0552**	**0.0251**	**6.7600e-003**	**0.0319**	**0.0000**	**9.2193**	**9.2193**	**2.7800e-003**	**0.0000**	**9.2777**

3.3 Site Preparation - 2016

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	2.0000e-004	3.2000e-004	2.8600e-003	0.0000	4.3000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3695	0.3695	2.0000e-005	0.0000	0.3699
Total	**2.0000e-004**	**3.2000e-004**	**2.8600e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3695**	**0.3695**	**2.0000e-005**	**0.0000**	**0.3699**

3.4 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					0.0267	0.0000	0.0267	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0147	0.1538	0.1043	1.2000e-004		8.7900e-003	8.7900e-003		8.0900e-003	8.0900e-003	0.0000	11.2266	11.2266	3.3900e-003	0.0000	11.2977
Total	**0.0147**	**0.1538**	**0.1043**	**1.2000e-004**	**0.0267**	**8.7900e-003**	**0.0355**	**0.0135**	**8.0900e-003**	**0.0216**	**0.0000**	**11.2266**	**11.2266**	**3.3900e-003**	**0.0000**	**11.2977**

3.4 Grading - 2016

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	2.7000e-004	4.3000e-004	3.8200e-003	1.0000e-005	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.4926	0.4926	3.0000e-005	0.0000	0.4933
Total	**2.7000e-004**	**4.3000e-004**	**3.8200e-003**	**1.0000e-005**	**5.8000e-004**	**0.0000**	**5.8000e-004**	**1.5000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4926**	**0.4926**	**3.0000e-005**	**0.0000**	**0.4933**

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					0.0267	0.0000	0.0267	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0147	0.1538	0.1043	1.2000e-004		8.7900e-003	8.7900e-003		8.0900e-003	8.0900e-003	0.0000	11.2265	11.2265	3.3900e-003	0.0000	11.2977
Total	**0.0147**	**0.1538**	**0.1043**	**1.2000e-004**	**0.0267**	**8.7900e-003**	**0.0355**	**0.0135**	**8.0900e-003**	**0.0216**	**0.0000**	**11.2265**	**11.2265**	**3.3900e-003**	**0.0000**	**11.2977**

3.4 Grading - 2016

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	2.7000e-004	4.3000e-004	3.8200e-003	1.0000e-005	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.4926	0.4926	3.0000e-005	0.0000	0.4933
Total	**2.7000e-004**	**4.3000e-004**	**3.8200e-003**	**1.0000e-005**	**5.8000e-004**	**0.0000**	**5.8000e-004**	**1.5000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4926**	**0.4926**	**3.0000e-005**	**0.0000**	**0.4933**

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	0.3883	3.2497	2.1098	3.0600e-003		0.2243	0.2243		0.2107	0.2107	0.0000	276.0551	276.0551	0.0685	0.0000	277.4929
Total	**0.3883**	**3.2497**	**2.1098**	**3.0600e-003**		**0.2243**	**0.2243**		**0.2107**	**0.2107**	**0.0000**	**276.0551**	**276.0551**	**0.0685**	**0.0000**	**277.4929**

3.5 Building Construction - 2016

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	0.0157	0.1618	0.1548	3.8000e-004	0.0105	2.5900e-003	0.0131	3.0100e-003	2.3800e-003	5.3900e-003	0.0000	34.1553	34.1553	2.6000e-004	0.0000	34.1608
Worker	0.0109	0.0171	0.1524	2.6000e-004	0.0231	1.9000e-004	0.0232	6.1200e-003	1.7000e-004	6.2900e-003	0.0000	19.6558	19.6558	1.1800e-003	0.0000	19.6806
Total	**0.0265**	**0.1789**	**0.3071**	**6.4000e-004**	**0.0336**	**2.7800e-003**	**0.0364**	**9.1300e-003**	**2.5500e-003**	**0.0117**	**0.0000**	**53.8111**	**53.8111**	**1.4400e-003**	**0.0000**	**53.8414**

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	0.3883	3.2497	2.1098	3.0600e-003		0.2243	0.2243		0.2107	0.2107	0.0000	276.0548	276.0548	0.0685	0.0000	277.4926
Total	**0.3883**	**3.2497**	**2.1098**	**3.0600e-003**		**0.2243**	**0.2243**		**0.2107**	**0.2107**	**0.0000**	**276.0548**	**276.0548**	**0.0685**	**0.0000**	**277.4926**

3.5 Building Construction - 2016

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	0.0157	0.1618	0.1548	3.8000e-004	0.0105	2.5900e-003	0.0131	3.0100e-003	2.3800e-003	5.3900e-003	0.0000	34.1553	34.1553	2.6000e-004	0.0000	34.1608
Worker	0.0109	0.0171	0.1524	2.6000e-004	0.0231	1.9000e-004	0.0232	6.1200e-003	1.7000e-004	6.2900e-003	0.0000	19.6558	19.6558	1.1800e-003	0.0000	19.6806
Total	**0.0265**	**0.1789**	**0.3071**	**6.4000e-004**	**0.0336**	**2.7800e-003**	**0.0364**	**9.1300e-003**	**2.5500e-003**	**0.0117**	**0.0000**	**53.8111**	**53.8111**	**1.4400e-003**	**0.0000**	**53.8414**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1000e-003	0.0264	0.0181	3.0000e-005		1.7800e-003	1.7800e-003		1.6700e-003	1.6700e-003	0.0000	2.3948	2.3948	5.9000e-004	0.0000	2.4072
Total	**3.1000e-003**	**0.0264**	**0.0181**	**3.0000e-005**		**1.7800e-003**	**1.7800e-003**		**1.6700e-003**	**1.6700e-003**	**0.0000**	**2.3948**	**2.3948**	**5.9000e-004**	**0.0000**	**2.4072**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	1.3000e-004	1.2700e-003	1.2700e-003	0.0000	9.0000e-005	2.0000e-005	1.1000e-004	3.0000e-005	2.0000e-005	4.0000e-005	0.0000	0.2946	0.2946	0.0000	0.0000	0.2947
Worker	8.0000e-005	1.3000e-004	1.1400e-003	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.1657	0.1657	1.0000e-005	0.0000	0.1659
Total	**2.1000e-004**	**1.4000e-003**	**2.4100e-003**	**0.0000**	**2.9000e-004**	**2.0000e-005**	**3.1000e-004**	**8.0000e-005**	**2.0000e-005**	**1.0000e-004**	**0.0000**	**0.4603**	**0.4603**	**1.0000e-005**	**0.0000**	**0.4605**

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	3.1000e-003	0.0264	0.0181	3.0000e-005		1.7800e-003	1.7800e-003		1.6700e-003	1.6700e-003	0.0000	2.3948	2.3948	5.9000e-004	0.0000	2.4072
Total	**3.1000e-003**	**0.0264**	**0.0181**	**3.0000e-005**		**1.7800e-003**	**1.7800e-003**		**1.6700e-003**	**1.6700e-003**	**0.0000**	**2.3948**	**2.3948**	**5.9000e-004**	**0.0000**	**2.4072**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	1.3000e-004	1.2700e-003	1.2700e-003	0.0000	9.0000e-005	2.0000e-005	1.1000e-004	3.0000e-005	2.0000e-005	4.0000e-005	0.0000	0.2946	0.2946	0.0000	0.0000	0.2947
Worker	8.0000e-005	1.3000e-004	1.1400e-003	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.1657	0.1657	1.0000e-005	0.0000	0.1659
Total	**2.1000e-004**	**1.4000e-003**	**2.4100e-003**	**0.0000**	**2.9000e-004**	**2.0000e-005**	**3.1000e-004**	**8.0000e-005**	**2.0000e-005**	**1.0000e-004**	**0.0000**	**0.4603**	**0.4603**	**1.0000e-005**	**0.0000**	**0.4605**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0172	0.1827	0.1325	2.0000e-004		0.0103	0.0103		9.4300e-003	9.4300e-003	0.0000	18.6241	18.6241	5.7100e-003	0.0000	18.7439
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0172**	**0.1827**	**0.1325**	**2.0000e-004**		**0.0103**	**0.0103**		**9.4300e-003**	**9.4300e-003**	**0.0000**	**18.6241**	**18.6241**	**5.7100e-003**	**0.0000**	**18.7439**

3.6 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	5.2000e-004	8.4000e-004	7.3500e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.5000e-004	0.0000	1.0651	1.0651	6.0000e-005	0.0000	1.0663
Total	**5.2000e-004**	**8.4000e-004**	**7.3500e-003**	**1.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3100e-003**	**3.5000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.0651**	**1.0651**	**6.0000e-005**	**0.0000**	**1.0663**

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	0.0172	0.1827	0.1325	2.0000e-004		0.0103	0.0103		9.4300e-003	9.4300e-003	0.0000	18.6241	18.6241	5.7100e-003	0.0000	18.7439
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0172**	**0.1827**	**0.1325**	**2.0000e-004**		**0.0103**	**0.0103**		**9.4300e-003**	**9.4300e-003**	**0.0000**	**18.6241**	**18.6241**	**5.7100e-003**	**0.0000**	**18.7439**

3.6 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	5.2000e-004	8.4000e-004	7.3500e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.5000e-004	0.0000	1.0651	1.0651	6.0000e-005	0.0000	1.0663
Total	**5.2000e-004**	**8.4000e-004**	**7.3500e-003**	**1.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3100e-003**	**3.5000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.0651**	**1.0651**	**6.0000e-005**	**0.0000**	**1.0663**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5666					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9900e-003	0.0197	0.0168	3.0000e-005		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	2.2979	2.2979	2.4000e-004	0.0000	2.3030
Total	**0.5696**	**0.0197**	**0.0168**	**3.0000e-005**		**1.5600e-003**	**1.5600e-003**		**1.5600e-003**	**1.5600e-003**	**0.0000**	**2.2979**	**2.2979**	**2.4000e-004**	**0.0000**	**2.3030**

3.7 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	1.4000e-004	2.2000e-004	1.9600e-003	0.0000	3.5000e-004	0.0000	3.5000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2840	0.2840	2.0000e-005	0.0000	0.2844
Total	**1.4000e-004**	**2.2000e-004**	**1.9600e-003**	**0.0000**	**3.5000e-004**	**0.0000**	**3.5000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2840**	**0.2840**	**2.0000e-005**	**0.0000**	**0.2844**

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	0.5666					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9900e-003	0.0197	0.0168	3.0000e-005		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	2.2979	2.2979	2.4000e-004	0.0000	2.3030
Total	**0.5696**	**0.0197**	**0.0168**	**3.0000e-005**		**1.5600e-003**	**1.5600e-003**		**1.5600e-003**	**1.5600e-003**	**0.0000**	**2.2979**	**2.2979**	**2.4000e-004**	**0.0000**	**2.3030**

3.7 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	1.4000e-004	2.2000e-004	1.9600e-003	0.0000	3.5000e-004	0.0000	3.5000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2840	0.2840	2.0000e-005	0.0000	0.2844
Total	**1.4000e-004**	**2.2000e-004**	**1.9600e-003**	**0.0000**	**3.5000e-004**	**0.0000**	**3.5000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2840**	**0.2840**	**2.0000e-005**	**0.0000**	**0.2844**

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	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
Unmitigated	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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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)	13.00	13.00	13.00	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.455937	0.042338	0.214948	0.150714	0.068093	0.009944	0.017510	0.022507	0.002330	0.001401	0.008743	0.000855	0.004680

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	127.3189	127.3189	5.7600e-003	1.1900e-003	127.8090
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	127.3189	127.3189	5.7600e-003	1.1900e-003	127.8090
NaturalGas Mitigated	6.6500e-003	0.0605	0.0508	3.6000e-004		4.5900e-003	4.5900e-003		4.5900e-003	4.5900e-003	0.0000	65.8113	65.8113	1.2600e-003	1.2100e-003	66.2119
NaturalGas Unmitigated	6.6500e-003	0.0605	0.0508	3.6000e-004		4.5900e-003	4.5900e-003		4.5900e-003	4.5900e-003	0.0000	65.8113	65.8113	1.2600e-003	1.2100e-003	66.2119

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)	1.23326e+006	6.6500e-003	0.0605	0.0508	3.6000e-004		4.5900e-003	4.5900e-003		4.5900e-003	4.5900e-003	0.0000	65.8113	65.8113	1.2600e-003	1.2100e-003	66.2119
Total		**6.6500e-003**	**0.0605**	**0.0508**	**3.6000e-004**		**4.5900e-003**	**4.5900e-003**		**4.5900e-003**	**4.5900e-003**	**0.0000**	**65.8113**	**65.8113**	**1.2600e-003**	**1.2100e-003**	**66.2119**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	1.23326e+006	6.6500e-003	0.0605	0.0508	3.6000e-004		4.5900e-003	4.5900e-003		4.5900e-003	4.5900e-003	0.0000	65.8113	65.8113	1.2600e-003	1.2100e-003	66.2119
Total		**6.6500e-003**	**0.0605**	**0.0508**	**3.6000e-004**		**4.5900e-003**	**4.5900e-003**		**4.5900e-003**	**4.5900e-003**	**0.0000**	**65.8113**	**65.8113**	**1.2600e-003**	**1.2100e-003**	**66.2119**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	437655	127.3189	5.7600e-003	1.1900e-003	127.8090
Total		**127.3189**	**5.7600e-003**	**1.1900e-003**	**127.8090**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	437655	127.3189	5.7600e-003	1.1900e-003	127.8090
Total		**127.3189**	**5.7600e-003**	**1.1900e-003**	**127.8090**

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	0.2477	1.0000e-005	8.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-003	1.6000e-003	0.0000	0.0000	1.7000e-003
Unmitigated	0.2477	1.0000e-005	8.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-003	1.6000e-003	0.0000	0.0000	1.7000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0567					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1910					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	8.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-003	1.6000e-003	0.0000	0.0000	1.7000e-003
Total	**0.2477**	**1.0000e-005**	**8.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.6000e-003**	**1.6000e-003**	**0.0000**	**0.0000**	**1.7000e-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	tons/yr										MT/yr					
Architectural Coating	0.0567					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1910					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	8.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-003	1.6000e-003	0.0000	0.0000	1.7000e-003
Total	**0.2477**	**1.0000e-005**	**8.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.6000e-003**	**1.6000e-003**	**0.0000**	**0.0000**	**1.7000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8.3562	0.0785	1.9100e-003	10.5976
Unmitigated	8.3562	0.0785	1.9200e-003	10.5988

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	2.3985 / 3.7515	8.3562	0.0785	1.9200e-003	10.5988
Total		**8.3562**	**0.0785**	**1.9200e-003**	**10.5988**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	2.3985 / 3.7515	8.3562	0.0785	1.9100e-003	10.5976
Total		**8.3562**	**0.0785**	**1.9100e-003**	**10.5976**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.9041	0.7626	0.0000	28.9190
Unmitigated	12.9041	0.7626	0.0000	28.9190

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	63.57	12.9041	0.7626	0.0000	28.9190
Total		**12.9041**	**0.7626**	**0.0000**	**28.9190**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	63.57	12.9041	0.7626	0.0000	28.9190
Total		**12.9041**	**0.7626**	**0.0000**	**28.9190**

9.0 Operational Offroad

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

10.0 Vegetation

Cuesta College North County Campus Center Project

San Luis Obispo County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	48.90	1000sqft	5.00	48,900.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2016
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 - Actual lot acreage = 5.0 acres based on project site plan.

Construction Phase -

Off-road Equipment - Default CalEEMod equipment lists for each phase of construction used.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition - Demo size estimated based on project site plans showing existing portables on site.

Grading - Grading area based on project site plans.

Vehicle Trips - Project would replace existing classrooms and would not increase campus enrollment; therefore no new vehicle trips.

Area Coating -

Operational Off-Road Equipment - no text

Table Name	Column Name	Default Value	New Value
tblGrading	AcresOfGrading	4.00	5.00
tblGrading	AcresOfGrading	0.00	5.00
tblLandUse	LotAcreage	1.12	5.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	ST_TR	11.23	0.00
tblVehicleTrips	SU_TR	1.21	0.00
tblVehicleTrips	WD_TR	27.49	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	5.1644	54.7631	42.2719	0.0491	19.3047	2.9401	22.2448	10.0924	2.7049	12.7972	0.0000	4,982.1721	4,982.1721	1.2359	0.0000	5,008.1266
2017	63.3074	27.7939	20.7094	0.0324	0.3020	1.8021	2.1041	0.0820	1.6921	1.7741	0.0000	3,144.8968	3,144.8968	0.7062	0.0000	3,159.7263
Total	**68.4718**	**82.5570**	**62.9813**	**0.0814**	**19.6068**	**4.7421**	**24.3489**	**10.1744**	**4.3970**	**14.5713**	**0.0000**	**8,127.0689**	**8,127.0689**	**1.9421**	**0.0000**	**8,167.8530**

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	5.1644	54.7631	42.2719	0.0491	19.3047	2.9401	22.2448	10.0924	2.7049	12.7972	0.0000	4,982.1721	4,982.1721	1.2359	0.0000	5,008.1266
2017	63.3074	27.7939	20.7094	0.0324	0.3020	1.8021	2.1041	0.0820	1.6921	1.7741	0.0000	3,144.8968	3,144.8968	0.7062	0.0000	3,159.7263
Total	**68.4718**	**82.5570**	**62.9813**	**0.0814**	**19.6068**	**4.7421**	**24.3489**	**10.1744**	**4.3970**	**14.5713**	**0.0000**	**8,127.0689**	**8,127.0689**	**1.9421**	**0.0000**	**8,167.8530**

	ROG	NOx	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	1.3574	5.0000e-005	5.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0107	0.0107	3.0000e-005		0.0113
Energy	0.0364	0.3313	0.2783	1.9900e-003		0.0252	0.0252		0.0252	0.0252		397.5046	397.5046	7.6200e-003	7.2900e-003	399.9237
Mobile	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	**1.3939**	**0.3313**	**0.2834**	**1.9900e-003**	**0.0000**	**0.0252**	**0.0252**	**0.0000**	**0.0252**	**0.0252**		**397.5153**	**397.5153**	**7.6500e-003**	**7.2900e-003**	**399.9351**

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	1.3574	5.0000e-005	5.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0107	0.0107	3.0000e-005		0.0113
Energy	0.0364	0.3313	0.2783	1.9900e-003		0.0252	0.0252		0.0252	0.0252		397.5046	397.5046	7.6200e-003	7.2900e-003	399.9237
Mobile	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	**1.3939**	**0.3313**	**0.2834**	**1.9900e-003**	**0.0000**	**0.0252**	**0.0252**	**0.0000**	**0.0252**	**0.0252**		**397.5153**	**397.5153**	**7.6500e-003**	**7.2900e-003**	**399.9351**

	ROG	NOx	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	Demolition	Demolition	1/1/2016	1/28/2016	5	20	
2	Site Preparation	Site Preparation	1/29/2016	2/4/2016	5	5	
3	Grading	Grading	2/5/2016	2/16/2016	5	8	
4	Building Construction	Building Construction	2/17/2016	1/3/2017	5	230	
5	Paving	Paving	1/4/2017	1/27/2017	5	18	
6	Architectural Coating	Architectural Coating	1/28/2017	2/22/2017	5	18	

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 73,350; Non-Residential Outdoor: 24,450 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Demolition	Excavators	3	8.00	162	0.38
Grading	Excavators	1	8.00	162	0.38
Building Construction	Generator Sets	1	8.00	84	0.74
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Paving	Paving Equipment	2	8.00	130	0.36
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
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
Demolition	6	15.00	0.00	200.00	13.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	13.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	13.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	21.00	8.00	0.00	13.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	13.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	13.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 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					2.2303	0.0000	2.2303	0.3377	0.0000	0.3377			0.0000			0.0000
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365		4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**	**2.2303**	**2.2921**	**4.5225**	**0.3377**	**2.1365**	**2.4743**		**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

3.2 Demolition - 2016

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	0.2742	3.2276	2.9227	7.5400e-003	0.1740	0.0414	0.2154	0.0476	0.0381	0.0857		758.2182	758.2182	5.4200e-003		758.3320
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	0.0728	0.1090	0.9722	1.6200e-003	0.1483	1.1600e-003	0.1495	0.0393	1.0500e-003	0.0404		134.6699	134.6699	8.1500e-003		134.8410
Total	**0.3470**	**3.3366**	**3.8949**	**9.1600e-003**	**0.3222**	**0.0426**	**0.3648**	**0.0869**	**0.0391**	**0.1261**		**892.8881**	**892.8881**	**0.0136**		**893.1730**

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					2.2303	0.0000	2.2303	0.3377	0.0000	0.3377			0.0000			0.0000
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365	0.0000	4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**	**2.2303**	**2.2921**	**4.5225**	**0.3377**	**2.1365**	**2.4743**	**0.0000**	**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

3.2 Demolition - 2016

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	0.2742	3.2276	2.9227	7.5400e-003	0.1740	0.0414	0.2154	0.0476	0.0381	0.0857		758.2182	758.2182	5.4200e-003		758.3320
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	0.0728	0.1090	0.9722	1.6200e-003	0.1483	1.1600e-003	0.1495	0.0393	1.0500e-003	0.0404		134.6699	134.6699	8.1500e-003		134.8410
Total	**0.3470**	**3.3366**	**3.8949**	**9.1600e-003**	**0.3222**	**0.0426**	**0.3648**	**0.0869**	**0.0391**	**0.1261**		**892.8881**	**892.8881**	**0.0136**		**893.1730**

3.3 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					19.1268	0.0000	19.1268	10.0452	0.0000	10.0452			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**19.1268**	**2.9387**	**22.0654**	**10.0452**	**2.7036**	**12.7488**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.3 Site Preparation - 2016

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	0.0874	0.1308	1.1667	1.9400e-003	0.1780	1.4000e-003	0.1794	0.0472	1.2700e-003	0.0485		161.6038	161.6038	9.7800e-003		161.8092
Total	**0.0874**	**0.1308**	**1.1667**	**1.9400e-003**	**0.1780**	**1.4000e-003**	**0.1794**	**0.0472**	**1.2700e-003**	**0.0485**		**161.6038**	**161.6038**	**9.7800e-003**		**161.8092**

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					19.1268	0.0000	19.1268	10.0452	0.0000	10.0452			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036	0.0000	4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**19.1268**	**2.9387**	**22.0654**	**10.0452**	**2.7036**	**12.7488**	**0.0000**	**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.3 Site Preparation - 2016

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	0.0874	0.1308	1.1667	1.9400e-003	0.1780	1.4000e-003	0.1794	0.0472	1.2700e-003	0.0485		161.6038	161.6038	9.7800e-003		161.8092
Total	**0.0874**	**0.1308**	**1.1667**	**1.9400e-003**	**0.1780**	**1.4000e-003**	**0.1794**	**0.0472**	**1.2700e-003**	**0.0485**		**161.6038**	**161.6038**	**9.7800e-003**		**161.8092**

3.4 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					6.6849	0.0000	6.6849	3.3818	0.0000	3.3818			0.0000			0.0000
Off-Road	3.6669	38.4466	26.0787	0.0298		2.1984	2.1984		2.0225	2.0225		3,093.7889	3,093.7889	0.9332		3,113.3860
Total	**3.6669**	**38.4466**	**26.0787**	**0.0298**	**6.6849**	**2.1984**	**8.8833**	**3.3818**	**2.0225**	**5.4043**		**3,093.7889**	**3,093.7889**	**0.9332**		**3,113.3860**

3.4 Grading - 2016

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	0.0728	0.1090	0.9722	1.6200e-003	0.1483	1.1600e-003	0.1495	0.0393	1.0500e-003	0.0404		134.6699	134.6699	8.1500e-003		134.8410
Total	**0.0728**	**0.1090**	**0.9722**	**1.6200e-003**	**0.1483**	**1.1600e-003**	**0.1495**	**0.0393**	**1.0500e-003**	**0.0404**		**134.6699**	**134.6699**	**8.1500e-003**		**134.8410**

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					6.6849	0.0000	6.6849	3.3818	0.0000	3.3818			0.0000			0.0000
Off-Road	3.6669	38.4466	26.0787	0.0298		2.1984	2.1984		2.0225	2.0225	0.0000	3,093.7889	3,093.7889	0.9332		3,113.3860
Total	**3.6669**	**38.4466**	**26.0787**	**0.0298**	**6.6849**	**2.1984**	**8.8833**	**3.3818**	**2.0225**	**5.4043**	**0.0000**	**3,093.7889**	**3,093.7889**	**0.9332**		**3,113.3860**

3.4 Grading - 2016

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	0.0728	0.1090	0.9722	1.6200e-003	0.1483	1.1600e-003	0.1495	0.0393	1.0500e-003	0.0404		134.6699	134.6699	8.1500e-003		134.8410
Total	**0.0728**	**0.1090**	**0.9722**	**1.6200e-003**	**0.1483**	**1.1600e-003**	**0.1495**	**0.0393**	**1.0500e-003**	**0.0404**		**134.6699**	**134.6699**	**8.1500e-003**		**134.8410**

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	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.5 Building Construction - 2016

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	0.1469	1.4056	1.5147	3.2800e-003	0.0944	0.0228	0.1172	0.0269	0.0210	0.0479		329.4152	329.4152	2.5600e-003		329.4690
Worker	0.1019	0.1526	1.3611	2.2600e-003	0.2076	1.6300e-003	0.2092	0.0551	1.4800e-003	0.0565		188.5378	188.5378	0.0114		188.7774
Total	**0.2488**	**1.5582**	**2.8758**	**5.5400e-003**	**0.3020**	**0.0244**	**0.3265**	**0.0820**	**0.0225**	**0.1044**		**517.9530**	**517.9530**	**0.0140**		**518.2463**

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	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**	**0.0000**	**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.5 Building Construction - 2016

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	0.1469	1.4056	1.5147	3.2800e-003	0.0944	0.0228	0.1172	0.0269	0.0210	0.0479		329.4152	329.4152	2.5600e-003		329.4690
Worker	0.1019	0.1526	1.3611	2.2600e-003	0.2076	1.6300e-003	0.2092	0.0551	1.4800e-003	0.0565		188.5378	188.5378	0.0114		188.7774
Total	**0.2488**	**1.5582**	**2.8758**	**5.5400e-003**	**0.3020**	**0.0244**	**0.3265**	**0.0820**	**0.0225**	**0.1044**		**517.9530**	**517.9530**	**0.0140**		**518.2463**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1341	1.2551	1.4198	3.2800e-003	0.0944	0.0193	0.1138	0.0269	0.0178	0.0447		323.9326	323.9326	2.3700e-003		323.9823
Worker	0.0858	0.1331	1.1605	2.2600e-003	0.2076	1.5100e-003	0.2091	0.0551	1.3800e-003	0.0564		181.1589	181.1589	0.0102		181.3723
Total	**0.2198**	**1.3883**	**2.5803**	**5.5400e-003**	**0.3020**	**0.0208**	**0.3229**	**0.0820**	**0.0192**	**0.1011**		**505.0914**	**505.0914**	**0.0125**		**505.3546**

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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**	**0.0000**	**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1341	1.2551	1.4198	3.2800e-003	0.0944	0.0193	0.1138	0.0269	0.0178	0.0447		323.9326	323.9326	2.3700e-003		323.9823
Worker	0.0858	0.1331	1.1605	2.2600e-003	0.2076	1.5100e-003	0.2091	0.0551	1.3800e-003	0.0564		181.1589	181.1589	0.0102		181.3723
Total	**0.2198**	**1.3883**	**2.5803**	**5.5400e-003**	**0.3020**	**0.0208**	**0.3229**	**0.0820**	**0.0192**	**0.1011**		**505.0914**	**505.0914**	**0.0125**		**505.3546**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9074**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**		**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

3.6 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0613	0.0951	0.8289	1.6100e-003	0.1483	1.0800e-003	0.1494	0.0393	9.9000e-004	0.0403		129.3992	129.3992	7.2600e-003		129.5516
Total	**0.0613**	**0.0951**	**0.8289**	**1.6100e-003**	**0.1483**	**1.0800e-003**	**0.1494**	**0.0393**	**9.9000e-004**	**0.0403**		**129.3992**	**129.3992**	**7.2600e-003**		**129.5516**

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	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9074**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**	**0.0000**	**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

3.6 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0613	0.0951	0.8289	1.6100e-003	0.1483	1.0800e-003	0.1494	0.0393	9.9000e-004	0.0403		129.3992	129.3992	7.2600e-003		129.5516
Total	**0.0613**	**0.0951**	**0.8289**	**1.6100e-003**	**0.1483**	**1.0800e-003**	**0.1494**	**0.0393**	**9.9000e-004**	**0.0403**		**129.3992**	**129.3992**	**7.2600e-003**		**129.5516**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	62.9588					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**63.2911**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.7 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0163	0.0254	0.2211	4.3000e-004	0.0395	2.9000e-004	0.0398	0.0105	2.6000e-004	0.0108		34.5065	34.5065	1.9400e-003		34.5471
Total	**0.0163**	**0.0254**	**0.2211**	**4.3000e-004**	**0.0395**	**2.9000e-004**	**0.0398**	**0.0105**	**2.6000e-004**	**0.0108**		**34.5065**	**34.5065**	**1.9400e-003**		**34.5471**

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	62.9588					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**63.2911**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.7 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0163	0.0254	0.2211	4.3000e-004	0.0395	2.9000e-004	0.0398	0.0105	2.6000e-004	0.0108		34.5065	34.5065	1.9400e-003		34.5471
Total	**0.0163**	**0.0254**	**0.2211**	**4.3000e-004**	**0.0395**	**2.9000e-004**	**0.0398**	**0.0105**	**2.6000e-004**	**0.0108**		**34.5065**	**34.5065**	**1.9400e-003**		**34.5471**

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	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
Unmitigated	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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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)	13.00	13.00	13.00	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.455937	0.042338	0.214948	0.150714	0.068093	0.009944	0.017510	0.022507	0.002330	0.001401	0.008743	0.000855	0.004680

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0364	0.3313	0.2783	1.9900e-003		0.0252	0.0252		0.0252	0.0252		397.5046	397.5046	7.6200e-003	7.2900e-003	399.9237
NaturalGas Unmitigated	0.0364	0.3313	0.2783	1.9900e-003		0.0252	0.0252		0.0252	0.0252		397.5046	397.5046	7.6200e-003	7.2900e-003	399.9237

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					
Junior College (2Yr)	3378.79	0.0364	0.3313	0.2783	1.9900e-003		0.0252	0.0252		0.0252	0.0252		397.5046	397.5046	7.6200e-003	7.2900e-003	399.9237
Total		**0.0364**	**0.3313**	**0.2783**	**1.9900e-003**		**0.0252**	**0.0252**		**0.0252**	**0.0252**		**397.5046**	**397.5046**	**7.6200e-003**	**7.2900e-003**	**399.9237**

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					
Junior College (2Yr)	3.37879	0.0364	0.3313	0.2783	1.9900e-003		0.0252	0.0252		0.0252	0.0252		397.5046	397.5046	7.6200e-003	7.2900e-003	399.9237
Total		**0.0364**	**0.3313**	**0.2783**	**1.9900e-003**		**0.0252**	**0.0252**		**0.0252**	**0.0252**		**397.5046**	**397.5046**	**7.6200e-003**	**7.2900e-003**	**399.9237**

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	1.3574	5.0000e-005	5.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0107	0.0107	3.0000e-005		0.0113
Unmitigated	1.3574	5.0000e-005	5.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0107	0.0107	3.0000e-005		0.0113

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	0.3105					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0465					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-004	5.0000e-005	5.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0107	0.0107	3.0000e-005		0.0113
Total	**1.3574**	**5.0000e-005**	**5.1200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0107**	**0.0107**	**3.0000e-005**		**0.0113**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	1.0465					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-004	5.0000e-005	5.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0107	0.0107	3.0000e-005		0.0113
Architectural Coating	0.3105					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3574**	**5.0000e-005**	**5.1200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0107**	**0.0107**	**3.0000e-005**		**0.0113**

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

Cuesta College North County Campus Center Project

San Luis Obispo County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	48.90	1000sqft	5.00	48,900.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2016
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 - Actual lot acreage = 5.0 acres based on project site plan.

Construction Phase -

Off-road Equipment - Default CalEEMod equipment lists for each phase of construction used.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition - Demo size estimated based on project site plans showing existing portables on site.

Grading - Grading area based on project site plans.

Vehicle Trips - Project would replace existing classrooms and would not increase campus enrollment; therefore no new vehicle trips.

Area Coating -

Operational Off-Road Equipment - no text

Table Name	Column Name	Default Value	New Value
tblGrading	AcresOfGrading	4.00	5.00
tblGrading	AcresOfGrading	0.00	5.00
tblLandUse	LotAcreage	1.12	5.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	ST_TR	11.23	0.00
tblVehicleTrips	SU_TR	1.21	0.00
tblVehicleTrips	WD_TR	27.49	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	5.1583	54.7478	42.2557	0.0491	19.3047	2.9401	22.2448	10.0924	2.7049	12.7972	0.0000	4,990.4829	4,990.4829	1.2359	0.0000	5,016.4374
2017	63.3063	27.7527	20.2992	0.0325	0.3020	1.8019	2.1040	0.0820	1.6920	1.7740	0.0000	3,155.1673	3,155.1673	0.7062	0.0000	3,169.9969
Total	**68.4646**	**82.5004**	**62.5549**	**0.0816**	**19.6068**	**4.7420**	**24.3487**	**10.1744**	**4.3969**	**14.5712**	**0.0000**	**8,145.6502**	**8,145.6502**	**1.9421**	**0.0000**	**8,186.4342**

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	5.1583	54.7478	42.2557	0.0491	19.3047	2.9401	22.2448	10.0924	2.7049	12.7972	0.0000	4,990.4829	4,990.4829	1.2359	0.0000	5,016.4374
2017	63.3063	27.7527	20.2992	0.0325	0.3020	1.8019	2.1040	0.0820	1.6920	1.7740	0.0000	3,155.1673	3,155.1673	0.7062	0.0000	3,169.9969
Total	**68.4646**	**82.5004**	**62.5549**	**0.0816**	**19.6068**	**4.7420**	**24.3487**	**10.1744**	**4.3969**	**14.5712**	**0.0000**	**8,145.6501**	**8,145.6501**	**1.9421**	**0.0000**	**8,186.4342**

	ROG	NOx	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	1.3574	5.0000e-005	5.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0107	0.0107	3.0000e-005		0.0113
Energy	0.0364	0.3313	0.2783	1.9900e-003		0.0252	0.0252		0.0252	0.0252		397.5046	397.5046	7.6200e-003	7.2900e-003	399.9237
Mobile	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	**1.3939**	**0.3313**	**0.2834**	**1.9900e-003**	**0.0000**	**0.0252**	**0.0252**	**0.0000**	**0.0252**	**0.0252**		**397.5153**	**397.5153**	**7.6500e-003**	**7.2900e-003**	**399.9351**

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	1.3574	5.0000e-005	5.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0107	0.0107	3.0000e-005		0.0113
Energy	0.0364	0.3313	0.2783	1.9900e-003		0.0252	0.0252		0.0252	0.0252		397.5046	397.5046	7.6200e-003	7.2900e-003	399.9237
Mobile	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	**1.3939**	**0.3313**	**0.2834**	**1.9900e-003**	**0.0000**	**0.0252**	**0.0252**	**0.0000**	**0.0252**	**0.0252**		**397.5153**	**397.5153**	**7.6500e-003**	**7.2900e-003**	**399.9351**

	ROG	NOx	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	Demolition	Demolition	1/1/2016	1/28/2016	5	20	
2	Site Preparation	Site Preparation	1/29/2016	2/4/2016	5	5	
3	Grading	Grading	2/5/2016	2/16/2016	5	8	
4	Building Construction	Building Construction	2/17/2016	1/3/2017	5	230	
5	Paving	Paving	1/4/2017	1/27/2017	5	18	
6	Architectural Coating	Architectural Coating	1/28/2017	2/22/2017	5	18	

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 73,350; Non-Residential Outdoor: 24,450 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Demolition	Excavators	3	8.00	162	0.38
Grading	Excavators	1	8.00	162	0.38
Building Construction	Generator Sets	1	8.00	84	0.74
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Paving	Paving Equipment	2	8.00	130	0.36
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
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
Demolition	6	15.00	0.00	200.00	13.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	13.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	13.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	21.00	8.00	0.00	13.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	13.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	13.00	13.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 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					2.2303	0.0000	2.2303	0.3377	0.0000	0.3377			0.0000			0.0000
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365		4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**	**2.2303**	**2.2921**	**4.5225**	**0.3377**	**2.1365**	**2.4743**		**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

3.2 Demolition - 2016

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	0.2345	3.1538	2.1361	7.5400e-003	0.1740	0.0413	0.2152	0.0476	0.0379	0.0855		759.9833	759.9833	5.3500e-003		760.0956
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	0.0677	0.0962	0.9587	1.6900e-003	0.1483	1.1600e-003	0.1495	0.0393	1.0500e-003	0.0404		141.2155	141.2155	8.1500e-003		141.3866
Total	**0.3022**	**3.2500**	**3.0948**	**9.2300e-003**	**0.3222**	**0.0424**	**0.3647**	**0.0869**	**0.0390**	**0.1259**		**901.1988**	**901.1988**	**0.0135**		**901.4822**

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					2.2303	0.0000	2.2303	0.3377	0.0000	0.3377			0.0000			0.0000
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365	0.0000	4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**	**2.2303**	**2.2921**	**4.5225**	**0.3377**	**2.1365**	**2.4743**	**0.0000**	**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

3.2 Demolition - 2016

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	0.2345	3.1538	2.1361	7.5400e-003	0.1740	0.0413	0.2152	0.0476	0.0379	0.0855		759.9833	759.9833	5.3500e-003		760.0956
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	0.0677	0.0962	0.9587	1.6900e-003	0.1483	1.1600e-003	0.1495	0.0393	1.0500e-003	0.0404		141.2155	141.2155	8.1500e-003		141.3866
Total	**0.3022**	**3.2500**	**3.0948**	**9.2300e-003**	**0.3222**	**0.0424**	**0.3647**	**0.0869**	**0.0390**	**0.1259**		**901.1988**	**901.1988**	**0.0135**		**901.4822**

3.3 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					19.1268	0.0000	19.1268	10.0452	0.0000	10.0452			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**19.1268**	**2.9387**	**22.0654**	**10.0452**	**2.7036**	**12.7488**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.3 Site Preparation - 2016

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	0.0812	0.1154	1.1504	2.0300e-003	0.1780	1.4000e-003	0.1794	0.0472	1.2700e-003	0.0485		169.4586	169.4586	9.7800e-003		169.6640
Total	**0.0812**	**0.1154**	**1.1504**	**2.0300e-003**	**0.1780**	**1.4000e-003**	**0.1794**	**0.0472**	**1.2700e-003**	**0.0485**		**169.4586**	**169.4586**	**9.7800e-003**		**169.6640**

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					19.1268	0.0000	19.1268	10.0452	0.0000	10.0452			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036	0.0000	4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**19.1268**	**2.9387**	**22.0654**	**10.0452**	**2.7036**	**12.7488**	**0.0000**	**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.3 Site Preparation - 2016

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	0.0812	0.1154	1.1504	2.0300e-003	0.1780	1.4000e-003	0.1794	0.0472	1.2700e-003	0.0485		169.4586	169.4586	9.7800e-003		169.6640
Total	**0.0812**	**0.1154**	**1.1504**	**2.0300e-003**	**0.1780**	**1.4000e-003**	**0.1794**	**0.0472**	**1.2700e-003**	**0.0485**		**169.4586**	**169.4586**	**9.7800e-003**		**169.6640**

3.4 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					6.6849	0.0000	6.6849	3.3818	0.0000	3.3818			0.0000			0.0000
Off-Road	3.6669	38.4466	26.0787	0.0298		2.1984	2.1984		2.0225	2.0225		3,093.7889	3,093.7889	0.9332		3,113.3860
Total	**3.6669**	**38.4466**	**26.0787**	**0.0298**	**6.6849**	**2.1984**	**8.8833**	**3.3818**	**2.0225**	**5.4043**		**3,093.7889**	**3,093.7889**	**0.9332**		**3,113.3860**

3.4 Grading - 2016

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	0.0677	0.0962	0.9587	1.6900e-003	0.1483	1.1600e-003	0.1495	0.0393	1.0500e-003	0.0404		141.2155	141.2155	8.1500e-003		141.3866
Total	**0.0677**	**0.0962**	**0.9587**	**1.6900e-003**	**0.1483**	**1.1600e-003**	**0.1495**	**0.0393**	**1.0500e-003**	**0.0404**		**141.2155**	**141.2155**	**8.1500e-003**		**141.3866**

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					6.6849	0.0000	6.6849	3.3818	0.0000	3.3818			0.0000			0.0000
Off-Road	3.6669	38.4466	26.0787	0.0298		2.1984	2.1984		2.0225	2.0225	0.0000	3,093.7889	3,093.7889	0.9332		3,113.3860
Total	**3.6669**	**38.4466**	**26.0787**	**0.0298**	**6.6849**	**2.1984**	**8.8833**	**3.3818**	**2.0225**	**5.4043**	**0.0000**	**3,093.7889**	**3,093.7889**	**0.9332**		**3,113.3860**

3.4 Grading - 2016

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	0.0677	0.0962	0.9587	1.6900e-003	0.1483	1.1600e-003	0.1495	0.0393	1.0500e-003	0.0404		141.2155	141.2155	8.1500e-003		141.3866
Total	**0.0677**	**0.0962**	**0.9587**	**1.6900e-003**	**0.1483**	**1.1600e-003**	**0.1495**	**0.0393**	**1.0500e-003**	**0.0404**		**141.2155**	**141.2155**	**8.1500e-003**		**141.3866**

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	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.5 Building Construction - 2016

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	0.1252	1.3768	1.1039	3.2900e-003	0.0944	0.0226	0.1171	0.0269	0.0208	0.0477		330.8737	330.8737	2.5200e-003		330.9267
Worker	0.0947	0.1347	1.3422	2.3700e-003	0.2076	1.6300e-003	0.2092	0.0551	1.4800e-003	0.0565		197.7017	197.7017	0.0114		197.9413
Total	**0.2199**	**1.5114**	**2.4460**	**5.6600e-003**	**0.3020**	**0.0243**	**0.3263**	**0.0820**	**0.0223**	**0.1043**		**528.5754**	**528.5754**	**0.0139**		**528.8680**

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	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**	**0.0000**	**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.5 Building Construction - 2016

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	0.1252	1.3768	1.1039	3.2900e-003	0.0944	0.0226	0.1171	0.0269	0.0208	0.0477		330.8737	330.8737	2.5200e-003		330.9267
Worker	0.0947	0.1347	1.3422	2.3700e-003	0.2076	1.6300e-003	0.2092	0.0551	1.4800e-003	0.0565		197.7017	197.7017	0.0114		197.9413
Total	**0.2199**	**1.5114**	**2.4460**	**5.6600e-003**	**0.3020**	**0.0243**	**0.3263**	**0.0820**	**0.0223**	**0.1043**		**528.5754**	**528.5754**	**0.0139**		**528.8680**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1146	1.2296	1.0148	3.2900e-003	0.0944	0.0192	0.1136	0.0269	0.0177	0.0446		325.3721	325.3721	2.3300e-003		325.4210
Worker	0.0802	0.1174	1.1552	2.3700e-003	0.2076	1.5100e-003	0.2091	0.0551	1.3800e-003	0.0564		189.9899	189.9899	0.0102		190.2033
Total	**0.1948**	**1.3470**	**2.1700**	**5.6600e-003**	**0.3020**	**0.0207**	**0.3227**	**0.0820**	**0.0190**	**0.1010**		**515.3620**	**515.3620**	**0.0125**		**515.6243**

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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**	**0.0000**	**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1146	1.2296	1.0148	3.2900e-003	0.0944	0.0192	0.1136	0.0269	0.0177	0.0446		325.3721	325.3721	2.3300e-003		325.4210
Worker	0.0802	0.1174	1.1552	2.3700e-003	0.2076	1.5100e-003	0.2091	0.0551	1.3800e-003	0.0564		189.9899	189.9899	0.0102		190.2033
Total	**0.1948**	**1.3470**	**2.1700**	**5.6600e-003**	**0.3020**	**0.0207**	**0.3227**	**0.0820**	**0.0190**	**0.1010**		**515.3620**	**515.3620**	**0.0125**		**515.6243**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9074**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**		**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

3.6 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0573	0.0839	0.8251	1.6900e-003	0.1483	1.0800e-003	0.1494	0.0393	9.9000e-004	0.0403		135.7071	135.7071	7.2600e-003		135.8595
Total	**0.0573**	**0.0839**	**0.8251**	**1.6900e-003**	**0.1483**	**1.0800e-003**	**0.1494**	**0.0393**	**9.9000e-004**	**0.0403**		**135.7071**	**135.7071**	**7.2600e-003**		**135.8595**

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	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9074**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**	**0.0000**	**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

3.6 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0573	0.0839	0.8251	1.6900e-003	0.1483	1.0800e-003	0.1494	0.0393	9.9000e-004	0.0403		135.7071	135.7071	7.2600e-003		135.8595
Total	**0.0573**	**0.0839**	**0.8251**	**1.6900e-003**	**0.1483**	**1.0800e-003**	**0.1494**	**0.0393**	**9.9000e-004**	**0.0403**		**135.7071**	**135.7071**	**7.2600e-003**		**135.8595**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	62.9588					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**63.2911**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.7 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0153	0.0224	0.2200	4.5000e-004	0.0395	2.9000e-004	0.0398	0.0105	2.6000e-004	0.0108		36.1886	36.1886	1.9400e-003		36.2292
Total	**0.0153**	**0.0224**	**0.2200**	**4.5000e-004**	**0.0395**	**2.9000e-004**	**0.0398**	**0.0105**	**2.6000e-004**	**0.0108**		**36.1886**	**36.1886**	**1.9400e-003**		**36.2292**

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	62.9588					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**63.2911**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.7 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0153	0.0224	0.2200	4.5000e-004	0.0395	2.9000e-004	0.0398	0.0105	2.6000e-004	0.0108		36.1886	36.1886	1.9400e-003		36.2292
Total	**0.0153**	**0.0224**	**0.2200**	**4.5000e-004**	**0.0395**	**2.9000e-004**	**0.0398**	**0.0105**	**2.6000e-004**	**0.0108**		**36.1886**	**36.1886**	**1.9400e-003**		**36.2292**

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	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
Unmitigated	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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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)	13.00	13.00	13.00	6.40	88.60	5.00	92	7	1

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.455937	0.042338	0.214948	0.150714	0.068093	0.009944	0.017510	0.022507	0.002330	0.001401	0.008743	0.000855	0.004680

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0364	0.3313	0.2783	1.9900e-003		0.0252	0.0252		0.0252	0.0252		397.5046	397.5046	7.6200e-003	7.2900e-003	399.9237
NaturalGas Unmitigated	0.0364	0.3313	0.2783	1.9900e-003		0.0252	0.0252		0.0252	0.0252		397.5046	397.5046	7.6200e-003	7.2900e-003	399.9237

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					
Junior College (2Yr)	3378.79	0.0364	0.3313	0.2783	1.9900e-003		0.0252	0.0252		0.0252	0.0252		397.5046	397.5046	7.6200e-003	7.2900e-003	399.9237
Total		**0.0364**	**0.3313**	**0.2783**	**1.9900e-003**		**0.0252**	**0.0252**		**0.0252**	**0.0252**		**397.5046**	**397.5046**	**7.6200e-003**	**7.2900e-003**	**399.9237**

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					
Junior College (2Yr)	3.37879	0.0364	0.3313	0.2783	1.9900e-003		0.0252	0.0252		0.0252	0.0252		397.5046	397.5046	7.6200e-003	7.2900e-003	399.9237
Total		**0.0364**	**0.3313**	**0.2783**	**1.9900e-003**		**0.0252**	**0.0252**		**0.0252**	**0.0252**		**397.5046**	**397.5046**	**7.6200e-003**	**7.2900e-003**	**399.9237**

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	1.3574	5.0000e-005	5.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0107	0.0107	3.0000e-005		0.0113
Unmitigated	1.3574	5.0000e-005	5.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0107	0.0107	3.0000e-005		0.0113

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	0.3105					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0465					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-004	5.0000e-005	5.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0107	0.0107	3.0000e-005		0.0113
Total	**1.3574**	**5.0000e-005**	**5.1200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0107**	**0.0107**	**3.0000e-005**		**0.0113**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	1.0465					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-004	5.0000e-005	5.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0107	0.0107	3.0000e-005		0.0113
Architectural Coating	0.3105					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3574**	**5.0000e-005**	**5.1200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0107**	**0.0107**	**3.0000e-005**		**0.0113**

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

Appendix B

Geotechnical Engineering and Geologic Hazards Report

GEOTECHNICAL ENGINEERING
AND GEOLOGIC HAZARDS REPORT
CUESTA COLLEGE – NORTH COUNTY CAMPUS
CAMPUS CENTER
2800 BUENA VISTA DRIVE
PASO ROBLES, CALIFORNIA

April 2, 2015

Prepared for

Mr. Terry Reece
Director of Facilities
San Luis Obispo Community College District

Prepared by

Earth Systems Pacific
4378 Old Santa Fe Road
San Luis Obispo, CA 93401

Earth Systems Pacific

4378 Old Santa Fe Road
San Luis Obispo, CA 93401-8166

(805) 544-3276 • FAX (805) 544-1786
E-mail: esp@earthsystems.com

April 2, 2015

FILE NO.: SL-17503-SB

Mr. Terry Reece
Director of Facilities
San Luis Obispo Community College District
PO Box 8106
San Luis Obispo, CA 93403-8106

PROJECT: CUESTA COLLEGE – NORTH COUNTY CAMPUS
CAMPUS CENTER
2800 BUENA VISTA DRIVE
PASO ROBLES, CALIFORNIA

SUBJECT: Geotechnical Engineering and Geologic Hazards Report

CONTRACT
REF: Revised Proposal to a Provide a Geotechnical Engineering Investigation, a Soil Corrosivity Study, and a Geologic Hazards Assessment, Cuesta College- North County Campus, Campus Center, by Earth Systems Pacific, Doc. No.1411-148.PRP.REV, revised December 5, 2014

Dear Mr. Reece:

In accordance with your authorization, this geotechnical engineering and geologic hazards assessment report has been prepared for use in the development of plans and specifications for the new Campus Center at the Cuesta College North County Campus in Paso Robles, California. Preliminary geotechnical recommendations for site preparation, grading, utility trenches, foundations, slabs-on-grade, retaining walls, asphalt concrete (AC) pavement, drainage and maintenance, and observation and testing are presented herein. This report also describes the general geologic characteristics, identifies existing and potential geologic hazards, and discusses the impacts the geologic conditions may have upon the project. A geotechnical corrosivity study, which was subcontracted to HDR, Inc. of Claremont, California, is also included. Two bound copies and an electronic copy of this report are furnished for your use. As directed, an electronic copy has also been forwarded to Mr. Chris Blair and Ms. Monisha Adnani.

We appreciate the opportunity to have provided services for this project and look forward to working with you again in the future. If there are any questions concerning this report, please do not hesitate to contact the undersigned.

Sincerely,
Earth Systems Pacific

Fred J. Potthast, GE
Principal Engineer

Richard T. Gorman, CEG ENGINEERING GEOLOGIST
Principal Geologist

Copy to: Mr. Chris Blair
PMSM Architects, Attn.: Ms. Monisha Adnani

Doc. No.: 1503-207.SGR/sr

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

APPENDICES

1.0 INTRODUCTION

The construction of new two-story Campus Center is planned at the Cuesta College North County Campus in Paso Robles, California. The new Campus Center will be constructed on the north side of the existing campus. The approximately 24,000 square foot structure will be of steel frame construction, with steel stud and possibly masonry walls. It will be surrounded by landscaping, pedestrian flatwork and/or asphalt concrete (AC) paths. Conventional continuous and spread (pad) foundations with concrete slabs-on-grade are planned. Retaining walls for sitework, or connected to or forming part of the structure, and a maximum of 4 feet tall, may also be constructed. A grading plan was not available at the time this report was prepared; the recommendations of this report are based on the assumption that finish floor of the new structure will be at or up to 4 feet above the current grades in the building area. Cut or fill slopes, if any, are anticipated to be a maximum of 4 feet tall. Maximum continuous loads (DL+LL) of 4 klf and maximum isolated loads (DL+LL) of 150 kips have been assumed for the purposes of this proposal. An elevator with a hydraulic piston may be provided for access to the second floor. The building will be served by the existing campus utility systems, and the project will include relocation or addition of underground utility lines and asphalt concrete AC pavement for vehicles. To our knowledge, drainage basins or LID Improvements are planned.

2.0 SCOPE OF SERVICES

The scope of work for this report included the following: field reconnaissance by a geotechnical engineer and a certified engineering geologist; subsurface exploration; geotechnical and corrosivity (subcontracted to HDR, Inc.) laboratory testing of samples secured during the field investigation; geotechnical, geologic and corrosivity (subcontracted to HDR, Inc.) analyses of the data; and preparation of this report. The analysis and subsequent recommendations were based on preliminary information provided by the client, preliminary Site and Floor Plans provided by PMSM Architects (2014), and preliminary information provided by John A. Martin & Associates (2014).

This report and preliminary geotechnical recommendations are intended to comply with the considerations of Sections 1803A.1 through 1803A.7, J104.3 and J104.4, as applicable, of the 2013 California Building Code (CBC); California Geological Survey Note 48 (CGS 2013); Interpretation of Regulations (IR) Document A-4 (DSA 2011); and common geotechnical engineering and engineering geology practice in this area under similar conditions at this time. The geotechnical test procedures were accomplished in general conformance with the standards noted, as modified by common geotechnical engineering practice in this area under similar conditions at this time.

Preliminary geotechnical recommendations for site preparation, grading, utility trenches, foundations, slabs-on-grade, retaining walls, AC pavement sections, drainage and maintenance, and observation and testing are presented to guide the development of project plans and specifications. The results of corrosivity testing and analyses with mitigation recommendations are also included; this scope of work was subcontracted to HDR, Inc. It is our intent that this geotechnical/geologic report be used exclusively by the client in the preparation of plans and specifications. Application beyond this intent is strictly at the user's risk.

This report does not address issues in the domain of contractors such as, but not limited to, site safety, loss of volume due to stripping of the site, shrinkage of soils during compaction, excavatability, dewatering, shoring, temporary slope angles, construction means and methods, etc. Analyses of the soil for mold potential, man-made asbestos, lead, radioisotopes, hydrocarbons, or chemical properties (other than geotechnical corrosivity) are beyond the scope of this report. Ancillary features such as temporary access roads, fences, flag and light poles, signage; and nonstructural fills are not within our scope and are also not addressed.

As there may be unresolved geotechnical issues with respect to this project, the geotechnical engineer should be retained to provide consultation as the design progresses, to review project plans as they near completion, to assist in verifying that pertinent geotechnical issues have been addressed, and to aid in conformance with the intent of this report. In the event that there are any changes in the nature, design, or location of improvements, or if any assumptions used in the preparation of this report prove to be incorrect, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions of this report are verified or are modified in writing. The criteria presented in this report are considered preliminary until such time as any peer review or review by any jurisdiction has been completed, conditions are observed by the geotechnical engineer in the field during construction, and the recommendations have been verified as appropriate or modified in writing.

3.0 SITE SETTING

The Cuesta College North County Campus is on the east side of Buena Vista Drive and the north side of Dallons Drive in Paso Robles, California. The approximate location of the campus is indicated on the Vicinity Map in Appendix A. The new Campus Center will be constructed northwest of the existing Allied Health/Math/Science and Library/LRC buildings. The approximate orientation and location of the Campus Center is shown on the Boring Location Map in Appendix A. Currently, the site is occupied by portable buildings, AC-paved paths, landscaping, an unimproved driveway, and unimproved parking areas. The north half (approximately) of the building area is relatively flat with a slight slope to the northeast.

The approximate site coordinates obtained from the Google Earth website (Europa Technologies 2015) are latitude 35.6508 N, longitude 120.6703 W. The locations and dispositions of utility lines in the planned building area are unknown.

4.0 FIELD INVESTIGATION

On March 19, 2015, a total of five borings were drilled in accessible locations on the site, to a maximum of 26.5 feet below the existing surfaces. The borings were drilled with a Mobile Drill Model B-53 rig, equipped with 6-inch outside diameter hollow stem auger and an automatic trip hammer for sampling. The approximate locations of the borings are shown on the Boring Location Map in Appendix A. As the borings were drilled, soil samples were obtained using a ring-lined barrel sampler (ASTM D 3550-01/07 with shoe similar to D 2937-04). Standard penetration tests were also performed in the drill rig borings (ASTM D 1586-11) at selected depths. Bulk soil samples were obtained from the auger cuttings. The borings were backfilled with auger spoils.

Soils encountered in the borings were categorized and logged in general accordance with the Unified Soil Classification System and ASTM D 2488-09a. Copies of the boring logs and a Boring Log Legend are included in Appendix A. In reviewing the boring logs and legend, the reader should recognize that the legend is intended as a guideline only, and there are a number of conditions that may influence the soil characteristics as observed during drilling. These include, but are not limited to, the presence of cobbles or boulders, cementation, variations in soil moisture, presence of groundwater, and other factors. Consequently, the logger must exercise judgment in interpreting the subsurface characteristics, possibly resulting in soil descriptions that vary somewhat from the legend.

5.0 LABORATORY ANALYSIS

Selected ring samples were tested for unit weight and moisture (ASTM D 2937-10, modified for ring liners). Two bulk samples were tested for maximum density and optimum moisture content (ASTM D 1557-12) and expansion index (ASTM D 4829-11). Bulk samples were also tested for cohesion and angle of shearing resistance (ASTM D 3080-11, modified for consolidated, undrained conditions) and for "R" value and expansion pressure (ASTM D 2844-13). The geotechnical laboratory test results are presented in Appendix B.

Three samples of the soils encountered in the borings were submitted to HDR, Inc., for geotechnical corrosivity testing. HDR, Inc.'s Soil Corrosivity Study, which contains their results, evaluation and recommendations for mitigation, is presented in Appendix C.

6.0 GENERAL SUBSURFACE PROFILE

Similar subsurface conditions were found in the five borings drilled. The site is overlain by a layer of fill soil that, in the areas drilled, ranged in depth from about 1.5 to 3.5 feet. The fill consisted of loose to medium dense, light brown to dark brown clayey sand. It was underlain by the Paso Robles Formation. The Paso Robles Formation is a sedimentary formation that typically comprises mixtures of clay, silt, sand, and gravel. In some areas, the formation is characterized by rock-like structure, consistency and hardness, and is described as a sandstone, siltstone, claystone, or conglomerate material. In others, the material has more soil-like qualities, and is described as clayey sand, poorly graded sand, or well-graded sand with gravel. At this site, it generally displayed more soil-like characteristics, and consisted predominantly of clayey sands and well-graded sands, with varying percentages of gravel. In general, the gravel content increased with depth. Conditions ranged from loose to very dense; in Boring 1, the loose conditions extended to a depth of 7 feet below the existing ground surface. A layer of dense, cemented material was encountered in Boring 2 from 4 to 11.5 feet.

During drilling, the soils were classified as slightly moist to very moist. No free subsurface water was observed to the maximum depth explored of 26.5 feet.

Please refer to the logs in Appendix A for a more complete description of the subsurface conditions found in the borings.

7.0 GEOLOGY

Geologic Setting

The site lies within the southern Salinas River Valley, within the Coast Range Geomorphic Province of California. The Santa Lucia Mountain Range and Salinas River lie to the west. The topographic features observed during the site reconnaissance suggest that the site lies on an older flood plain of the Salinas River. In the vicinity of the site, the flood plain is approximately 100 feet higher in elevation than the base of the Salinas River. Older alluvium and sediments of the Paso Robles Formation surround the site (see the Geologic Map in Appendix B).

Based on the subsurface explorations, the site is underlain by continental sedimentary deposits of the Pliocene/Pleistocene-age Paso Robles Formation. The Paso Robles Formation is underlain by sediments of the Miocene age Monterey Formation. The Geologic map of the Paso Robles Quadrangle by Dibblee, Jr. (2004), shows the site being underlain by older alluvium, with a geologic contact between the Paso Robles Formation and older alluvium approximately 800 feet southeast of the building area. Our observations during the field investigation, however, suggest that the sediments encountered are Paso Robles Formation.

The trend of the Salinas River is predominantly controlled by the regional northwest trending Rinconada and San Andreas faults. Near the City of Paso Robles, the Salinas River is approximately 3/4-mile wide. Just north of Paso Robles, three tributaries converge with the river and widen its flood plain considerably to approximately 5-1/4 miles.

Faulting

Significant Faults

The San Andreas, Los Osos (Irish Hills segment), and Hosgri-San Simeon Faults are the most significant regional active faults within a 65-mile radius of the site that could affect the proposed Campus Center building and associated improvements during their anticipated lifespan. Regional faults and locations of historic earthquake events are depicted on the Historical Earthquake/Fault Map in Appendix D. The closest active fault to the site is the San Andreas Fault, located approximately 22 miles east. The closest fault to the site (regardless of activity) is the late Quaternary-age Rinconada Fault, located approximately 2 miles west.

San Andreas Fault

The San Andreas Fault, considered to be the most active fault in the general region, lies 22 miles to the east of the site. The San Andreas Fault undergoes a major change in character between Parkfield and Cholame. North of Cholame, the fault moves more or less constantly in a process called creep, whereas the south end of the fault is locked, moving only in very large earthquakes. The last major quake on this part of the fault was the 1857 event (magnitude 7.9). In the immediate vicinity of Parkfield, there is a 20-mile segment that is locked, generating an earthquake every 20 years or so on average. Dated quakes on this segment are 1881, 1901, 1922, 1934, and 1966, and are usually in the magnitude 5.5 to 6.0 range (Bakun 1988). A 6.0 magnitude earthquake occurred on this fault segment on September 28, 2004.

Los Osos Fault (Irish Hills segment)

The Irish Hills segment of the Los Osos Fault, at its closest point to the site, is approximately 26 miles to the southwest. The Los Osos Fault consists of four distinct segments. From northwest to southeast, these are the Estero Bay, the Irish Hills, the Lopez Reservoir, and the Newsome Ridge segments. PG&E (1988) suggests that the Irish Hills segment displays the best expressed geomorphic features, displacing late Pleistocene and Holocene deposits. The Irish Hills segment starts in the vicinity of Los Osos and extends to just past San Luis Obispo Creek. A two-mile long segment west of Laguna Lake is considered to be active (Treiman 1989) and is zoned as a State Earthquake Fault Zone under the Alquist-Priolo Act (Hart 1997). The Los Osos Fault comprises a northwest-trending series of high- and low-angle faults that exhibit a complex history of both strike-slip and reverse displacement. However, during late Quaternary, movement appears to have been primarily reverse displacement (PG&E 1988).

Hosgri-San Simeon Fault System

The Hosgri-San Simeon Fault System lies approximately 26 miles to the west of the site. A northwest-trending strike-slip fault, the San Simeon Fault extends from offshore of Ragged Point to just offshore of San Simeon Point, where it joins the northern end of the Hosgri Fault. From this point, the Hosgri Fault extends to an ocean shelf 2 miles west of Point Buchon, and then trends toward the Point Sal area. The fault system is considered active by the 2004 United States Geologic Survey (Jennings & Bryant 2010), based on Hall's claims of recent offset terrace deposits along San Simeon Cove, and also by a relocation of the 1927 "Lompoc Earthquake" onto the southern end of the Hosgri Fault (Hall, 1975, 1976, 1977).

On December 22, 2003, a 6.5 magnitude earthquake occurred approximately 2 miles northeast of San Simeon, California and approximately 20 miles northwest of the subject site. Analysis by the USGS and the University of California at Berkeley indicates that the event had a thrust (reverse-faulting) mechanism (Goel 2004). The earthquake occurred in the vicinity of the northern end of the Hosgri-San Simeon Fault.

Groundwater

At the time of drilling, the soils were logged as slightly moist to very moist. Groundwater was not encountered in any of the borings to the maximum depth explored of 26.5 feet.

8.0 SEISMICITY

Earthquake History

The historic seismicity in the site region was researched using EQSEARCH (Blake, updated 2012). The ground motion attenuation relation used was Boore, Joyner and Fumal (Boore, et al., 1997) for a 2013 CBC Site Class C – very dense soil and soft rock. EQSEARCH is a custom catalog of historical Central California earthquakes. This catalog computes the epicentral distance from the selected site to each of the earthquakes within the specified search area. The epicentral distances should be considered estimates, particularly for earthquake data prior to 1932, when modern instruments were first used to record earthquake data. The parameters used for the search consisted of earthquake Richter magnitudes ranging from 5.0 to 9.0 that occurred within a 65-mile radius of the site, from 1800 to December 2012. The site coordinates used in this search were latitude 35.3291 N and longitude 120.7436W (Europa Technologies 2015). The Historical Earthquake/Fault Map in Appendix D depicts faults within the general region of the project site, as well as historical earthquake epicenters and their magnitudes.

The results of the search indicated that within the given parameters, 54 earthquakes have occurred (see the Historical Earthquake/Fault Map in Appendix D). The highest peak horizontal ground acceleration (PGA) estimated to have occurred at the site from those historical earthquakes was 0.11g. This earthquake was located approximately 53 miles east and was known as the "1857 Earthquake" on the San Andreas Fault. The closest earthquake to the site had a 5.0 magnitude and produced an estimated peak horizontal ground acceleration of 0.077g at the site, located 11miles south of the site. Earthquake magnitudes and locations returned by the search within the site vicinity are plotted on the Historical Earthquake/Fault Map in Appendix D.

Design Acceleration Parameters

The site is in a region of generally high seismicity and has the potential to experience strong ground shaking from earthquakes on regional or local causative faults. The site is not in a State of California Earthquake Fault Zone (Bryant & Hart 1997 rev. 2007) or in a 2013 CBC Site Class E or F category. The San Luis Obispo County Department of Planning and Building Permit View web site (2015) indicates that the site is not located within a high liquefaction hazard zone, but it is in a high landslide zone. However, the site is relatively flat with no significant slopes on or immediately adjacent to the site, therefore we do not agree with this classification by San Luis Obispo County. According to 2013 CBC Section 1616A 1.3, the site is assigned to Seismic Design Category D as the site's mapped spectral response acceleration parameter at a 1 second period (S_1) is 0.512g, which is less than 0.75g. The ASCE 7-10 Site Design Response Parameters are shown in the following table. Based on the above parameters, a site specific response analysis was not warranted to analyze the ground motion hazard at the site. To characterize the seismicity at the site and to provide seismic design parameters for the architect/engineer, a General Procedure Ground Motion Analysis was performed to calculate the ground motions at the site. The ground motions were obtained from the United States Geological Survey Earthquake Hazards Program website (USGS 2015) using the 2013 ASCE 7-10 Standard Analysis Method, for Site Class C. The results of this analysis are presented in the following table.

SUMMARY OF DESIGN RESPONSE ACCELERATION PARAMETERS

Mapped Spectral Response Acceleration for Site Class B		Site Coefficients for Site Class C		Adjusted MCE Spectral Response Accelerations for Site Class C		Design Spectral Response Accelerations for Site Class C	
Seismic Parameter	Value (g)	Site Coefficient	Value	Seismic Parameter	Value (g)	Seismic Parameter	Value (g)
S_S	1.393	F_a	1.000	S_{MS}	1.393	S_{DS}	0.928
S_1	0.512	F_v	1.300	S_{M1}	0.665	S_{D1}	0.444
Peak Mean Ground Acceleration (PGA_M) 0.516 g							

Seismic Design Category

Section 1613A.3.5 of the 2013 CBC indicates that structures will be assigned to Category D unless $S_1 \geq 0.75$. The S_1 calculated for the site is 0.512g; therefore, the site would be a Seismic Design Category D.

9.0 GEOLOGIC HAZARDS

Surface Ground Rupture

Surface ground rupture generally occurs at sites that are traversed by, or lie very near to, a causative fault. The site is not located within a State Earthquake Fault Zone (Bryant & Hart 1997, rev. 2007), and there are no mapped faults crossing or adjacent to the site. The closest mapped active fault to the site is the San Andreas Fault, located approximately 22 miles east. Therefore, the potential for surface ground rupture to occur at the site is very low.

Liquefaction

The term liquefaction refers to the liquefied condition and subsequent softening that can occur in soils when they are subjected to cyclic strains, such as those generated during a seismic event. Previous studied have concluded that liquefaction within the upper 50 feet of soil can potentially affect improvements at the ground surface. Due to the shallow depth to the Paso Robles Formation, and assuming the earthwork program recommended in the "Grading" Section of this report is successfully completed, the potential for liquefaction to occur is considered to be nil.

Seismically Induced Settlement

Seismically induced settlement of sufficient magnitude to cause structural damage is normally associated with poorly consolidated, predominantly sandy soils, or variable consolidation characteristics within the building areas. Due to the shallow depth to the Paso Robles Formation, and assuming the earthwork program recommended in the "Grading" Section of this report is successfully completed, the potential for seismically induced settlement to occur at the site is considered to be nil.

Slope Stability

The site is generally flat with no significant slopes on or adjacent to it; therefore, the potential for slope instability to impact the site is considered to be nil.

Flooding

According to the Federal Emergency Management Agency (FEMA 2012), the site is not located in a special flood hazard area (see the FEMA Flood Zone Map in Appendix D).

Naturally Occurring Asbestos

Asbestos-bearing rock units within the Central Coast area generally consist of serpentinite, ultra-mafic rock units consisting of olivine-hornblende and some schist metamorphic rock units. There are no naturally occurring asbestos-bearing rock formations (serpentinite or ultramafic rock) on the site. The site is underlain predominantly by the Paso Robles Formation, which is not an asbestos-bearing geologic unit. Therefore, the potential for naturally-occurring asbestos to occur on the site is nil.

Radon

Radon is a naturally-occurring, gaseous element formed by the radioactive decay of radium atoms, and is associated with certain rock or soil units. The occurrence of radon correlates with the presence of specific minerals, and its concentrations in soil or rock will vary depending on the mineralogy of the surrounding bedrock, temperature, barometric pressure, moisture and other factors. According to Special Report 208, by the California Geological Survey (Churchill 2008) radon is most commonly found in areas of San Luis Obispo County that are underlain by bedrock of the Monterey formation; however, it can also be associated with other geologic units. The site is underlain by the Paso Robles Formation and, according to Special Report 208, there is a moderate potential for radon to occur at the site. A copy of the Radon Map from Special Report 208 is included in Appendix D.

10.0 CONCLUSIONS

Geology

It is our opinion that there are no significant local or regional geologic conditions or hazards that would preclude development of the site with the proposed Campus Center and other improvements as described in the "Introduction" Section of this report, provided the recommendations contained herein are implemented in the design and construction.

Site Geology

The site is underlain by clayey sands and well-graded sands of the Paso Robles Formation, overlain by fill soil up to 3.5 feet deep in the areas drilled.

Groundwater

Groundwater was not encountered in any of the borings to the maximum depth explored of 26.5 feet.

Slope Stability

As the site is generally flat with no significant slopes on or adjacent to it, the potential for slope instability to impact the site is very low to nil.

Seismicity

The site is located within the seismically active Southern California area, and moderate to severe ground shaking can be expected during the life of the proposed project. The largest historical mean peak horizontal acceleration estimated to have occurred in the vicinity of the site was 0.11g.

Surface Ground Rupture

The site is not located in any State Earthquake Fault Zones and there are no mapped faults crossing the site. The closest mapped active fault to the site is the San Andreas Fault, located approximately 22 miles east. Therefore, the potential for surface ground rupture to occur at the site is very low.

Liquefaction and Seismically Induced Settlement

An earthwork program is recommended to densify the majority of the upper soil (see the "Grading" Section of this report). Assuming the recommended earthwork program is successfully completed, and considering the underlying generally medium dense to dense Paso Robles formation, it is our opinion that the potential for liquefaction and seismically induced settlement to occur is nil.

Flooding

The site is not located in a special flood hazard area.

Naturally Occurring Asbestos

There are no naturally occurring asbestos-bearing rock formations (serpentinite or ultra-mafic rock) on the site. The site is underlain by the Paso Robles Formation, which is not an asbestos-bearing geologic unit. Therefore, the potential for naturally-occurring asbestos on the site is nil.

Radon

The Radon Potential Hazard Map for Western San Luis Obispo County (Churchill 2008) indicates the site is located within moderate radon potential zone for indoor radon levels. The architect/engineer should consider this potential in the design of the proposed improvements.

Geotechnical Engineering

In our opinion, the site is suitable, from a geotechnical engineering standpoint, for the proposed Campus Center and associated site improvements, as described in the "Introduction" Section of this report, provided the recommendations contained herein are implemented in the design and construction. The primary geotechnical engineering concerns are the presence of fill soils, the potential for differential settlement in the planned building area, and the erosion and the corrosive potential of the site soils. Provided that the building areas are prepared as recommended in the "Grading" Section of this report, conventional continuous and spread (pad) foundations may be used to support the proposed building.

Fill soils were encountered in all of the borings, and extended to a maximum depth of 3.5 feet in the areas drilled. To our knowledge, this fill is undocumented, i.e. there are no records pertaining to its placement and compaction. Typically, it is not advisable to rely upon undocumented fill soils for foundation support. The fill soils should be removed as part of the earthwork program, and replaced as properly moisture-conditioned and compacted engineered fill prior to construction of foundations.

The density of the Paso Robles Formational material was found to be variable, ranging from "loose" to "very dense." In Boring 1, the loose conditions were observed to extend to a depth of 7 feet, while soils at comparable depths in other parts of the building area were logged as dense. Differential settlement can occur when a structure's foundation spans materials having variable compression characteristics, such as the loose to medium dense conditions found in the upper soils in the proposed building areas. Such variable conditions could stress and possibly damage building foundations, often resulting in severe cracks and displacement. It is possible that the loose conditions found in Boring 1 are anomalous and isolated, and do not extend for a significant area beyond the boring. Therefore, during site preparation operations and prior to grading, the area in the vicinity of Boring 1 should be further explored, and recommendations for additional earthwork in this limited area should be provided by the geotechnical engineer, if determined to be necessary.

The site soils are considered to be erodible. It is essential that all surface drainage be controlled and directed to appropriate discharge points, and that surface soils, particularly those disturbed during construction, are stabilized by vegetation or other means *during and following construction*.

As indicated in the Soil Corrosivity Study by HDR, Inc. (see Appendix C), electrical resistivities of the samples tested were in the mildly corrosive category with as received moisture contents; when saturated, the resistivities were in the moderately corrosive category. Soil pH values were neutral to mildly alkaline. The soluble salt contents of the soils were low. Soil ammonium and nitrate concentrations were low. The soils were classified as moderately corrosive to ferrous metals. Please refer to the Soil Corrosivity Study in Appendix C for a complete summary of the test results, and recommendations for mitigation.

Expansion index testing yielded a results of 3 for both the clayey sand and clayey sand soils of the Paso Robles Formation. Per 2013 CBC Section 1803A.5.3, these soils are not considered to be expansive. Therefore, no special measures with respect expansive soil conditions are considered necessary.

11.0 PRELIMINARY GEOTECHNICAL RECOMMENDATIONS

The following recommendations are for the Campus Center and the other site improvements as described in the "Introduction" Section of this report. If locations, elevations, structural loads, etc., change, the recommendations contained herein may require modification. In developing the following recommendations, it was assumed that irrigated landscaping or flatwork that would keep the soils at relatively uniform, year-round moisture will be installed for a zone of at least five feet around the perimeter of all improvements.

Two distinct types of Portland cement concrete (PCC) slabs-on-grade are discussed in the following recommendations. The building's interior slabs are defined as "slabs-on-grade." Sidewalks that will not support vehicles are referred to as "exterior pedestrian flatwork." AC paths may also be utilized for pedestrian access; these paths are different than AC pavement, which is intended to support vehicles.

Unless otherwise noted, the following definitions are used in the recommendations presented below. Where terms are not defined, definitions commonly used in the construction industry are intended.

- **Building Area** – The building area is defined as the area within and extending a minimum of 5 feet beyond the perimeter of the foundations for the Campus Center building. The building area includes any retaining walls, covered walkways or other improvements that are connected to the structure and that are intended to act in a manner similar to it.

- **Exterior Pedestrian Flatwork and AC Areas** – The areas within and extending a minimum of 1 foot beyond the limits of all exterior pedestrian flatwork and any areas to receive AC paths or AC pavement.
- **Sitework Retaining Wall Areas** – The areas within and extending a minimum of 3 feet beyond the foundation limits of any sitework retaining walls.
- **Grading Area** – The entire area to be graded, including the building and exterior pedestrian flatwork areas, AC paths and AC pavement areas, and sitework retaining wall areas.
- **Existing Grade:** Elevations of the site that existed as of the date of this report.
- **Finish Pad Grade:** The elevation in the building area where earthwork operations are typically considered to be complete. It does not include any sand or gravel that might be placed below slabs-on-grade in association with vapor protection for the slabs.
- **Scarified:** Plowed or ripped in two orthogonal directions to a depth of not less than 12 inches.
- **Moisture Conditioned:** Adjusting the soil moisture to optimum moisture content, or just above, prior to application of compactive effort.
- **Compacted/Recompacted:** Soils placed in level lifts not exceeding 8 inches in loose thickness and compacted to a minimum of 90 percent of maximum dry density. Based on maximum dry density by ASTM D 1557-12 and field density by ASTM D 6938-10, or other methods acceptable to the geotechnical engineer and jurisdiction.

Site Preparation

1. The ground surface in the grading area should be prepared for construction by removing the existing portable buildings, existing flatwork and AC paths, all existing fill, and all other improvements, vegetation, large roots, debris, organic topsoil, and other deleterious materials. Existing utility lines that will not remain in service should be either removed or abandoned. The appropriate method of abandonment will depend upon the type and depth of the utility. Recommendations for abandonment can be made as necessary.

2. Voids created by the removal of materials or utilities described above should be called to the attention of the geotechnical engineer. No fill should be placed unless the underlying soil has been observed by the geotechnical engineer.

Grading

1. Following site preparation, all existing fill in the building area should be removed to a level plane at the deepest point of the fill. The resulting level plane should be scarified, moisture conditioned and compacted.

2. Due to the loose conditions found to approximately 7 feet in Boring 1, the area in the vicinity of Boring 1 should be further explored at the time of construction, and recommendations for additional earthwork in this limited area should be provided by the geotechnical engineer, if determined to be necessary.

3. Following site preparation and removal of all existing fill, and following any excavations to grade or prior to placement of fill, the soil in any exterior pedestrian flatwork and AC areas, and in all other grading areas, should be scarified to a minimum depth of 1 foot, moisture conditioned and recompacted.

4. Voids created by dislodging cobbles and/or debris during scarification should be backfilled and recompacted, and the dislodged materials should be removed from the work area.

5. Previously removed site soils and other similar soils may be placed used as fill. Any fill soils used within the building area should be nonexpansive. Nonexpansive materials are defined as soils that fall in the GW, GP, GM, GC, SP, SW, SC and SM categories per ASTM D 2487-11, and that have an expansion index of 10 or less (ASTM D 4829-11).

6. Imported soils used in the building, sitework retaining wall, exterior pedestrian flatwork, AC path and AC pavement areas should have strength and expansion qualities equal to or better than the site soils. Imported soils should not exceed the geotechnical corrosivity potential of the site soils. See the soil Corrosivity Study in Appendix C for the corrosivity parameters of the site soils. Proposed imported materials should be reviewed by the geotechnical engineer before being brought to the site, and on an intermittent basis during placement.

7. All materials used as fill should be cleaned of any debris and rocks larger than 3 inches in diameter. When fill material includes rocks, the rocks should be placed in a sufficient soil matrix to ensure that voids caused by nesting of the rocks will not occur and that the fill can be properly compacted.

8. The recommended soil moisture content should be maintained throughout construction, and during the lives of the structures and sitework improvements. Failure to maintain the soil moisture content can result in desiccation cracks and disturbance, which are an indication of degradation of the soil compaction. If desiccation cracks are allowed to develop, or if soils near improvements such as foundations, flatwork, etc. are otherwise disturbed, damage to those improvements may result. Soils that have cracked or are otherwise disturbed should be removed, moisture conditioned, and recompacted.

9. Permanent cut and fill slopes should not exceed a 2:1 (horizontal to vertical) angle.

10. The architect/engineer should designate any special measures for grading operations, if needed, to mitigate the moderate potential for indoor radon levels.

Utility Trenches

1. Utility trenches adjacent to foundations should not be excavated within the zone of foundation influence, as shown in Typical Detail A in Appendix E.

2. Utilities that must pass beneath foundations should be placed with properly compacted utility trench backfill and the foundation should be designed to span the trench.

3. A select, noncorrosive, granular, easily compacted material should be used as bedding and shading immediately around utilities. The site soil may be used for trench backfill above the select material.

4. In general, trench backfill should be compacted to a minimum of 90 percent of maximum dry density. The final foot of trench backfill in slab-on-grade areas and below subgrade and all aggregate base in AC pavement areas should be compacted to a minimum of 95 percent of maximum dry density. A minimum of 85 percent of maximum dry density will generally be sufficient where trench backfill is located in landscaped or other unimproved areas, where settlement of trench backfill would not be detrimental.

5. Prior to applying compactive effort, soils should be moisture conditioned. Trench backfill should be placed in level lifts not exceeding 6 inches in loose thickness and compacted to the minimums recommended above.

6. Compaction of trench backfill by jetting or flooding is not recommended at this site due to the potential for cemented layers and very dense soils. However, to aid in *encasing* utility conduits, particularly corrugated drain pipes, and multiple, closely-spaced conduits in a single trench in the bedding and shading material, jetting or flooding may be useful. Flooding or jetting should only be attempted with extreme caution, and any flooding or jetting operation should be subject to review by the geotechnical engineer.

7. Long-term settlement of properly compacted sand or other nonexpansive imported material should be assumed to be about 0.25 to 0.5 percent of the depth of the backfill. Where trenches are backfilled with site soils, the anticipated settlement would be about twice that of sand or nonexpansive backfill. Improvements that are constructed over or near trenches should be designed to accommodate the potential for settlement.

8. The Soil Corrosivity Study by HDR, Inc. in Appendix C should be used by the architect/engineer in specifying appropriate corrosion protection measures for utility improvements.

9. The architect/engineer should designate any special measures for utility trenches, if needed, to mitigate the moderate potential for indoor radon levels.

10. The recommendations of this section are minimums only, and may be superseded by the architect/engineer based upon soil corrosivity or the requirements of pipe manufacturers, utility companies or the governing jurisdiction.

Foundations

1. The Campus Center may be supported by continuous and spread footings bearing in firm recompacted soils. Minimum overall foundations depth should be 18 inches below lowest adjacent grade. Spread footings should be at least 24 inches square.

2. Minimum continuous footing reinforcement should consist of two No. 4 rebars, one at the top and one at the bottom. Spread footings should be reinforced in accordance with the requirements of the architect/engineer.

3. Footings bearing in firm recompacted soil may be designed using maximum allowable bearing capacities of 2,000 psf dead load and 3,000 psf dead plus live loads. Using these criteria, maximum settlement and differential settlement are expected to be less than 1/2-inch and less than 3/8-inch in 25 feet, respectively.

4. To calculate resistance to lateral loads, please see the values presented in the "Retaining Walls" Section of this report. Lateral capacity is based on the assumption that any backfill adjacent to foundations has been properly compacted. Passive and friction components of resistance may be combined in the analysis without reduction to either value.

5. Foundation excavations should be observed by the geotechnical engineer prior to placement of reinforcing steel. Soils in footing excavations should be lightly moistened and no desiccation cracks should be present prior to concrete placement.

6. The architect/engineer should designate any special measures for foundations, if needed, to mitigate the moderate potential for indoor radon levels.

7. The Soil Corrosivity Study by HDR Engineering, Inc. in Appendix C should be used by the architect/engineer in specifying appropriate corrosion protection measures for all foundation elements.

Slabs-on-Grade

Interior Slabs-On-Grade

1. Interior slabs-on-grade should have a minimum thickness of 4 full inches. They should be reinforced and doweled to foundations per the specifications of the architect/engineer. At a minimum, interior slabs should be reinforced with No. 3 rebar at 24 inches on center each way. All structural slabs should contain minimum rebar meeting the criteria of ACI 318, Section 7.12.2 (ACI 2011). At a minimum, foundation dowels should be lap spliced to the slab rebar. The size and spacing of the dowels should match the size and spacing of the slab rebar.

Exterior Pedestrian Flatwork

1. Exterior pedestrian flatwork should have a minimum thickness of 4 full inches. Minimum reinforcement for exterior pedestrian flatwork placed over nonexpansive imported soils should consist of No. 3 rebar placed at 24 inches on-center each way.

2. Flatwork should be constructed with frequent joints to allow articulation as the flatwork moves in response to seasonal soil temperature and moisture variations. The soil underlying the flatwork should be moisture conditioned prior to casting the flatwork.

3. Flatwork at doorways, and at other areas where maintaining the elevation of the flatwork is desired, should be doweled to the perimeter foundation, at a minimum, by No. 3 dowels lapped to the flatwork rebar at 24 inches on center. In other areas, the flatwork may be doweled to the foundation or the flatwork may be allowed to "float free," at the discretion of the architect/engineer. Flatwork that is intended to float free should be separated from foundations by a felt joint or other means.

Moisture Vapor Transmission

1. Due to the current use of impermeable floor coverings, water-soluble flooring adhesives, and the speed at which buildings are now constructed, moisture vapor transmission through slabs is a much more common problem than in past years. Where moisture vapor transmitted from the underlying soil would be undesirable, slabs should be protected from subsurface moisture vapor. A number of options for vapor protection are discussed below; however, the means of vapor protection, including the type and thickness of the vapor retarder, if specified, are left to the discretion of the architect/engineer.

2. Where specified, vapor retarders should conform to ASTM Standard E 1745-11. This standard specifies properties for three performance classes; Class A, B and C. The appropriate class should be selected based on the sensitivity of floor coverings to moisture intrusion and the potential for damage to the vapor retarder during placement of slab reinforcement and concrete.

3. Several recent studies, including those of American Concrete Institute (ACI) Committee 302 (ACI 2004), have concluded that excess water above the vapor retarder increases the potential for moisture damage to floor coverings and could increase the potential for mold growth or other microbial contamination. The studies also concluded that it is preferable to eliminate the typical sand layer beneath the slab and place the slab concrete in direct contact with a Class A vapor retarder, particularly during wet weather construction. However, placing the concrete directly on the vapor retarder requires special attention to using the proper vapor retarder, a very low water-cement ratio in the concrete mix, and special finishing and curing techniques.

4. Probably the next most effective option would be the use of vapor-inhibiting admixtures in the slab concrete mix and/or application of a sealer to the surface of the slab. This would also require special concrete mixes and placement procedures, depending upon the recommendations of the admixture or sealer manufacturer.

5. Another option that may be a reasonable compromise between effectiveness and cost considerations is the use of a subslab vapor retarder protected by a sand layer. If a Class A vapor retarder is specified, the retarder can be placed directly on the compacted site soil. The retarder should be covered with a minimum 2 inches of *clean* sand. If a less durable vapor retarder is specified (i.e. ASTM E 1745-11, Class B or C), a minimum of 4 inches of clean sand should be provided, and the retarder should be placed in the center of the clean sand layer. Clean sand is defined as a well or poorly graded sand (ASTM D 2487-11) of which less than 3 percent passes the No. 200 sieve.

6. Regardless of the underslab vapor retarder selected, proper installation of the retarder per ASTM E 1643-11 is critical for optimum performance. Where practicable, the vapor retarder should be placed a minimum of 1 inch above the flow line of the drainage path surrounding the structures, or 1 inch above the area drain grates if area drains are used to collect runoff around the structures. All seams should be properly lapped, and all seams and utility penetrations should be properly sealed in accordance with the vapor retarder manufacturer's recommendations.

7. If the sand is used between the vapor retarder and the slab, it should be moistened only as necessary to promote concrete curing; saturation of the sand should be avoided, as the excess moisture would be on top of the vapor retarder, potentially resulting in vapor transmission through the slab for months or years.

8. The architect/engineer should designate any special measures to be used in conjunction with moisture vapor transmission protection, if needed, to mitigate the moderate potential for indoor radon levels.

9. Positive drainage away from the building should be maintained; see the "Drainage and Maintenance" Section of this report for additional discussion of this issue. If water is allowed to pond near the structure, it may seep into the ground and migrate laterally through cracks or utility penetrations in the foundation, ultimately gaining access above the vapor retarder.

Slabs-on-Grade - General

1. To reduce shrinkage cracks in all interior and exterior slabs-on-grade, the concrete aggregates should be of appropriate size and proportion, the water/cement ratio should be low, the concrete should be properly placed and finished, contraction joints should

be installed, and the concrete should be properly cured. This is particularly applicable to slabs that will be cast directly upon a vapor retarder and those that will be protected from transmission of vapor by use of admixtures or surface sealers. Concrete materials, placement, and curing specifications should be at the direction of the architect/engineer; AC 302.1R-04 (ACI 2004) is suggested as a resource for the architect/engineer in preparing such specification.

2. To provide stability for curbs adjacent to exterior pedestrian flatwork, they should be set back a minimum distance equal to one-third the height of any adjacent descending slope, but not less than 5 feet from the tops of slopes. Alternately, curbs may be deepened to provide stability. The geotechnical engineer should review, on an individual basis, any situation where curbs must be deepened to meet this recommendation.

3. The architect/engineer should designate any special measures to be used for slabs-on-grade, if needed, to mitigate the moderate potential for indoor radon levels.

4. The Soil Corrosivity Study by HDR, Inc. in Appendix C should be used by the architect/engineer in specifying appropriate corrosion protection measures for all slabs-on-grade.

Retaining Walls

1. All retaining walls should be founded in firm soil that has been recompacted per the "Grading" Section of this report. Foundations for all retaining walls should have minimum overall depths (not including any keyway) of 18 inches below lowest grade within 6 feet laterally of any adjacent slope.

2. Retaining wall design may be based on the following parameters:

Active equivalent fluid pressure (on site soil or imported)

Nonexpansive materials.....35 pcf

At-rest equivalent fluid pressure (on site soil or imported)

Nonexpansive materials.....55 pcf

Passive equivalent fluid pressure .....400 pcf

Maximum toe pressure..... 3,000 psf

Coefficient of sliding friction..... 0.40

3. No surcharges are taken into consideration in the values presented in Paragraph 2. The maximum toe pressures presented are *allowable* values; no factors of safety, load factors or other factors have been applied to the remaining values. With the exception of the maximum toe pressure, these values will require application of appropriate factors of safety, load factors, and/or other factors as deemed appropriate by the architect/engineer.

4. If the active or at-rest pressures presented in Paragraph 2 for *imported nonexpansive materials* are utilized for design of retaining walls, the nonexpansive materials should be used exclusively as backfill above a 1:1 plane extended upward from the back of the wall footing to approximately 1 foot from the top of the wall backfill, unless otherwise recommended by the geotechnical engineer. The upper foot should be backfilled with native soil, except in areas where AC pavement or exterior pedestrian flatwork will abut the top of the wall. In such cases, the gravel should extend to the nonexpansive material, aggregate base, or other material below the improved surface, as appropriate.

5. The active and at-rest pressures presented in Paragraph 2 are applicable to a horizontal retained surface behind the wall. Walls having a retained surface that slopes upward from the wall should be designed for an additional equivalent fluid pressure of 1 pcf for the active case and 1.5 pcf for the at-rest case, for every degree of slope inclination.

6. It is assumed that retaining wall heights will not exceed 5 feet.

7. Section 1803A.5.12.1 of the 2013 CBC requires that dynamic seismic lateral earth pressures be provided by the geotechnical engineer for walls retaining more than 6 feet of backfill. As the walls for this project will not retain more than 6 feet, design for seismic lateral earth pressures is not required.

8. Long-term settlement of properly compacted, imported nonexpansive material used for retaining wall backfill should be assumed to be about 0.25 to 0.5 percent of the depth of the backfill; long-term settlement of properly compacted site soil retaining wall backfill would be about twice that of sand or gravel backfill. Improvements that are constructed near the tops of retaining walls should be designed to accommodate long-term settlement.

9. All retaining walls should be drained with perforated pipe encased in a free-draining gravel blanket. The pipe should be placed perforations downward, and should discharge in a nonerosive manner away from foundations and other improvements. The gravel blanket should have a width of approximately 1 foot and should extend upward to approximately 1 foot from the top of the wall backfill. The upper foot should be backfilled with native soil, except in areas where AC pavement or exterior pedestrian flatwork will abut the top of the wall. In such cases, the gravel should extend to the nonexpansive material, aggregate base, or other material below the improved surface, as appropriate. To reduce infiltration of the soil into the gravel, a permeable synthetic filter fabric conforming to the Standard Specifications Section 88-1.02B – Class C (Caltrans 2010), should be placed between the two. Manufactured synthetic drains, such as Miradrain or Enkadrain are acceptable alternatives to the use of gravel, provided that they are installed in accordance with the recommendations of the manufacturer.

10. Where weep hole drainage can be properly discharged, the perforated pipe may be omitted in lieu of weep holes on maximum 4-foot centers. A filter fabric as described above should be placed between the weep holes and the drain gravel.

11. Walls facing areas where moisture transmission through the wall would be undesirable should be *thoroughly* waterproofed in accordance with the specifications of the architect/engineer.

12. The architect/engineer should bear in mind that retaining walls by their nature are flexible structures, and that surface treatments on walls often crack. Where walls are to be plastered or otherwise have a finish applied, the flexibility should be considered in determining the suitability of the surfacing material, spacing of horizontal and vertical control joints, etc. The flexibility should also be considered where a retaining wall will abut or be connected to a rigid structure, and where the geometry of the wall is such that its flexibility will vary along its length.

13. Foundation excavations should be observed by the geotechnical engineer prior to placement of reinforcing steel. Soils in footing excavations should be lightly moistened and no desiccation cracks should be present prior to concrete placement.

14. The architect/engineer should designate any special measures to be used for retaining walls, if needed, to mitigate the moderate potential for indoor radon levels.

15. The Soil Corrosivity Study by HDR, Inc. in Appendix C should be used by the architect/engineer in specifying appropriate corrosion protection measures for all retaining walls.

Asphalt Concrete Pavement

1. The following AC pavement sections are based upon the tested R-value, or resistance to deformation under repeated loading, of 48. The pavement sections are based on assumed Traffic Indices (TIs) of 5.0 through 7.0. Determination of the appropriate TI for specific areas of the project is left to others. The AC and aggregate base (AB) thicknesses were calculated in accordance with the method presented in Section 600 of the "Highway Design Manual" (Caltrans 2008), and are for compacted material. Normal Caltrans construction tolerances should apply.

Traffic Index	AC	AB
5.0	2.75"	4.0"
5.5	3.00"	4.0"
6.0	3.25"	6.0"
6.5	3.75"	6.0"
7.0	4.00"	6.0"

2. Paths for pedestrian access may be constructed of AC over AB. Design methods for AC pavement do not typically consider pedestrian loading only. Therefore, the section design is typically based on local experience and anticipated life span. For this application, a minimum pavement section of 1.5 to 2.0 inches of AC over 2 to 4 inches of AB is considered appropriate.

3. AB should conform to the requirements of Section 26 of the Standard Specifications (Caltrans 2010). AC should conform to the requirements of Section 32 of the Standard Specifications (Caltrans 2010).

4. The upper 12 inches of subgrade and all AB in pavement areas should be compacted to a minimum of 95 percent of maximum dry density. Subgrade and aggregate base should be firm and unyielding when proofrolled with heavy, rubber-tired grading equipment prior to continuing construction.

5. The governing jurisdiction may have additional requirements for pavement that could take precedence over the above recommendations.

Drainage and Maintenance

1. Per Section 1804A.3 of the 2013 CBC, unpaved ground surfaces should be *finish graded* to direct surface runoff away from foundations and other improvements at a minimum 5 percent grade for a minimum distance of 10 feet. The site should be similarly sloped to drain away from foundation, slopes, and other improvements during construction. Where this is not practicable due to other improvements, etc., swales with improved surfaces, area drains, or other drainage facilities, should be used to collect and discharge runoff.

2. Any eaves of the building should be fitted with roof gutters. Runoff from flatwork, roof gutters, downspouts, planter drains, area drains, etc. should discharge in a nonerosive manner away from foundations and other improvements in accordance with the requirements of the governing agencies. Erosion protection should be placed at all discharge points unless the discharge is to a pavement surface.

3. To reduce the potential for planter drainage gaining access to subslab areas, any raised planter boxes adjacent to foundations should be installed with drains and sealed sides and bottoms. Drains should also be provided for areas adjacent to the structure that would not otherwise freely drain.

4. The on-site soils are erodible; stabilization of soils disturbed during construction by vegetation or other means *during* and *following* construction, is essential to reduce erosion damage. Care should be taken to establish and maintain vegetation. The landscaping should be planned and installed to maintain the surface drainage recommended above. Surface drainage should also be maintained during construction.

5. Maintenance of drainage and other improvements is critical to the long-term stability of the site and the integrity of the structures. Site improvements should be maintained on a regular basis.

6. All exterior drains and drain outlets should be maintained to be free-flowing. Vegetation and erosion matting (if utilized) should be maintained or augmented as needed. Irrigation systems should be maintained so that soils around structures and on slopes are kept at a relatively uniform year-round moisture content, and are neither over-watered nor allowed to dry and desiccate.

7. To reduce the potential for disruption of drainage patterns and undermining of structures, fill areas, slopes, etc., all rodent activity should be aggressively controlled.

8. The architect/engineer should designate any special drainage and maintenance measures to be used, if needed, to mitigate the moderate potential for indoor radon levels.

Observation and Testing

1. It must be recognized that the recommendations contained in this report are based on a limited number of borings and rely on continuity of the subsurface conditions encountered.

2. It is assumed that the geotechnical engineer will be retained to provide consultation during the design phase, to interpret this report during construction, and to provide construction monitoring in the form of testing and observation.

3. At a minimum, the geotechnical engineer should be retained to provide:
   - Review of final plans, details and specifications
   - Professional observation during grading, trench backfill, and foundation construction
   - Determination of the need for extended overexcavation in the vicinity of Boring 1
   - Oversight of special inspection and compaction testing grading and backfill

4. Special inspection of grading and backfill should be provided as per Section 1704A.7 and Table 1704A.7 of the CBC. The special inspector should be under the direction of the geotechnical engineer. At a minimum, the following items should be inspected and/or tested by the special inspector:
   - Stripping and clearing of vegetation
   - Overexcavation of the building area to the recommended depth, and to any additional depth in the vicinity of Boring 1, if determined by the geotechnical engineer
   - Scarification and moisture conditioning of overexcavated areas
   - Scarification and moisture conditioning of exterior pedestrian flatwork, AC pavement and all other grading areas
   - Fill quality, placement, moisture conditioning and compaction
   - Utility trench backfill
   - Foundation excavations

5. A program of quality assurance should be developed prior to beginning construction. At a minimum, the program should include all geotechnical items shown on the testing and inspection schedule of the approved plans. It should also include any additional inspection items required by the engineer and/or the governing jurisdiction. These items should be discussed at a preconstruction site meeting among a representative of the owner, the geotechnical engineer, special inspector, the project inspector, the engineer, and contractors. The geotechnical engineer should be notified at least 48 hours prior to beginning grading operations.

6. Locations and frequency of compaction tests should be as per the recommendation of the geotechnical engineer at the time of construction. The recommended test location and frequency may be subject to modification by the geotechnical engineer, based upon soil and moisture conditions encountered, size and type of equipment used by the contractor, the general trend of the results of compaction tests, or other factors.

12.0 CLOSURE

This report is valid for the conditions, as they exist at this time for the type of project described herein. Our intent was to perform the investigation in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the locality of this project under similar conditions at this time. No representation, warranty, or guarantee is either expressed or implied. This report is intended for the exclusive use by the client as discussed in the "Scope of Services" Section. Application beyond the stated intent is strictly at the user's risk.

This report is valid for conditions as they exist at this time for the type of project described herein. The conclusions and recommendations contained in this report could be rendered invalid, either in whole or in part, due to changes in building codes, regulations, standards of geotechnical or construction practice, changes in physical conditions, or the broadening off knowledge. If Earth Systems Pacific is not retained to provide construction observation and testing services, it shall not be responsible for the interpretation of the information by others or any consequences arising therefrom.

If changes with respect to project type or location become necessary, if items not addressed in this report are incorporated into plans, or if any of the assumptions used in the preparation of this report are not correct, this firm shall be notified for modifications to this report. This firm should be retained early in the design process for the structure to provide geotechnical guidance as the design progresses. Any items not specifically addressed in this report shall comply with the CBC and the requirements of the governing jurisdiction.

The preliminary recommendations of this soils report are based upon the geotechnical conditions encountered at the site, and may be augmented by additional requirements of the architect/engineer, or by additional recommendations provided by the geotechnical engineer based on conditions exposed at the time of construction.

Thank you for this opportunity to have been of service. If you have any questions, please feel free to contact this office at your convenience.

End of Text

TECHNICAL REFERENCES

ACI (American Concrete Institute). 2004. "Guide for Concrete Floor and Slab Construction." *Document 302.1R04.*

ACI (American Concrete Institute). 2011. "Building Code Requirements for Structural Concrete." *Document 318.*

Al Atik, L. and Sitar, N. 2010 October. "Seismic Earth Pressures on Cantilever Retaining Structures." *Journal of Geotechnical and Geoenvironmental Engineering* 136 (10), American Society of Civil Engineers.

ASCE (American Society of Civil Engineers). 2013. *Minimum Design Loads for Buildings and other Structures (7-10, third printing), Standards ASCE/SEI 7-10.*

ASTM (American Society for Testing Materials). 2015. *Annual Book of ASTM Standards.*

Bakun, W. H. 1988. "The Earthquake Prediction Experiment at Absence, California." *Earthquakes and Volcanoes* 20 (2), United States Geological Survey.

Blake, T. F. [2000] 2012. EQSEARCH: A Computer Program for the Estimation of Peak Horizontal Acceleration from California Historical Earthquake Catalogs [software]. http://thomasfblake.com.

Boore, D. M., W. B. Joyner, and T. E. Fumal. 1997. "Empirical Near-Source Attenuation Relations for Horizontal and Vertical Components of Peak Ground Acceleration, Peak Ground Velocity, and Pseudo-Absolute Acceleration Response Spectra." *Seismological Research Letters* 68-1.

Bryant, W. A. & Hart, E. W. [1997] Revised 2007. *Fault-Rupture Hazard Zones in California,* California Division of Mines and Geology Special Publication 42.

Caltrans (California Department of Transportation). 2010. *Standard Specifications.*

Caltrans (California Department of Transportation). 2008. *Highway Design Manual.*

CGS (California Geologic Survey) 2013 October. "Checklist for Review of Engineering Geology and Seismology Reports for California Public Schools, Hospitals, and Essential Services Buildings." *Note 48.*

Churchill, R. K. 2008. "Radon Potential in San Luis Obispo County." *Special Report 208,* California Geologic Survey.

DSA. Division of the State Architect. 2011. Interpretation of Regulations (IR) Document A-4. Geologic Hazards Report Requirements.

Dibblee, T. W., Jr. 2004. "Geologic Map of the Templeton Quadrangle," United States Geological Survey Map Map DF-135.

Europa Technologies. 2015. Google Earth [website], retrieved from: http://www.google.com/earth/index.html

TECHNICAL REFERENCES (continued)

FEMA (Federal Emergency Management Agency). 2012 November. "Flood Insurance Rate Map," Map Number 06079C1055F

Goel, Rakesh K. 2003. "Preliminary Report on December 22, 2003 San Simeon Earthquake," Earthquake Engineering Research Institute, http://works.bepress.com/rgoel/28

Hall, C. A., and S. W. Prior. 1975. "Geologic Map of the Cayucos-San Luis Obispo Region, California." United States Geological Survey Map MF-68.

Hall, C. A. 1976. "San Simeon-Hosgri Fault System, Coastal Central California: Economic and Environmental Implications." *Geological Society of America Abstracts with Programs* vol. 8 p. 38.

Hall, C. A. 1977. "Origin and Development of Lompoc-Santa Maria Pull-Apart Basin and Its Relation to the San Simeon-Hosgri Fault, California (abstract)." *Geological Society of America Abstracts with Programs* 9 (4).

Hart, E. W. 1997 Revised. *Fault-Rupture Hazard Zones in California,* California Division of Mines and Geology Special Publication 42.

Jennings, Charles W. and William A. Bryant. 2010. " Fault Activity Map of California," *California Geological Survey.*

John A. Martin & Associates. 2014. "Structural Basis of Design – Campus Center – North County College Campus," San Luis Obispo Community College District

Pacific Gas & Electric Company. 1998. "Diablo Canyon Power Plant Long Term Seismic Program," United States Government Document.

PMSM Architects. 2014. Preliminary Site Plan for Cuesta College North County Campus, Campus Center.

San Luis Obispo County. 2015. "Permit View," [Interactive GIS Mapping web site for Geologic Hazards]. San Luis Obispo County, Department of Planning and Building, retrieved from: http://www.sloplanning.org/PermitViewMap/MapSearch

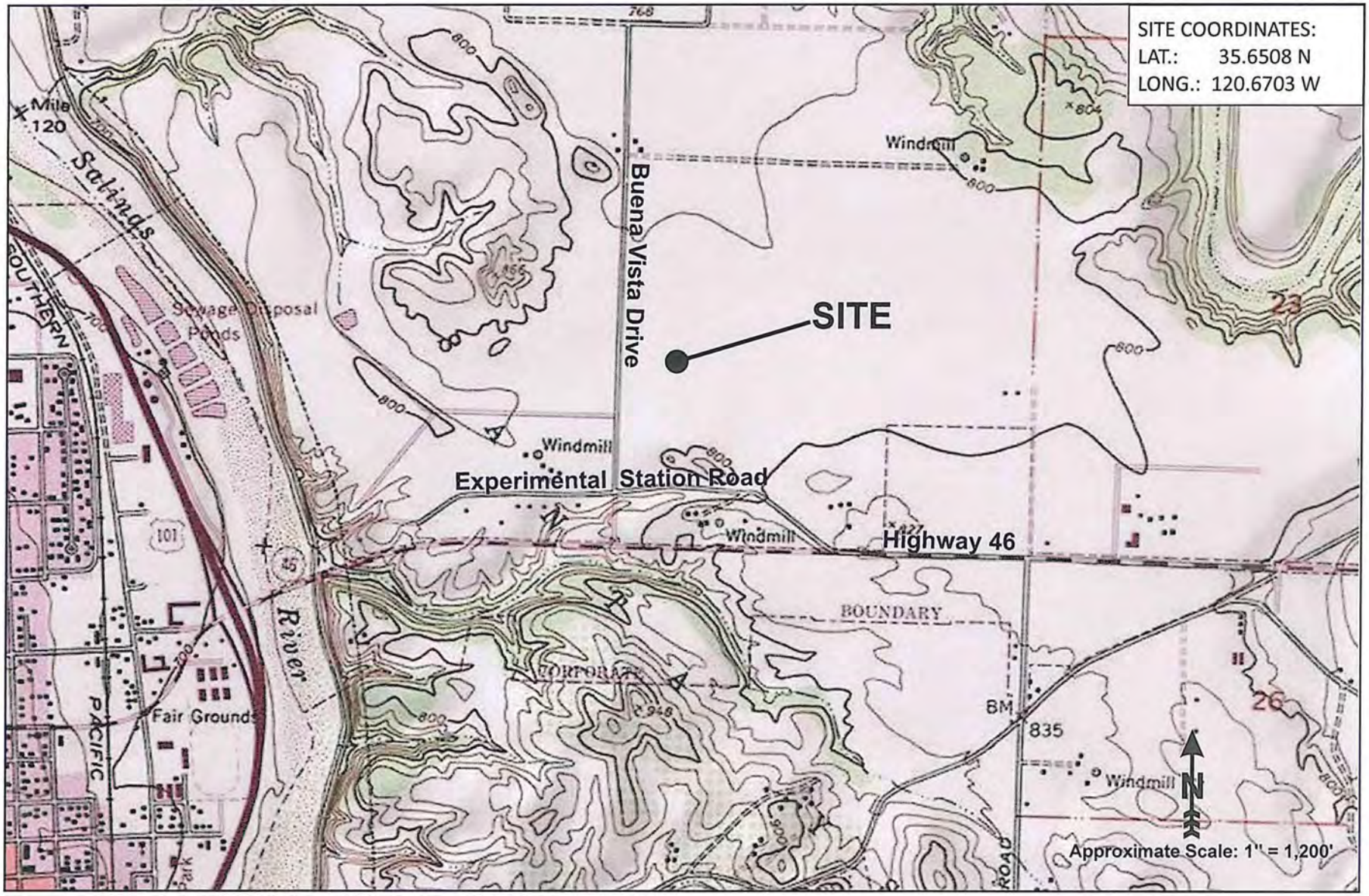
Treiman, J. A. 1989. "Fault Evaluation Report FER-200, Los Osos Fault Zone, San Luis Obispo County, California." *California Division of Mines and Geology, Fault Evaluation Report FER-200.*

USA Topo Maps. 1979. Templeton Quadrangle

USGS (United States Geological Survey). 2015. Earthquake Hazards Program, retrieved from: http://earthquake.usgs.gov/hazards/designmaps/

APPENDIX A

Vicinity Map
Boring Location Map
Boring Log Legend
Boring Logs



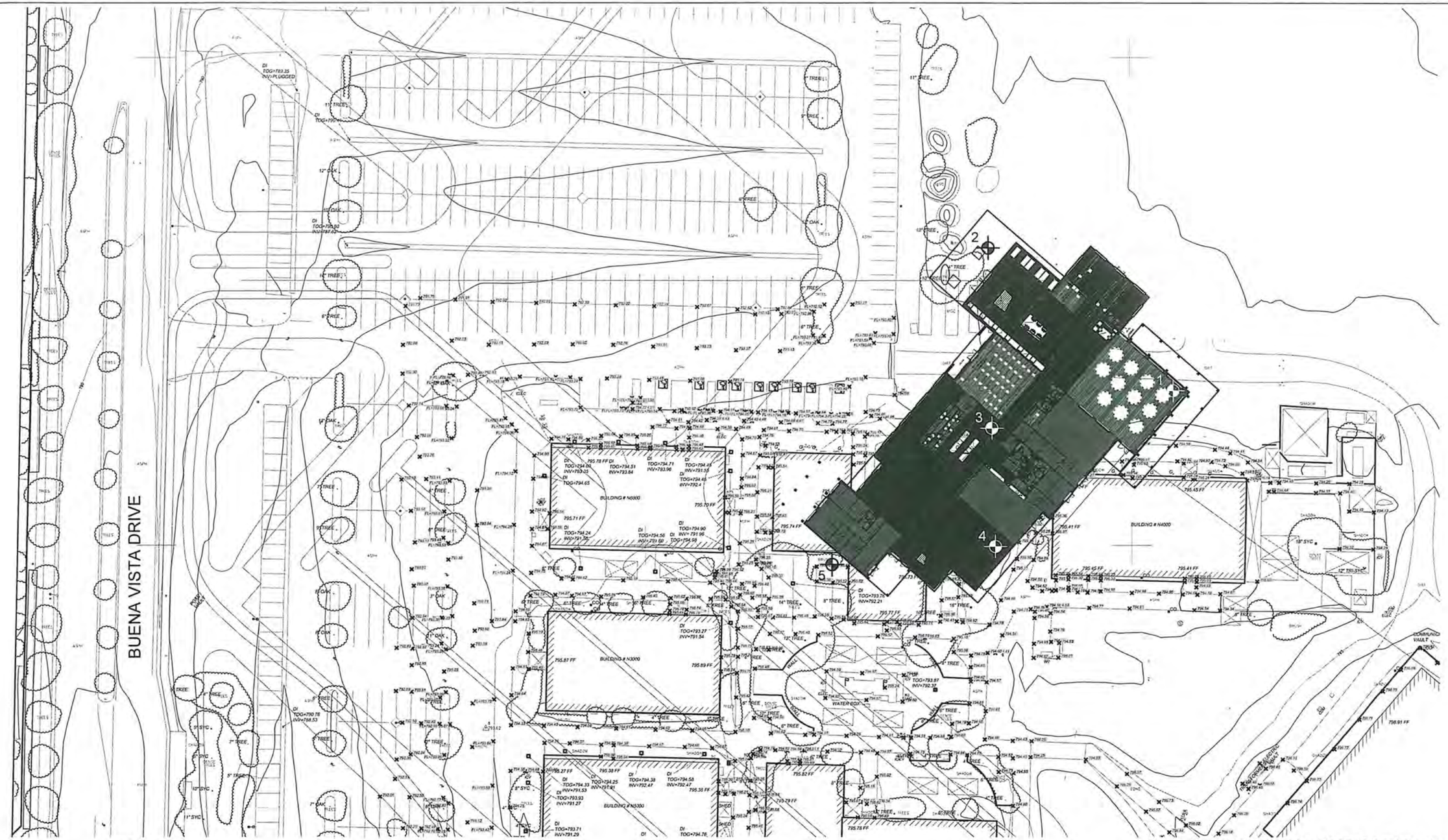
Reference: Extracted from USA Topo Maps, Paso Robles Quadrangle, 1979

EARTH SYSTEMS PACIFIC
4378 Old Santa Fe Road, San Luis Obispo, CA 93401
www.earthsystems.com - email: esp@earthsystems.com
(805) 544-3276

VICINITY MAP
CUESTA COLLEGE - NORTH COUNTY CAMPUS
CAMPUS CENTER
2800 Buena Vista Drive
Paso Robles, California

Date
March 2015

Project No.
SL-17503-SB



Base Map Provided by PMSM Architects

LEGEND

5 ⊕ Boring Location (Approx.)

BORING LOCATION MAP

CUESTA COLLEGE - NORTH COUNTY CAMPUS
CAMPUS CENTER

2800 Buena Vista Drive
Paso Robles, California

NOT TO SCALE

N

Earth Systems Pacific
4378 Old Santa Fe Road
San Luis Obispo, CA 93401-8116
(805) 544-3276 • FAX (805) 544-1786
E-mail: esp@earthsystems.com

March 23, 2015 SB SL-17503-SB

CUESTA COLLEGE NORTH COUNTY-CAMPUS CENTER-032315borings

Earth Systems Pacific

BORING LOG LEGEND

SAMPLE / SUBSURFACE WATER SYMBOLS	GRAPH. SYMBOL
CALIFORNIA MODIFIED	
STANDARD PENETRATION TEST (SPT)	
SHELBY TUBE	
BULK	
SUBSURFACE WATER DURING DRILLING	
SUBSURFACE WATER AFTER DRILLING	

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487)

MAJOR DIVISIONS	GROUP SYMBOL	TYPICAL DESCRIPTIONS	GRAPH. SYMBOL
COARSE GRAINED SOILS (MORE THAN HALF OF MATERIAL IS LARGER THAN #200 SIEVE SIZE)	GW	WELL GRADED GRAVELS, 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, NON-PLASTIC FINES	
	GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES, PLASTIC FINES	
	SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	
	SP	POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES	
	SM	SILTY SANDS, SAND-SILT MIXTURES, NON-PLASTIC FINES	
	SC	CLAYEY SANDS, SAND-CLAY MIXTURES, PLASTIC FINES	
FINE GRAINED SOILS (HALF OR MORE OF MATERIAL IS SMALLER THAN #200 SIEVE SIZE)	ML	INORGANIC SILTS AND VERY FINE SANDS, 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	
	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 SILTS	
	PT	PEAT AND OTHER HIGHLY ORGANIC SOILS	

OBSERVED MOISTURE CONDITION

DRY	SLIGHTLY MOIST	MOIST	VERY MOIST	WET (SATURATED)

CONSISTENCY

COARSE GRAINED SOILS			FINE GRAINED SOILS		
BLOWS/FOOT		DESCRIPTIVE TERM	BLOWS/FOOT		DESCRIPTIVE TERM
SPT	CA SAMPLER		SPT	CA SAMPLER	
0-10	0-16	LOOSE	0-2	0-3	VERY SOFT
11-30	17-50	MEDIUM DENSE	3-4	4-7	SOFT
31-50	51-83	DENSE	5-8	8-13	MEDIUM STIFF
OVER 50	OVER 83	VERY DENSE	9-15	14-25	STIFF
			16-30	26-50	VERY STIFF
			OVER 30	OVER 50	HARD

GRAIN SIZES

U.S. STANDARD SERIES SIEVE				CLEAR SQUARE SIEVE OPENING		
# 200	# 40	# 10	# 4	3/4"	3"	12"

SILT & CLAY	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		

TYPICAL BEDROCK HARDNESS

MAJOR DIVISIONS	TYPICAL DESCRIPTIONS
EXTREMELY HARD	CORE, FRAGMENT, OR EXPOSURE CANNOT BE SCRATCHED WITH KNIFE OR SHARP PICK; CAN ONLY BE CHIPPED WITH REPEATED HEAVY HAMMER BLOWS
VERY HARD	CANNOT BE SCRATCHED WITH KNIFE OR SHARP PICK; CORE OR FRAGMENT BREAKS WITH REPEATED HEAVY HAMMER BLOWS
HARD	CAN BE SCRATCHED WITH KNIFE OR SHARP PICK WITH DIFFICULTY (HEAVY PRESSURE); HEAVY HAMMER BLOW REQUIRED TO BREAK SPECIMEN
MODERATELY HARD	CAN BE GROOVED 1/16 INCH DEEP BY KNIFE OR SHARP PICK WITH MODERATE OR HEAVY PRESSURE; CORE OR FRAGMENT BREAKS WITH LIGHT HAMMER BLOW OR HEAVY MANUAL PRESSURE
SOFT	CAN BE GROOVED OR GOUGED EASILY BY KNIFE OR SHARP PICK WITH LIGHT PRESSURE, CAN BE SCRATCHED WITH FINGERNAIL; BREAKS WITH LIGHT TO MODERATE MANUAL PRESSURE
VERY SOFT	CAN BE READILY INDENTED, GROOVED OR GOUGED WITH FINGERNAIL, OR CARVED WITH KNIFE; BREAKS WITH LIGHT MANUAL PRESSURE

TYPICAL BEDROCK WEATHERING

MAJOR DIVISIONS	TYPICAL DESCRIPTIONS
FRESH	NO DISCOLORATION, NOT OXIDIZED
SLIGHTLY WEATHERED	DISCOLORATION OR OXIDATION IS LIMITED TO SURFACE OF, OR SHORT DISTANCE FROM, FRACTURES: SOME FELDSPAR CRYSTALS ARE DULL
MODERATELY WEATHERED	DISCOLORATION OR OXIDATION EXTENDS FROM FRACTURES, USUALLY THROUGHOUT; Fe-Mg MINERALS ARE "RUSTY", FELDSPAR CRYSTALS ARE "CLOUDY"
INTENSELY WEATHERED	DISCOLORATION OR OXIDATION THROUGHOUT; FELDSPAR AND Fe-Mg MINERALS ARE ALTERED TO CLAY TO SOME EXTENT, OR CHEMICAL ALTERATION PRODUCES IN SITU DISAGGREGATION
DECOMPOSED	DISCOLORATION OR OXIDATION THROUGHOUT, BUT RESISTANT MINERALS SUCH AS QUARTZ MAY BE UNALTERED; FELDSPAR AND Fe-Mg MINERALS ARE COMPLETELY ALTERED TO CLAY

Earth Systems Pacific

Boring No. 1
PAGE 1 OF 1

LOGGED BY: R. Wagner
DRILL RIG: Mobile B-53
AUGER TYPE: 6" Hollow Stem Auger

JOB NO.: SL-17503-SB
DATE: 03/19/15

CUESTA COLLEGE - NORTH COUNTY CAMPUS
CAMPUS CENTER
2800 Buena Vista Drive
Paso Robles, California

DEPTH (feet)	USCS CLASS	SYMBOL	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.
0			6.0" AGGREGATE BASE AND GRAVEL					
1	SC		CLAYEY SAND: brown, loose, slightly moist (Fill)					
3	SC		CLAYEY SAND: light brown, loose, moist, trace fine gravel (Paso Robles Formation)	3.0 - 4.5	▬	119.3	6.0	2 3 3
5				5.0 - 6.5	▬	107.9	6.3	2 2 3
7	SW		WELL GRADED SAND: light brown, dense, moist, trace gravel					
10				10.0 - 11.5	▬			14 24 45
15				15.0 - 16.5	●			9 16 18
16			increasing gravel content					
20				20.0 - 21.5	●			10 18 19
25				25.0 - 26.5	●			8 11 18
26			End of Boring @ 26.5' No subsurface water encountered					

LEGEND: ▬ Ring Sample ○ Grab Sample ▭ Shelby Tube Sample ● SPT

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

Earth Systems Pacific

LOGGED BY: R. Wagner
DRILL RIG: Mobile B-53
AUGER TYPE: 6" Hollow Stem Auger

Boring No. 2
PAGE 1 OF 1
JOB NO.: SL-17503-SB
DATE: 03/19/15

CUESTA COLLEGE - NORTH COUNTY CAMPUS
CAMPUS CENTER
2800 Buena Vista Drive
Paso Robles, California

DEPTH (feet)	USCS CLASS	SYMBOL	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.
0			6.0" AGGREGATE BASE AND GRAVEL					
1	SC		CLAYEY SAND: dark brown, medium dense, moist (Fill)					
2	SW		WELL GRADED SAND: brown, medium dense, slightly moist, trace clay, trace gravel (Paso Robles Formation)	2.0 - 4.0	○			18
3				2.5 - 4.0	■	128.4	3.7	29 30
4			cemented, dense					
5				5.0 - 6.5	■	116.4	3.6	12 25 30
9			orange brown, moist, increasing gravel					
10				10.0 - 11.5	■	---	---	12 26 37
12			cementation ends					
14			very moist					
15				15.0 - 16.5	●			9 15 16
20				20.0 - 21.5	●			8 16 17
25				25.0 - 26.5	●			11 20 21
26			End of Boring @ 26.5' No subsurface water encountered					

LEGEND: ■ Ring Sample ○ Grab Sample ▭ Shelby Tube Sample ● SPT

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

Earth Systems Pacific

Boring No. 3
PAGE 1 OF 1

LOGGED BY: R. Wagner
DRILL RIG: Mobile B-53
AUGER TYPE: 6" Hollow Stem Auger

JOB NO.: SL-17503-SB
DATE: 03/19/15

CUESTA COLLEGE - NORTH COUNTY CAMPUS
CAMPUS CENTER
2800 Buena Vista Drive
Paso Robles, California

DEPTH (feet)	USCS CLASS	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.
0		6.0" AGGREGATE BASE AND GRAVEL					
1	SC	CLAYEY SAND: dark brown, medium dense, slightly moist (Fill)					
2	SW	WELL GRADED SAND: light brown, medium dense, moist, trace clay, trace gravel (Paso Robles Formation)	2.0 - 3.5	Ring	121.7	7.0	5, 7, 9
5			5.0 - 6.5	Ring	112.1	5.3	4, 8, 12
7		increasing gravel					
10			10.0 - 11.5	Ring			9, 14, 14
15		orange brown, dense, very moist	15.0 - 16.5	SPT			8, 18, 18
20			20.0 - 21.5	SPT			10, 15, 17
23		light brown					
25			25.0 - 26.5	SPT			8, 12, 19
26		End of Boring @ 26.5' No subsurface water encountered					

LEGEND: Ring Sample ○ Grab Sample ▭ Shelby Tube Sample ● SPT

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

Earth Systems Pacific

Boring No. 4
PAGE 1 OF 1
JOB NO.: SL-17503-SB
DATE: 03/19/15

LOGGED BY: R. Wagner
DRILL RIG: Mobile B-53
AUGER TYPE: 6" Hollow Stem Auger

CUESTA COLLEGE - NORTH COUNTY CAMPUS
CAMPUS CENTER
2800 Buena Vista Drive
Paso Robles, California

DEPTH (feet)	USCS CLASS	SYMBOL	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.
0	SC		CLAYEY SAND: brown, medium dense, moist (Fill)	0.0 - 3.0	Grab			
3				2.5 - 4.0	Ring	119.9	5.0	18 29 30
3	SC		CLAYEY SAND: orange brown, dense, moist (Paso Robles Formation)	3.0 - 6.0	Grab			
5			slightly moist	5.0 - 6.5	Ring	112.2	1.9	12 25 30
7	SW		WELL GRADED SAND: orange brown, dense, slightly moist, trace clay and gravel					
10			increasing gravel	10.0 - 11.5	Ring	116.9	3.1	12 26 37
15			very dense	15.0 - 16.5	SPT			9 15 16
19			very moist, dense					
20				20.0 - 21.5	SPT			8 16 17
25				25.0 - 26.5	SPT			11 20 21
26			End of Boring @ 26.5' No subsurface water encountered					

LEGEND: ■ Ring Sample ○ Grab Sample □ Shelby Tube Sample ● SPT

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

Earth Systems Pacific

Boring No. 5

LOGGED BY: R. Wagner
DRILL RIG: Mobile B-53
AUGER TYPE: 6" Hollow Stem Auger

PAGE 1 OF 1
JOB NO.: SL-17503-SB
DATE: 03/19/15

CUESTA COLLEGE - NORTH COUNTY CAMPUS
CAMPUS CENTER
2800 Buena Vista Drive
Paso Robles, California

DEPTH (feet)	USCS CLASS	SYMBOL	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.
0			2.25" ASPHALT CONCRETE OVER 6" AGGREGATE BASE					
1	SC		CLAYEY SAND: brown, medium dense, moist, trace gravel (Fill)					
3								30
4	SW		WELL GRADED SAND: light brown, medium dense, slightly moist, trace clay (Paso Robles Formation)	3.5 - 5.0	■	115.2	2.7	18 25
8			trace fine to coarse gravel, dense	8.5 - 9.5	■			25 50/4.0"
10			End of Boring @ 10.0' No subsurface water encountered					

LEGEND: ■ Ring Sample ○ Grab Sample ▭ Shelby Tube Sample ● SPT

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

APPENDIX B

Geotechnical Laboratory Test Results

Cuesta College - North County Campus
Campus Center

SL-17503-SB

BULK DENSITY TEST RESULTS

ASTM D 2937-10 (modified for ring liners)

March 26, 2015

BORING NO.	DEPTH feet	MOISTURE CONTENT, %	WET DENSITY, pcf	DRY DENSITY, pcf
1	4.0 - 4.5	6.0	126.5	119.3
1	6.0 - 6.5	6.3	114.7	107.9
2	3.5 - 4.0	3.7	133.1	128.4
2	6.0 - 6.5	3.6	120.6	116.4
3	3.0 - 3.5	7.0	130.3	121.7
3	6.0 - 6.5	5.3	118.0	112.1
4	4.0 - 4.5	5.0	125.9	119.9
4	6.0 - 6.5	1.9	114.4	112.2
4	11.0 - 11.5	3.1	120.5	116.9
5	4.5 - 5.0	2.7	118.3	115.2

EXPANSION INDEX TEST RESULTS

ASTM D 4829-11

BORING NO.	DEPTH feet	EXPANSION INDEX
4	0.0 - 3.0	3
4	3.0 - 6.0	3

Cuesta College - North County Campus
Campus Center

SL-17503-SB

MOISTURE-DENSITY COMPACTION TEST

ASTM D 1557-12 (Modified)

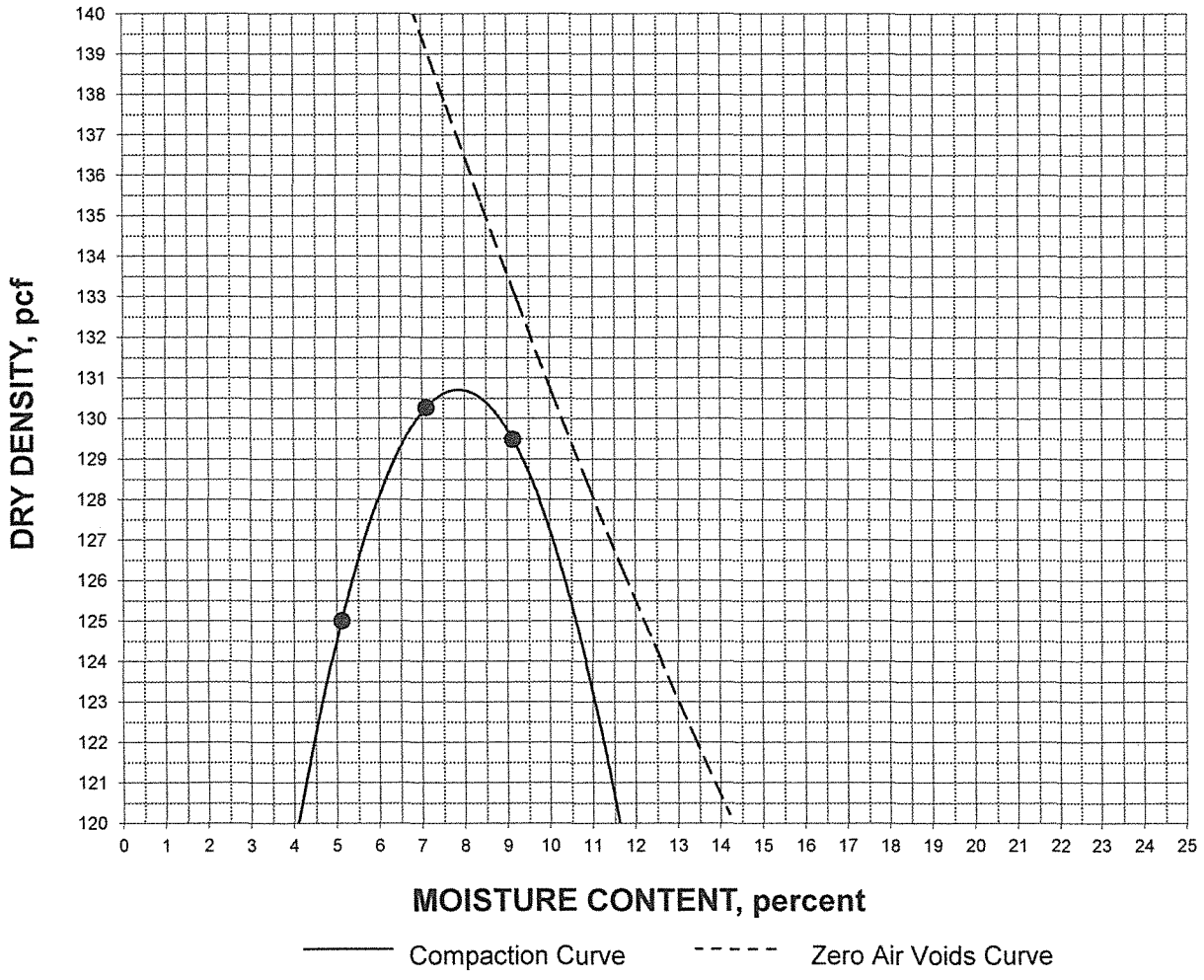
PROCEDURE USED: A
PREPARATION METHOD: Moist
RAMMER TYPE: Mechanical
SPECIFIC GRAVITY: 2.65 (assumed)

March 26, 2015
Boring #4 @ 3.0 - 6.0'
Orange Brown Clayey Sand (SC)

SIEVE DATA:

Sieve Size	% Retained (Cumulative)
3/4"	0
3/8"	0
#4	0

MAXIMUM DRY DENSITY: 130.7 pcf
OPTIMUM MOISTURE: 7.9%



Cuesta College - North County Campus
Campus Center

SL-17503-SB

MOISTURE-DENSITY COMPACTION TEST

ASTM D 1557-12 (Modified)

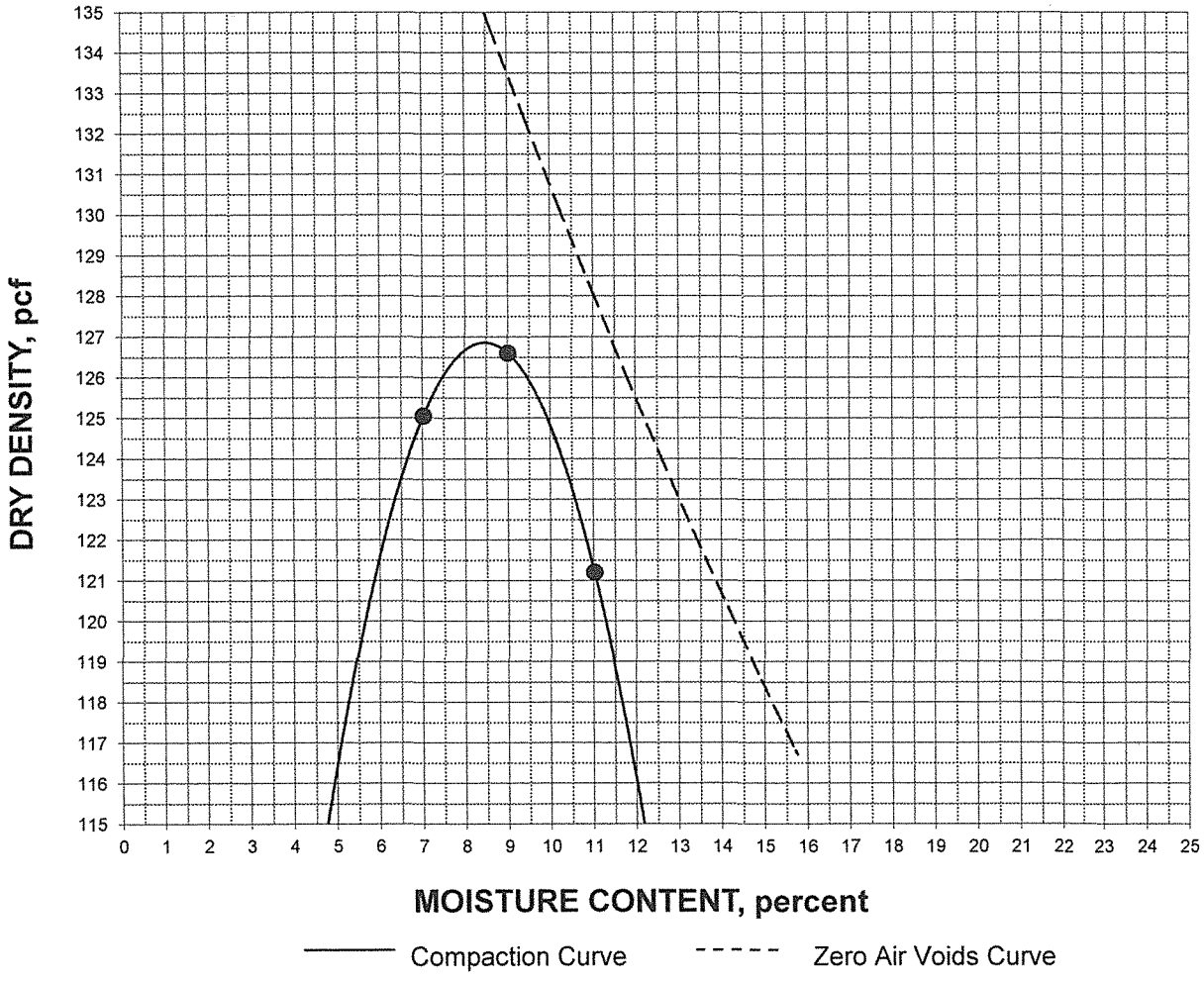
PROCEDURE USED: A
PREPARATION METHOD: Moist
RAMMER TYPE: Mechanical
SPECIFIC GRAVITY: 2.65 (assumed)

March 26, 2015
Boring #4 @ 0.0 - 2.0'
Brown Clayey Sand (SC)

SIEVE DATA:

Sieve Size	% Retained (Cumulative)
3/4"	0
3/8"	0
#4	0

MAXIMUM DRY DENSITY: 126.9 pcf
OPTIMUM MOISTURE: 8.5%



Cuesta College - North County Campus
Campus Center

SL-17503-SB

DIRECT SHEAR

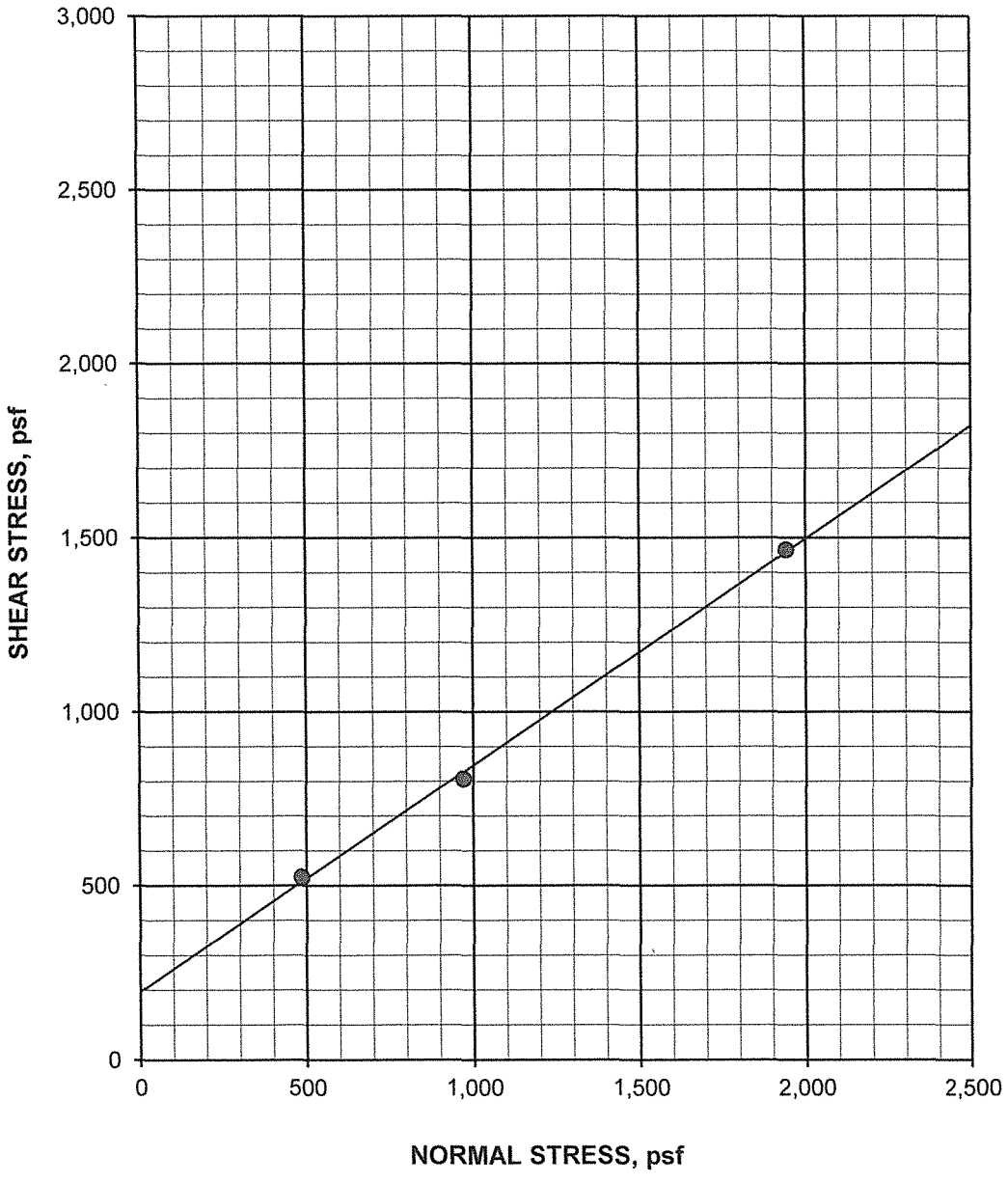
ASTM D 3080/D3080M-11 (modified for consolidated, undrained conditions)

March 26, 2015

Boring #4 @ 0.0 - 2.0'
Clayey Sand (SC)
Compacted to 90% RC, saturated

INITIAL DRY DENSITY: 114.2 pcf
INITIAL MOISTURE CONTENT: 8.5 %
PEAK SHEAR ANGLE (Ø): 33°
COHESION (C): 195 psf

SHEAR vs. NORMAL STRESS



Cuesta College - North County Campus
Campus Center

SL-17503-SB

DIRECT SHEAR continued

ASTM D 3080/D3080M-11 (modified for consolidated, undrained conditions)

Boring #4 @ 0.0 - 2.0'

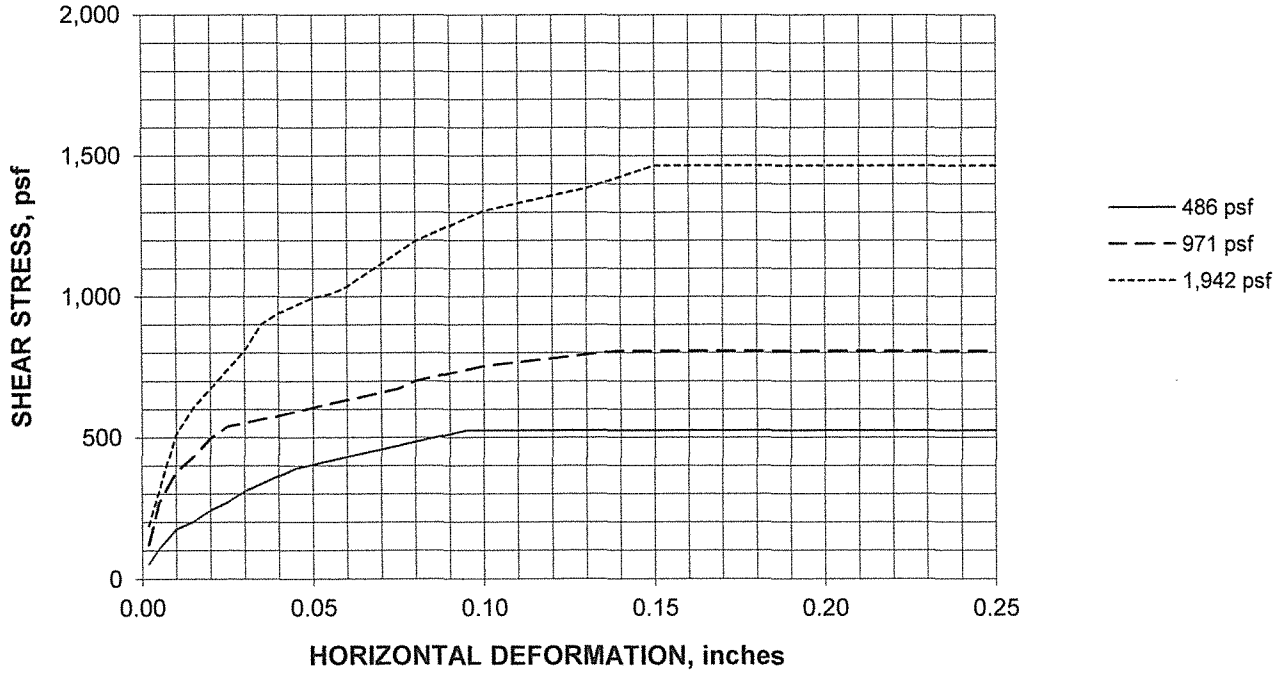
March 26, 2015

Clayey Sand (SC)

Compacted to 90% RC, saturated

SPECIFIC GRAVITY: 2.65 (assumed)

SAMPLE NO.:	1	2	3	AVERAGE
INITIAL				
WATER CONTENT, %	8.5	8.5	8.5	8.5
DRY DENSITY, pcf	114.2	114.2	114.2	114.2
SATURATION, %	50.2	50.2	50.2	50.2
VOID RATIO	0.448	0.448	0.448	0.448
DIAMETER, inches	2.410	2.410	2.410	
HEIGHT, inches	1.00	1.00	1.00	
AT TEST				
WATER CONTENT, %	16.9	14.7	13.8	
DRY DENSITY, pcf	115.2	119.2	121.5	
SATURATION, %	100.0	100.0	100.0	
VOID RATIO	0.435	0.388	0.361	
HEIGHT, inches	0.99	0.96	0.94	



Cuesta College - North County Campus
Campus Center

SL-17503-SB

RESISTANCE '*R*' VALUE AND EXPANSION PRESSURE

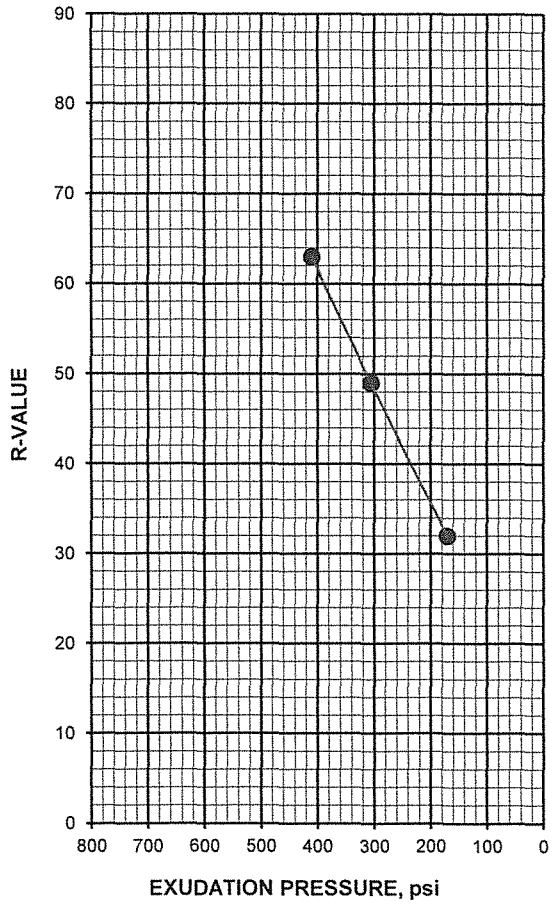
ASTM D 2844/D2844M-13

March 26, 2015

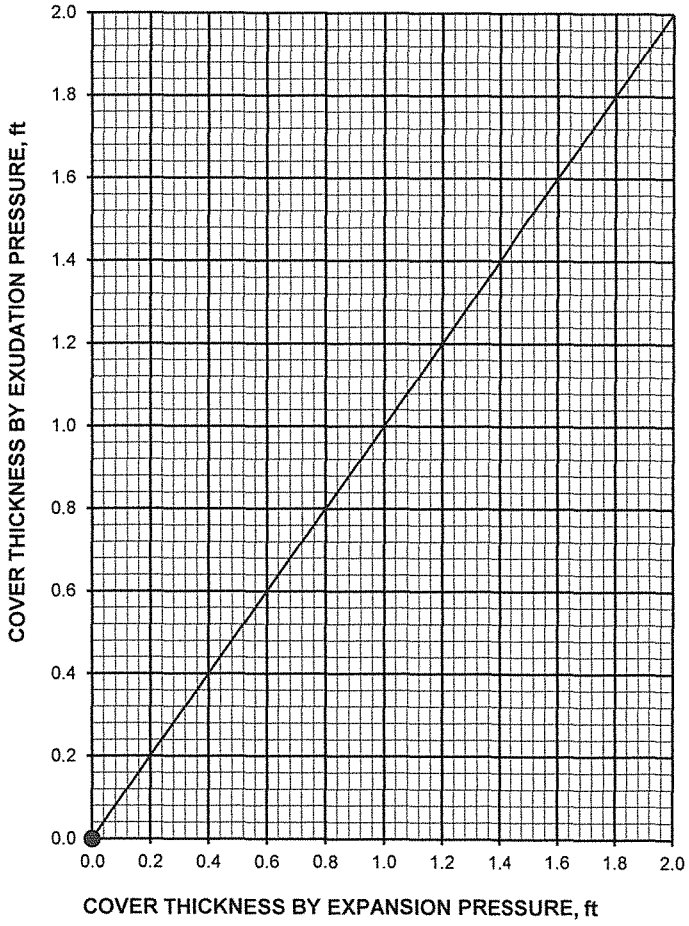
Boring #4 @ 0.0 - 3.0'
Brown Clayey Sand (SC)

Dry Density @ 300 psi Exudation Pressure: 115.6-pcf
%Moisture @ 300 psi Exudation Pressure: 9.9%
R-Value - Exudation Pressure: 48
R-Value - Expansion Pressure: N/A
R-Value @ Equilibrium: 48

EXUDATION PRESSURE CHART



EXPANSION PRESSURE CHART



APPENDIX C

Soil Corrosivity Study by HDR, Inc.

April 1, 2015 via email: fred@earthsystems.com

EARTH SYSTEMS PACIFIC
4378 Old Santa Fe Road
San Luis Obispo, CA 93401

Attention: Mr. Fred J. Potthast

Re: Soil Corrosivity Study
Cuesta College - North County
Campus - Campus Center
Paso Robles, CA
HDR #254283 Rev 01,
ESP #SL-17503-SB

Introduction

Laboratory tests have been completed on three soil samples provided for the Cuesta College – North County Campus – Campus Center project. The purpose of these tests was to determine if the soils might have deleterious effects on underground utility piping, hydraulic elevator cylinders, and concrete structures. HDR Engineering, Inc. (HDR) assumes that the samples provided are representative of the most corrosive soils at the site. This report was revised to correct Earth Systems Pacific's project number.

The proposed campus center structure has two stories and no subterranean levels. The site is located at 2800 Buena Vista Drive in Paso Robles, California, and the water table is reportedly deeper than 26.5 feet deep.

The scope of this study is limited to a determination of soil corrosivity and general corrosion control recommendations for materials likely to be used for construction. HDR's recommendations do not constitute, and are not meant as a substitute for, design documents for the purpose of construction. If the architects and/or engineers desire more specific information, designs, specifications, or review of design, HDR will be happy to work with them as a separate phase of this project.

Laboratory Soil Corrosivity Tests

The electrical resistivity of each sample was measured in a soil box per ASTM G187 in its as-received condition and again after saturation with distilled water. Resistivities are at about their lowest value when the soil is saturated. The pH of the saturated samples was measured per CTM 643. A 5:1 water:soil extract from each sample was chemically analyzed for the major soluble salts commonly found in soil per ASTM D4327, ASTM D6919, and Standard Method 2320-B[1]. Laboratory analysis was performed under HDR laboratory number 15-0234SCS and the test results are shown in the attached Table 1.

Soil Corrosivity

A major factor in determining soil corrosivity is electrical resistivity. The electrical resistivity of a soil is a measure of its resistance to the flow of electrical current. Corrosion of buried metal is an electrochemical process in which the amount of metal loss due to corrosion is directly proportional to the flow of electrical current (DC) from the metal into the soil. Corrosion currents, following Ohm's Law, are inversely proportional to soil resistivity. Lower electrical resistivities result from higher moisture and soluble salt contents and indicate corrosive soil.

A correlation between electrical resistivity and corrosivity toward ferrous metals is:[2]

Soil Resistivity in ohm-centimeters	Corrosivity Category
Greater than 10,000	Mildly Corrosive
2,001 to 10,000	Moderately Corrosive
1,001 to 2,000	Corrosive
0 to 1,000	Severely Corrosive

Other soil characteristics that may influence corrosivity towards metals are pH, soluble salt content, soil types, aeration, anaerobic conditions, and site drainage.

---

[1] *American Public Health Association (APHA). 2012. Standard Methods of Water and Wastewater. 22nd ed. American Public Health Association, American Water Works Association, Water Environment Federation publication. APHA, Washington D.C.*

[2] *Romanoff, Melvin. Underground Corrosion, NBS Circular 579. Reprinted by NACE. Houston, TX, 1989, pp. 166–167.*

Electrical resistivities were in the mildly corrosive category with as-received moisture. When saturated, the resistivities were in the moderately corrosive category. The resistivities dropped considerably with added moisture because the samples were dry as-received.

Soil pH values varied from 7.0 to 7.6. This range is neutral to mildly alkaline.[3] These values do not particularly increase soil corrosivity.

The soluble salt content of the samples was low.

Ammonium and nitrate were detected in low concentrations.

Tests were not made for sulfide and negative oxidation-reduction (redox) potential because these samples did not exhibit characteristics typically associated with anaerobic conditions.

This soil is classified as moderately corrosive to ferrous metals.

Corrosion Control Recommendations

The life of buried materials depends on thickness, strength, loads, construction details, soil moisture, etc., in addition to soil corrosivity, and is, therefore, difficult to predict. Of more practical value are corrosion control methods that will increase the life of materials that would be subject to significant corrosion.

The following recommendations are based on the soil conditions discussed in the Soil Corrosivity section above. Unless otherwise indicated, these recommendations apply to the entire site or alignment.

Steel Pipe

Implement *all* the following measures:

1. Underground steel pipe with rubber gasketed, mechanical, grooved end, or other nonconductive type joints should be bonded for electrical continuity. Electrical continuity is necessary for corrosion monitoring and the possible future application of cathodic protection.

---

[3] *Romanoff, Melvin. Underground Corrosion, NBS Circular 579. Reprinted by NACE. Houston, TX, 1989, p. 8.*

2. Install corrosion monitoring test stations to facilitate corrosion monitoring and the possible future application of cathodic protection:

    a. At each end of the pipeline.

    b. At each end of all casings.

    c. Other locations as necessary so the interval between test stations does not exceed 1,200 feet.

3. To prevent dissimilar metal corrosion cells and to facilitate the possible future application of cathodic protection, electrically isolate each buried steel pipeline per NACE SP0286 from:

    a. Dissimilar metals.

    b. Dissimilarly coated piping (cement-mortar vs. dielectric).

    c. Above ground steel pipe.

    d. All existing piping.

4. Choose one of the following corrosion control options:

    OPTION 1

    a. Apply a suitable dielectric coating intended for underground use such as:

        i. Polyurethane per AWWA C222 *or*

        ii. Extruded polyethylene per AWWA C215 *or*

        iii. A tape coating system per AWWA C214 *or*

        iv. Hot applied coal tar enamel per AWWA C203 *or*

        v. Fusion bonded epoxy per AWWA C213.

    b. Although it is customary to cathodically protect bonded dielectrically coated structures, cathodic protection is not recommended at this time due to moderately corrosive soils. Joint bonds, test stations, and insulated joints should still be installed and will facilitate the application of cathodic protection in the future if needed to control leaks.

OPTION 2

a. As an alternative to dielectric coating and possible future cathodic protection, apply a ¾-inch cement mortar coating per AWWA C205 or encase in concrete 3 inches thick, using any type of ASTM C150 cement. Joint bonds, test stations, and insulated joints are still recommended for these alternatives.

NOTE: Some steel piping systems, such as for oil, gas, and high-pressure piping systems, have special corrosion and cathodic protection requirements that must be evaluated for each specific application.

Hydraulic Elevator

Implement *all* the following measures:

1. Electrically insulate each cylinder from building metals by installing dielectric material between the piston platen and car, insulating the bolts, and installing an insulated joint in the oil line.

2. Choose one of the following corrosion control options for the hydraulic steel cylinders.

   OPTION 1

   a. Coat hydraulic elevator cylinders as described above for steel pipe, item #4, option 1.

   b. Apply cathodic protection to hydraulic cylinders as per NACE SP0169.

   OPTION 2

   a. As an alternative to electrical insulation and cathodic protection, place each cylinder in a plastic casing with a plastic watertight seal at the bottom.

3. The elevator oil line should be placed above ground if possible but, if underground, should be protected by one of the following corrosion control options:

   OPTION 1

   a. Provide a bonded dielectric coating.

b. Electrically isolate the pipeline.

c. Apply cathodic protection to steel piping as per NACE SP0169.

OPTION 2

a. Place the oil line in a PVC casing pipe with solvent-welded joints to prevent contact with soil and soil moisture.

Iron Pipe

Implement *all* the following measures:

1. To prevent dissimilar metal corrosion cells and to facilitate the possible future application of cathodic protection, electrically insulate underground iron pipe from dissimilar metals and from above ground iron pipe with insulating joints per NACE SP0286.

2. Bond all nonconductive type joints for electrical continuity. Electrical continuity is necessary for corrosion monitoring and possible future application of cathodic protection.

3. Install corrosion monitoring test stations to facilitate corrosion monitoring and the possible future application of cathodic protection:

    a. At each end of the pipeline.

    b. At each end of any casings.

    c. Other locations as necessary so the interval between test stations does not exceed 1,200 feet.

4. Choose one of the following corrosion control options:

    OPTION 1

    a. Apply a suitable coating intended for underground use such as:

        i. Polyethylene encasement per AWWA C105; *or*

        ii. Epoxy coating; *or*

iii. Polyurethane; *or*

iv. Wax tape.

NOTE: The thin factory-applied asphaltic coating applied to ductile iron pipe for transportation and aesthetic purposes does not constitute a corrosion control coating.

b. Although it is customary to cathodically protect coated structures, cathodic protection is not recommended at this time due to moderately corrosive soils. Joint bonds, test stations, and insulated joints should still be installed and will facilitate the application of cathodic protection in the future if needed to control leaks.

OPTION 2

a. As an alternative to coating systems described in Option 1 and possible future cathodic protection, concrete encase all buried portions of metallic piping so that there is a minimum of 3 inches of concrete cover provided over and around surfaces of pipe, fittings, and valves using any type of ASTM C150 cement.

Copper Tubing

Implement *all* the following measures:

1. Electrically insulate underground copper pipe from dissimilar metals and from above ground copper pipe with insulating devices per NACE SP0286.

2. Electrically insulate cold water piping from hot water piping systems.

3. Place cold water copper tubing in an 8-mil polyethylene sleeve or encase in double 4-mil thick polyethylene sleeves and bed and backfill with clean sand at least 2 inches thick surrounding the tubing. Clean sand should have a minimum resistivity of no less than 3,000 ohm-cm, and a pH of 6.0–8.0. Copper tubing for cold water can also be treated the same as for hot water.

4. Hot water tubing may be subject to a higher corrosion rate. Protect hot copper tubing by one of the following measures:

a. Preventing soil contact. Soil contact may be prevented by placing the tubing above ground or encasing the tubing with PVC pipe with solvent-welded joints. *or*

b. Applying cathodic protection per NACE SP0169. The amount of cathodic protection current needed can be minimized by coating the tubing.

Plastic and Vitrified Clay Pipe

1. No special precautions are required for plastic and vitrified clay piping placed underground from a corrosion viewpoint.

2. Protect all metallic fittings and valves with wax tape per AWWA C217 or epoxy.

All Pipe

1. On all pipes, appurtenances, and fittings not protected by cathodic protection, coat bare metal such as valves, bolts, flange joints, joint harnesses, and flexible couplings with wax tape per AWWA C217 after assembly.

2. Where metallic pipelines penetrate concrete structures such as building floors, vault walls, and thrust blocks use plastic sleeves, rubber seals, or other dielectric material to prevent pipe contact with the concrete and reinforcing steel.

Concrete

1. From a corrosion standpoint, any type of ASTM C150 cement may be used for concrete structures and pipe because the sulfate concentration is negligible, 0 to 0.10 percent.[4,5,6]

2. Standard concrete cover over reinforcing steel may be used for concrete structures and pipe in contact with these soils due to the low chloride concentration[7] found onsite.

---

[4] *2012 International Building Code (IBC) Section 1904.3*

[5] *2012 International Residential Code (IRC) which refers to American Concrete Institute (ACI) 318 Table 19.3.2.1*

[6] *2013 California Building Code (CBC) which refers to American Concrete Institute (ACI) 318 Table 19.3.2.1*

[7] *Design Manual 303: Concrete Cylinder Pipe. Ameron. p.65*

Closure

The analysis and recommendations presented in this report are based upon data obtained from the laboratory samples. This report does not reflect variations that may occur across the site or due to the modifying effects of construction. If variations appear, HDR should be notified immediately so that further evaluation and supplemental recommendations can be provided.

HDR's services have been performed with the usual thoroughness and competence of the engineering profession. No other warranty or representation, either expressed or implied, is included or intended.

Please call if you have any questions.

Respectfully Submitted,
HDR Engineering, Inc.

Lucy Quijarquez

Brien L. Clark, PE

Enc: Table 1

15-0234SCS_SCS_Rpt_LQ_Rev00_BC.docx

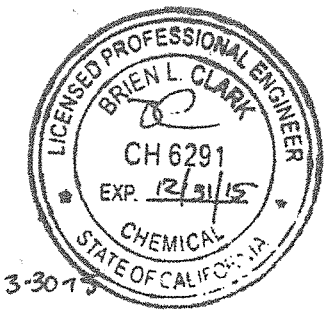


Table 1 - Laboratory Tests on Soil Samples

Earth Systems Pacific
Cuesta College - North County Campus - Campus Center
Your #SL-17503-SA, HDR Lab #15-0234SCS
24-Mar-15

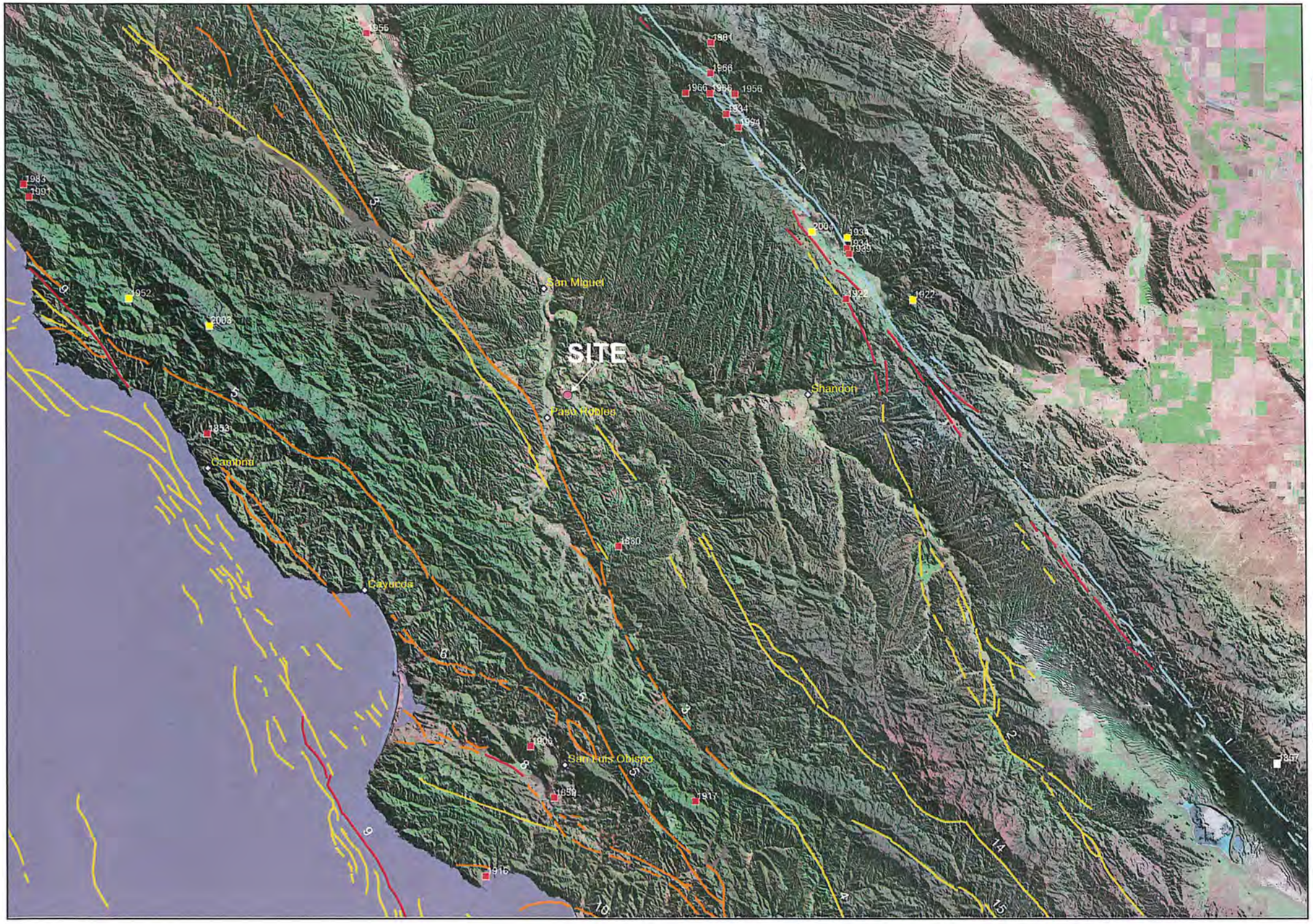
Sample ID			B2 @ 2'-4' SW	B4 @ 0'-3' SC	B4 @ 3'-6' SC
Resistivity		**Units**			
as-received		ohm-cm	36,200	16,000	124,000
saturated		ohm-cm	5,600	5,600	6,000
pH			7.1	7.0	7.6
Electrical Conductivity		mS/cm	0.07	0.09	0.06
Chemical Analyses					
Cations					
calcium	Ca^{2+}	mg/kg	60	53	18
magnesium	Mg^{2+}	mg/kg	12	11	5.2
sodium	Na^{1+}	mg/kg	18	43	61
potassium	K^{1+}	mg/kg	7.3	6.9	1.8
Anions					
carbonate	CO_3^{2-}	mg/kg	ND	ND	ND
bicarbonate	HCO_3^{1-}	mg/kg	101	107	70
fluoride	F^{1-}	mg/kg	1.7	2.7	2.5
chloride	Cl^{1-}	mg/kg	9.9	6.2	2.6
sulfate	SO_4^{2-}	mg/kg	11	42	23
phosphate	PO_4^{3-}	mg/kg	12	12	7.4
Other Tests					
ammonium	NH_4^{1+}	mg/kg	0.33	ND	ND
nitrate	NO_3^{1-}	mg/kg	49	39	37
sulfide	S^{2-}	qual	na	na	na
Redox		mV	na	na	na

Electrical conductivity in millisiemens/cm and chemical analysis were made on a 1:5 soil-to-water extract.
mg/kg = milligrams per kilogram (parts per million) of dry soil.
Redox = oxidation-reduction potential in millivolts
ND = not detected
na = not analyzed

431 West Baseline Road · Claremont, CA 91711
Phone: 909.962.5485 · Fax: 909.626.3316

APPENDIX D

Geologic Map
Historical Earthquake/Fault Map
FEMA Flood Zone Map
Radon Zone Map



LEGEND

- Historic rupture (<200 years)
- Holocene fault (<10,000 years)
- Late Quaternary (<700,000 years)
- Quaternary fault (<1.6 million)

HISTORICAL EARTHQUAKE MAGNITUDE

5.0 to 5.9 | 6.0 to 6.9 | 7.0 to 7.9

FAULTS

1 San Andreas
2 San Juan
3 Rinconada
4 East Huasna
5 Oceanic
6 Cambria
7 West Huasna
8 Los Osos
9 Hosgri-San Simeon
10 San Luis Range
11 Casmalia
12 Lions Head
13 Oceano
14 La Panza
15 South Cuyama

REFERENCES

Blake, T.F., EQSEARCH, 2000, updated 2012
Jennings, C.W, & Bryant, W.A., 2010

N

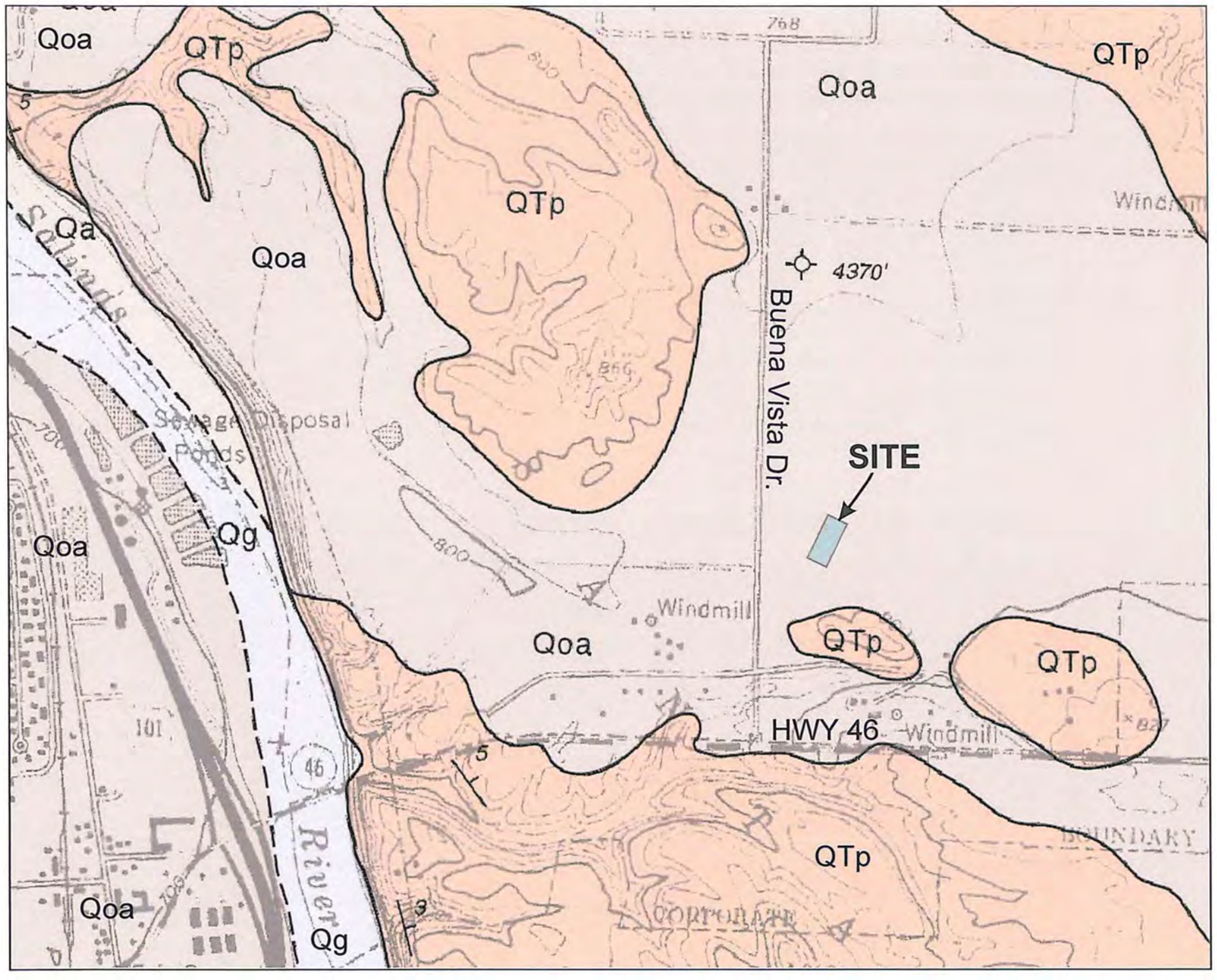
(Approximate Scale: 1" = 6 miles)

EARTH SYSTEMS PACIFIC
4378 Old Santa Fe Road, San Luis Obispo, CA 93401
www.earthsystems.com - email: esp@earthsystems.com
(805) 544-3276

HISTORICAL EARTHQUAKE/FAULT MAP
CUESTA COLLEGE - NORTH COUNTY CAMPUS
CAMPUS CENTER
2800 Buena Vista Drive
Paso Robles, California

Date
March 2015

Project No.
SL-17503-SB



Extract from: Geologic Map of the Paso Robles 7.5' Quadrangle, San Luis Obispo County, California: by Dibblee, Jr., 2004.

EXPLANATION

Geologic Units

Qg

Channel Deposits
-gravel & sand of stream channels
(Holocene)

Qa

Alluvium
-alluvial gravel & sand of valley areas
(Holocene)

Qoa

Older Alluvium
-dissected terrace remnants of older alluvial gravel & sand
(Pleistocene)

QTp

Paso Robles Formation
poorly sorted conglomerate & sandstone
(Pliocene - lower Pleistocene)

Geologic Symbols

Contact
Dashed where approximately located or inferred

High-angle fault
Dashed where approximately located or inferred; dotted where concealed

Thrust or reverse fault
Dashed where approximately located or inferred; dotted where concealed. Saw-teeth on upper plate. Dip of fault plane between 30° and 80°

Anticline
Showing axis at surface. Dashed where approximately located; dotted where concealed

Syncline
Showing axis at surface. Dashed where approximately located; dotted where concealed

Horizontal 30 Inclined 90 Vertical
Strike and dip of beds

N

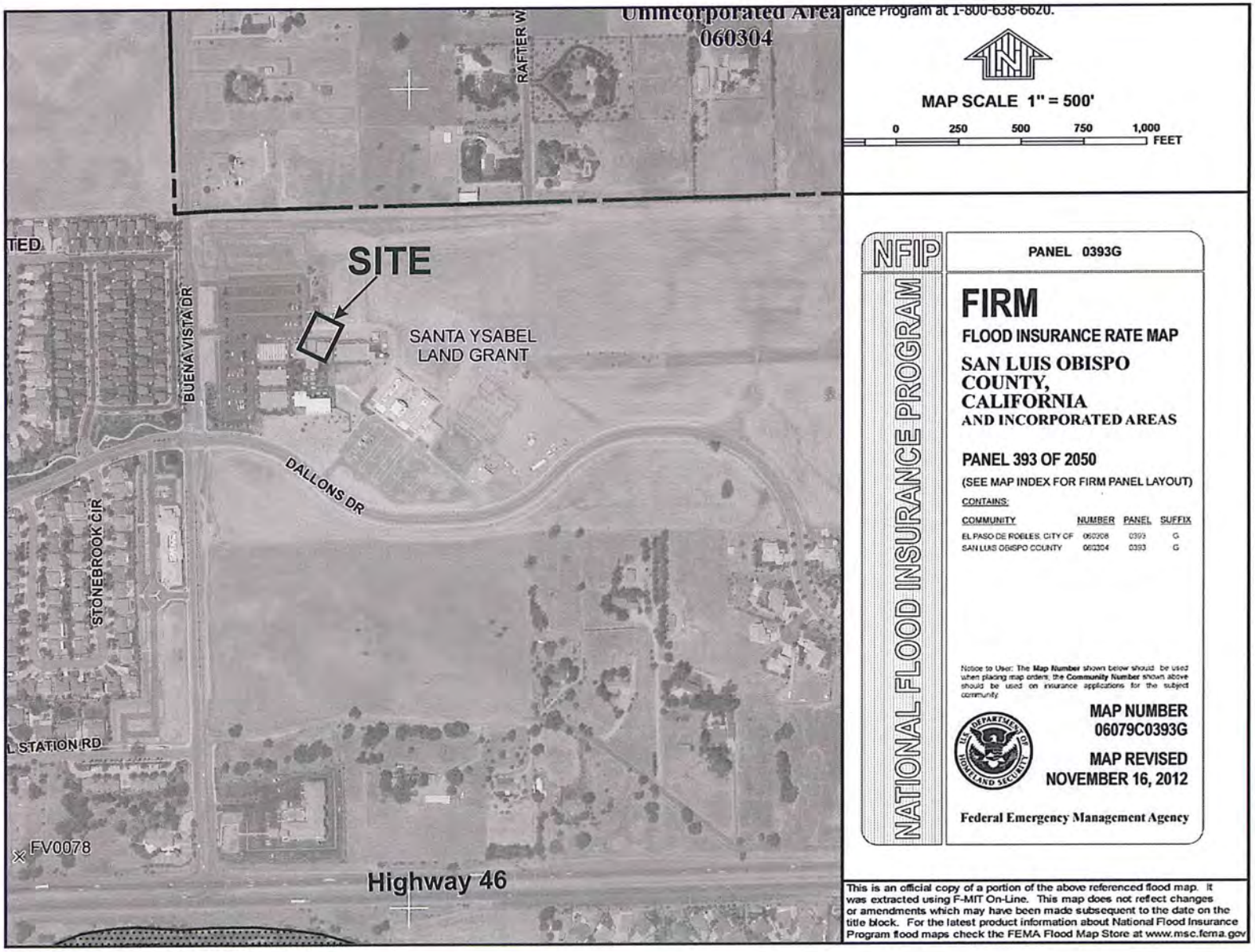
Approx. Scale: 1" = 1,000'

EARTH SYSTEMS PACIFIC
4378 Old Santa Fe Road, San Luis Obispo, CA 93401
www.earthsystems.com - email: esp@earthsystems.com
(805) 544-3276

GEOLOGIC MAP
CUESTA COLLEGE - NORTH COUNTY CAMPUS
CAMPUS CENTER
2800 Buena Vista Drive
Paso Robles, California

Date
March 2015

Project No.
SL-17503-SB



EARTH SYSTEMS PACIFIC
4378 Old Santa Fe Road, San Luis Obispo, CA 93401
www.earthsystems.com - email: esp@earthsystems.com
(805) 544-3276

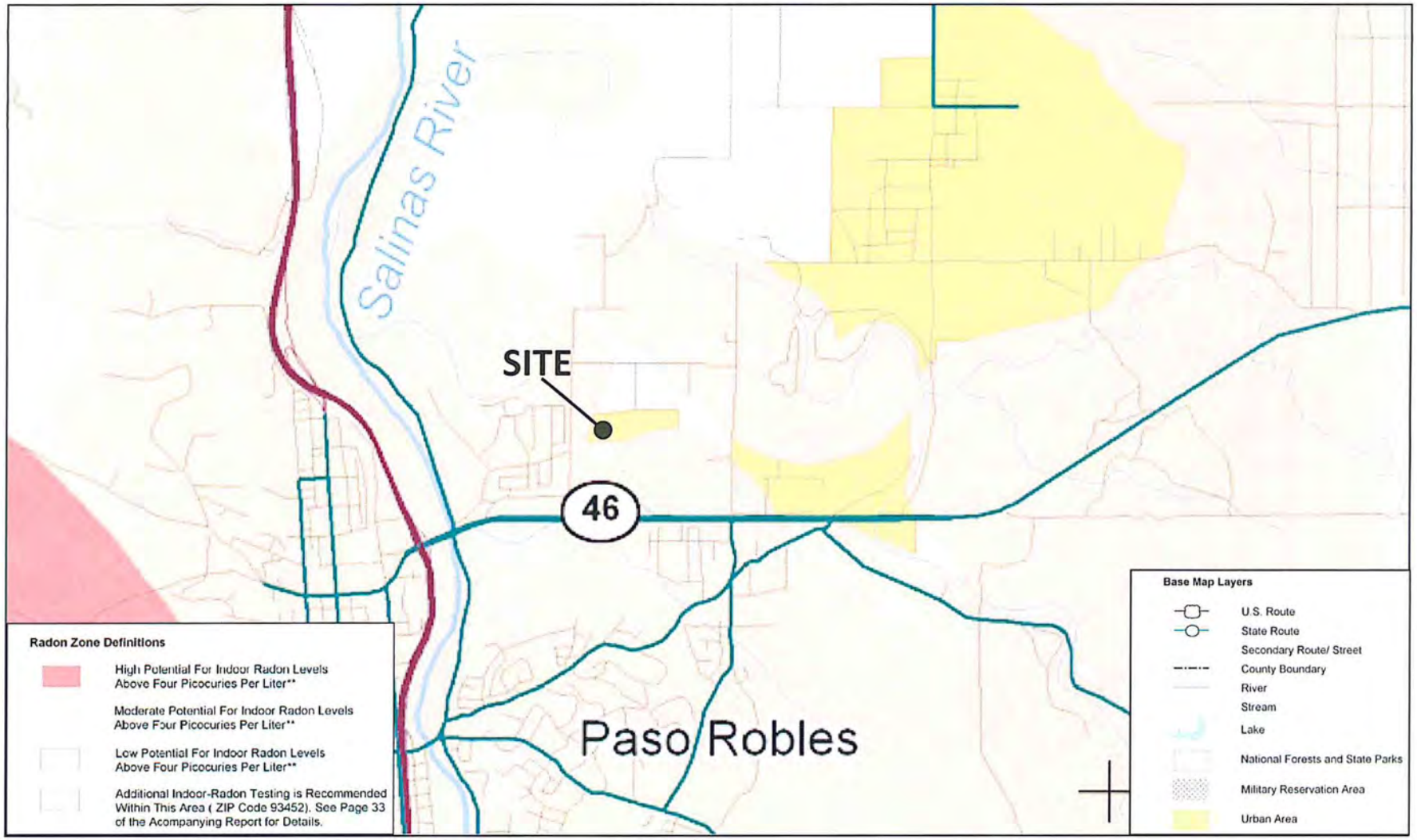
FEMA FLOOD ZONE MAP
CUESTA COLLEGE - NORTH COUNTY CAMPUS
CAMPUS CENTER
2800 Buena Vista Drive
Paso Robles, California

Date
March 2015

Project No.
SL-17503-SB

RADON MAP

CUESTA COLLEGE - NORTH COUNTY CAMPUS
CAMPUS CENTER
2800 Buena Vista Drive
Paso Robles, California



EARTH SYSTEMS PACIFIC

4378 Old Santa Fe Road, San Luis Obispo, CA 93401

(805) 544-3276 - (805) 544-1786

www.earthsystems.com - email: esp@earthsystems.com

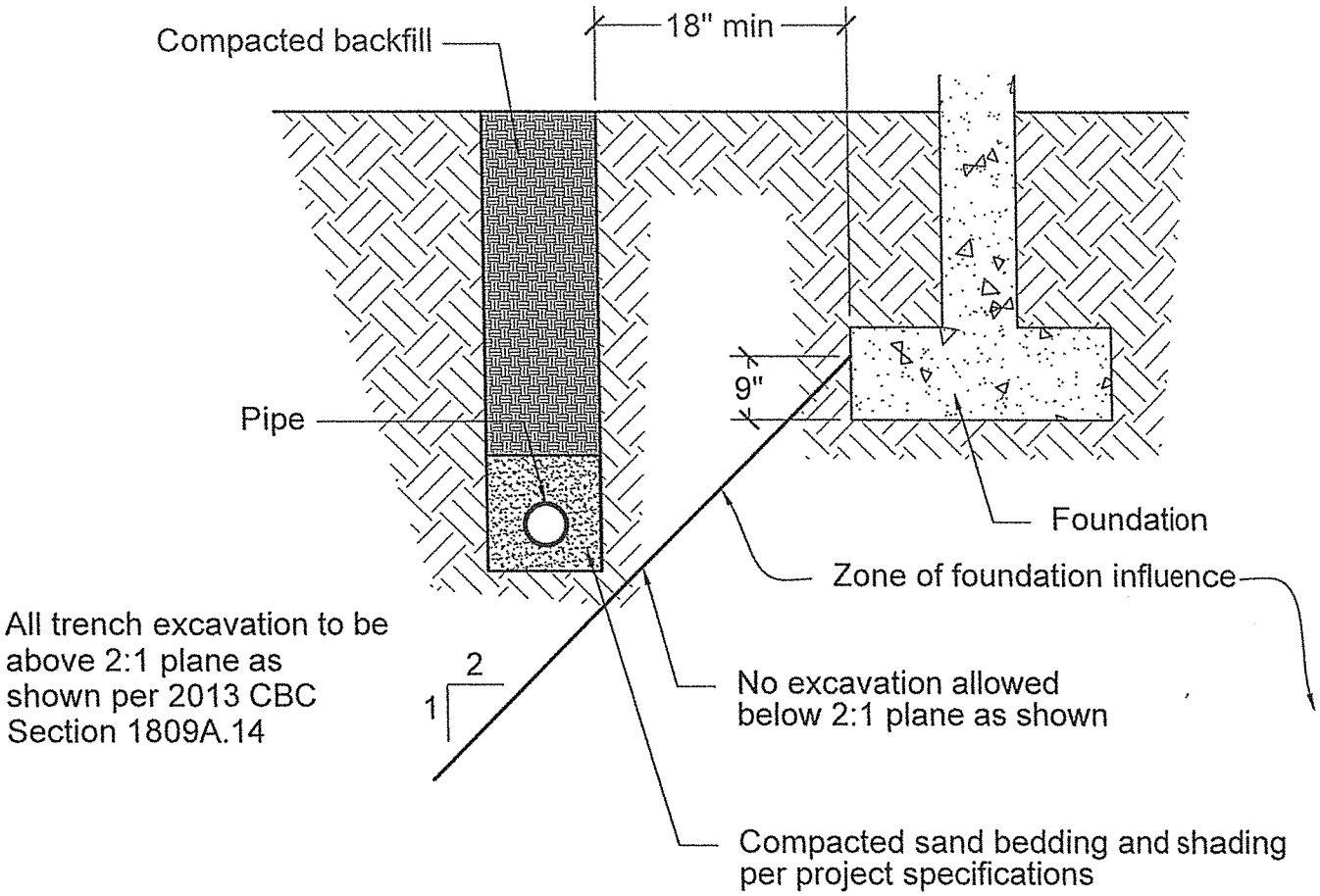
March 2015

SL-17503-SB

APPENDIX E

Typical Detail A: Pipe Parallel to Foundations

TYPICAL DETAIL A
PIPE PLACED PARALLEL TO FOUNDATIONS*



SCHEMATIC ONLY
NOT TO SCALE

Earth Systems Pacific

4378 Old Santa Fe Road
San Luis Obispo, CA 93401-8116
(805) 544-3276 • FAX (805) 544-1786
E-mail: esp@earthsys.com

Appendix C

Response to Comments

COMMENTS and RESPONSES

INTRODUCTION

Public review of the Draft Initial Study-Mitigated Negative Declaration (IS-MND) for the Cuesta College North County Campus Center Project began on July 8, 2015 and ended on August 10, 2015. San Luis Obispo County Community College District received two comment letters on the Draft IS-MND. The comment letters and District's responses follow. Each comment letter has been numbered sequentially and each separate issue raised by the commenter, if more than one, has been assigned a number. The responses to each comment identify first the number of the comment letter, and then the number assigned to each issue (1.2, for example, indicates that the response is for the second issue raised in comment letter number one).

Where a comment results in a change to the IS-MND text, a notation is made in the response indicating that the text is revised. Changes in text are signified by strikeouts (~~strikeouts~~) where text is removed and by underlines (<u>underlines</u>) where text is added.

Additional clerical revisions are also shown in the Final IS-MND in strikeout and underline format.

Comment letters were received from the following entities:

1. State of California Governor's Office of Planning and Research, State Clearinghouse and Planning Unit
2. San Luis Obispo County Air Pollution Control District

Letter No. 1

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

August 10, 2015

Terry Reece
Cuesta College - San Luis Obispo Community College District
P.O. Box 8106, Highway 1
San Luis Obispo, CA 93403-8106

Subject: Cuesta College North County Campus Center Project
SCH#: 2015071019

Dear Terry Reece:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. The review period closed on August 7, 2015, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH#	2015071019
Project Title	Cuesta College North County Campus Center Project
Lead Agency	Cuesta College

Type	MND Mitigated Negative Declaration
Description	The project involves construction of a two-story, approximately 48,900 gsf campus center building on the Cuesta College North County campus in the City of Paso Robles. The project would not affect enrollment at Cuesta College. Six existing modular classroom structures located on the project site would be demolished to accommodate the new campus center building. Construction is anticipated to begin in late 2015. The Cuesta College North County campus is located north of Highway 46, adjacent to Dallons Drive on the southern boundary and Buena Vista Drive. The project site is located to the west of the existing Fox Allied Health/Math & Science Building, between Parking Lot 10 and Parking Lot 11.

Lead Agency Contact

Name	Terry Reece		
Agency	Cuesta College - San Luis Obispo Community College District		
Phone	805 546 3283	*Fax*	
email			
Address	P.O. Box 8106, Highway 1		
City	San Luis Obispo	*State* CA	*Zip* 93403-8106

Project Location

County	San Luis Obispo			
City	Paso Robles			
Region				
Lat / Long	35° 39' 2" N / 120° 40' 13" W			
Cross Streets	Buena Vista Drive and Dallons Drive			
Parcel No.				
Township	*Range*	*Section*	*Base*	

Proximity to:

Highways	Hwy 46, 101
Airports	Paso Robles Municipal Airport
Railways	UPRR
Waterways	Salinas River
Schools	Cuesta College, others
Land Use	Public Facilities

Project Issues	Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Landuse; Cumulative Effects
Reviewing Agencies	Resources Agency; Department of Fish and Wildlife, Region 4; Department of Parks and Recreation; Department of Water Resources; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 5; Air Resources Board; Regional Water Quality Control Board, Region 3; Department of Toxic Substances Control; Native American Heritage Commission; Public Utilities Commission

Date Received 07/09/2015 *Start of Review* 07/09/2015 *End of Review* 08/07/2015

Note: Blanks in data fields result from insufficient information provided by lead agency.

Letter 1: State of California Governor's Office of Planning and Research, State Clearinghouse and Planning Unit, August 10, 2015

1.1. The commenter notes that the San Luis Obispo County Community College District is in compliance with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. No revisions to the IS-MND are required based on this comment. However, the comment will be forwarded to the San Luis Obispo County Community College District (SLOCCCD) decision-makers for their consideration.

SLO COUNTY apcd | Air Pollution Control District
San Luis Obispo County

Letter No. 2

August 7, 2015

San Luis Obispo County Community College District
Attn: Mr. Terry Reece, Facilities Director
Cuesta College
P. O. Box 8106
San Luis Obispo, CA 93403

SUBJECT: APCD Comments Regarding the Initial Study - Mitigated Negative Declaration for the Cuesta College North County Campus Center Project

Dear Mr. Reece,

Thank you for including the San Luis Obispo County Air Pollution Control District (APCD) in the environmental review process. We have completed our review of the proposed project that would construct a two-story, approximately 48,900 total square foot (sf) campus center building on the Cuesta College North County campus in the City of Paso Robles. Construction is anticipated to begin in late 2015. The Cuesta College North County campus is located north of Highway 46, adjacent to Dallons Drive, the southern boundary of the college, and Buena Vista Drive. The project site is located to the west of the existing Fox Allied Health/Math & Science Building, between Parking Lot 10 and Parking Lot 1. The project would not affect enrollment at Cuesta College. Six existing modular classroom structures located on the project site would be demolished to accommodate the new campus center building.

The area of buildings to be demolished total approximately 43,900 sf would result in a net increase in total built square footage of approximately 5,000 sf. The maximum disturbed area for the project would be up to 5.0 acres. Demolition would include all buildings, steps, railings, ramps, decks, and hardscape in the project area. Within the project area planting and trees would be protected where possible and restoration would occur for affected landscaping. The project site is generally flat and the cut and fill soil is anticipated to be balanced on site during site preparation and grading. The proposed campus center would connect to existing utilities at the site. Since the project location is within a school campus, air quality mitigation for sensitive receptors would be necessary. *The following are APCD comments that are pertinent to this project.*

2.1

GENERAL COMMENTS

As a commenting agency in the California Environmental Quality Act (CEQA) review process for a project, the APCD assesses air pollution impacts from both the construction and operational phases of a project, with separate significant thresholds for each. **Please**

address the action items contained in this letter that are highlighted by bold and underlined text.

Page 21 of the IS/MND states that the California Air Resources Board (ARB) manages the 10 air monitoring stations in SLO County. **Please change this to note that there are 11 air monitoring stations in SLO County, 9 managed by the APCD and 2, including the Paso Robles station, are managed by the ARB.** 2.1

Table 3 on Page 21 of the IS/MND provides a good summary of the specific air quality measurement for the Paso Robles station and shows that the measurements have not exceeded the State or Federal ambient air quality standards. However, **it is also important for the IS/MND to show the general results of air quality measurements throughout SLO County relative to Federal and State standards as presented in Table 2 on page 8 of the 2013 APCD Air Quality Report** (see link below). **This report shows that east of the project site, the eastern part of the county is non-attainment for the Federal 8-hour ozone standard and the county in general is non-attainment for State ozone and PM10 standards. Please add this information to the Air Quality section of the project's IS/MND.** 2.2

Also, **Page 13 of the APCD's 2013 Air Quality Report shows that the official highest 2013 PM10 24-hour concentration for the Paso Robles Station was 61 µg/m^3 instead of 595.6 µg/m^3 as shown in Table 3 of the IS/MND. Please see the APCD's 2013 Air Quality Report at the address below and make this correction to the IS/MND**: 2.3
http://slocleanair.org/images/cms/upload/files/2013aqrt-FINAL%281%29.pdf

CONSTRUCTION PHASE IMPACTS - Below Threshold

The Initial Study/Mitigated Negative Declaration (IS/MND) evaluated the construction impacts of this project using the most recent CalEEMod computer model, a tool for estimating construction emissions related to the development of land uses. The modeling results indicate that the construction phase impacts will likely be less than the APCD's significance threshold values identified in Table 2-1 of the CEQA Air Quality Handbook (see: slocleanair.org/business/landuseceqa.php). **Therefore, with the exception of the requirements below, the APCD is not requiring other construction phase mitigation measures for this project.**

Naturally Occurring Asbestos – Project Exemption 2.4

The APCD has recently updated the maps of areas in the SLO County (see map at: http://slocleanair.org/business/asbestos) where the soil and/or bedrock have the potential to contain naturally occurring asbestos (NOA) which has been identified by the state Air Resources Board (ARB) as a toxic air contaminant. The project site is not located within a potential NOA area and therefore, is exempt from the ARB Air Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations (93105).

Demolition of Asbestos Containing Materials

Demolition activities can have potential negative air quality impacts, including issues surrounding proper handling, demolition, and disposal of asbestos containing material (ACM). Asbestos containing materials could be encountered during the demolition or remodeling of existing buildings 2.5

or the disturbance, demolition, or relocation of above or below ground utility pipes/pipelines (e.g., transite pipes or insulation on pipes). **This project will include demolition activities and may be subject to various regulatory jurisdictions, including the requirements stipulated in the National Emission Standard for Hazardous Air Pollutants (40CFR61, Subpart M - asbestos NESHAP).** These requirements include, but are not limited to: 1) written notification, within at least 10 business days of activities commencing, to the APCD, 2) asbestos survey conducted by a Certified Asbestos Consultant, and, 3) applicable removal and disposal requirements of identified ACM. Please contact the APCD Enforcement Division at (805) 781-5912 and also go to http://slocleanair.org/business/asbestos.php for further information. To obtain a Notification of Demolition and Renovation form go to the "Other Forms" section of: slocleanair.org/business/onlineforms.php.

Developmental Burning

Effective February 25, 2000, **the APCD prohibited developmental burning of vegetative material within San Luis Obispo County.** If you have any questions regarding these requirements, contact the APCD Enforcement Division at 781-5912.

Dust Control Measures

Construction activities can generate fugitive dust, which could be a nuisance to local residents and businesses in close proximity to the proposed construction site. **Projects with grading areas that are within 1,000 feet of any sensitive receptor (i.e. Cuesta College North County Campus) shall implement the following mitigation measures to manage fugitive dust emissions such that they do not exceed the APCD's 20% opacity limit (APCD Rule 401) or prompt nuisance violations (APCD Rule 402).** 2.5

a. Reduce the amount of the disturbed area where possible;
b. Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site and from exceeding the APCD's limit of 20% opacity for greater than 3 minutes in any 60 minute period. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible. **Please note that since water use is a concern due to drought conditions, the contractor or builder shall consider the use of an APCD-approved dust suppressant where feasible to reduce the amount of water used for dust control.** For a list of suppressants, see Section 4.3 of the CEQA Air Quality Handbook;
c. All dirt stock pile areas should be sprayed daily and covered with tarps or other dust barriers as needed;
d. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible, following completion of any soil disturbing activities;
e. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast germinating, non-invasive grass seed and watered until vegetation is established;
f. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD;
g. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless

seeding or soil binders are used;

h. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site;
i. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114;
j. Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site;
k. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers shall be used with reclaimed water used where feasible. Roads shall be pre-wetted prior to sweeping when feasible;
l. All PM_{10} mitigation measures required should be shown on grading and building plans; and,
m. The contractor or builder shall designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints and reduce visible emissions below the APCD's limit of 20% opacity for greater than 3 minutes in any 60 minute period. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD Compliance Division prior to the start of any grading, earthwork or demolition.

Construction Phase Idling Limitations

The project site is a sensitive receptor location. Projects that will have diesel powered construction activity in close proximity to any sensitive receptor shall implement the following mitigation measures to ensure that public health benefits are realized by reducing toxic risk from diesel emissions: 2.5

To help reduce sensitive receptor emissions impact of diesel vehicles and equipment used to construct the project, the applicant shall implement the following idling control techniques:

1. California Diesel Idling Regulations

a. ***On-road diesel vehicles*** shall comply with Section 2485 of Title 13 of the California Code of Regulations. This regulation limits idling from diesel-fueled commercial motor vehicles with gross vehicular weight ratings of more than 10,000 pounds and licensed for operation on highways. It applies to California and non-California based vehicles. In general, the regulation specifies that drivers of said vehicles:
   1. Shall not idle the vehicle's primary diesel engine for greater than 5 minutes at any location, except as noted in Subsection (d) of the regulation; and,
   2. Shall not operate a diesel-fueled auxiliary power system (APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5.0 minutes at any location when within 1,000 feet of a restricted area, except as noted in Subsection (d) of the regulation.

b. ***Off-road diesel equipment*** shall comply with the 5 minute idling restriction identified in Section 2449(d)(2) of the California Air Resources Board's In-Use off-Road Diesel regulation.

c. Signs must be posted in the designated queuing areas and job sites to remind drivers and operators of the state's 5 minute idling limit.

d. The specific requirements and exceptions in the regulations can be reviewed at the following web sites: www.arb.ca.gov/msprog/truck-idling/2485.pdf and www.arb.ca.gov/regact/2007/ordiesl07/frooal.pdf.

2. Diesel Idling Restrictions Near Sensitive Receptors

In addition to the State required diesel idling requirements, the project applicant shall comply with these more restrictive requirements to minimize impacts to nearby sensitive receptors:

a. Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors;
b. Diesel idling within 1,000 feet of sensitive receptors shall not be permitted;
c. Use of alternative fueled equipment is recommended; and
d. Signs that specify the no idling areas must be posted and enforced at the site.

2.5

OPERATIONAL PHASE IMPACTS - Below Threshold

Based on the IS/MND, the project's operational phase emission estimates using the most recent CalEEMod computer model, a tool for estimating operational emissions related to the development of land uses, the operational phase would likely be less than the APCD's significance threshold values identified in Table 3-2 of the CEQA Air Quality Handbook. **Therefore, APCD is not requiring any operational phase mitigation measures for this project.**

2.6

Again, thank you for the opportunity to comment on this proposal. If you have any questions or comments, feel free to contact me at 781-5912.

Sincerely,

Andy Mutziger
Air Quality Specialist

AJM/arr

cc: Tim Fuhs, Enforcement Division, APCD
PMSM Architects

h:\plan\ceqa\project_review\3000\3900\3904-1\3904-1.docx

Letter 2: San Luis Obispo County Air Pollution Control District, August 7, 2015

2.1. The commenter reiterates their understanding of the proposed project and setting, and the role of the San Luis Obispo County Air Pollution Control District (SLOAPCD) in the environmental review process. The commenter notes that the California Air Resources Board (ARB) manages the 11 monitoring stations in SLO County, and suggests that the IS-MND be revised to reflect this fact. The following revisions have been made to Section III, *Air Quality*, of the IS-MND to include this information:

> Table 3 summarizes the annual air quality data for the local airshed. The ARB maintains over 60 air quality monitoring stations throughout California, including ~~ten~~ 11 stations in San Luis Obispo County. Of the 11 stations in San Luis Obispo County, nine are managed by the APCD and two are managed by ARB. The nearest monitoring station to the project site is located in the City of Paso Robles and is currently ~~owned and operated~~ managed by ARB. The station is located at 235 Santa Fe Avenue, approximately 3.5 miles south of the project site. Air quality parameters monitored at this station include: ozone (O_3), particulates less than 10 and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$), wind speed, wind direction, and ambient temperature (ATM). The data collected at this station is considered to be generally representative of the baseline air quality experienced at the project site.

2.2. The commenter suggests that the IS-MND include the results of the air quality measurements throughout SLO County relative to Federal and State standards, as presented in the 2013 SLOAPCD *Annual Air Quality Report*. Accordingly, the following has been added to Section III, *Air Quality*, of the IS-MND:

> The primary pollutants of concern in San Luis Obispo County are ozone (O_3) and particulate matter (PM_{10}). Table 3 provides the number of days of State or Federal exceedance in a given year, that the standard would have been exceeded had sampling occurred every day of the year. The major local sources for PM10 are agricultural operations, vehicle dust, grading, and dust produced by high winds. Ozone is a secondary pollutant that is not produced directly by a source, but rather is formed by a reaction between nitrogen oxides (NO_X) and reactive organic gases (ROG) in the presence of sunlight. Reductions in ozone concentrations are dependent on reducing the amount of these precursors. In San Luis Obispo County, the major sources of ROG are motor vehicles, organic solvents, the petroleum industry, and pesticides; and the major sources of NO_X are motor vehicles, public utility power generation, and fuel combustion by various industrial sources (San Luis Obispo County Clean Air Plan, 2001). According to the 2013 APCD Air Quality Report, the eastern part of the County is in non-attainment for the Federal 8-hour ozone standard. The County, as a whole, is also in non-attainment for the State ozone and PM_{10} standards.

2.3. The commenter notes that the official highest 2013 PM_{10} 24-hour concentration for the Paso Robles Station was 61 $\mu g/m^3$, rather than 595.6 $\mu g/m^3$ as shown in Table 3 of the IS-MND. Therefore, Table 3 of the IS-MND has been revised as shown:

Table 3
Ambient Air Quality Data at the Paso Robles –
Santa Fe Avenue Monitoring Station

Pollutant	2011	2012	2013
Ozone, ppm –Hourly Maximum	0.076	0.081	0.072
Number of days of State exceedances (>0.09 ppm)	0	0	0
Number of days of Federal exceedances (>0.12 ppm)	0	0	0
Ozone, ppm – Eight Hour (State)	0.068	0.070	0.067
Number of days of State exceedances (>0.070 ppm)	0	0	0
Number of days of Nation exceedances (>0.075 ppm)	0	0	0
Particulate Matter <10 microns, μg/m^3 Worst 24 Hours	113.4	61.3	~~595.6~~[1] 61.0
Number of samples of State exceedances (>50 μg/m^3)	2	2	19.4
Number of samples of Federal exceedances (>150 μg/m^3)	*	*	*

**There was insufficient (or no) data available to determine the value.*
~~[1]CARB does not provide explanation for outlier values, second highest value for 2013 was 89.0~~
Source: CARB, Top 4 Summaries, 2011-2013, 2013 APCD Air Quality Report
Paso Robles- Santa Fe Avenue Monitoring Station

2.4. The commenter notes that the construction phase impacts of the project would be below the SLOAPCD's significance thresholds. The commenter also notes that SLOAPCD does not require construction phase mitigation measures for this project beyond the following requirements:

- *Naturally Occurring Asbestos- Project Exemption*
- *Demolition of Asbestos Containing Materials.*
- *Developmental Burning.*
- *Dust Control Measures.*
- *Construction Phase Idling Limitations.*

Comments related to Naturally Occurring Asbestos (NOA) are addressed in this response. Comments related to demolition of asbestos-containing materials, developmental burning, dust control measures, and construction phase idling limitations are addressed in Response 2.5.

The commenter notes that SLOAPCD has recently updated the maps of areas in SLO County where soil and/or bedrock have the potential to contain NOA, and that the project site is not located within a potential NOA area. No revisions to the IS-MND are required based on this comment. As described in Section VI, *Geology and Soils*, of the IS-MND, there are no naturally-occurring asbestos-bearing formations (serpentine or ultramafic rock) on the site (Earth Systems Pacific, 2015).

2.5. As described in Response 2.4, SLOAPCD may require construction phase mitigation measures for demolition of asbestos-containing materials, developmental burning, dust control, and construction phase idling. SLOAPCD's required dust control measures are discussed in the Construction Emissions subsection of Section III, *Air Quality*, of the IS-MND. In addition, to address SLOAPCD comments related to demolition of asbestos-containing materials, developmental burning, and construction phase idling, the

following revisions have been made to the Construction Emissions subsection of Section III, *Air Quality*, of the IS-MND:

> SLOAPCD requires that projects with grading areas that are greater than 4-acres or that are within 1,000 feet of any sensitive receptor implement dust control measures to minimize nuisance impacts and to reduce fugitive dust emissions. Project construction would require grading and excavation within a sensitive receptor area. The project must also implement SLOAPCD's construction phase idling limitations if diesel powered construction activity will occur in close proximity to sensitive receptors. Construction would be staged on the North County Cuesta College campus, which is within an existing school receptor. However, the project staging area would be predominantly used for vehicle storage when not in use (such as overnight), and equipment idling would be prohibited in the staging area. To the maximum extent practicable, no diesel equipment would be used in the staging areas. In addition, SLOAPCD requires that projects which involve demolition of buildings where asbestos containing materials (ACM) could be encountered implement measures for proper handling, demolition, and disposal. Therefore, with implementation of applicable SLOACPD dust control measures, including prohibition of developmental burning, idling limitations, and measures for demolition of buildings containing ACM, the project would have a less than significant impact to air quality and sensitive receptors from project construction.

2.6. The commenter states that the project's operational emissions would not exceed SLOAPCD's operational significance threshold values, and that SLOAPCD does not require any operational phase mitigation measures for the project. No revisions to the IS-MND are required based on this comment.

Appendix D

Mitigation Monitoring and Reporting Program

CUESTA COLLEGE NORTH COUNTY CAMPUS CENTER PROJECT

MITIGATION MONITORING AND REPORTING PROGRAM

CEQA requires that a reporting or monitoring program be adopted for the conditions of project approval that are necessary to mitigate or avoid significant effects on the environment (Public Resources Code 21081.6). This mitigation monitoring and reporting program is designed to ensure compliance with adopted mitigation measures during project implementation. For each mitigation measure recommended in the Final Initial Study-Mitigated Negative Declaration (Final IS-MND), specifications are made herein that identify the action required and the monitoring that must occur. In addition, a responsible agency is identified for verifying compliance with individual conditions of approval contained in this Mitigation Monitoring and Reporting Program.

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Compliance Verification		
					Initial	Date	Comments
BIOLOGICAL RESOURCES							
BIO-1 Native/Breeding Bird Protection. To avoid impacts to nesting birds, including birds protected under the Migratory Bird Treaty Act, all initial ground disturbing activities including tree removal should be limited to the time period between August 16 and January 31 (i.e., outside the nesting season) if feasible. If initial site disturbance, grading, and vegetation removal cannot be conducted during this time period, a pre-construction survey for active nests within the project site shall be conducted by a qualified biologist at the site no more than two weeks prior to any construction activities. If an active bird nest is located, the nest site shall be fenced at a distance commensurate with the particular species and in consultation with the California Department of Fish and Wildlife (CDFW) until juveniles have fledged and when there is no evidence of a second attempt at nesting. Limits of construction to avoid a nest should be established in the field with flagging and stakes or construction fencing. Construction personnel shall be instructed on the sensitivity of the area. The project proponent shall record the results of the recommended protective measures described above to document compliance with applicable state and federal laws pertaining to protection of native birds.	1. Limit all initial ground disturbing activities, including tree removal, to the time period between August 16 and January 31. 2. A qualified biologist shall prepare a pre-construction survey if initial site disturbance cannot be conducted during the time specified above. 3. The project proponent shall record the results of protective measures to document compliance with applicable state and federal laws pertaining to protection of native birds.	1. Monitor ground disturbing activities schedule prior to construction. 2. Review pre-construction survey no more than two weeks prior to construction 3. Review record of protective measures upon notice of located active bird nests.	Once	SLO County Community College District			
BIO-2 Tree Protection and Replacement. Existing trees on and adjacent to the project site shall be avoided through setbacks and installation of protective fencing to the extent feasible during demolition and construction. Trees that cannot be avoided and must be removed due to the proposed project shall be replaced at a rate of one native tree planted for	1. Existing trees on and adjacent to the project site shall be avoided and trees that cannot be avoided and must be removed shall be replaced at a rate of one native tree planted for every one mature tree removed.	1. Review of tree protection and replacement measures during construction.	1. Periodically throughout construction. 2. Periodically for seven years or until stasis has been	SLO County Community College District			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Compliance Verification		
					Initial	Date	Comments
every one mature tree removed. Replacement trees shall be installed on-site or at an approved off-site location under the direction of a certified arborist. A restoration and monitoring program shall be developed and implemented for a minimum of seven years or until stasis has been determined by certified arborist.	2. The applicant shall develop and implement a tree restoration and monitoring program.	2. Review of tree restoration and monitoring program for a minimum of seven years or until stasis has been determined.	determined.				
CULTURAL RESOURCES							
CR-1 Construction Monitoring. A qualified archaeologist and paleontologist shall monitor all groundbreaking activities within the project site. In the event that archaeological and historic artifacts are encountered during project construction, all work in the vicinity of the find will be halted until such time as the find is evaluated by a qualified archaeologist and appropriate mitigation (e.g., curation, preservation in place, etc.), if necessary, is implemented. After the find has been appropriately mitigated consistent with Mitigation Measure CR-2 or Mitigation Measure CR-3, as appropriate, work in the area may resume.	A qualified archaeologist and paleontologist shall monitor all groundbreaking activities within the project site. In the event that archaeological and historic artifacts are encountered during project construction, all work in the vicinity of the find will be halted until such time as the find is evaluated by a qualified archaeologist and MM CR-2 or MM CR-3, is implemented.	Review of construction monitoring activities during construction.	Periodically throughout construction activities.	SLO County Community College District			
CR-2 Procedure for Treatment of Uncovered Cultural Resources. If buried cultural resources are uncovered during construction, all work will be halted in the vicinity of the archaeological discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the cultural resource. In the event that any artifact or an unusual amount of bone, or shell is	The lead agency will halt all work if cultural resources or any artifact or an unusual amount of bone, or shell is encountered during construction until the find can be evaluated by a qualified archaeologist/ paleontologist. If the resources are found to be significant, they will be avoided or	Review of compliance with procedures for treatment of uncovered cultural resources upon discovery.	Once	SLO County Community College District			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Compliance Verification		
					Initial	Date	Comments
encountered during construction, work will be immediately stopped and relocated to another area. The lead agency will stop construction within 100 feet of the exposed resource until a qualified archaeologist/paleontologist can evaluate the find (see 36 CFR 800.11.1 and CCR, Title 14, Section 15064.5[f]). Examples of such cultural materials might include: ground stone tools such as mortars, bowls, pestles, and manos; chipped stone tools such as projectile points or choppers; flakes of stone not consistent with the immediate geology such as obsidian or fused shale; historic trash pits containing bottles and/or ceramics; or structural remains. If the resources are found to be significant, they will be avoided or will be mitigated consistent with State Historic Preservation Office (SHPO) Guidelines.	will be mitigated consistent with State Historic Preservation Office (SHPO) Guidelines.						
CR-3 Procedure for Accidental Discovery of Human Remains. In the event of an accidental discovery of any human remains, the steps and procedures specified in Health and Safety Code Section 7050.5, California Environmental Quality Act (CEQA) Section 15064.5(e), and Public Resources Code Section 5097.98 will be implemented. No further excavation or disturbance of the area where the remains are discovered and a nearby area reasonably suspected to overlie adjacent remains is allowed until the coroner is contacted and the appropriate steps taken pursuant to Health and Safety Code §7050.5 and Public Resource Code §5097.98. If the coroner determines the remains to be Native American, the coroner will contact the Native American Heritage Commission (NAHC) within 24 hours. If Native American human remains are discovered during project construction, it will be necessary to comply with state laws relating to the	In the event of an accidental discovery of any human remains, the steps and procedures specified in Health and Safety Code Section 7050.5, California Environmental Quality Act (CEQA) Section 15064.5(e), and Public Resources Code Section 5097.98 will be implemented. If Native American human remains are discovered during project construction, the applicant must comply with state laws relating to the disposition of Native American burials that are under the jurisdiction of the NAHC (Pub. Res. Code Section 5097)	Review of compliance with procedures for accidental discovery of human remains upon discovery.	Once	SLO County Community College District			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Compliance Verification		
					Initial	Date	Comments
disposition of Native American burials that are under the jurisdiction of the NAHC (Pub. Res. Code Section 5097). For remains of Native American origin, no further excavation or disturbance will take place in the area where the remains are discovered and a nearby area reasonably suspected to overlie adjacent remains until the most likely descendant of the deceased Native American(s) has made a recommendation to the landowner or the person responsible for the excavation work regarding means of treating or disposing of the human remains and any associated grave goods, with appropriate dignity, as provided in the Pub. Res. Code Section 5097.98; or the NAHC is unable to identify a most likely descendant or the descendant fails to make a recommendation within 48 hours after being notified. In consultation with the most likely descendant, the project archaeologist and the lead agency will determine a course of action regarding preservation or excavation of Native American human remains, and this recommendation will be implemented expeditiously. If a most likely descendent cannot be located or does not make a recommendation, the project archaeologist and the lead agency will determine a course of action regarding preservation or excavation of Native American human remains, which will be submitted to the NAHC for review prior to implementation.							
CR-1 Construction Monitoring. A qualified archaeologist and paleontologist shall monitor all groundbreaking activities within the project site. In the event that archaeological and historic artifacts are encountered during project construction, all work in the vicinity of the find will be halted until such time as the find is	A qualified archaeologist and paleontologist shall monitor all groundbreaking activities within the project site.	Review of monitoring activities during construction.	Periodically throughout construction activities.	SLO County Community College District			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Compliance Verification		
					Initial	Date	Comments
evaluated by a qualified archaeologist and appropriate mitigation (e.g., curation, preservation in place, etc.), if necessary, is implemented. After the find has been appropriately mitigated consistent with Mitigation Measure CR-2 or Mitigation Measure CR-3, as appropriate, work in the area may resume.							
NOISE							
N-1 Construction Noise Reduction: The following requirements shall be implemented during construction of the project: • To ensure that noise emissions from construction vehicles and other equipment are limited to the minimum feasible levels, equip all noise-producing equipment and vehicles using internal combustion engines with mufflers, and air-inlet silencers where appropriate, that meet or exceed original factory specification. Equip mobile or fixed "package" equipment (e.g., arc-welders, air compressors) with shrouds and noise-control features that are readily available for that type of equipment. • Install a sound barrier around the project site or adjacent classrooms or other noise-sensitive receptors within 250 feet of construction activity during operation of heavy construction equipment when adjacent classes are in session or facilities are in use. Temporary noise barriers should be made of noise-resistant material sufficient to achieve a Sound Transmission Class	All noise-producing equipment and vehicles shall be equipped with noise-control features. Temporary noise barriers shall be installed around the project site.	Review of consistency with noise-reducing requirements prior to construction.	Once	SLO County Community College District			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Compliance Verification		
					Initial	Date	Comments
(STC) rating of STC 30 or greater, based on sound transmission loss data taken according to ASTM Test Method E90. Such a barrier may provide as much as a 10 dB insertion loss, provided it is positioned as close as possible to the noise source or to the receptors. To be effective, the barrier must be long and tall enough to completely block the line-of-sight between the noise source and the receptors. The gaps between adjacent panels must be filled-in to avoid having noise penetrate directly through the barrier.							