



MEMORANDUM

DATE: February 23, 2018
TO: T.J. Gamble, Somera Capital Management, LLC
FROM: Amy Fischer, Principal
SUBJECT: Air Quality Impact Analysis - Avila Beach Cottage Hotel Project, Avila Beach

INTRODUCTION

This Air Quality Impact Technical Memorandum for the proposed Avila Beach Cottage Hotel project (project) has been prepared using methods and assumptions recommended in the air quality impact assessment guidelines of the San Luis Obispo (SLO) County Air Pollution Control District (APCD) and by the County of San Luis Obispo (County). This analysis follows the guidelines within the SLO County APCD's *California Environmental Quality Act (CEQA) Air Quality Handbook*¹, including an assessment of criteria pollutant emissions, an assessment of carbon monoxide (CO) hot-spot impacts, and an assessment of the project's greenhouse gas (GHG) emissions consistent with the *County of San Luis Obispo EnergyWise Plan*.² Mitigation measures to reduce or eliminate significant air quality impacts are identified, where appropriate.

PROJECT DESCRIPTION

The project site is located in the community of Avila, San Luis Obispo County, just inland and uphill from Avila Beach Drive between Wild Cherry Canyon Road and the San Luis Bay Inn. The project site, assessor parcel number (APN) 076-174-009, is 22.25 acres (969,212 square feet [sf]). The total developed area of the project will be approximately 5.98 acres.

The project site and immediate surroundings are undeveloped, with the exception of portions of the San Luis Bay Inn development to the east, and two rural residences to the north. Nearby uses include commercial, residential, and recreational uses, including the San Luis Bay Inn, Avila Beach Golf Resort, Port San Luis, public beaches, and the community of Avila.

The project would develop a 50-unit boutique resort hotel consisting of a 29,404 sf main lodge with the following amenities:

¹ San Luis Obispo County Air Pollution Control District, 2012. *CEQA Air Quality Handbook*. April.

² San Luis Obispo, County of, 2011. *County of San Luis Obispo EnergyWise Plan*. November.

- 5,331 sf restaurant and bar with support facilities (i.e. kitchen)
- 429 sf pool bar
- 1,679 sf spa
- 566 sf fitness center
- 2,046 sf conference and banquet space
- 1,032 sf lobby/reception area
- 299 sf gift shop
- 11,218 sf partially subterranean parking and valet area
- Other employee, service, mechanical and restroom space

A 1,250 sf pool with a 4,600 sf deck would be located behind the main lodge. A 70 sf gate house would be located at the entry point of the property to direct guests and deliveries. Guest accommodations would include a series of small, single-story cottages, ranging from 460 to 833 sf totaling 29,873 sf of dwelling space. The total square footage of the development, including the underground parking area (but excluding cottage decks), would be 55,193 sf. The overall impervious footprint³ would be 62,116 sf, or 6.4 percent, of the 22.25-acre parcel.

Although the precise construction schedule is unknown at this time, for purposes of this air quality analysis, it was assumed that construction would begin by September 3, 2018, require approximately 13 months for completion, and be fully operational in 2019. Earthwork for site preparation would include 18,225 cubic yards (cy) of cut and 14,055 cy of fill, resulting in a net export of 4,170 cy of soil.

The project applicant has committed to implementing several water conservation measures, including the following:

- Efficient irrigation technology including weather-based smart controllers, low-volume spray heads, drip emitters, and soil moisture sensors;
- Low-flow toilets, showers, and faucets; and
- A graywater or reclaimed water (when available) irrigation system that is expected to reduce the total outdoor water usage by approximately 44 percent.

ENVIRONMENTAL SETTING

Air Quality Background

Both State and federal governments have established health-based Ambient Air Quality Standards (AAQS) for six criteria air pollutants:⁴ CO, ozone (O₃), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), lead (Pb), and suspended particulate matter (PM). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. These standards are designed to protect the health and welfare of the population with a reasonable margin of safety.

³ Gross square footage, including cottage decks but not including subterranean areas.

⁴ Criteria pollutants are defined as those pollutants for which the Federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

Two criteria pollutants, O₃ and NO₂, are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. Pollutants such as PM, CO, SO₂, and Pb are considered local pollutants that tend to accumulate in the air locally.

The primary pollutants of concern based on the current air quality conditions in the project area are O₃, CO, and PM. Significance thresholds established by an air district are used to manage total regional and local emissions within an air basin based on the air basin's attainment status for criteria pollutants. These emission thresholds were established for individual development projects that would contribute to regional and local emissions and could adversely affect or delay the County's projected attainment target goals for nonattainment criteria pollutants.

Because of the conservative nature of the significance thresholds, and the regional context of individual development project emissions, there is no direct correlation between a single project and localized air quality-related health effects. One individual project that generates emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like nitrogen oxides (NO_x) and reactive organic gases (ROG).

Occupants of facilities such as schools, day care centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with greater associated exposure to ambient air quality conditions. Recreational uses are also considered sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise.

Ozone (O₃)

O₃ is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving ROG and NO_x. The main sources of ROG and NO_x, often referred to as ozone precursors, are combustion processes (including combustion in motor vehicle engines) and the evaporation of solvents, paints, and fuels. In San Luis Obispo County, automobiles are the single largest source of ozone precursors. O₃ is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with O₃ production through the photochemical reaction process. O₃ causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Carbon Monoxide (CO)

CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles. While CO transport is limited, it disperses with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations near congested roadways or intersections may reach unhealthful levels that adversely affect local sensitive receptors (e.g., residents, schoolchildren, the

elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service (LOS) or with extremely high traffic volumes. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impair central nervous system function, and induce angina (chest pain) in persons with serious heart disease. Extremely high levels of CO, such as those generated when a vehicle is running in an unventilated garage, can be fatal.

Particulate Matter (PM)

PM is a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from manmade and natural sources. Particulate matter is categorized in two size ranges: PM₁₀ for particles less than 10 microns in diameter and PM_{2.5} for particles less than 2.5 microns in diameter. Vehicle exhaust, road dust, mineral quarries, grading, demolition, and agricultural tilling are major contributors of particulate matter in SLO County. Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities such as construction are other sources of such fine particulates. These fine particulates are small enough to be inhaled into the deepest parts of the human lung and can cause adverse health effects. According to the California Air Resources Board (CARB), studies in the United States and elsewhere have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks, and studies of children's health in California have demonstrated that particle pollution may significantly reduce lung function growth in children. The CARB also reports that statewide attainment of particulate matter standards could prevent thousands of premature deaths, lower hospital admissions for cardiovascular and respiratory disease and asthma-related emergency room visits, and avoid hundreds of thousands of episodes of respiratory illness in California.⁵

Nitrogen Dioxide (NO₂)

NO₂ is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO₂. Aside from its contribution to O₃ formation, NO₂ also contributes to other pollution problems, including a high concentration of fine PM, poor visibility, and acid deposition. NO₂ may be visible as a coloring component on high pollution days, especially in conjunction with high O₃ levels. NO₂ decreases lung function and may reduce resistance to infection. On January 22, 2010, the U.S. Environmental Protection Agency (USEPA) strengthened the health-based National Ambient Air Quality Standards (NAAQS) for NO₂.

Sulfur Dioxide (SO₂)

SO₂ is a colorless acidic gas with a strong odor. It is produced by the combustion of sulfur-containing fuels such as oil, coal, and diesel. SO₂ has the potential to damage materials and can cause health effects at high concentrations. It can irritate lung tissue and increase the risk of acute and chronic respiratory disease. SO₂ also reduces visibility and the level of sunlight at the ground surface.

⁵ California Air Resources Board, 2011. *Fact Sheets*. Website: www.arb.ca.gov/htm/fslist.htm#Health.pdf. October.

Lead (Pb)

Pb is a metal found naturally in the environment as well as in manufactured products. The major sources of Pb emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of Pb emissions. The highest levels of Pb in air are generally found near Pb smelters. Other stationary sources are waste incinerators, utilities, and Pb-acid battery factories.

Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the USEPA established national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The USEPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of the USEPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.

Toxic Air Contaminants (TACs)

In addition to the criteria pollutants discussed above, TACs are another group of pollutants of concern. Some examples of TACs include: benzene, butadiene, formaldehyde, and hydrogen sulfide. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

TACs do not have ambient air quality standards, but are regulated by the USEPA and CARB. In 1998, CARB identified particulate matter from diesel-fueled engines as a toxic air contaminant. CARB has completed a risk management process that identified potential cancer risks for a range of activities and land uses that are characterized by use of diesel-fueled engines.⁶ High volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

Table 1 shows the most common sources of each of the six criteria pollutants and their primary effects. The federal and State AAQS for these criteria pollutants are shown in Table 2.

⁶ California Air Resources Board, 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October.

Table 1: Sources and Health Effects of Air Pollution

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	<ul style="list-style-type: none"> Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. Natural events, such as decomposition of organic matter. 	<ul style="list-style-type: none"> Reduced tolerance for exercise. Impairment of mental function. Impairment of fetal development. Death at high levels of exposure. Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> Motor vehicle exhaust. High temperature stationary combustion. Atmospheric reactions. 	<ul style="list-style-type: none"> Aggravation of respiratory illness. Reduced visibility. Reduced plant growth. Formation of acid rain.
Ozone (O ₃)	<ul style="list-style-type: none"> Atmospheric reaction of organic gases with nitrogen oxides in sunlight. 	<ul style="list-style-type: none"> Aggravation of respiratory and cardiovascular diseases. Irritation of eyes. Impairment of cardiopulmonary function. Plant leaf injury.
Lead (Pb)	<ul style="list-style-type: none"> Contaminated soil. 	<ul style="list-style-type: none"> Impairment of blood functions and nerve construction. Behavioral and hearing problems in children.
Suspended Particulate Matter (PM _{2.5} and PM ₁₀)	<ul style="list-style-type: none"> Stationary combustion of solid fuels. Construction activities. Industrial processes. Atmospheric chemical reactions. 	<ul style="list-style-type: none"> Reduced lung function. Aggravation of the effects of gaseous pollutants. Aggravation of respiratory and cardiorespiratory diseases. Increased cough and chest discomfort. Soiling. Reduced visibility.
Sulfur Dioxide (SO ₂)	<ul style="list-style-type: none"> Combustion of sulfur-containing fossil fuels. Smelting of sulfur-bearing metal ores. Industrial processes. 	<ul style="list-style-type: none"> Aggravation of respiratory diseases (asthma, emphysema). Reduced lung function. Irritation of eyes. Reduced visibility. Plant injury. Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board (CARB), 2015.

Table 2: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ^a		Federal Standards ^b			
		Concentration ^c	Method ^d	Primary ^{c,e}	Secondary ^{c,f}	Method ^g	
Ozone (O ₃) ^h	1-Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry		Same as Primary Standard	Ultraviolet Photometry	
	8-Hour	0.07 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)			
Respirable Particulate Matter (PM ₁₀) ⁱ	24-Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	20 µg/m ³					
Fine Particulate Matter (PM _{2.5}) ⁱ	24-Hour		Gravimetric or Beta Attenuation	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	12 µg/m ³		12.0 µg/m ³			
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)		Non-Dispersive Infrared Photometry (NDIR)	
	1-Hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)			
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m ³)					
Nitrogen Dioxide (NO ₂) ^j	Annual Arithmetic Mean	0.03 ppm (57 µg/m ³)	Gas Phase Chemiluminescence	53 ppb (100 µg/m ³)	Same as Primary Standard	Gas Phase Chemiluminescence	
	1-Hour	0.18 ppm (339 µg/m ³)		100 ppb (188 µg/m ³)			
Lead (Pb) ^{l,m}	30-Day Average	1.5 µg/m ³	Atomic Absorption		Same as Primary Standard	High-Volume Sampler and Atomic Absorption	
	Calendar Quarter			1.5 µg/m ³ (for certain areas) ^l			
	Rolling 3-Month Average			0.15 µg/m ³			
Sulfur Dioxide (SO ₂) ^k	24-Hour	0.04 ppm (105 µg/m ³)	Ultraviolet Fluorescence	0.14 ppm (for certain areas) ^k		Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)	
	3-Hour						0.5 ppm (1300 µg/m ³)
	1-Hour	0.25 ppm (655 µg/m ³)		75 ppb (196 µg/m ³)			
	Annual Arithmetic Mean			0.030 ppm (for certain areas) ^k			
Visibility-Reducing Particles ⁿ	8-Hour	See footnote n	Beta Attenuation and Transmittance through Filter Tape.	No Federal Standards			
Sulfates	24-Hour	25 µg/m ³	Ion Chromatography				
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence				
Vinyl Chloride ^l	24-Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography				

Table notes are provided on the following page.

- ^a California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- ^b National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact USEPA for further clarification and current national policies.
- ^c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- ^d Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.
- ^e National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- ^f National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- ^g Reference method as described by the USEPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the USEPA.
- ^h On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- ⁱ On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- ^j To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- ^k On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
- ^l The ARB has identified lead and vinyl chloride as ‘toxic air contaminants’ with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- ^m The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
- ⁿ In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively.

°C = degrees Celsius

CARB = California Air Resources Board

USEPA = United States Environmental Protection Agency

ppb = parts per billion

ppm = parts per million

mg/m³ = milligrams per cubic meter

µg/m³ = micrograms per cubic meter

Source: California Air Resources Board, 2016. <https://www.arb.ca.gov/research/aaqs/aaqs2.pdf>

Greenhouse Gas (GHG) and Global Climate Change Background

Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. The Earth's average near-surface atmospheric temperature rose $0.6 \pm 0.2^\circ$ Celsius ($^\circ\text{C}$) or $1.1 \pm 0.4^\circ$ Fahrenheit ($^\circ\text{F}$) in the 20th century. The prevailing scientific opinion on climate change is that most of the warming observed over the last 50 years is attributable to human activities. The increased amounts of carbon dioxide (CO_2) and other GHGs are the primary causes of the human-induced component of warming. GHGs are released by the burning of fossil fuels, land clearing, agriculture, and other activities that lead to an increase in the greenhouse effect.⁷

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur Hexafluoride (SF_6)

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere, and enhancing the natural greenhouse effect, which is believed to be causing global warming. While manmade GHGs include naturally-occurring GHGs such as CO_2 , CH_4 , and N_2O , some gases, like HFCs, PFCs, and SF_6 , are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. For the purposes of this air quality analysis, the term "GHGs" will refer collectively to the six gases listed above only.

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric

⁷ The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduces the heat escaping, greenhouse gases like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of greenhouse gas results in global warming, the naturally occurring greenhouse effect is necessary to keep our planet at a comfortable temperature.

lifetime”). The GWP of each gas is measured relative to CO₂, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO₂ over a specified time period. GHG emissions are typically measured in terms of pounds or tons of “CO₂ equivalents” (CO₂e). Table 3 shows the GWP for each type of GHG. For example, SF₆ is 22,800 times more potent at contributing to global warming than CO₂ over a 100 year time span.

Table 3: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-Year Time Horizon)
Carbon Dioxide	50-200	1
Methane	12	25
Nitrous Oxide	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC: Tetrafluoromethane (CF ₄)	50,000	7,390
PFC: Hexafluoromethane (C ₂ F ₆)	10,000	12,200
Sulfur Hexafluoride (SF ₆)	3,200	22,800

Source: IPCC, 2007. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC.*

The following discussion summarizes the characteristics of the six GHGs.

Carbon Dioxide (CO₂)

In the atmosphere, carbon generally exists in its oxidized form, as CO₂. Natural sources of CO₂ include the respiration (breathing) of humans, animals and plants, volcanic out gassing, decomposition of organic matter and evaporation from the oceans. Human caused sources of CO₂ include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. Natural sources release approximately 150 billion tons of CO₂ each year, far outweighing the 7 billion tons of man-made emissions of CO₂ each year. Nevertheless, natural removal processes, such as photosynthesis by land- and ocean-dwelling plant species, cannot keep pace with this extra input of man-made CO₂, and consequently, the gas is building up in the atmosphere.

In 2015, CO₂ emissions from fossil fuel combustion accounted for approximately 98 percent of man-made CO₂ emissions and approximately 84 percent of California's overall GHG emissions (CO₂e).⁸ The transportation sector accounted for California's largest portion of CO₂ emissions, approximately 44 percent, with gasoline consumption making up the greatest portion of these emissions. Electricity generation was California's second largest category of GHG emissions.

⁸ California Air Resources Board, 2017. *California Greenhouse Gas Emission Inventory - 2017 Edition*. June 6. Website: www.arb.ca.gov/cc/inventory/data/data.htm (accessed February 22, 2018).

Methane (CH₄)

CH₄ is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Decomposition occurring in landfills accounts for the majority of human-generated CH₄ emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation, manure management, and rice cultivation are also significant sources of CH₄ in California. CH₄ accounted for approximately 9 percent of gross climate change emissions (CO₂e) in California in 2015.⁹

Total annual emissions of CH₄ are approximately 500 million tons, with manmade emissions accounting for the majority. As with CO₂, the major removal process of atmospheric CH₄ – a chemical breakdown in the atmosphere – cannot keep pace with source emissions, and CH₄ concentrations in the atmosphere are increasing.

Nitrous Oxide (N₂O)

N₂O is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. N₂O is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion emit N₂O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N₂O emissions in California. N₂O emissions accounted for nearly 2.7 percent of man-made GHG emissions (CO₂e) in California in 2015.¹⁰

Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulfur Hexafluoride (SF₆)

HFCs are primarily used as substitutes for ozone-depleting substances regulated under the Montreal Protocol.¹¹ PFCs and SF₆ are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry leads to greater use of PFCs. HFCs, PFCs, and SF₆ accounted for about 4.3 percent of man-made GHG emissions (CO₂e) in California in 2015.¹²

Black Carbon

Black carbon is the most strongly light-absorbing component of PM formed by burning fossil fuels such as coal, diesel, and biomass. Black carbon is emitted directly into the atmosphere in the form of PM_{2.5} and is the most effective form of PM, by mass, at absorbing solar energy. Per unit of mass in

⁹ Ibid.

¹⁰ Ibid.

¹¹ The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion.

¹² Ibid.

the atmosphere, black carbon can absorb a million times more energy than CO₂.¹³ Black carbon contributes to climate change both directly, such as absorbing sunlight, and indirectly, such as affecting cloud formation. However, because black carbon is short-lived in the atmosphere, it can be difficult to quantify its effect on global-warming.

Most U.S. emissions of black carbon come from mobile sources (52 percent), especially diesel engines and vehicles. The other major source is open biomass burning, including wildfires, although residential heating and industry also contribute. The CARB estimates that the annual black carbon emissions in California have decreased approximately 70 percent between 1990 and 2010 and are expected to continue to decline significantly due to controls on mobile diesel emissions.

METHODOLOGY

Construction Emissions

Construction activities can generate a substantial amount of air pollution. Construction activities are considered temporary; however, short term impacts can contribute to exceedances of air quality standards. Construction activities include site preparation, earthmoving, and general construction. The emissions generated from these common construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel and gasoline powered equipment, portable auxiliary equipment, and worker commute trips. The California Emission Estimator Model v.2016.3.2 (CalEEMod) computer program was used to calculate emissions from on-site construction equipment and emissions from worker and vehicle trips to the site.

Operational Emissions

The air quality analysis includes estimating emissions associated with long-term operation of the project. Indirect emissions of criteria pollutants with regional impacts would be emitted by project generated vehicle trips from hotel occupants and employees. In addition, localized air quality impacts (i.e., higher carbon monoxide concentrations or “hot spots”) near intersections or roadway segments in the project vicinity would also potentially occur due to project generated vehicle trips.

Consistent with the SLO County APCD guidance for estimating emissions associated with land use development projects, the CalEEMod computer program was used to calculate the long-term operational emissions associated with the project.

Greenhouse Gas Emissions

GHG emissions associated with the project would occur over the short term from construction activities, consisting primarily of emissions from equipment exhaust. There would also be long-term GHG emissions associated with project-related vehicular trips. Recognizing that the field of global climate change analysis is rapidly evolving, the approaches advocated most recently indicate that for determining a project’s contribution to GHG emissions, lead agencies should calculate, or estimate, emissions from vehicular traffic, energy consumption, water conveyance and treatment, waste

¹³ U.S. EPA. 2015. Black Carbon. Website: www3.epa.gov/blackcarbon/basic.html (accessed on September 17, 2015). September.

generation, construction activities, and any other significant source of emissions within the project area. The CalEEMod results were used to quantify GHG emissions generated by the project.

THRESHOLDS OF SIGNIFICANCE

The State *CEQA Guidelines* indicate that a project would normally have a significant adverse air quality impact if project-generated pollutant emissions would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under applicable federal or state ambient air quality standards (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

The State *CEQA Guidelines* indicate that a project would normally have a significant adverse GHG emission impact if the project would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reduction the emissions of GHGs.

The SLO County APCD sets emissions thresholds in the *CEQA Air Quality Handbook*, which were established based on the attainment status of the air basin in regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety, these emission thresholds are regarded as conservative and would overstate an individual project's contribution to health risks. The thresholds of significance for emissions from construction activities are shown in Table 4 and the thresholds of significance for operational emissions impacts are presented in Table 5.

Table 4: Air Quality Thresholds of Significance for Construction Emissions

Pollutant	Threshold ¹		
	Daily	Quarterly Tier 1	Quarterly Tier 2
ROG + NO _x (combined)	137 lbs	2.5 tons	6.3 tons
Diesel Particulate Matter (DPM)	7 lbs	0.13 tons	0.32 tons
Fugitive Particulate Matter (PM ₁₀), Dust ²		2.5 tons	
Greenhouse Gases (CO ₂ e)	1,150 tons per year Amortized and Combined with Operational Emissions ³		

Source: SLO County APCD, 2012. *CEQA Air Quality Handbook*. April.

¹ Daily and quarterly emission thresholds are based on the California Health & Safety Code and the CARB Carl Moyer Guidelines.

² Any project with a grading area greater than 4.0 acres of worked area can exceed the 2.5 ton PM10 quarterly threshold.

³ The amortization of GHG emissions over the life of the project is based on the total greenhouse gas emissions for construction activities divided by the project life (i.e., 50 years for residential projects and 25 years for commercial projects) then add that number to the annual operational phase GHG emissions.

Table 5: Air Quality Thresholds of Significance for Operational Emissions

Pollutant	Threshold ¹	
	Daily	Annual
ROG + NO _x (combined) ¹	25 lbs	25 tons
Diesel Particulate Matter (DPM) ¹	1.25 lbs	
Fugitive Particulate Matter (PM ₁₀), Dust	25 lbs	25 tons
CO	550 lbs	
Greenhouse Gases (CO ₂ e)	Consistency with a Qualified Greenhouse Gas Reduction Plan OR 1,150 MT CO ₂ e/year OR 4.9 CO ₂ e/SP/year (residents + employees)	

Source: SLO County APCD, 2012. *CEQA Air Quality Handbook*. April.

¹ 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.

² CalEEMod – use winter operational emissions data to compare to operational thresholds.

IMPACTS AND MITIGATION MEASURES

The project would release emissions over the short term as a result of construction activities, and over the long term from additional traffic generation and operation of the hotel. Emissions would include criteria air pollutants, toxic air contaminants, and GHG emissions. The sections below describe the project’s consistency with applicable air quality plans, estimated potential emissions, and the significance of impacts with respect to the identified thresholds of significance.

Air Quality Impacts

Consistency with Applicable Air Quality Plans

The air quality plan applicable to the project area is the SLO County APCD's 2001 Clean Air Plan (CAP), which was adopted on March 26, 2002.¹⁴ The CAP outlines the SLO County APCD's strategies to reduce ozone precursor emissions from a wide variety of stationary and mobile sources. Additionally, SLO County APCD adopted the PM Report and associated control measures in July 2005 to reduce public exposure to particulate matter (PM).¹⁵ According to the SLO County APCD's *CEQA Air Quality Handbook*, if the proposed project is consistent with the land use, transportation control measures, and strategies outlined in the CAP, then the project is considered consistent with the CAP.¹⁶

The CAP includes transportation control measures related to a campus trip reduction project, local transit system improvements, commute options, bicycling enhancements, and other trip reduction programs. As a hotel land use, the transportation control measures would not be specifically applicable to the project; however, the project would not conflict with the implementation of any of these measures.

The CAP also includes land use control measures which are related to circulation management and development standards. Measure L-1 *Planning Compact Communities*, specifies that rural areas of the county should be maintained as open space, agricultural lands and very low density residential development. This measure is not specifically applicable to the project; however portions of the project site would be preserved as open space which is consistent with this measure. Measure L-3 *Balancing Jobs and Housing*, aims to narrow the gap between the availability of jobs and housing. The proposed project would be located less than 0.5 miles from the community of Avila and would therefore provide additional jobs near housing. Therefore, the project would not conflict with this measure.

The proposed project would be consistent with applicable land use and transportation control measures outlined in the CAP and would therefore be considered consistent with the CAP.

Construction Emissions

During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by excavation, grading, hauling, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, ROG, directly-emitted particulate matter (PM_{2.5} and PM₁₀), and TACs such as diesel exhaust particulate matter.

Site preparation and project construction would involve grading, paving, and building activities. Construction-related effects on air quality from the project would be greatest during the grading

¹⁴ San Luis Obispo County Air Pollution Control District, 2001. *2001 Clean Air Plan San Luis Obispo County*. December.

¹⁵ San Luis Obispo County Air Pollution Control District, 2005. *Particulate Matter Report Implementation of SB 656 Requirements*. July.

¹⁶ San Luis Obispo County Air Pollution Control District, 2012. Op. Cit.

phase due to the disturbance of soils. If not properly controlled, construction/soil disturbing activities would temporarily generate fugitive dust which is a source of particulate emissions (PM₁₀). Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of fugitive dust after it dries. PM₁₀ emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM₁₀ emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site. Water or other soil stabilizers can be used to control fugitive dust, resulting in emission reductions of 50 percent or more.

In addition to dust-related PM₁₀ emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO₂, NO_x, ROG and some soot particulate (PM_{2.5} and PM₁₀) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the project using CalEEMod and summarized in Table 6. Specific construction details are not yet known; therefore, default assumptions (e.g., construction duration and fleet activities) from CalEEMod were used. For purposes of this CalEEMod modeling analysis, the construction schedule for all improvements was assumed to be approximately 13 months. The results were then compared to the SLO County APCD’s established thresholds of significance for construction impacts, as seen below.

Table 6: Air Quality Construction Emissions

	ROG + NO _x (combined)		Diesel Particulate Matter (DPM)		Fugitive Dust ² (PM ₁₀)
	pounds/day	tons/quarter	pounds/day	tons/quarter	tons/quarter
Project Construction Emissions	125.1	1.5	2.6	<0.1	<0.1
SLO County APCD’s Significance Threshold¹	137	2.5³	7	0.13³	2.5³
Exceeds Threshold?	No	No	No	No	No

Source: LSA, February 2018.

¹ Daily and quarterly emission thresholds are based on the California Health & Safety Code and the CARB Carl Moyer Guidelines.

² Per SLO County APCD, any project with a grading area greater than 4.0 acres of worked area can exceed the 2.5 ton PM₁₀ quarterly threshold.

³ Quarterly Tier 1 thresholds.

Under this scenario, unmitigated project emissions would not exceed the significance threshold for criteria pollutants. Therefore, construction of the project would result in less-than-significant impacts and would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Naturally occurring asbestos (NOA) has been identified by CARB as a toxic air contaminant. Serpentine and ultramafic rocks are very common throughout California and may contain NOA. The

SLO County APCD's 2012 *CEQA Air Quality Handbook*, Technical Appendix 4.4 identifies areas throughout the county where NOA may be present. If a project site is located in a candidate area for NOA, under the CARB Airborne Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations (Section 93105), prior to any construction activities at the site, the project proponent must ensure that a geologic evaluation is conducted to determine if the area disturbed is exempt from the regulation. If it is determined that NOA is not present at the project site, an exemption request must be filed with the SLO County APCD.

According to maps contained in the SLO County APCD's *CEQA Air Quality Handbook*, the project site is located in a candidate area for NOA. Therefore, a geological evaluation to determine if the area to be disturbed is exempt from the regulation is required.

A geologic evaluation for the proposed project was performed by Geosolutions in October 2016.¹⁷ The evaluation determined that due to the depth of ultra-basic type rocks that occur near the property, there would be a low potential for the presence of naturally occurring asbestos. Additionally, the project would not modify or disturb the base of the bluff or the underlying basaltic type rock. Therefore, it is anticipated that the project is subject to NOA requirements but would not be disturbing NOA and the exemption would apply.

The SLO County APCD has specified several emission reduction measures that would be applicable to the project. These emission reduction measures, which are identified below, when incorporated into construction specifications, would meet the SLO County APCD's requirements for fugitive dust and asbestos control.

Fugitive Dust Reduction Measures. According to the SLO County APCD's *CEQA Air Quality Handbook*, all projects with grading areas greater than 4-acres must manage fugitive dust sources to ensure that dust emissions are controlled to below the 20 percent opacity limit identified in the SLO County APCD Rule 401 *Visible Emissions* and to ensure dust is not omitted offsite. The following fugitive dust reduction measures are required.

Fugitive Dust Reduction Measures. The following fugitive dust reduction measures shall be shown on grading and building plans:

- 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. Increased watering frequency would be required whenever wind speeds exceed 15 miles per hour (mph). Reclaimed (non-potable) water should be used whenever possible. The contractor shall consider the use of an SLO County APCD approved dust suppressant where feasible to reduce the amount of water used for dust control;
- c. All dirt stock pile areas should be sprayed daily 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;

¹⁷ Geosolutions, 2016. *Geologic Coastal Bluff Evaluation Update*. October 6.

- 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 SLO County 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 with reclaimed water should be used where feasible;
- l. 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, reduce visible emissions below 20 percent opacity, and to prevent transport of dust offsite. 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 SLO County APCD Compliance Division prior to the start of any grading, earthwork or demolition.

Naturally-Occurring Asbestos and Asbestos in Demolition. Consistent with the CARB ATCM for Construction, Grading, Quarrying, and Surface Mining Operations (Section 93105), if NOA is not found at the site, an exemption request will need to be filed with the SLO County APCD. If NOA is found at the site during the geologic evaluation, the project will need to comply with all requirements outlined in the Asbestos ATCM.

Operational Emissions

Long-term air emission impacts are those associated with area sources and mobile sources involving any change related to the project, such as changes in the type of permanent use of the project site. These long-term emissions are primarily mobile source emissions that would result from vehicle trips associated with the project. Area sources, such as natural gas heaters, landscape equipment,

and use of consumer products, would also result in pollutant emissions during the operation of the project.

PM₁₀ emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM₁₀ occurs when vehicle tires pulverize small rocks and pavement and the vehicle wakes generate airborne dust. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles. Since much of the project traffic fleet would be made up of light-duty gasoline-powered vehicles, a majority of the PM₁₀ emissions would result from entrainment of roadway dust from vehicle travel.

Energy source emissions result from activities in buildings for which electricity and natural gas are used (non-hearth). The quantity of emissions is the product of usage intensity (i.e., the amount of electricity or natural gas) and the emission factor of the fuel source. Major sources of energy demand include building mechanical systems, such as heating and air conditioning, lighting, and plug-in electronics, such as refrigerators or cooking equipment. Greater building or appliance efficiency reduces the amount of energy for a given activity and thus lowers the resultant emissions. The project would not include an emergency backup generator.

Area source emissions associated with the project would include emissions from water heating and the use of landscaping equipment.

Long-term operational emissions were calculated using CalEEMod. Trip generation rates for the project were based on the project’s Transportation Impact Study, which estimates the project would generate approximately 842 trips per day.¹⁸ Model output worksheets are attached. The incremental daily and annual emission increases associated with the operations of the project are identified in Table 7 for ROG + NO_x, diesel particulate matter (exhaust PM₁₀), fugitive PM₁₀ (dust), and GHGs.

Table 7: Air Quality Operational Emissions

	ROG + NO _x (combined)		Diesel Particulate Matter (DPM)	Fugitive Dust (PM ₁₀)		CO
	pounds/day	tons/year	pounds/day	pounds/day	tons/quarter	pounds/day
Project Operational Emissions	12.0	2.2	0.1	4.5	0.3	26.9
SLO County APCD Significance Threshold¹	25	25	1.25	25	2.5	550
Exceeds Threshold?	No	No	No	No	No	No

Source: LSA, February 2018.

¹ Daily and annual emission thresholds are based on the California Health & Safety Code Division 26, Part 3, Chapter 10, Section 40918

¹⁸ Central Coast Transportation Consulting, 2016. *Internal Draft Transportation Impact Study*. October.

As shown in Table 7, the emissions associated with the operations of the project would be well below the significance thresholds set by the SLO County APCD. Therefore impacts associated with project operation would be less than significant and the project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Mitigation would not be required.

Localized CO Impacts

High concentrations of CO are strongly associated with motor vehicle emissions and generally occur near roadways with high traffic volumes, traffic congestions, active parking lots, and/or automobile tunnels. Localized high levels of CO are associated with traffic congestion and idling vehicles. Operating projects near intersections that are heavily traveled or may become congested are vulnerable to high concentrations of CO. The project site is not located near a heavily traveled intersection and would not contribute to any traffic congestion that would thereby create or contribute to any CO hotspots. The project would consist of underground parking; however vehicle emissions inside the underground parking lots would be minimal because it will utilize a valet stacking system and therefore would not increase traffic congestion and idling vehicles which would occur when vehicles are searching for parking spaces. In addition, CalEEMod results indicate CO emissions during operations of the project do not exceed the CO threshold set by the SLO County APCD, therefore localized CO impacts would be less than significant and the project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Cumulative Impacts

CEQA defines a cumulative impact as two or more individual effects, which when considered together, are considerable or which compound or increase other environmental impacts. Air pollution is largely a cumulative impact and no single project is sufficient in size to itself result in nonattainment of ambient air quality standards. In developing the thresholds of significance for air pollutants used in the analysis above, SLO County APCD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

As shown in Tables 6 and 7, above, implementation of the proposed project would generate less than significant construction and operational emissions. Therefore, the project would not make a cumulatively considerable contribution to regional air quality impacts.

Sensitive Receptors

The project would not be located in close proximity (i.e., within 1,000 feet) to any major source of TAC, would not be located in close proximity (i.e. within 1,000 feet) to any sensitive receptors, and would not be a major generator of diesel truck trips or other source of TACs. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during construction or operation of the proposed project, and potential impacts would be considered less than significant. Therefore, a detailed Health Risk Assessment is not required.

Objectionable Odors

Heavy-duty equipment in the project area during construction would emit odors. However, the construction activity would be short-term and would cease to occur after project construction is completed. No other sources of objectionable odors have been identified for the project. Therefore, the project would not be expected to generate or expose sensitive receptors to objectionable odors and impacts related to objectionable odors would be less than significant.

Greenhouse Gas Analysis

This section discusses the project's impacts related to the release of GHG emissions for both construction and operational phases of the project.

Construction Emissions

Construction activities associated with the project would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO₂, CH₄, and N₂O. Furthermore, CH₄ is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

Using CalEEMod, it is estimated that the project would generate approximately 595 metric tons of CO₂e during the construction period. When amortized over the 25-year life of the project, annual emissions would be 23.8 metric tons of CO₂e.

Operational Emissions

Long-term operation of the project would generate GHG emissions from area and mobile sources as well as indirect emissions from sources associated with energy consumption. Mobile-source GHG emissions would include project-generated vehicle trips to and from the project. Area-source emissions would be associated with activities such as landscaping and maintenance on the project site, and other sources.

As identified in the Project Description, the project applicant has committed to implementing several water conservation measures, including the following:

- Efficient irrigation technology including weather-based smart controllers, low-volume spray heads, drip emitters, and soil moisture sensors;
- Low-flow toilets, showers, and faucets; and
- A graywater irrigation system that is expected to reduce the total outdoor water usage by approximately 44 percent.

Following guidance from the SLO County APCD, GHG emissions were estimated using CalEEMod. The project's water conservation measures were included as inputs to CalEEMod. Table 8 shows the calculated GHG emissions for the project. Additional calculation details are included in Appendix A.

Table 8: Greenhouse Gas Operational Emissions

Emission Source	Operational GHG Emissions (metric tons/year)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Construction Emissions				
Construction emissions amortized over 25 years	23.7	<0.1	<0.1	23.8
Operational Emissions				
Area Source Emissions	1.2	<0.1	<0.1	1.1
Energy Source Emissions	171.5	<0.1	<0.1	172.6
Mobile Source Emissions	879.4	<0.1	<0.1	880.4
Waste Source Emissions	9.3	0.6	<0.1	23.1
Water Source Emissions	7.7	0.2	<0.1	14.0
Total CO₂e Emission	1,115.0			
SLO County APCD Significance Threshold	1,150 MT CO₂e/year OR 4.9 CO₂e/SP/year (residents + employees)			
Exceeds Threshold?	No			

Source: LSA, February 2018.

Notes:

CH₄ = methane

CO₂ = carbon dioxide

CO₂e = gross climate change emissions

GHG = greenhouse gas

MT = metric tons

SP = service population

According to the SLO County APCD, a project would have less-than-significant GHG emissions if it would meet one or more of the following criteria: be consistent with a qualified GHG reduction plan, result in operational-related GHG emissions of less than 1,150 metric tons of CO₂e a year, or result in operational-related GHG emissions of less than 4.9 metric tons of CO₂e per service population (residents plus employees). The County does not have a qualified GHG reduction plan. Therefore, the determination of significance is based on the emission estimates. Based on the analysis results, the project would generate approximately 1,115 metric tons of CO₂e which is below the SLO County APCD’s numeric threshold of 1,150 metric tons CO₂e. Therefore, the project would not have a significant effect on the environment related to GHG emissions.

Consistency with Greenhouse Gas Reduction Plans

The County adopted the EnergyWise Plan in November 2011 to demonstrate the County’s continued commitment to addressing the challenges of climate change by reducing local GHG emissions and preparing the County to adapt to a changing climate.¹⁹ The EnergyWise Plan outlines the County’s approach to reducing GHG emissions through a number of goals, measures, and actions that provide a road map to achieving the County’s GHG reduction target of 15 percent below baseline levels by 2020. The EnergyWise Plan includes some measures that are either not applicable to the project, are

¹⁹ San Luis Obispo, County of, 2011. *County of San Luis Obispo EnergyWise Plan*. November.

voluntary, apply to other land uses, or refer to actions to be taken by the County to reduce GHG emissions. However, the following measures would be applicable to the project.

Energy Conservation:

- Require the use of energy-efficient equipment in all new development, including but not limited to Energy Star appliances, high-efficiency equipment, heat recovery equipment, and building energy management systems.
- Minimize the use of dark materials on roofs by requiring roofs to achieve a minimum solar reflectivity index (SRI) of 10 for high-slope roofs and 64 for low-slope roofs (CALGreen 5.1 Planning and Design).
- Minimize heat gained from surface parking lots by utilizing the following strategies for a minimum of 50 percent of the site's hardscape:
 - Provide shade from the existing tree canopy or within five years of landscape installation;
 - Provide shade from structures covered by solar panels;
 - Provide shade structures or hardscape materials with a minimum SRI of 29;
 - Use an open-grid pavement system (at least 50 percent pervious).

Solid Waste: Implement a composting and green waste program. Incorporate trash collection enclosures that promote recycling. Reduce construction and demolition waste by recycling construction and demolition debris generated on site.

Land Use and Transportation: Require new or expanded commercial, industrial, public, or mixed-use projects with 25 employees or more to create a Transportation Demand Management (TDM) plan, which may include:

- Parking cash-out,
- Subsidized public transportation passes,
- Car sharing, vanpools, shuttles, or ride-matching programs,
- Bicycle parking and storage facilities, and
- Alternative work schedules, when applicable.
- Require new or expanded mixed-use, industrial, commercial, office, or residential development (with a minimum of 15 units per acre and/or 25 employees) to provide transit passes valid for at least one year to each resident or employee for the first year of project occupancy.
- Expand the use and availability of alternative and low carbon fuels for vehicles and equipment by improving access to community-wide pedestrian and bicycle networks as well as install electric charging stations.

Water Conservation Measures:

- Install fixtures that do not exceed maximum flow rates or by demonstrating that the building will achieve a 20 percent reduction in water use through alternative methods per California Green Building Code.
- Increase the availability and use of recycled water for use in outdoor landscaping areas. Encourage the installation and use of greywater and rainwater harvesting systems to reduce outdoor potable water use.
- Reduce outdoor water use in new landscapes through compliance with the County's Water-Efficient Landscape Ordinance.
 - Turf will not exceed 20 percent of the total site area on parcels 1 acre or less and 20 percent if landscaped areas on parcels greater than 1 acre.
 - Irrigation controllers will have rain sensors.

Consistency Summary. The project would include these GHG reducing measures that are consistent with the intent of the County's EnergyWise Plan. To support these measures, the project would construct new structures and buildings that include high energy efficient appliances as well as use recycled content in the construction phase. Once operational, the project would provide recycling services to reduce waste. To help reduce mobile emissions, a TDM plan would be implemented. Bicycle parking as well as electric vehicle charging stations and carpool/low-emission vehicle dedicated parking would be provided. Water reduction measures that will be implemented by the project include water conserving toilets, sinks, and showers, laundry on demand (reduced towel/sheet replacement) and drought-tolerant landscaping with primarily drip irrigation and seasonal/weather control of irrigation. Therefore, the sustainability measures included in the project plans would be consistent with the EnergyWise Plan and would not conflict with the reduction goals established by Assembly Bill 32. As a result, the project would not conflict with plans adopted for the purpose of reducing GHG emissions. Impacts would be less-than-significant and mitigation would not be required.

CONCLUSION

As identified above, the proposed project would be consistent with applicable land use and transportation control measures outlined in the CAP and would therefore be considered consistent with the CAP. In addition, based on the analysis presented above, construction and operation of the project would not result in the generation of criteria air pollutants that would exceed SLO County APCD thresholds. Implementation of the SLO County APCD's construction emission reduction measures would further reduce construction dust impacts. The project would not make a cumulatively considerable contribution to regional air quality impacts. The project is not expected to expose future guests to significant TAC emissions or produce significant TAC emissions that would affect nearby sensitive receptors. The project would not result in objectionable odors affecting a substantial number of people. GHG emissions during construction and operation of the project are estimated to be lower than significance thresholds, and would not be cumulatively considerable.

Sustainability measures included in the project plans would not conflict with the County's EnergyWise Plan. Therefore, with implementation of the SLO County APCD's construction emission reduction measures, the project would result in less-than-significant air quality and GHG emissions and mitigation would not be required.

APPENDIX A

CalEEMod Output Sheets

Avila Beach Hotel - San Luis Obispo County, Annual

Avila Beach Hotel
San Luis Obispo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	6.05	1000sqft	0.10	6,051.00	0
Other Asphalt Surfaces	75.39	1000sqft	1.73	75,390.00	0
Parking Lot	167.00	Space	0.65	66,800.00	0
High Turnover (Sit Down Restaurant)	5.33	1000sqft	0.10	5,331.00	0
Apartments Low Rise	50.00	Dwelling Unit	1.42	29,875.00	143

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.2	Precipitation Freq (Days)	44
Climate Zone	4			Operational Year	2019
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	349	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Avila Beach Hotel - San Luis Obispo County, Annual

Project Characteristics - CO2 intensity factor of PG&E per PG&E guidance (November 2015), average of last 5 years (2015-2019).

Land Use - Land use details per September 2017 Project Description. Other asphalt surfaces includes roads, cart path, and pedestrian path.

Construction Phase - Default

Grading - Per Flowers & Assoc. Jan 2018, 18,225 cy cut, 14,055 cy fill, for net of 4,170 cy exported.

Vehicle Trips - Trip generation rates for the proposed project per Transportation Impact Study prepared by Central Coast Transportation Consulting, October 2016

Energy Use -

Water And Wastewater - Water usage details per Water Usage Analysis (9-1-16).

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation - Per Green Features List, installation of timers and photo sensors, assumed 16% reduction as is estimated minimum by CAPCOA.

Water Mitigation - WSW-2 per Water Usage Analysis (9-1-16): 2.6 AFY of 5.89 AFY for outdoor water use. Indoor water use included in water usage estimate.

Green Features List: WSW-1, assumed 20% ; WUW-4, 10% assumed; WUW-3, unable to calculate MAWA or ETWU.

Waste Mitigation - Green Features List; recycling services. AB 939 target 75%, 50% for conservative analysis.

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Table Name	Column Name	Default Value	New Value
tblGrading	MaterialExported	0.00	4,170.00
tblLandUse	LandUseSquareFeet	6,050.00	6,051.00
tblLandUse	LandUseSquareFeet	5,330.00	5,331.00
tblLandUse	LandUseSquareFeet	50,000.00	29,875.00
tblLandUse	LotAcreage	0.14	0.10
tblLandUse	LotAcreage	1.50	0.65
tblLandUse	LotAcreage	0.12	0.10
tblLandUse	LotAcreage	3.13	1.42
tblProjectCharacteristics	CO2IntensityFactor	641.35	349
tblVehicleTrips	ST_TR	7.16	16.84
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	158.37	0.00
tblVehicleTrips	SU_TR	6.07	16.84
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	131.84	0.00
tblVehicleTrips	WD_TR	6.59	16.84
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	127.15	0.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-3-2018	12-2-2018	1.4959	1.4959
2	12-3-2018	3-2-2019	0.9330	0.9330
3	3-3-2019	6-2-2019	0.9198	0.9198
4	6-3-2019	9-2-2019	0.9186	0.9186
5	9-3-2019	9-30-2019	0.2652	0.2652
		Highest	1.4959	1.4959

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	0.2546	7.9600e-003	0.6883	4.0000e-005		3.7600e-003	3.7600e-003		3.7600e-003	3.7600e-003	0.0000	1.1201	1.1201	1.1100e-003	0.0000	1.1480
Energy	9.2600e-003	0.0827	0.0597	5.1000e-004		6.4000e-003	6.4000e-003		6.4000e-003	6.4000e-003	0.0000	174.4516	174.4516	8.6400e-003	3.1000e-003	175.5925
Mobile	0.3410	1.4846	3.9942	9.6300e-003	0.8049	0.0143	0.8192	0.2157	0.0135	0.2292	0.0000	879.4262	879.4262	0.0405	0.0000	880.4374
Waste						0.0000	0.0000		0.0000	0.0000	18.6874	0.0000	18.6874	1.1044	0.0000	46.2971
Water						0.0000	0.0000		0.0000	0.0000	1.8879	6.6577	8.5456	0.1945	4.6900e-003	14.8056
Total	0.6048	1.5753	4.7423	0.0102	0.8049	0.0245	0.8293	0.2157	0.0237	0.2393	20.5753	1,061.6556	1,082.2309	1.3491	7.7900e-003	1,118.2806

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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	0.2546	7.9600e-003	0.6883	4.0000e-005		3.7600e-003	3.7600e-003		3.7600e-003	3.7600e-003	0.0000	1.1201	1.1201	1.1100e-003	0.0000	1.1480
Energy	9.2600e-003	0.0827	0.0597	5.1000e-004		6.4000e-003	6.4000e-003		6.4000e-003	6.4000e-003	0.0000	171.5161	171.5161	8.3900e-003	3.0500e-003	172.6358
Mobile	0.3410	1.4846	3.9942	9.6300e-003	0.8049	0.0143	0.8192	0.2157	0.0135	0.2292	0.0000	879.4262	879.4262	0.0405	0.0000	880.4374
Waste						0.0000	0.0000		0.0000	0.0000	9.3437	0.0000	9.3437	0.5522	0.0000	23.1486
Water						0.0000	0.0000		0.0000	0.0000	1.8879	5.8522	7.7401	0.1944	4.6800e-003	13.9944
Total	0.6048	1.5753	4.7423	0.0102	0.8049	0.0245	0.8293	0.2157	0.0237	0.2393	11.2316	1,057.9146	1,069.1462	0.7965	7.7300e-003	1,091.3641

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.41	0.35	1.21	40.96	0.77	2.41

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/3/2018	9/28/2018	5	20	
2	Site Preparation	Site Preparation	9/29/2018	10/12/2018	5	5	
3	Grading	Grading	10/13/2018	11/9/2018	5	8	
4	Building Construction	Building Construction	11/10/2018	9/27/2019	5	230	
5	Paving	Paving	9/28/2019	10/25/2019	5	18	
6	Architectural Coating	Architectural Coating	10/26/2019	11/22/2019	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 2.38

Residential Indoor: 60,497; Residential Outdoor: 20,166; Non-Residential Indoor: 17,073; Non-Residential Outdoor: 5,691; Striped Parking Area: 8,531 (Architectural Coating – sqft)

OffRoad Equipment

Avila Beach Hotel - San Luis Obispo County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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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	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	521.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	100.00	31.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0372	0.3832	0.2230	3.9000e-004		0.0194	0.0194		0.0181	0.0181	0.0000	35.1241	35.1241	9.6800e-003	0.0000	35.3660
Total	0.0372	0.3832	0.2230	3.9000e-004		0.0194	0.0194		0.0181	0.0181	0.0000	35.1241	35.1241	9.6800e-003	0.0000	35.3660

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3.2 Demolition - 2018

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	8.0000e-004	7.7000e-004	6.6900e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2845	1.2845	5.0000e-005	0.0000	1.2858
Total	8.0000e-004	7.7000e-004	6.6900e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2845	1.2845	5.0000e-005	0.0000	1.2858

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	0.0372	0.3832	0.2230	3.9000e-004		0.0194	0.0194		0.0181	0.0181	0.0000	35.1240	35.1240	9.6800e-003	0.0000	35.3660
Total	0.0372	0.3832	0.2230	3.9000e-004		0.0194	0.0194		0.0181	0.0181	0.0000	35.1240	35.1240	9.6800e-003	0.0000	35.3660

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3.2 Demolition - 2018

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	8.0000e-004	7.7000e-004	6.6900e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2845	1.2845	5.0000e-005	0.0000	1.2858
Total	8.0000e-004	7.7000e-004	6.6900e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2845	1.2845	5.0000e-005	0.0000	1.2858

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.2410	0.1124	1.9000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	17.3800	17.3800	5.4100e-003	0.0000	17.5152
Total	0.0228	0.2410	0.1124	1.9000e-004	0.0903	0.0129	0.1032	0.0497	0.0119	0.0615	0.0000	17.3800	17.3800	5.4100e-003	0.0000	17.5152

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3.3 Site Preparation - 2018

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	4.8000e-004	4.6000e-004	4.0100e-003	1.0000e-005	8.7000e-004	1.0000e-005	8.7000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7707	0.7707	3.0000e-005	0.0000	0.7715
Total	4.8000e-004	4.6000e-004	4.0100e-003	1.0000e-005	8.7000e-004	1.0000e-005	8.7000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7707	0.7707	3.0000e-005	0.0000	0.7715

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.2410	0.1124	1.9000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	17.3799	17.3799	5.4100e-003	0.0000	17.5152
Total	0.0228	0.2410	0.1124	1.9000e-004	0.0903	0.0129	0.1032	0.0497	0.0119	0.0615	0.0000	17.3799	17.3799	5.4100e-003	0.0000	17.5152

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3.3 Site Preparation - 2018

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	4.8000e-004	4.6000e-004	4.0100e-003	1.0000e-005	8.7000e-004	1.0000e-005	8.7000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7707	0.7707	3.0000e-005	0.0000	0.7715
Total	4.8000e-004	4.6000e-004	4.0100e-003	1.0000e-005	8.7000e-004	1.0000e-005	8.7000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7707	0.7707	3.0000e-005	0.0000	0.7715

3.4 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0665	0.0000	0.0665	0.0338	0.0000	0.0338	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0277	0.3067	0.1658	3.0000e-004		0.0155	0.0155		0.0143	0.0143	0.0000	27.1069	27.1069	8.4400e-003	0.0000	27.3178
Total	0.0277	0.3067	0.1658	3.0000e-004	0.0665	0.0155	0.0820	0.0338	0.0143	0.0481	0.0000	27.1069	27.1069	8.4400e-003	0.0000	27.3178

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3.4 Grading - 2018

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	7.7100e-003	0.2435	0.0551	5.2000e-004	6.0900e-003	1.7700e-003	7.8500e-003	1.8200e-003	1.6900e-003	3.5100e-003	0.0000	50.9799	50.9799	2.8700e-003	0.0000	51.0516
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	8.0000e-004	7.7000e-004	6.6900e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2845	1.2845	5.0000e-005	0.0000	1.2858
Total	8.5100e-003	0.2442	0.0618	5.3000e-004	7.5300e-003	1.7800e-003	9.3000e-003	2.2000e-003	1.7000e-003	3.9000e-003	0.0000	52.2644	52.2644	2.9200e-003	0.0000	52.3374

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					0.0665	0.0000	0.0665	0.0338	0.0000	0.0338	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0277	0.3067	0.1658	3.0000e-004		0.0155	0.0155		0.0143	0.0143	0.0000	27.1068	27.1068	8.4400e-003	0.0000	27.3178
Total	0.0277	0.3067	0.1658	3.0000e-004	0.0665	0.0155	0.0820	0.0338	0.0143	0.0481	0.0000	27.1068	27.1068	8.4400e-003	0.0000	27.3178

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3.4 Grading - 2018

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	7.7100e-003	0.2435	0.0551	5.2000e-004	6.0900e-003	1.7700e-003	7.8500e-003	1.8200e-003	1.6900e-003	3.5100e-003	0.0000	50.9799	50.9799	2.8700e-003	0.0000	51.0516
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	8.0000e-004	7.7000e-004	6.6900e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2845	1.2845	5.0000e-005	0.0000	1.2858
Total	8.5100e-003	0.2442	0.0618	5.3000e-004	7.5300e-003	1.7800e-003	9.3000e-003	2.2000e-003	1.7000e-003	3.9000e-003	0.0000	52.2644	52.2644	2.9200e-003	0.0000	52.3374

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0482	0.4210	0.3165	4.8000e-004		0.0270	0.0270		0.0254	0.0254	0.0000	42.7981	42.7981	0.0105	0.0000	43.0602
Total	0.0482	0.4210	0.3165	4.8000e-004		0.0270	0.0270		0.0254	0.0254	0.0000	42.7981	42.7981	0.0105	0.0000	43.0602

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3.5 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-003	0.0670	0.0226	1.1000e-004	2.5300e-003	6.2000e-004	3.1500e-003	7.3000e-004	5.9000e-004	1.3300e-003	0.0000	10.7788	10.7788	7.2000e-004	0.0000	10.7967
Worker	9.6300e-003	9.2800e-003	0.0803	1.7000e-004	0.0173	1.2000e-004	0.0175	4.6100e-003	1.1000e-004	4.7200e-003	0.0000	15.4134	15.4134	6.3000e-004	0.0000	15.4292
Total	0.0126	0.0762	0.1029	2.8000e-004	0.0199	7.4000e-004	0.0206	5.3400e-003	7.0000e-004	6.0500e-003	0.0000	26.1922	26.1922	1.3500e-003	0.0000	26.2260

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	0.0482	0.4210	0.3165	4.8000e-004		0.0270	0.0270		0.0254	0.0254	0.0000	42.7981	42.7981	0.0105	0.0000	43.0602
Total	0.0482	0.4210	0.3165	4.8000e-004		0.0270	0.0270		0.0254	0.0254	0.0000	42.7981	42.7981	0.0105	0.0000	43.0602

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3.5 Building Construction - 2018

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	3.0000e-003	0.0670	0.0226	1.1000e-004	2.5300e-003	6.2000e-004	3.1500e-003	7.3000e-004	5.9000e-004	1.3300e-003	0.0000	10.7788	10.7788	7.2000e-004	0.0000	10.7967
Worker	9.6300e-003	9.2800e-003	0.0803	1.7000e-004	0.0173	1.2000e-004	0.0175	4.6100e-003	1.1000e-004	4.7200e-003	0.0000	15.4134	15.4134	6.3000e-004	0.0000	15.4292
Total	0.0126	0.0762	0.1029	2.8000e-004	0.0199	7.4000e-004	0.0206	5.3400e-003	7.0000e-004	6.0500e-003	0.0000	26.1922	26.1922	1.3500e-003	0.0000	26.2260

3.5 Building Construction - 2019

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	0.2290	2.0446	1.6649	2.6100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	228.0511	228.0511	0.0556	0.0000	229.4400
Total	0.2290	2.0446	1.6649	2.6100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	228.0511	228.0511	0.0556	0.0000	229.4400

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3.5 Building Construction - 2019

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	0.0141	0.3430	0.1076	6.0000e-004	0.0137	2.7400e-003	0.0164	3.9500e-003	2.6300e-003	6.5700e-003	0.0000	57.9305	57.9305	3.7200e-003	0.0000	58.0236
Worker	0.0466	0.0438	0.3791	8.9000e-004	0.0934	6.3000e-004	0.0940	0.0248	5.9000e-004	0.0254	0.0000	80.6192	80.6192	3.0100e-003	0.0000	80.6944
Total	0.0607	0.3868	0.4867	1.4900e-003	0.1070	3.3700e-003	0.1104	0.0288	3.2200e-003	0.0320	0.0000	138.5498	138.5498	6.7300e-003	0.0000	138.7179

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	0.2290	2.0446	1.6649	2.6100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	228.0508	228.0508	0.0556	0.0000	229.4397
Total	0.2290	2.0446	1.6649	2.6100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	228.0508	228.0508	0.0556	0.0000	229.4397

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3.5 Building Construction - 2019

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	0.0141	0.3430	0.1076	6.0000e-004	0.0137	2.7400e-003	0.0164	3.9500e-003	2.6300e-003	6.5700e-003	0.0000	57.9305	57.9305	3.7200e-003	0.0000	58.0236
Worker	0.0466	0.0438	0.3791	8.9000e-004	0.0934	6.3000e-004	0.0940	0.0248	5.9000e-004	0.0254	0.0000	80.6192	80.6192	3.0100e-003	0.0000	80.6944
Total	0.0607	0.3868	0.4867	1.4900e-003	0.1070	3.3700e-003	0.1104	0.0288	3.2200e-003	0.0320	0.0000	138.5498	138.5498	6.7300e-003	0.0000	138.7179

3.6 Paving - 2019

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	0.0127	0.1276	0.1231	1.9000e-004		7.2000e-003	7.2000e-003		6.6400e-003	6.6400e-003	0.0000	16.7223	16.7223	5.1400e-003	0.0000	16.8509
Paving	3.4600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0161	0.1276	0.1231	1.9000e-004		7.2000e-003	7.2000e-003		6.6400e-003	6.6400e-003	0.0000	16.7223	16.7223	5.1400e-003	0.0000	16.8509

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3.6 Paving - 2019

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	9.6000e-004	9.0000e-004	7.8200e-003	2.0000e-005	1.9300e-003	1.0000e-005	1.9400e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.6623	1.6623	6.0000e-005	0.0000	1.6638
Total	9.6000e-004	9.0000e-004	7.8200e-003	2.0000e-005	1.9300e-003	1.0000e-005	1.9400e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.6623	1.6623	6.0000e-005	0.0000	1.6638

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	0.0127	0.1276	0.1231	1.9000e-004		7.2000e-003	7.2000e-003		6.6400e-003	6.6400e-003	0.0000	16.7223	16.7223	5.1400e-003	0.0000	16.8509
Paving	3.4600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0161	0.1276	0.1231	1.9000e-004		7.2000e-003	7.2000e-003		6.6400e-003	6.6400e-003	0.0000	16.7223	16.7223	5.1400e-003	0.0000	16.8509

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3.6 Paving - 2019

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	9.6000e-004	9.0000e-004	7.8200e-003	2.0000e-005	1.9300e-003	1.0000e-005	1.9400e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.6623	1.6623	6.0000e-005	0.0000	1.6638
Total	9.6000e-004	9.0000e-004	7.8200e-003	2.0000e-005	1.9300e-003	1.0000e-005	1.9400e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.6623	1.6623	6.0000e-005	0.0000	1.6638

3.7 Architectural Coating - 2019

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	0.6988					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5587
Total	0.7014	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5587

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3.7 Architectural Coating - 2019

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	9.6000e-004	9.0000e-004	7.8200e-003	2.0000e-005	1.9300e-003	1.0000e-005	1.9400e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.6623	1.6623	6.0000e-005	0.0000	1.6638
Total	9.6000e-004	9.0000e-004	7.8200e-003	2.0000e-005	1.9300e-003	1.0000e-005	1.9400e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.6623	1.6623	6.0000e-005	0.0000	1.6638

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	0.6988					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5586
Total	0.7014	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5586

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3.7 Architectural Coating - 2019

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	9.6000e-004	9.0000e-004	7.8200e-003	2.0000e-005	1.9300e-003	1.0000e-005	1.9400e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.6623	1.6623	6.0000e-005	0.0000	1.6638
Total	9.6000e-004	9.0000e-004	7.8200e-003	2.0000e-005	1.9300e-003	1.0000e-005	1.9400e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.6623	1.6623	6.0000e-005	0.0000	1.6638

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	ROG	NOx	CO	SO2	Fugitive 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	0.3410	1.4846	3.9942	9.6300e-003	0.8049	0.0143	0.8192	0.2157	0.0135	0.2292	0.0000	879.4262	879.4262	0.0405	0.0000	880.4374
Unmitigated	0.3410	1.4846	3.9942	9.6300e-003	0.8049	0.0143	0.8192	0.2157	0.0135	0.2292	0.0000	879.4262	879.4262	0.0405	0.0000	880.4374

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	842.00	842.00	842.00	2,139,991	2,139,991
General Office Building	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	842.00	842.00	842.00	2,139,991	2,139,991

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	13.00	5.00	5.00	35.80	21.00	43.20	86	11	3
General Office Building	13.00	5.00	5.00	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down)	13.00	5.00	5.00	8.50	72.50	19.00	37	20	43
Other Asphalt Surfaces	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
Parking Lot	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.549382	0.034064	0.198767	0.132360	0.033447	0.007872	0.013134	0.018943	0.002404	0.001320	0.005630	0.000825	0.001852
General Office Building	0.549382	0.034064	0.198767	0.132360	0.033447	0.007872	0.013134	0.018943	0.002404	0.001320	0.005630	0.000825	0.001852
High Turnover (Sit Down Restaurant)	0.549382	0.034064	0.198767	0.132360	0.033447	0.007872	0.013134	0.018943	0.002404	0.001320	0.005630	0.000825	0.001852
Other Asphalt Surfaces	0.549382	0.034064	0.198767	0.132360	0.033447	0.007872	0.013134	0.018943	0.002404	0.001320	0.005630	0.000825	0.001852
Parking Lot	0.549382	0.034064	0.198767	0.132360	0.033447	0.007872	0.013134	0.018943	0.002404	0.001320	0.005630	0.000825	0.001852

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	79.8795	79.8795	6.6400e-003	1.3700e-003	80.4546
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	82.8150	82.8150	6.8800e-003	1.4200e-003	83.4113
NaturalGas Mitigated	9.2600e-003	0.0827	0.0597	5.1000e-004		6.4000e-003	6.4000e-003		6.4000e-003	6.4000e-003	0.0000	91.6366	91.6366	1.7600e-003	1.6800e-003	92.1812
NaturalGas Unmitigated	9.2600e-003	0.0827	0.0597	5.1000e-004		6.4000e-003	6.4000e-003		6.4000e-003	6.4000e-003	0.0000	91.6366	91.6366	1.7600e-003	1.6800e-003	92.1812

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	509943	2.7500e-003	0.0235	0.0100	1.5000e-004		1.9000e-003	1.9000e-003		1.9000e-003	1.9000e-003	0.0000	27.2125	27.2125	5.2000e-004	5.0000e-004	27.3742
General Office Building	99054.9	5.3000e-004	4.8600e-003	4.0800e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	5.2860	5.2860	1.0000e-004	1.0000e-004	5.3174
High Turnover (Sit Down Restaurant)	1.10821e+006	5.9800e-003	0.0543	0.0456	3.3000e-004		4.1300e-003	4.1300e-003		4.1300e-003	4.1300e-003	0.0000	59.1382	59.1382	1.1300e-003	1.0800e-003	59.4896
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		9.2600e-003	0.0827	0.0597	5.1000e-004		6.4000e-003	6.4000e-003		6.4000e-003	6.4000e-003	0.0000	91.6366	91.6366	1.7500e-003	1.6800e-003	92.1812

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5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	509943	2.7500e-003	0.0235	0.0100	1.5000e-004		1.9000e-003	1.9000e-003		1.9000e-003	1.9000e-003	0.0000	27.2125	27.2125	5.2000e-004	5.0000e-004	27.3742
General Office Building	99054.9	5.3000e-004	4.8600e-003	4.0800e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	5.2860	5.2860	1.0000e-004	1.0000e-004	5.3174
High Turnover (Sit Down Restaurant)	1.10821e+006	5.9800e-003	0.0543	0.0456	3.3000e-004		4.1300e-003	4.1300e-003		4.1300e-003	4.1300e-003	0.0000	59.1382	59.1382	1.1300e-003	1.0800e-003	59.4896
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		9.2600e-003	0.0827	0.0597	5.1000e-004		6.4000e-003	6.4000e-003		6.4000e-003	6.4000e-003	0.0000	91.6366	91.6366	1.7500e-003	1.6800e-003	92.1812

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5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	217440	34.4216	2.8600e-003	5.9000e-004	34.6694
General Office Building	107889	17.0793	1.4200e-003	2.9000e-004	17.2023
High Turnover (Sit Down Restaurant)	174430	27.6130	2.2900e-003	4.7000e-004	27.8118
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	23380	3.7011	3.1000e-004	6.0000e-005	3.7278
Total		82.8150	6.8800e-003	1.4100e-003	83.4113

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5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	210957	33.3953	2.7700e-003	5.7000e-004	33.6358
General Office Building	104133	16.4846	1.3700e-003	2.8000e-004	16.6033
High Turnover (Sit Down Restaurant)	169867	26.8906	2.2300e-003	4.6000e-004	27.0842
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	19639.2	3.1090	2.6000e-004	5.0000e-005	3.1314
Total		79.8795	6.6300e-003	1.3600e-003	80.4547

6.0 Area Detail**6.1 Mitigation Measures Area**

No Hearths Installed

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	ROG	NOx	CO	SO2	Fugitive 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	0.2546	7.9600e-003	0.6883	4.0000e-005		3.7600e-003	3.7600e-003		3.7600e-003	3.7600e-003	0.0000	1.1201	1.1201	1.1100e-003	0.0000	1.1480
Unmitigated	0.2546	7.9600e-003	0.6883	4.0000e-005		3.7600e-003	3.7600e-003		3.7600e-003	3.7600e-003	0.0000	1.1201	1.1201	1.1100e-003	0.0000	1.1480

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	0.0629					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1703					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0214	7.9600e-003	0.6883	4.0000e-005		3.7600e-003	3.7600e-003		3.7600e-003	3.7600e-003	0.0000	1.1201	1.1201	1.1100e-003	0.0000	1.1480
Total	0.2546	7.9600e-003	0.6883	4.0000e-005		3.7600e-003	3.7600e-003		3.7600e-003	3.7600e-003	0.0000	1.1201	1.1201	1.1100e-003	0.0000	1.1480

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0629					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1703					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0214	7.9600e-003	0.6883	4.0000e-005		3.7600e-003	3.7600e-003		3.7600e-003	3.7600e-003	0.0000	1.1201	1.1201	1.1100e-003	0.0000	1.1480
Total	0.2546	7.9600e-003	0.6883	4.0000e-005		3.7600e-003	3.7600e-003		3.7600e-003	3.7600e-003	0.0000	1.1201	1.1201	1.1100e-003	0.0000	1.1480

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

Use Grey Water

Use Water Efficient Irrigation System

Use Water Efficient Landscaping

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7.7401	0.1944	4.6800e-003	13.9944
Unmitigated	8.5456	0.1945	4.6900e-003	14.8056

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	3.2577 / 2.05377	4.9619	0.1065	2.5700e-003	8.3910
General Office Building	1.07529 / 0.659048	1.6274	0.0352	8.5000e-004	2.7591
High Turnover (Sit Down Restaurant)	1.61783 / 0.103266	1.9563	0.0528	1.2700e-003	3.6556
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		8.5456	0.1945	4.6900e-003	14.8056

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	3.2577 / 0.993557	4.3745	0.1064	2.5600e-003	7.7993
General Office Building	1.07529 / 0.31883	1.4389	0.0351	8.5000e-004	2.5693
High Turnover (Sit Down Restaurant)	1.61783 / 0.0499573	1.9268	0.0528	1.2700e-003	3.6258
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		7.7401	0.1944	4.6800e-003	13.9944

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	9.3437	0.5522	0.0000	23.1486
Unmitigated	18.6874	1.1044	0.0000	46.2971

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	23	4.6688	0.2759	0.0000	11.5667
General Office Building	5.63	1.1428	0.0675	0.0000	2.8313
High Turnover (Sit Down Restaurant)	63.43	12.8757	0.7609	0.0000	31.8990
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		18.6874	1.1044	0.0000	46.2971

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8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834
General Office Building	2.815	0.5714	0.0338	0.0000	1.4157
High Turnover (Sit Down Restaurant)	31.715	6.4379	0.3805	0.0000	15.9495
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		9.3437	0.5522	0.0000	23.1486

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Avila Beach Hotel - San Luis Obispo County, Summer

Avila Beach Hotel
San Luis Obispo County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	6.05	1000sqft	0.10	6,051.00	0
Other Asphalt Surfaces	75.39	1000sqft	1.73	75,390.00	0
Parking Lot	167.00	Space	0.65	66,800.00	0
High Turnover (Sit Down Restaurant)	5.33	1000sqft	0.10	5,331.00	0
Apartments Low Rise	50.00	Dwelling Unit	1.42	29,875.00	143

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.2	Precipitation Freq (Days)	44
Climate Zone	4			Operational Year	2019
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	349	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Avila Beach Hotel - San Luis Obispo County, Summer

Project Characteristics - CO2 intensity factor of PG&E per PG&E guidance (November 2015), average of last 5 years (2015-2019).

Land Use - Land use details per September 2017 Project Description. Other asphalt surfaces includes roads, cart path, and pedestrian path.

Construction Phase - Default

Grading - Per Flowers & Assoc. Jan 2018, 18,225 cy cut, 14,055 cy fill, for net of 4,170 cy exported.

Vehicle Trips - Trip generation rates for the proposed project per Transportation Impact Study prepared by Central Coast Transportation Consulting, October 2016

Energy Use -

Water And Wastewater - Water usage details per Water Usage Analysis (9-1-16).

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation - Per Green Features List, installation of timers and photo sensors, assumed 16% reduction as is estimated minimum by CAPCOA.

Water Mitigation - WSW-2 per Water Usage Analysis (9-1-16): 2.6 AFY of 5.89 AFY for outdoor water use. Indoor water use included in water usage estimate.

Green Features List: WSW-1, assumed 20% ; WUW-4, 10% assumed; WUW-3, unable to calculate MAWA or ETWU.

Waste Mitigation - Green Features List; recycling services. AB 939 target 75%, 50% for conservative analysis.

Avila Beach Hotel - San Luis Obispo County, Summer

Table Name	Column Name	Default Value	New Value
tblGrading	MaterialExported	0.00	4,170.00
tblLandUse	LandUseSquareFeet	6,050.00	6,051.00
tblLandUse	LandUseSquareFeet	5,330.00	5,331.00
tblLandUse	LandUseSquareFeet	50,000.00	29,875.00
tblLandUse	LotAcreage	0.14	0.10
tblLandUse	LotAcreage	1.50	0.65
tblLandUse	LotAcreage	0.12	0.10
tblLandUse	LotAcreage	3.13	1.42
tblProjectCharacteristics	CO2IntensityFactor	641.35	349
tblVehicleTrips	ST_TR	7.16	16.84
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	158.37	0.00
tblVehicleTrips	SU_TR	6.07	16.84
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	131.84	0.00
tblVehicleTrips	WD_TR	6.59	16.84
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	127.15	0.00

2.0 Emissions Summary

Avila Beach Hotel - San Luis Obispo County, Summer

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	1.4072	0.0483	4.1717	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4832	7.4832	7.4400e-003	0.0000	7.6692
Energy	0.0507	0.4530	0.3272	2.7700e-003		0.0351	0.0351		0.0351	0.0351		553.4909	553.4909	0.0106	0.0102	556.7801
Mobile	1.9587	7.8258	21.8221	0.0547	4.5394	0.0783	4.6177	1.2137	0.0739	1.2877		5,502.7570	5,502.7570	0.2450		5,508.8818
Total	3.4167	8.3271	26.3210	0.0577	4.5394	0.1361	4.6756	1.2137	0.1318	1.3456	0.0000	6,063.7311	6,063.7311	0.2630	0.0102	6,073.3310

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	1.4072	0.0483	4.1717	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4832	7.4832	7.4400e-003	0.0000	7.6692
Energy	0.0507	0.4530	0.3272	2.7700e-003		0.0351	0.0351		0.0351	0.0351		553.4909	553.4909	0.0106	0.0102	556.7801
Mobile	1.9587	7.8258	21.8221	0.0547	4.5394	0.0783	4.6177	1.2137	0.0739	1.2877		5,502.7570	5,502.7570	0.2450		5,508.8818
Total	3.4167	8.3271	26.3210	0.0577	4.5394	0.1361	4.6756	1.2137	0.1318	1.3456	0.0000	6,063.7311	6,063.7311	0.2630	0.0102	6,073.3310

Avila Beach Hotel - San Luis Obispo County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/3/2018	9/28/2018	5	20	
2	Site Preparation	Site Preparation	9/29/2018	10/12/2018	5	5	
3	Grading	Grading	10/13/2018	11/9/2018	5	8	
4	Building Construction	Building Construction	11/10/2018	9/27/2019	5	230	
5	Paving	Paving	9/28/2019	10/25/2019	5	18	
6	Architectural Coating	Architectural Coating	10/26/2019	11/22/2019	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 2.38

Residential Indoor: 60,497; Residential Outdoor: 20,166; Non-Residential Indoor: 17,073; Non-Residential Outdoor: 5,691; Striped Parking Area: 8,531 (Architectural Coating – sqft)

OffRoad Equipment

Avila Beach Hotel - San Luis Obispo County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Avila Beach Hotel - San Luis Obispo County, Summer

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	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	521.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	100.00	31.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048		3,871.7665	3,871.7665	1.0667		3,898.4344
Total	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048		3,871.7665	3,871.7665	1.0667		3,898.4344

Avila Beach Hotel - San Luis Obispo County, Summer

3.2 Demolition - 2018

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	0.0785	0.0694	0.6849	1.4800e-003	0.1483	1.0100e-003	0.1493	0.0393	9.4000e-004	0.0403		147.3230	147.3230	5.9600e-003		147.4721
Total	0.0785	0.0694	0.6849	1.4800e-003	0.1483	1.0100e-003	0.1493	0.0393	9.4000e-004	0.0403		147.3230	147.3230	5.9600e-003		147.4721

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	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344
Total	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344

Avila Beach Hotel - San Luis Obispo County, Summer

3.2 Demolition - 2018

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	0.0785	0.0694	0.6849	1.4800e-003	0.1483	1.0100e-003	0.1493	0.0393	9.4000e-004	0.0403		147.3230	147.3230	5.9600e-003		147.4721
Total	0.0785	0.0694	0.6849	1.4800e-003	0.1483	1.0100e-003	0.1493	0.0393	9.4000e-004	0.0403		147.3230	147.3230	5.9600e-003		147.4721

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708		3,831.6239	3,831.6239	1.1928		3,861.4448
Total	4.5627	48.1988	22.4763	0.0380	18.0663	2.5769	20.6432	9.9307	2.3708	12.3014		3,831.6239	3,831.6239	1.1928		3,861.4448

Avila Beach Hotel - San Luis Obispo County, Summer

3.3 Site Preparation - 2018

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	0.0942	0.0833	0.8219	1.7800e-003	0.1780	1.2200e-003	0.1792	0.0472	1.1200e-003	0.0483		176.7876	176.7876	7.1600e-003		176.9666
Total	0.0942	0.0833	0.8219	1.7800e-003	0.1780	1.2200e-003	0.1792	0.0472	1.1200e-003	0.0483		176.7876	176.7876	7.1600e-003		176.9666

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448
Total	4.5627	48.1988	22.4763	0.0380	18.0663	2.5769	20.6432	9.9307	2.3708	12.3014	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448

Avila Beach Hotel - San Luis Obispo County, Summer

3.3 Site Preparation - 2018

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	0.0942	0.0833	0.8219	1.7800e-003	0.1780	1.2200e-003	0.1792	0.0472	1.1200e-003	0.0483		176.7876	176.7876	7.1600e-003		176.9666
Total	0.0942	0.0833	0.8219	1.7800e-003	0.1780	1.2200e-003	0.1792	0.0472	1.1200e-003	0.0483		176.7876	176.7876	7.1600e-003		176.9666

3.4 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6483	0.0000	6.6483	3.3820	0.0000	3.3820			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272		2,988.0216	2,988.0216	0.9302		3,011.2769
Total	2.7733	30.6725	16.5770	0.0297	6.6483	1.5513	8.1996	3.3820	1.4272	4.8092		2,988.0216	2,988.0216	0.9302		3,011.2769

Avila Beach Hotel - San Luis Obispo County, Summer

3.4 Grading - 2018

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	0.7624	23.8496	5.3496	0.0526	0.6189	0.1757	0.7945	0.1842	0.1681	0.3522		5,651.898 2	5,651.898 2	0.3111		5,659.674 5
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	0.0785	0.0694	0.6849	1.4800e-003	0.1483	1.0100e-003	0.1493	0.0393	9.4000e-004	0.0403		147.3230	147.3230	5.9600e-003		147.4721
Total	0.8409	23.9191	6.0345	0.0541	0.7672	0.1767	0.9439	0.2235	0.1690	0.3925		5,799.221 2	5,799.221 2	0.3170		5,807.146 6

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					6.6483	0.0000	6.6483	3.3820	0.0000	3.3820			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272	0.0000	2,988.021 6	2,988.021 6	0.9302		3,011.276 9
Total	2.7733	30.6725	16.5770	0.0297	6.6483	1.5513	8.1996	3.3820	1.4272	4.8092	0.0000	2,988.021 6	2,988.021 6	0.9302		3,011.276 9

Avila Beach Hotel - San Luis Obispo County, Summer

3.4 Grading - 2018

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	0.7624	23.8496	5.3496	0.0526	0.6189	0.1757	0.7945	0.1842	0.1681	0.3522		5,651.898 2	5,651.898 2	0.3111		5,659.674 5
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	0.0785	0.0694	0.6849	1.4800e-003	0.1483	1.0100e-003	0.1493	0.0393	9.4000e-004	0.0403		147.3230	147.3230	5.9600e-003		147.4721
Total	0.8409	23.9191	6.0345	0.0541	0.7672	0.1767	0.9439	0.2235	0.1690	0.3925		5,799.221 2	5,799.221 2	0.3170		5,807.146 6

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.935 1	2,620.935 1	0.6421		2,636.988 3
Total	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.935 1	2,620.935 1	0.6421		2,636.988 3

Avila Beach Hotel - San Luis Obispo County, Summer

3.5 Building Construction - 2018

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	0.1630	3.6787	1.1827	6.3000e-003	0.1439	0.0341	0.1780	0.0414	0.0327	0.0741		668.0850	668.0850	0.0424			669.1450
Worker	0.5232	0.4629	4.5662	9.8800e-003	0.9886	6.7600e-003	0.9954	0.2622	6.2500e-003	0.2685		982.1534	982.1534	0.0398			983.1475
Total	0.6862	4.1417	5.7489	0.0162	1.1325	0.0409	1.1734	0.3036	0.0389	0.3425		1,650.2384	1,650.2384	0.0822			1,652.2925

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	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421			2,636.9883
Total	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421			2,636.9883

Avila Beach Hotel - San Luis Obispo County, Summer

3.5 Building Construction - 2018

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	0.1630	3.6787	1.1827	6.3000e-003	0.1439	0.0341	0.1780	0.0414	0.0327	0.0741		668.0850	668.0850	0.0424		669.1450
Worker	0.5232	0.4629	4.5662	9.8800e-003	0.9886	6.7600e-003	0.9954	0.2622	6.2500e-003	0.2685		982.1534	982.1534	0.0398		983.1475
Total	0.6862	4.1417	5.7489	0.0162	1.1325	0.0409	1.1734	0.3036	0.0389	0.3425		1,650.2384	1,650.2384	0.0822		1,652.2925

3.5 Building Construction - 2019

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635

Avila Beach Hotel - San Luis Obispo County, Summer

3.5 Building Construction - 2019

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	0.1419	3.5005	1.0419	6.2700e-003	0.1439	0.0280	0.1718	0.0414	0.0268	0.0682		666.5176	666.5176	0.0409		667.5411
Worker	0.4697	0.4051	4.0186	9.5800e-003	0.9886	6.5400e-003	0.9952	0.2622	6.0300e-003	0.2682		953.3483	953.3483	0.0350		954.2239
Total	0.6116	3.9056	5.0604	0.0159	1.1325	0.0345	1.1670	0.3036	0.0328	0.3364		1,619.8659	1,619.8659	0.0760		1,621.7649

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635

Avila Beach Hotel - San Luis Obispo County, Summer

3.5 Building Construction - 2019

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	0.1419	3.5005	1.0419	6.2700e-003	0.1439	0.0280	0.1718	0.0414	0.0268	0.0682		666.5176	666.5176	0.0409		667.5411
Worker	0.4697	0.4051	4.0186	9.5800e-003	0.9886	6.5400e-003	0.9952	0.2622	6.0300e-003	0.2682		953.3483	953.3483	0.0350		954.2239
Total	0.6116	3.9056	5.0604	0.0159	1.1325	0.0345	1.1670	0.3036	0.0328	0.3364		1,619.8659	1,619.8659	0.0760		1,621.7649

3.6 Paving - 2019

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	1.2679	12.7604	12.3130	0.0189		0.7196	0.7196		0.6637	0.6637		1,843.3191	1,843.3191	0.5671		1,857.4966
Paving	0.3464					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6143	12.7604	12.3130	0.0189		0.7196	0.7196		0.6637	0.6637		1,843.3191	1,843.3191	0.5671		1,857.4966

Avila Beach Hotel - San Luis Obispo County, Summer

3.6 Paving - 2019

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	0.0940	0.0810	0.8037	1.9200e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		190.6697	190.6697	7.0000e-003		190.8448
Total	0.0940	0.0810	0.8037	1.9200e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		190.6697	190.6697	7.0000e-003		190.8448

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	1.2679	12.7604	12.3130	0.0189		0.7196	0.7196		0.6637	0.6637	0.0000	1,843.3191	1,843.3191	0.5671		1,857.4966
Paving	0.3464					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6143	12.7604	12.3130	0.0189		0.7196	0.7196		0.6637	0.6637	0.0000	1,843.3191	1,843.3191	0.5671		1,857.4966

Avila Beach Hotel - San Luis Obispo County, Summer

3.6 Paving - 2019

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	0.0940	0.0810	0.8037	1.9200e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		190.6697	190.6697	7.0000e-003		190.8448
Total	0.0940	0.0810	0.8037	1.9200e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		190.6697	190.6697	7.0000e-003		190.8448

3.7 Architectural Coating - 2019

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	69.8762					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	70.1427	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423

Avila Beach Hotel - San Luis Obispo County, Summer

3.7 Architectural Coating - 2019

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	0.0940	0.0810	0.8037	1.9200e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		190.6697	190.6697	7.0000e-003		190.8448
Total	0.0940	0.0810	0.8037	1.9200e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		190.6697	190.6697	7.0000e-003		190.8448

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	69.8762					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	70.1427	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423

Avila Beach Hotel - San Luis Obispo County, Summer

3.7 Architectural Coating - 2019

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	0.0940	0.0810	0.8037	1.9200e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		190.6697	190.6697	7.0000e-003		190.8448
Total	0.0940	0.0810	0.8037	1.9200e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		190.6697	190.6697	7.0000e-003		190.8448

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Avila Beach Hotel - San Luis Obispo County, Summer

	ROG	NOx	CO	SO2	Fugitive 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	1.9587	7.8258	21.8221	0.0547	4.5394	0.0783	4.6177	1.2137	0.0739	1.2877		5,502.7570	5,502.7570	0.2450		5,508.8818
Unmitigated	1.9587	7.8258	21.8221	0.0547	4.5394	0.0783	4.6177	1.2137	0.0739	1.2877		5,502.7570	5,502.7570	0.2450		5,508.8818

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	842.00	842.00	842.00	2,139,991	2,139,991
General Office Building	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	842.00	842.00	842.00	2,139,991	2,139,991

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	13.00	5.00	5.00	35.80	21.00	43.20	86	11	3
General Office Building	13.00	5.00	5.00	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down)	13.00	5.00	5.00	8.50	72.50	19.00	37	20	43
Other Asphalt Surfaces	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
Parking Lot	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0

Avila Beach Hotel - San Luis Obispo County, Summer

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.549382	0.034064	0.198767	0.132360	0.033447	0.007872	0.013134	0.018943	0.002404	0.001320	0.005630	0.000825	0.001852
General Office Building	0.549382	0.034064	0.198767	0.132360	0.033447	0.007872	0.013134	0.018943	0.002404	0.001320	0.005630	0.000825	0.001852
High Turnover (Sit Down Restaurant)	0.549382	0.034064	0.198767	0.132360	0.033447	0.007872	0.013134	0.018943	0.002404	0.001320	0.005630	0.000825	0.001852
Other Asphalt Surfaces	0.549382	0.034064	0.198767	0.132360	0.033447	0.007872	0.013134	0.018943	0.002404	0.001320	0.005630	0.000825	0.001852
Parking Lot	0.549382	0.034064	0.198767	0.132360	0.033447	0.007872	0.013134	0.018943	0.002404	0.001320	0.005630	0.000825	0.001852

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0507	0.4530	0.3272	2.7700e-003		0.0351	0.0351		0.0351	0.0351		553.4909	553.4909	0.0106	0.0102	556.7801
NaturalGas Unmitigated	0.0507	0.4530	0.3272	2.7700e-003		0.0351	0.0351		0.0351	0.0351		553.4909	553.4909	0.0106	0.0102	556.7801

Avila Beach Hotel - San Luis Obispo County, Summer

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					
Apartments Low Rise	1397.1	0.0151	0.1288	0.0548	8.2000e-004		0.0104	0.0104		0.0104	0.0104		164.3650	164.3650	3.1500e-003	3.0100e-003	165.3418
General Office Building	271.383	2.9300e-003	0.0266	0.0224	1.6000e-004		2.0200e-003	2.0200e-003		2.0200e-003	2.0200e-003		31.9274	31.9274	6.1000e-004	5.9000e-004	32.1172
High Turnover (Sit Down Restaurant)	3036.19	0.0327	0.2977	0.2500	1.7900e-003		0.0226	0.0226		0.0226	0.0226		357.1985	357.1985	6.8500e-003	6.5500e-003	359.3211
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0507	0.4530	0.3272	2.7700e-003		0.0351	0.0351		0.0351	0.0351		553.4910	553.4910	0.0106	0.0102	556.7801

Avila Beach Hotel - San Luis Obispo County, Summer

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	lb/day										lb/day					
Apartments Low Rise	1.3971	0.0151	0.1288	0.0548	8.2000e-004		0.0104	0.0104		0.0104	0.0104		164.3650	164.3650	3.1500e-003	3.0100e-003	165.3418
General Office Building	0.271383	2.9300e-003	0.0266	0.0224	1.6000e-004		2.0200e-003	2.0200e-003		2.0200e-003	2.0200e-003		31.9274	31.9274	6.1000e-004	5.9000e-004	32.1172
High Turnover (Sit Down Restaurant)	3.03619	0.0327	0.2977	0.2500	1.7900e-003		0.0226	0.0226		0.0226	0.0226		357.1985	357.1985	6.8500e-003	6.5500e-003	359.3211
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0507	0.4530	0.3272	2.7700e-003		0.0351	0.0351		0.0351	0.0351		553.4910	553.4910	0.0106	0.0102	556.7801

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

Avila Beach Hotel - San Luis Obispo County, Summer

	ROG	NOx	CO	SO2	Fugitive 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	1.4072	0.0483	4.1717	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4832	7.4832	7.4400e-003	0.0000	7.6692
Unmitigated	1.4072	0.0483	4.1717	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4832	7.4832	7.4400e-003	0.0000	7.6692

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	0.3446					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9333					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1294	0.0483	4.1717	2.2000e-004		0.0228	0.0228		0.0228	0.0228		7.4832	7.4832	7.4400e-003		7.6692
Total	1.4072	0.0483	4.1717	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4832	7.4832	7.4400e-003	0.0000	7.6692

Avila Beach Hotel - San Luis Obispo County, Summer

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					
Architectural Coating	0.3446					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9333					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1294	0.0483	4.1717	2.2000e-004		0.0228	0.0228		0.0228	0.0228		7.4832	7.4832	7.4400e-003		7.6692
Total	1.4072	0.0483	4.1717	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4832	7.4832	7.4400e-003	0.0000	7.6692

7.0 Water Detail

7.1 Mitigation Measures Water

- Use Reclaimed Water
- Use Grey Water
- Use Water Efficient Irrigation System
- Use Water Efficient Landscaping

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

Avila Beach Hotel - San Luis Obispo County, Summer

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Avila Beach Hotel - San Luis Obispo County, Winter

Avila Beach Hotel
San Luis Obispo County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	6.05	1000sqft	0.10	6,051.00	0
Other Asphalt Surfaces	75.39	1000sqft	1.73	75,390.00	0
Parking Lot	167.00	Space	0.65	66,800.00	0
High Turnover (Sit Down Restaurant)	5.33	1000sqft	0.10	5,331.00	0
Apartments Low Rise	50.00	Dwelling Unit	1.42	29,875.00	143

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.2	Precipitation Freq (Days)	44
Climate Zone	4			Operational Year	2019
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	349	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Avila Beach Hotel - San Luis Obispo County, Winter

Project Characteristics - CO2 intensity factor of PG&E per PG&E guidance (November 2015), average of last 5 years (2015-2019).

Land Use - Land use details per September 2017 Project Description. Other asphalt surfaces includes roads, cart path, and pedestrian path.

Construction Phase - Default

Grading - Per Flowers & Assoc. Jan 2018, 18,225 cy cut, 14,055 cy fill, for net of 4,170 cy exported.

Vehicle Trips - Trip generation rates for the proposed project per Transportation Impact Study prepared by Central Coast Transportation Consulting, October 2016

Energy Use -

Water And Wastewater - Water usage details per Water Usage Analysis (9-1-16).

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation - Per Green Features List, installation of timers and photo sensors, assumed 16% reduction as is estimated minimum by CAPCOA.

Water Mitigation - WSW-2 per Water Usage Analysis (9-1-16): 2.6 AFY of 5.89 AFY for outdoor water use. Indoor water use included in water usage estimate.

Green Features List: WSW-1, assumed 20% ; WUW-4, 10% assumed; WUW-3, unable to calculate MAWA or ETWU.

Waste Mitigation - Green Features List; recycling services. AB 939 target 75%, 50% for conservative analysis.

Avila Beach Hotel - San Luis Obispo County, Winter

Table Name	Column Name	Default Value	New Value
tblGrading	MaterialExported	0.00	4,170.00
tblLandUse	LandUseSquareFeet	6,050.00	6,051.00
tblLandUse	LandUseSquareFeet	5,330.00	5,331.00
tblLandUse	LandUseSquareFeet	50,000.00	29,875.00
tblLandUse	LotAcreage	0.14	0.10
tblLandUse	LotAcreage	1.50	0.65
tblLandUse	LotAcreage	0.12	0.10
tblLandUse	LotAcreage	3.13	1.42
tblProjectCharacteristics	CO2IntensityFactor	641.35	349
tblVehicleTrips	ST_TR	7.16	16.84
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	158.37	0.00
tblVehicleTrips	SU_TR	6.07	16.84
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	131.84	0.00
tblVehicleTrips	WD_TR	6.59	16.84
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	127.15	0.00

2.0 Emissions Summary

Avila Beach Hotel - San Luis Obispo County, Winter

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	1.4072	0.0483	4.1717	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4832	7.4832	7.4400e-003	0.0000	7.6692
Energy	0.0507	0.4530	0.3272	2.7700e-003		0.0351	0.0351		0.0351	0.0351		553.4909	553.4909	0.0106	0.0102	556.7801
Mobile	1.9183	8.1486	22.4009	0.0526	4.5394	0.0791	4.6185	1.2137	0.0747	1.2884		5,288.9121	5,288.9121	0.2478		5,295.1064
Total	3.3763	8.6499	26.8997	0.0556	4.5394	0.1369	4.6764	1.2137	0.1326	1.3463	0.0000	5,849.8862	5,849.8862	0.2658	0.0102	5,859.5557

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	1.4072	0.0483	4.1717	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4832	7.4832	7.4400e-003	0.0000	7.6692
Energy	0.0507	0.4530	0.3272	2.7700e-003		0.0351	0.0351		0.0351	0.0351		553.4909	553.4909	0.0106	0.0102	556.7801
Mobile	1.9183	8.1486	22.4009	0.0526	4.5394	0.0791	4.6185	1.2137	0.0747	1.2884		5,288.9121	5,288.9121	0.2478		5,295.1064
Total	3.3763	8.6499	26.8997	0.0556	4.5394	0.1369	4.6764	1.2137	0.1326	1.3463	0.0000	5,849.8862	5,849.8862	0.2658	0.0102	5,859.5557

Avila Beach Hotel - San Luis Obispo County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/3/2018	9/28/2018	5	20	
2	Site Preparation	Site Preparation	9/29/2018	10/12/2018	5	5	
3	Grading	Grading	10/13/2018	11/9/2018	5	8	
4	Building Construction	Building Construction	11/10/2018	9/27/2019	5	230	
5	Paving	Paving	9/28/2019	10/25/2019	5	18	
6	Architectural Coating	Architectural Coating	10/26/2019	11/22/2019	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 2.38

Residential Indoor: 60,497; Residential Outdoor: 20,166; Non-Residential Indoor: 17,073; Non-Residential Outdoor: 5,691; Striped Parking Area: 8,531 (Architectural Coating – sqft)

OffRoad Equipment

Avila Beach Hotel - San Luis Obispo County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Avila Beach Hotel - San Luis Obispo County, Winter

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	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	521.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	100.00	31.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048		3,871.7665	3,871.7665	1.0667		3,898.4344
Total	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048		3,871.7665	3,871.7665	1.0667		3,898.4344

Avila Beach Hotel - San Luis Obispo County, Winter

3.2 Demolition - 2018

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	0.0892	0.0788	0.6742	1.4100e-003	0.1483	1.0100e-003	0.1493	0.0393	9.4000e-004	0.0403		140.4437	140.4437	5.8300e-003		140.5895
Total	0.0892	0.0788	0.6742	1.4100e-003	0.1483	1.0100e-003	0.1493	0.0393	9.4000e-004	0.0403		140.4437	140.4437	5.8300e-003		140.5895

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	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344
Total	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344

Avila Beach Hotel - San Luis Obispo County, Winter

3.2 Demolition - 2018

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	0.0892	0.0788	0.6742	1.4100e-003	0.1483	1.0100e-003	0.1493	0.0393	9.4000e-004	0.0403		140.4437	140.4437	5.8300e-003		140.5895
Total	0.0892	0.0788	0.6742	1.4100e-003	0.1483	1.0100e-003	0.1493	0.0393	9.4000e-004	0.0403		140.4437	140.4437	5.8300e-003		140.5895

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708		3,831.6239	3,831.6239	1.1928		3,861.4448
Total	4.5627	48.1988	22.4763	0.0380	18.0663	2.5769	20.6432	9.9307	2.3708	12.3014		3,831.6239	3,831.6239	1.1928		3,861.4448

Avila Beach Hotel - San Luis Obispo County, Winter

3.3 Site Preparation - 2018

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	0.1070	0.0946	0.8091	1.7000e-003	0.1780	1.2200e-003	0.1792	0.0472	1.1200e-003	0.0483		168.5325	168.5325	7.0000e-003		168.7073
Total	0.1070	0.0946	0.8091	1.7000e-003	0.1780	1.2200e-003	0.1792	0.0472	1.1200e-003	0.0483		168.5325	168.5325	7.0000e-003		168.7073

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448
Total	4.5627	48.1988	22.4763	0.0380	18.0663	2.5769	20.6432	9.9307	2.3708	12.3014	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448

Avila Beach Hotel - San Luis Obispo County, Winter

3.3 Site Preparation - 2018

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	0.1070	0.0946	0.8091	1.7000e-003	0.1780	1.2200e-003	0.1792	0.0472	1.1200e-003	0.0483		168.5325	168.5325	7.0000e-003		168.7073
Total	0.1070	0.0946	0.8091	1.7000e-003	0.1780	1.2200e-003	0.1792	0.0472	1.1200e-003	0.0483		168.5325	168.5325	7.0000e-003		168.7073

3.4 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6483	0.0000	6.6483	3.3820	0.0000	3.3820			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272		2,988.0216	2,988.0216	0.9302		3,011.2769
Total	2.7733	30.6725	16.5770	0.0297	6.6483	1.5513	8.1996	3.3820	1.4272	4.8092		2,988.0216	2,988.0216	0.9302		3,011.2769

Avila Beach Hotel - San Luis Obispo County, Winter

3.4 Grading - 2018

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	0.7825	24.0520	5.6991	0.0519	0.6189	0.1789	0.7977	0.1842	0.1711	0.3553		5,574.9333	5,574.9333	0.3218		5,582.9788
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	0.0892	0.0788	0.6742	1.4100e-003	0.1483	1.0100e-003	0.1493	0.0393	9.4000e-004	0.0403		140.4437	140.4437	5.8300e-003		140.5895
Total	0.8717	24.1308	6.3733	0.0533	0.7672	0.1799	0.9470	0.2235	0.1721	0.3956		5,715.3770	5,715.3770	0.3277		5,723.5682

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					6.6483	0.0000	6.6483	3.3820	0.0000	3.3820			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769
Total	2.7733	30.6725	16.5770	0.0297	6.6483	1.5513	8.1996	3.3820	1.4272	4.8092	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769

Avila Beach Hotel - San Luis Obispo County, Winter

3.4 Grading - 2018

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	0.7825	24.0520	5.6991	0.0519	0.6189	0.1789	0.7977	0.1842	0.1711	0.3553		5,574.9333	5,574.9333	0.3218		5,582.9788
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	0.0892	0.0788	0.6742	1.4100e-003	0.1483	1.0100e-003	0.1493	0.0393	9.4000e-004	0.0403		140.4437	140.4437	5.8300e-003		140.5895
Total	0.8717	24.1308	6.3733	0.0533	0.7672	0.1799	0.9470	0.2235	0.1721	0.3956		5,715.3770	5,715.3770	0.3277		5,723.5682

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883

Avila Beach Hotel - San Luis Obispo County, Winter

3.5 Building Construction - 2018

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	0.1715	3.6695	1.3246	6.1200e-003	0.1439	0.0350	0.1789	0.0414	0.0335	0.0749		649.0786	649.0786	0.0453		650.2118
Worker	0.5944	0.5253	4.4947	9.4200e-003	0.9886	6.7600e-003	0.9954	0.2622	6.2500e-003	0.2685		936.2914	936.2914	0.0389		937.2630
Total	0.7659	4.1949	5.8193	0.0155	1.1325	0.0418	1.1742	0.3036	0.0397	0.3434		1,585.3700	1,585.3700	0.0842		1,587.4747

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	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883

Avila Beach Hotel - San Luis Obispo County, Winter

3.5 Building Construction - 2018

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	0.1715	3.6695	1.3246	6.1200e-003	0.1439	0.0350	0.1789	0.0414	0.0335	0.0749		649.0786	649.0786	0.0453		650.2118
Worker	0.5944	0.5253	4.4947	9.4200e-003	0.9886	6.7600e-003	0.9954	0.2622	6.2500e-003	0.2685		936.2914	936.2914	0.0389		937.2630
Total	0.7659	4.1949	5.8193	0.0155	1.1325	0.0418	1.1742	0.3036	0.0397	0.3434		1,585.3700	1,585.3700	0.0842		1,587.4747

3.5 Building Construction - 2019

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635

Avila Beach Hotel - San Luis Obispo County, Winter

3.5 Building Construction - 2019

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	0.1492	3.4883	1.1710	6.0900e-003	0.1439	0.0288	0.1726	0.0414	0.0275	0.0689		647.0366	647.0366	0.0438		648.1308
Worker	0.5344	0.4599	3.9307	9.1300e-003	0.9886	6.5400e-003	0.9952	0.2622	6.0300e-003	0.2682		908.7548	908.7548	0.0341		909.6076
Total	0.6836	3.9482	5.1017	0.0152	1.1325	0.0353	1.1678	0.3036	0.0335	0.3372		1,555.7914	1,555.7914	0.0779		1,557.7384

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635

Avila Beach Hotel - San Luis Obispo County, Winter

3.5 Building Construction - 2019

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	0.1492	3.4883	1.1710	6.0900e-003	0.1439	0.0288	0.1726	0.0414	0.0275	0.0689		647.0366	647.0366	0.0438		648.1308
Worker	0.5344	0.4599	3.9307	9.1300e-003	0.9886	6.5400e-003	0.9952	0.2622	6.0300e-003	0.2682		908.7548	908.7548	0.0341		909.6076
Total	0.6836	3.9482	5.1017	0.0152	1.1325	0.0353	1.1678	0.3036	0.0335	0.3372		1,555.7914	1,555.7914	0.0779		1,557.7384

3.6 Paving - 2019

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	1.2679	12.7604	12.3130	0.0189		0.7196	0.7196		0.6637	0.6637		1,843.3191	1,843.3191	0.5671		1,857.4966
Paving	0.3464					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6143	12.7604	12.3130	0.0189		0.7196	0.7196		0.6637	0.6637		1,843.3191	1,843.3191	0.5671		1,857.4966

Avila Beach Hotel - San Luis Obispo County, Winter

3.6 Paving - 2019

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	0.1069	0.0920	0.7861	1.8300e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		181.7510	181.7510	6.8200e-003		181.9215
Total	0.1069	0.0920	0.7861	1.8300e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		181.7510	181.7510	6.8200e-003		181.9215

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	1.2679	12.7604	12.3130	0.0189		0.7196	0.7196		0.6637	0.6637	0.0000	1,843.3191	1,843.3191	0.5671		1,857.4966
Paving	0.3464					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6143	12.7604	12.3130	0.0189		0.7196	0.7196		0.6637	0.6637	0.0000	1,843.3191	1,843.3191	0.5671		1,857.4966

Avila Beach Hotel - San Luis Obispo County, Winter

3.6 Paving - 2019

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	0.1069	0.0920	0.7861	1.8300e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		181.7510	181.7510	6.8200e-003		181.9215
Total	0.1069	0.0920	0.7861	1.8300e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		181.7510	181.7510	6.8200e-003		181.9215

3.7 Architectural Coating - 2019

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	69.8762					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	70.1427	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423

Avila Beach Hotel - San Luis Obispo County, Winter

3.7 Architectural Coating - 2019

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	0.1069	0.0920	0.7861	1.8300e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		181.7510	181.7510	6.8200e-003		181.9215
Total	0.1069	0.0920	0.7861	1.8300e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		181.7510	181.7510	6.8200e-003		181.9215

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	69.8762					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	70.1427	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423

Avila Beach Hotel - San Luis Obispo County, Winter

3.7 Architectural Coating - 2019

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	0.1069	0.0920	0.7861	1.8300e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		181.7510	181.7510	6.8200e-003		181.9215
Total	0.1069	0.0920	0.7861	1.8300e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		181.7510	181.7510	6.8200e-003		181.9215

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Avila Beach Hotel - San Luis Obispo County, Winter

	ROG	NOx	CO	SO2	Fugitive 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	1.9183	8.1486	22.4009	0.0526	4.5394	0.0791	4.6185	1.2137	0.0747	1.2884		5,288.912 1	5,288.912 1	0.2478		5,295.106 4
Unmitigated	1.9183	8.1486	22.4009	0.0526	4.5394	0.0791	4.6185	1.2137	0.0747	1.2884		5,288.912 1	5,288.912 1	0.2478		5,295.106 4

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	842.00	842.00	842.00	2,139,991	2,139,991
General Office Building	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	842.00	842.00	842.00	2,139,991	2,139,991

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	13.00	5.00	5.00	35.80	21.00	43.20	86	11	3
General Office Building	13.00	5.00	5.00	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	13.00	5.00	5.00	8.50	72.50	19.00	37	20	43
Other Asphalt Surfaces	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
Parking Lot	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0

Avila Beach Hotel - San Luis Obispo County, Winter

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.549382	0.034064	0.198767	0.132360	0.033447	0.007872	0.013134	0.018943	0.002404	0.001320	0.005630	0.000825	0.001852
General Office Building	0.549382	0.034064	0.198767	0.132360	0.033447	0.007872	0.013134	0.018943	0.002404	0.001320	0.005630	0.000825	0.001852
High Turnover (Sit Down Restaurant)	0.549382	0.034064	0.198767	0.132360	0.033447	0.007872	0.013134	0.018943	0.002404	0.001320	0.005630	0.000825	0.001852
Other Asphalt Surfaces	0.549382	0.034064	0.198767	0.132360	0.033447	0.007872	0.013134	0.018943	0.002404	0.001320	0.005630	0.000825	0.001852
Parking Lot	0.549382	0.034064	0.198767	0.132360	0.033447	0.007872	0.013134	0.018943	0.002404	0.001320	0.005630	0.000825	0.001852

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0507	0.4530	0.3272	2.7700e-003		0.0351	0.0351		0.0351	0.0351		553.4909	553.4909	0.0106	0.0102	556.7801
NaturalGas Unmitigated	0.0507	0.4530	0.3272	2.7700e-003		0.0351	0.0351		0.0351	0.0351		553.4909	553.4909	0.0106	0.0102	556.7801

Avila Beach Hotel - San Luis Obispo County, Winter

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					
Apartments Low Rise	1397.1	0.0151	0.1288	0.0548	8.2000e-004		0.0104	0.0104		0.0104	0.0104		164.3650	164.3650	3.1500e-003	3.0100e-003	165.3418
General Office Building	271.383	2.9300e-003	0.0266	0.0224	1.6000e-004		2.0200e-003	2.0200e-003		2.0200e-003	2.0200e-003		31.9274	31.9274	6.1000e-004	5.9000e-004	32.1172
High Turnover (Sit Down Restaurant)	3036.19	0.0327	0.2977	0.2500	1.7900e-003		0.0226	0.0226		0.0226	0.0226		357.1985	357.1985	6.8500e-003	6.5500e-003	359.3211
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0507	0.4530	0.3272	2.7700e-003		0.0351	0.0351		0.0351	0.0351		553.4910	553.4910	0.0106	0.0102	556.7801

Avila Beach Hotel - San Luis Obispo County, Winter

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	lb/day										lb/day					
Apartments Low Rise	1.3971	0.0151	0.1288	0.0548	8.2000e-004		0.0104	0.0104		0.0104	0.0104		164.3650	164.3650	3.1500e-003	3.0100e-003	165.3418
General Office Building	0.271383	2.9300e-003	0.0266	0.0224	1.6000e-004		2.0200e-003	2.0200e-003		2.0200e-003	2.0200e-003		31.9274	31.9274	6.1000e-004	5.9000e-004	32.1172
High Turnover (Sit Down Restaurant)	3.03619	0.0327	0.2977	0.2500	1.7900e-003		0.0226	0.0226		0.0226	0.0226		357.1985	357.1985	6.8500e-003	6.5500e-003	359.3211
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0507	0.4530	0.3272	2.7700e-003		0.0351	0.0351		0.0351	0.0351		553.4910	553.4910	0.0106	0.0102	556.7801

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

Avila Beach Hotel - San Luis Obispo County, Winter

	ROG	NOx	CO	SO2	Fugitive 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	1.4072	0.0483	4.1717	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4832	7.4832	7.4400e-003	0.0000	7.6692
Unmitigated	1.4072	0.0483	4.1717	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4832	7.4832	7.4400e-003	0.0000	7.6692

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	0.3446					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9333					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1294	0.0483	4.1717	2.2000e-004		0.0228	0.0228		0.0228	0.0228		7.4832	7.4832	7.4400e-003		7.6692
Total	1.4072	0.0483	4.1717	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4832	7.4832	7.4400e-003	0.0000	7.6692

Avila Beach Hotel - San Luis Obispo County, Winter

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					
Architectural Coating	0.3446					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9333					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1294	0.0483	4.1717	2.2000e-004		0.0228	0.0228		0.0228	0.0228		7.4832	7.4832	7.4400e-003		7.6692
Total	1.4072	0.0483	4.1717	2.2000e-004		0.0228	0.0228		0.0228	0.0228	0.0000	7.4832	7.4832	7.4400e-003	0.0000	7.6692

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

Use Grey Water

Use Water Efficient Irrigation System

Use Water Efficient Landscaping

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Avila Beach Hotel - San Luis Obispo County, Winter

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation
