AIR QUALITY AND GREENHOUSE GAS IMPACT ANALYSIS

YOSEMITE CROSSING PROJECT

CITY OF MERCED, CALIFORNIA

APPENDIX A TO IS #19-28

LSA

September 2019

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YOSEMITE CROSSING PROJECT

CITY OF MERCED, CALIFORNIA

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LIST OF ABBREVIATIONS AND ACRONYMS

°F	degrees Fahrenheit
°C	degrees Celsius
µg/m^3	micrograms per cubic meter
AAQS	ambient air quality standards
AB	Assembly Bill
APS	Alternative Planning Strategy
AQMP	Air Quality Management Plan
BAU	Business-as-Usual
Bio-CO_2	biologically generated carbon dioxide
BPS	Best Performance Standards
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CAT	Climate Action Team
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CAP	Climate Action Plan
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAP	Climate Change Action Plan
CEQA	California Environmental Quality Act
CH_4	methane
City	City of Merced
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
GAMAQI	Guidance for Assessing and Mitigating Air Quality Impacts
GHG	greenhouse gas
GWP	global warming potential
HFCs	hydrofluorocarbons
hr	hour
IPCC	Intergovernmental Panel on Climate Change
ISR	Indirect Source Review
LOS	level of service
mg/m^3	milligrams per cubic meter
MPO	Metropolitan Planning Organization
N_2O	nitrous oxide

NAAQS	national ambient air quality standards
NBio-CO_2	non-biologically generated carbon dioxide
ND	no data available
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
O_3	ozone (or smog)
OEHHA	California's Office of Environmental Health Hazard Assessment
Pb	lead
PCAP	Programmatic Climate Action Plan
PFCs	perfluorocarbons
PG&E	Pacific Gas & Electric Company
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in size
$PM_{2.5}$	particulate matter less than 2.5 microns in size
ppb	parts per billion
ppm	parts per million
project	Yosemite Crossing Project
ROG	reactive organic gas
RTP	Regional Transportation Plan
SB	Senate Bill
SCS	Sustainable Communities Strategy
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SF_6	sulfur hexafluoride
SO_2	sulfur dioxide
SO_X	sulfur oxides
State	State of California
TACs	toxic air contaminants
UDM	Urban Design Manual
USEPA	United States Environmental Protection Agency
UNFCCC	United Nations Framework Convention on Climate Change
VOCs	volatile organic compounds

1.0 AIR QUALITY IMPACT ANALYSIS

1.1 INTRODUCTION

This Air Quality and Greenhouse Gas Analysis for the proposed Yosemite Crossing Project (project) in the City of Merced (City) in Merced County, California has been prepared using methods and assumptions recommended in the San Joaquin Valley Air Pollution Control District's (SJVAPCD) *Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI).[1] This analysis includes a description of existing regulatory framework, an assessment of project construction and operation-period emissions, and an assessment of greenhouse gas (GHG) emissions. Measures to reduce or eliminate significant impacts are identified, where appropriate.

1.2 PROJECT DESCRIPTION

The 21.4-acre project site is located at the northeast corner of G Street and Yosemite Avenue in Merced. The project site is bound to the north by vacant land, to the east by single family residential uses, open space, a ponding basin, and a proposed Valley Children's facility, to the south by Yosemite Avenue, and to the west by G Street. Figure 1 shows the site's regional and local context. Figure 2 depicts an aerial photograph of the project site.

The proposed project would include a variety of uses, including 66,465 square feet of medical-dental office space, a 128-room hotel, 7,898 square feet of fast-food restaurants with drive-through windows, a 3,130 square foot gasoline/service station with 12 fueling positions, 18,222 square feet of shopping center uses, a 5,000 square foot high-turnover (sit-down) restaurant, 12,000 square feet of general office space, a 4,804 square foot day care center, a 3,560 square foot drive-in bank, residential uses, and a total of 912 parking spaces. The project would also include 44 units of multi-family apartments. The project site plan is shown in Figure 3.

Access to the project would be provided by five driveways, along Mercy Avenue, "G" Street, and Yosemite Avenue. Regional access to the site is provided by State Route 99, which is located approximately 2.5 miles south of the project site. The project site is located in an area developed with single-family residential, medical, commercial, religious, and school uses. Mercy Medical Center Hospital is located approximately 0.1 mile north of the project site, Merced College is located approximately 0.1 mile west of the project site, and Cruickshank Middle School is located approximately 0.2 mile northeast of the project site.

Construction of Phase I of the project would include Pad A, Shop A, Shop B, the gas station, Pad D, and Pad E and is expected to begin September 2020. The construction schedule for future phases has not been determined. Construction activities are expected to utilize standard construction equipment.

[1] San Joaquin Valley Air Pollution Control District, 2015. *Guidance for Assessing and Mitigating Air Quality Impacts*. March 19. Website: www.valleyair.org/transportation/ceqa_idx.htm (accessed August 2019).

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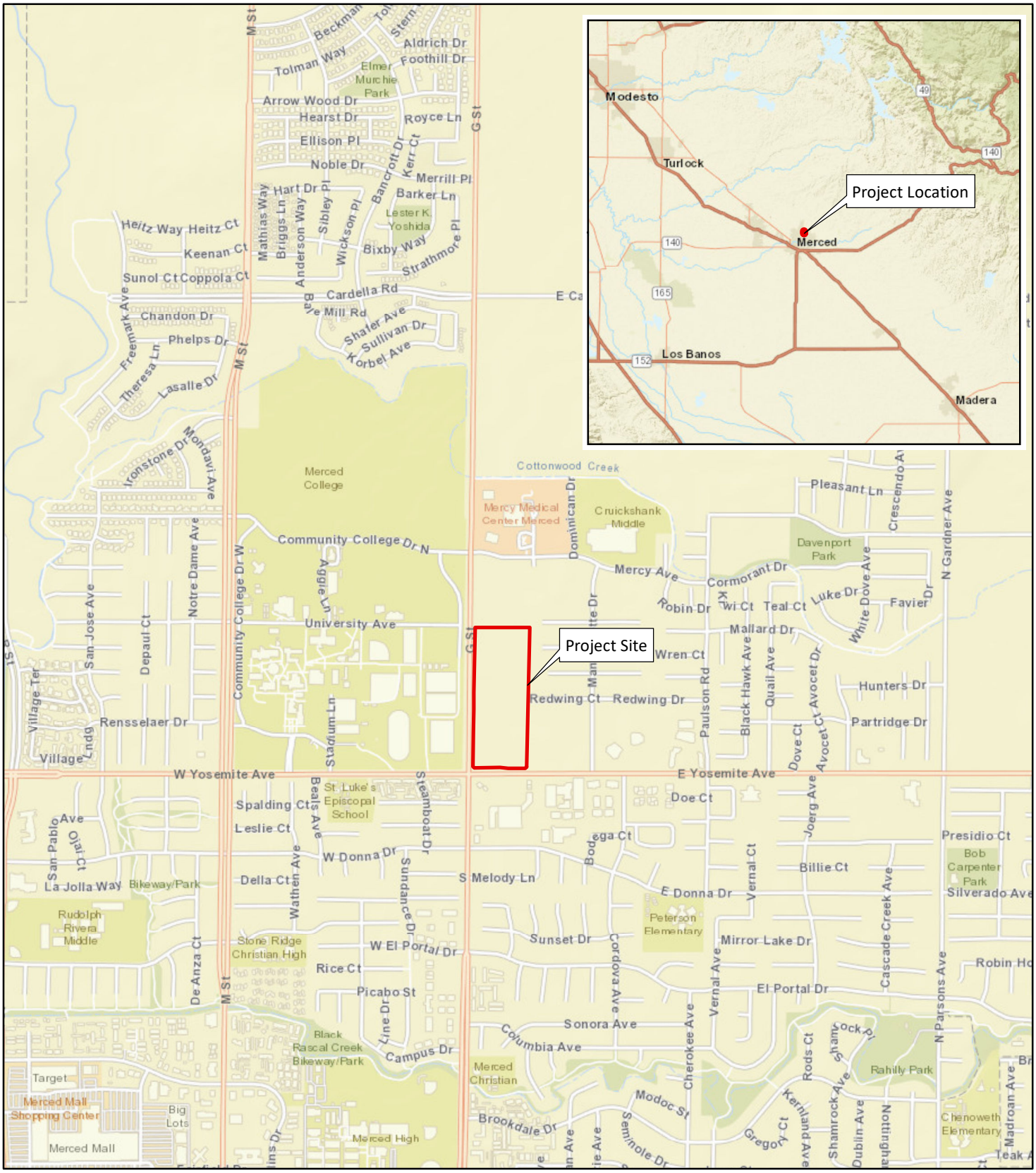

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FIGURE 1

Yosemite Crossing
Merced, Merced County, California
Project Vicinity Map

SOURCE: ESRI World Street Map (08/19).

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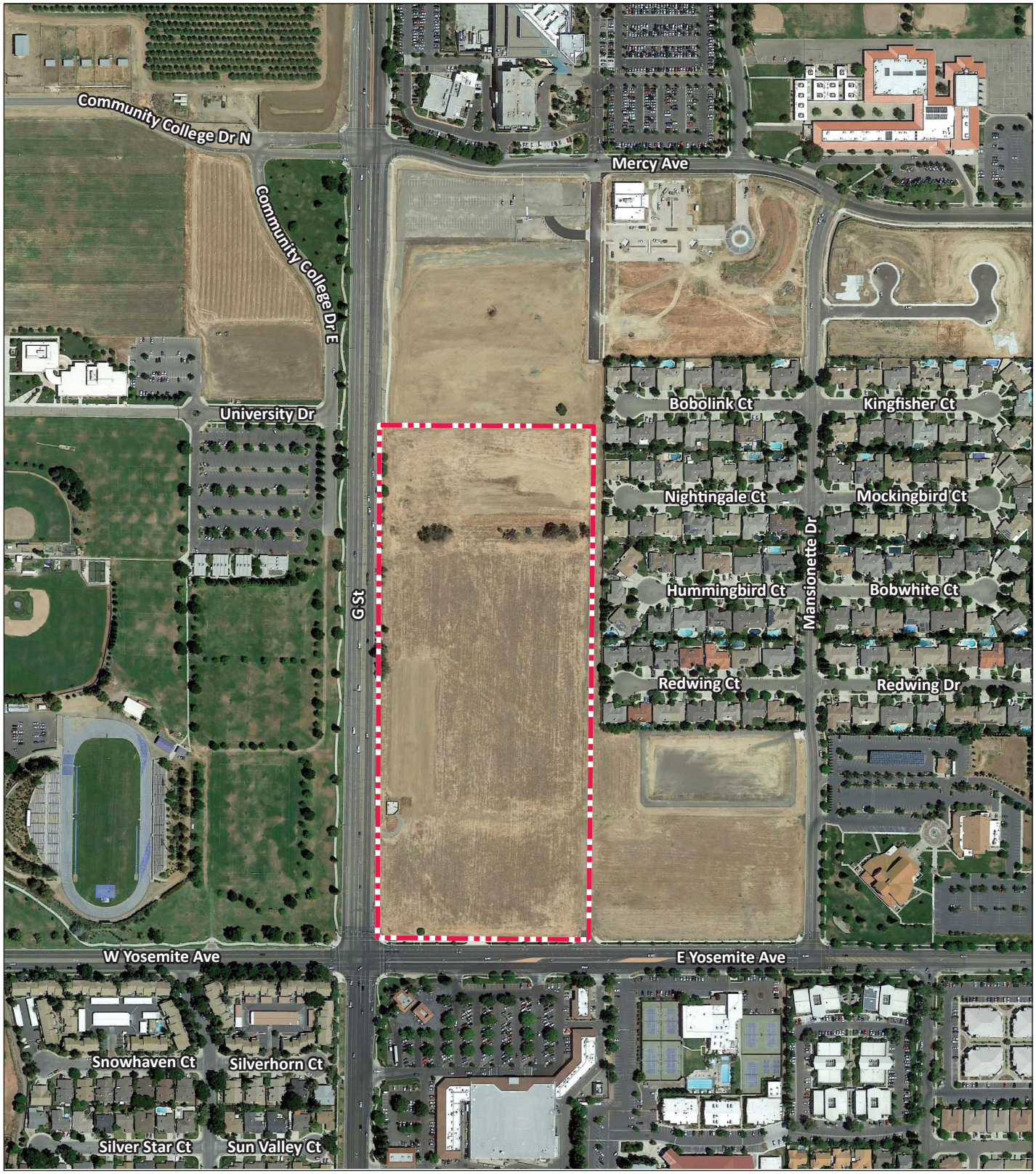

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FIGURE 2

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FEET

N

Project Site

Yosemite Crossing

Aerial Photograph of the Project Site

SOURCES: GOOGLE EARTH, 5/16/18; LSA, 2019.

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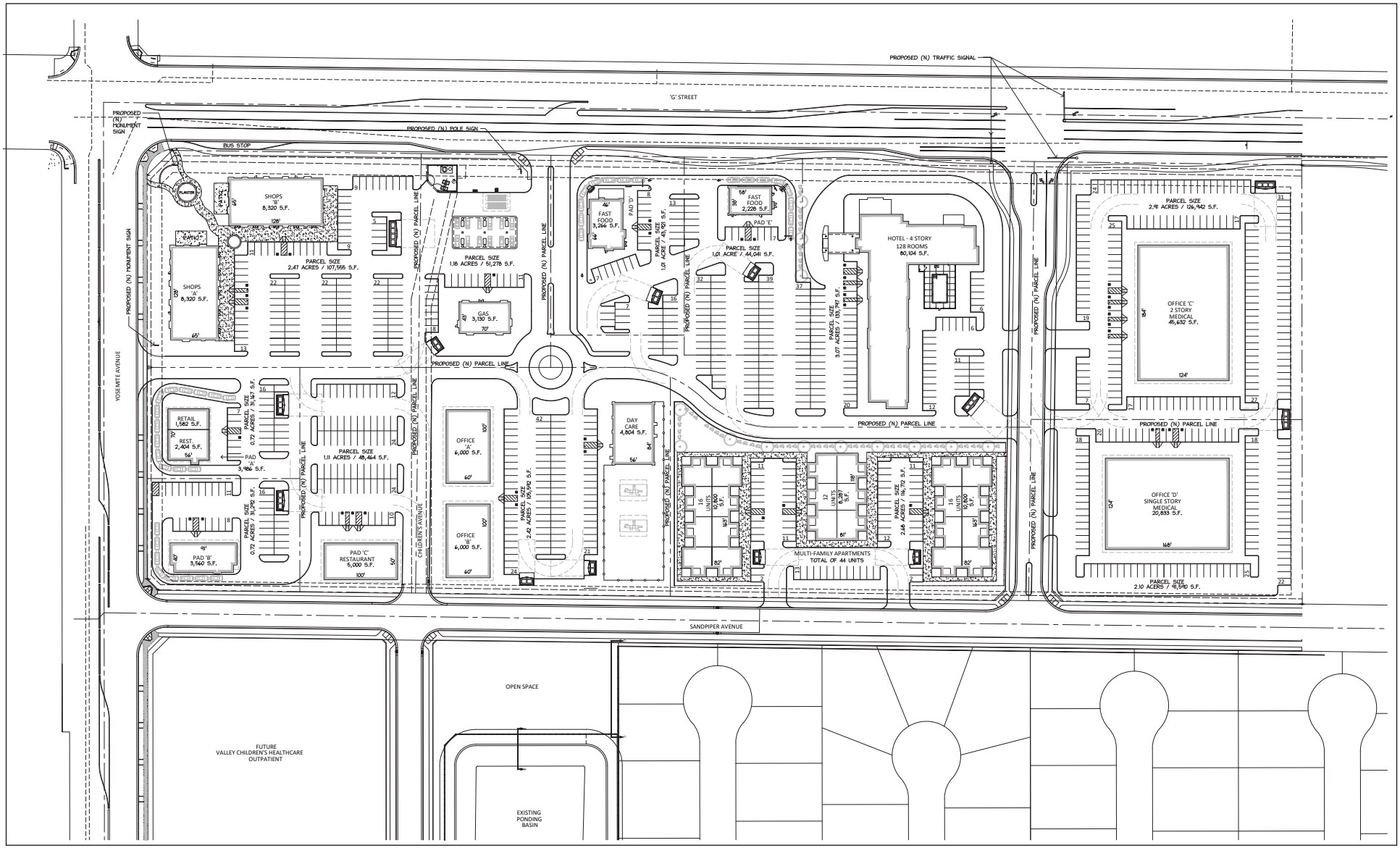

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FIGURE 3

NOT TO SCALE

Yosemite Crossing

Site Plan

SOURCE: CENTERLINE DESIGN, LLC, SEPTEMBER 2019.

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1.2.1 Existing Sensitive Land Uses in the Project Area

For the purposes of this analysis, sensitive receptors are areas of population that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include residences, schools, day care centers, hospitals, parks, and similar uses which are sensitive to air quality. Impacts on sensitive receptors are of particular concern because they are the population most vulnerable to the effects of air pollution.[2] The closest sensitive receptor locations to the project site include the single family residences located immediately east of the project site, along Redwing Court, Hummingbird Court, Nightingale Cord, and Bobolink Court.

1.3 AIR QUALITY BACKGROUND

This section provides background information on air pollutants and their health effects. It also provides brief information from the California Air Resources Board's Air Quality and Land Use Handbook[3] (CARB Handbook) and the supplement; Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways: Technical Advisory[4], a brief description of the general health risks of toxics, and the California Environmental Quality Act (CEQA) significance criteria for project evaluation.

1.3.1 Air Pollutants and Health Effects

Both State and Federal governments have established health-based Ambient Air Quality Standards for six criteria air pollutants:[5] carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), 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 populace with a reasonable margin of safety. Long-term exposure to elevated levels of criteria pollutants may result in adverse health effects. However, emission thresholds established by an air district are used to manage total regional emissions within an air basin based on the air basin's attainment status for criteria pollutants. These emission thresholds were established for individual projects that would contribute to regional emissions and pollutant concentrations and could adversely affect or delay the projected attainment target year for certain criteria pollutants.

Because of the conservative nature of the thresholds and the basin-wide context of individual 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).

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2 San Joaquin Valley Air Pollution Control District, 2015. op. cit.

3 California Air Resources Board, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April.

4 California Air Resources Board, 2017. *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways: Technical Advisory.*

5 United States Environmental Protection Agency (USEPA), 2014. 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.

Occupants of facilities such as schools, daycare 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.

1.3.1.1 Ozone

Ozone 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. Automobiles are the single largest source of ozone precursors. Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

1.3.1.2 Carbon Monoxide

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. 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.

1.3.1.3 Particulate Matter

Particulate matter is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles are those that are 10 microns or less in diameter, or PM_{10}. Fine, suspended particulate matter with an aerodynamic diameter of 2.5 microns or less, or $PM_{2.5}$, is not readily filtered out by the lungs. Nitrates, sulfates, dust, and combustion particulates are major components of PM_{10} and $PM_{2.5}$. These small particles can be directly emitted into the atmosphere as byproducts of fuel combustion; through abrasion, such as tire or brake lining wear; or through fugitive dust (wind or mechanical erosion of soil). They can also be formed in the atmosphere through chemical reactions. Particulates may transport carcinogens and other toxic compounds that adhere to the particle surfaces and can enter the human body through the lungs.

1.3.1.4 Nitrogen Dioxide

NO_2 is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, NO_2 also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. NO_2 decreases lung function and may reduce resistance to infection.

1.3.1.5 Sulfur Dioxide

SO_2 is a colorless, irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels in the region. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight.

1.3.1.6 Lead

Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead 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 lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery factories. Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the United States Environmental Protection Agency (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 USEPAs regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.

1.3.1.7 Visibility-Reducing Particles

Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials (e.g., metals, soot, soil, dust, and salt). The Statewide standard is intended to limit the frequency and severity of visibility impairment due to regional haze. The entire San Joaquin Valley Air Basin (SJVAB) is unclassified for the State standard for visibility-reducing particles.

1.3.1.8 Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated by the USEPA and CARB. Some examples of TACs include benzene, butadiene, formaldehyde, and hydrogen sulfide. The identification, regulation, and monitoring of TACs is relatively recent compared to that for criteria pollutants.

TACs do not have ambient air quality standards, but are regulated by the USEPA, CARB, and the SJVAPCD. In 1998, the CARB identified particulate matter from diesel-fueled engines as a TAC. The CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines.[6] High-volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (e.g., distribution centers and 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.

Unlike TACs emitted from industrial and other stationary sources noted above, most diesel particulate matter is emitted from mobile sources—primarily "off-road" sources such as construction and mining equipment, agricultural equipment, and truck-mounted refrigeration units, as well as trucks and buses traveling on freeways and local roadways.

Although not specifically monitored, recent studies indicate that exposure to diesel particulate matter may contribute significantly to a cancer risk (a risk of approximately 500 to 700 in 1,000,000) that is greater than all other measured TACs combined.[7] The technology for reducing diesel particulate matter emissions from heavy-duty trucks is well established, and both State and Federal agencies are moving aggressively to regulate engines and emission control systems to reduce and remediate diesel emissions. The CARB anticipates that by 2020, average statewide diesel particulate matter concentrations will decrease by 85 percent from levels in 2000 with full implementation of the CARB's Diesel Risk Reduction Plan,[8] meaning that the statewide health risk from diesel particulate matter is expected to decrease from 540 cancer cases in 1,000,000 to 21.5 cancer cases in 1,000,000.

Table 1 summarizes the sources and health effects of air pollutants discussed in this section. Table 2 presents a summary of State and Federal ambient air quality standards (AAQS).

6 CARB, 2000. Stationary Source Division and Mobile Source Control Division. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.* October.

7 Ibid.

8 Ibid.

Table 1: Sources and Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	● Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust ● Natural events, such as decomposition of organic matter	● 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)	● Motor vehicle exhaust ● High temperature stationary combustion ● Atmospheric reactions	● Aggravation of respiratory illness ● Reduced visibility ● Reduced plant growth ● Formation of acid rain
Ozone (O_3)	● Atmospheric reaction of organic gases with nitrogen oxides in sunlight	● Aggravation of respiratory and cardiovascular diseases ● Irritation of eyes ● Impairment of cardiopulmonary function ● Plant leaf injury
Lead (Pb)	● Contaminated soil	● Impairment of blood functions and nerve construction ● Behavioral and hearing problems in children
Suspended Particulate Matter ($PM_{2.5}$ and PM_{10})	● Stationary combustion of solid fuels ● Construction activities ● Industrial processes ● Atmospheric chemical reactions	● 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)	● Combustion of sulfur-containing fossil fuels ● Smelting of sulfur-bearing metal ores Industrial processes	● 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 (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 (O3)[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 (PM10)[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 (PM2.5)[i]	24-Hour	-		35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	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 (NO2)[j]	Annual Arithmetic Mean	0.03 ppm (57 µg/m^3)	Gas Phase Chemi-luminescence	53 ppb (100 µg/m^3)	Same as Primary Standard	Gas Phase Chemi-luminescence
	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	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m^3 (for certain areas)[l]	Same as Primary Standard	
	Rolling 3-Month Average[i]	–		0.15 µg/m^3		
Sulfur Dioxide (SO2)[k]	24-Hour	0.04 ppm (105 µg/m^3)	Ultraviolet Fluorescence	0.14 ppm (for certain areas)	–	Ultraviolet Fluorescence; Spectro-photometry (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)[k]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[k]	–	
Visibility-Reducing Particles[l]	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[j]	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 (PM_{10}, $PM_{2.5}$, 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 PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ 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 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM_{10} standards (primary and secondary) of 150 $\mu g/m^3$ 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 SO_2 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 SO_2 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 CARB 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 $\mu g/m^3$ 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 CARB 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/m^3 = milligrams per cubic meter
$\mu g/m^3$ = micrograms per cubic meter
Source: California Air Resources Board, 2016. https://www.arb.ca.gov/research/aaqs/aaqs2.pdf

1.3.2 Greenhouse Gases and Global Climate Change

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 ± 0.2° Celsius (°C) or 1.1 ± 0.4° Fahrenheit (°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, and lead to an increase in the greenhouse effect.[9]

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, methane, 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.

[9] 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.

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 global warming potential 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 lifetime"). The GWP of each gas is measured relative to carbon dioxide, 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 CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e). Table 3 shows the GWP for each type of GHG. For example, sulfur hexafluoride is 22,800 times more potent at contributing to global warming than carbon dioxide.

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_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

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

The following discussion summarizes the characteristics of the six GHGs and black carbon.

1.3.2.1 Carbon Dioxide

In the atmosphere, carbon generally exists in its oxidized form, as CO_2. Natural sources of CO_2 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 CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. Natural sources release approximately 150 billion tons of CO_2 each year, far outweighing the 7 billion tons of man-made emissions of CO_2 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 CO_2, and consequently, the gas is building up in the atmosphere.

In 2016, CO_2 emissions accounted for approximately 83 percent of California's overall GHG emissions.[10] The transportation sector accounted for California's largest portion of CO_2 emissions,

[10] California Air Resources Board. 2018. *California Greenhouse Gas Emission Inventory – 2018 Edition*. July 11. Website: www.arb.ca.gov/cc/inventory/data/data.htm (accessed August 2019).

approximately 39 percent, with gasoline consumption making up the greatest portion of these emissions. Industrial sources were California's second largest category of GHG emissions.

1.3.2.2 Methane

Methane 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 CH_4 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 CH_4 in California. Methane accounted for approximately 9.0 percent of GHG emissions in California in 2016.[11]

Total annual emissions of methane in California are approximately 38.9 million tons, with manmade emissions accounting for the majority. As with CO_2, the major removal process of atmospheric methane—a chemical breakdown in the atmosphere—cannot keep pace with source emissions, and methane concentrations in the atmosphere are increasing.

1.3.2.3 Nitrous Oxide

Nitrous oxide 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. Nitrous oxide is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion emit N_2O, 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 N_2O emissions in California. Nitrous oxide emissions accounted for approximately 3 percent of GHG emissions in California in 2016.[12]

1.3.2.4 Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride

HFCs are primarily used as substitutes for ozone-depleting substances regulated under the Montreal Protocol.[13] PFCs and SF_6 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 SF_6 accounted for about 6 percent of man-made GHG emissions (CO_2e) in California in 2016.[14]

1.3.2.5 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

11 Ibid.
12 Ibid.
13 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.
14 Ibid.

$PM_{2.5}$ and is the most effective form of PM, by mass, at absorbing solar energy. Per unit of mass in the atmosphere, black carbon can absorb a million times more energy than CO_2.[15] 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), particularly from diesel fueled vehicles. The other major source of black carbon 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.

1.3.3 Air Quality Regulatory Setting

The USEPA and the CARB regulate direct emissions from motor vehicles. The SJVAPCD is the regional agency primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as monitoring ambient pollutant concentrations.

1.3.3.1 Federal Clean Air Act

The 1970 Federal Clean Air Act authorized the establishment of national health-based air quality standards and also set deadlines for their attainment. The Federal Clean Air Act Amendments of 1990 changed deadlines for attaining national standards as well as the remedial actions required of areas of the nation that exceed the standards. Under the Clean Air Act, State and local agencies in areas that exceed the national standards are required to develop State Implementation Plans to demonstrate how they will achieve the national standards by specified dates.

1.3.3.2 California Clean Air Act

In 1988, the California Clean Air Act (CCAA) required that all air districts in the State endeavor to achieve and maintain California ambient air quality standards (CAAQS) for carbon monoxide, ozone, sulfur dioxide and nitrogen dioxide by the earliest practical date. The California Clean Air Act provides districts with authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each nonattainment district is required to adopt a plan to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. A Clean Air Plan shows how a district would reduce emissions to achieve air quality standards. Generally, the State standards for these pollutants are more stringent than the national standards.

[15] U.S. Environmental Protection Agency, 2015. *Black Carbon*. September Website: www3.epa.gov/blackcarbon/basic.html, accessed August 2019.

1.3.3.3 California Air Resources Board Handbook

The CARB has developed an Air Quality and Land Use Handbook[16] which is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. According to the CARB Handbook, recent air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California. The CARB Handbook recommends that county and city planning agencies strongly consider proximity to these sources when finding new locations for "sensitive" land uses such as homes, medical facilities, daycare centers, schools and playgrounds.

Land use designations with air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners and large gasoline service stations. Key recommendations in the CARB Handbook include taking steps to avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day or rural roads with 50,000 vehicles/day;
- Within 1,000 feet of a major service and maintenance rail yard;
- Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries;
- Within 300 feet of any dry cleaning operation (for operations with two or more machines, provide 500 feet); and
- Within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

The CARB Handbook specifically states that its recommendations are advisory and acknowledges land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

The recommendations are generalized and do not consider site specific meteorology, freeway truck percentages or other factors that influence risk for a particular project site. The purpose of the land use compatibility analysis is to further examine the project site for actual health risk associated with the location of new housing on the project site.

1.3.3.4 San Joaquin Valley Air Pollution Control District

The SJVAPCD has specific air quality-related planning documents, rules, and regulations. This section summarizes the local planning documents and regulations that may be applicable to the project as administered by the SJVAPCD with CARB oversight.

[16] California Air Resources Board, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April.

Rule 2280—Portable Equipment Registration. Portable equipment used at project sites for less than six consecutive months must be registered with the SJVAPCD. The SJVAPCD will issue the registrations 30 days after receipt of the application.[17]

Rule 2303—Mobile Source Emission Reduction Credits. A project may qualify for SJVAPCD vehicle emission reduction credits if it meets the specific requirements of Rule 2303 for any of the following categories[18]:

- Low-Emission Transit Buses
- Zero-Emission Vehicles
- Retrofit Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles
- Retrofit Heavy-Duty Vehicles

Rule 4201 and Rule 4204—Particulate Matter Concentration and Emission Rates. Rule 4201 and Rule 4202 apply to operations that emit or may emit dust, fumes, or total suspended particulate matter.[19]

Rule 8011—General Requirements: Fugitive Dust Emission Sources. Fugitive dust regulations are applicable to outdoor fugitive dust sources. Operations, including construction operations, must control fugitive dust emissions in accordance with SJVAPCD Regulation VIII. According to Rule 8011, the SJVAPCD requires the implementation of control measures for fugitive dust emission sources. For projects in which construction-related activities would disturb equal to or greater than 1 acre of surface area, the SJVAPCD recommends that demonstration of receipt of an SJVAPCD-approved Dust Control Plan or Construction Notification Form, before issuance of the first grading permit, be made a condition of approval.[20]

Rule 9510—Indirect Source Review. In December 2005, the SJVAPCD adopted the Indirect Source Rule (Rule 9510) to meet its emission reduction commitments in the PM_{10} and O_3 Attainment Plans. Indirect Source Review regulation applies to any development project that includes at least 2,000 square feet of commercial space. This Rule requires project applicants to reduce operation

[17] San Joaquin Valley Air Pollution Control District, 1996. Portable Equipment Registration. Amended May 16. Website: https://www.valleyair.org/rules/currntrules/r2280.pdf, accessed August 2019.

[18] San Joaquin Valley Air Pollution Control District, 1994. Mobile Source Emission Reduction Credits. Adopted May 19. Website: http://www.valleyair.org/rules/currntrules/r2303.pdf, accessed August 2019.

[19] San Joaquin Valley Air Pollution Control District, 1996. Rule 4202. Particulate Matter - Emission Rate. Amended December 17. Website: https://www.valleyair.org/rules/currntrules/r4202.pdf, accessed August 2019.

[20] San Joaquin Valley Air Pollution Control District, 2004. Rule 8011. Indirect Source Review. Amended August 19. Website: https://www.valleyair.org/rules/currntrules/r8011.pdf, accessed August 2019.

emissions of NO_x by 33.3 percent of the project's operational baseline and 50 percent of the project's operational PM_{10} emissions.[21]

Guidance for Assessing and Mitigating Air Quality Impacts. The SJVAPCD prepared the GAMAQI to assist lead agencies and project applicants in evaluating the potential air quality impacts of projects in the SJVAB. The GAMAQI provides SJVAPCD-recommended procedures for evaluating potential air quality impacts during the CEQA environmental review process. The GAMAQI provides guidance on evaluating short-term (construction) and long-term (operational) air emissions. The most recent version of the GAMAQI, adopted March 19, 2015, was used in this evaluation. It contains guidance on the following:

- Criteria and thresholds for determining whether a project may have a significant adverse air quality impact;
- Specific procedures and modeling protocols for quantifying and analyzing air quality impacts;
- Methods to mitigate air quality impacts; and
- Information for use in air quality assessments and environmental documents, including air quality, regulatory setting, climate, and topography data.

Regional Air Quality Management Plan. The SJVAPCD is responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the SJVAB. The main purpose of an AQMP is to bring the area into compliance with federal and State air quality standards. The SJVAPCD does not have one single AQMP for criteria pollutants, rather the District address each criteria pollutant with its own Plan. The SJVAPCD has the following AQMPs:

- 2016 Moderate Area Plan for the 2012 $PM_{2.5}$ standard
- 2016 Plan for the 2008 8-Hour Ozone Standard
- 2013 Plan for the Revoked 1-Hour Ozone Standard
- 2007 PM_{10} Maintenance Plan
- 2004 Revision to the California State Implementation Plan for Carbon Monoxide

The SJVAPCD's AQMPs incorporate the latest scientific and technological information and planning assumptions, including updated emission inventory methodologies for various source categories. The SJVAPCD's AQMPs included the integrated strategies and measures needed to meet the national ambient air quality standards (NAAQS), implementation of new technology measures, and demonstrations of attainment of the 1-hour and 8-hour ozone NAAQS as well as the latest 24-hour and annual $PM_{2.5}$ standards.

[21] San Joaquin Valley Air Pollution Control District, 2015. Rule 9510. Indirect Source Review. Adopted December 21, 2017, Effective March 21. Website: https://www.valleyair.org/rules/currntrules/r9510.pdf, accessed August 2019.

1.3.3.5 City of Merced General Plan

The City of Merced addresses air quality in the Sustainable Development Element of the City's General Plan.[22] The Sustainable Development Element includes goals, policies, and implementing actions that work toward clean air with minimal toxic substances and odor, clean air with minimal particulate content, effective and efficient transportation infrastructure, and coordinated and cooperative intergovernmental air quality programs. The following policies and implementing actions from the Sustainable Development Element would be applicable to the proposed project.

- **Policy SD-1.1:** Accurately determine and fairly mitigate the local and regional air quality impacts of projects proposed in the City of Merced.
- **Policy SD-1.3:** Integrate land use planning, transportation planning, and air quality planning for the most efficient use of public resources and for a healthier environment.
- **Implementing Action 1.1.b:** Ensure that significant air quality impacts identified during CEQA review are consistently and fairly mitigated.
- **Implementing Action 1.1.c:** All air quality mitigation measures should be feasible, implementable, and cost effective.
- **Implementing Action 1.1.e:** Reduce the air quality impacts of development projects that may be insignificant by themselves, but cumulatively are significant.
- **Implementing Action 1.6.a:** Work with the SJVAPCD to reduce to the maximum extent feasible particulate emissions from construction, grading, excavation, and demolition.
- **Implementing Action 1.6.c:** Require all access roads, driveways, and parking areas in new commercial and industrial development to be paved or constructed of other materials that minimize particulate emissions.

1.3.4 Global Climate Change Regulation

This section describes regulations related to Global Climate Change at the federal, State, and local level.

1.3.4.1 Federal Regulations

The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled that the USEPA has the authority to regulate CO_2 emissions under the federal Clean Air Act. While there currently are no adopted federal regulations for the control or reduction of GHG emissions, the USEPA commenced several actions in 2009 to implement a regulatory approach to global climate change.

[22] Merced, City of, 2012. *Merced Vision 2030 General Plan*. June 20. Website: https://www.cityofmerced.org/civicax/filebank/blobdload.aspx?BlobID=11481 (accessed August 2019).

This includes the 2009 USEPA final rule for mandatory reporting of GHGs from large GHG emission sources in the United States. Additionally, the USEPA Administrator signed an endangerment finding action in 2009 under the Clean Air Act, finding that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, SF_6) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to global climate change, leading to national GHG emission standards.

1.3.4.2 State Regulations

The CARB is the lead agency for implementing climate change regulations in the State. Since its formation, the CARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problems. Key efforts by the State are described below.

Assembly Bill 1493 (2002). In a response to the transportation sector's significant contribution to California's CO_2 emissions, Assembly Bill 1493 (AB 1493) was enacted on July 22, 2002. AB 1493 requires the CARB to set GHG emission standards for passenger vehicles and light duty trucks (and other vehicles whose primary use is noncommercial personal transportation in the State) manufactured in 2009 and all subsequent model years. These standards (starting in model years 2009 to 2016) were approved by the CARB in 2004, but the needed waiver of California Clean Air Act (CAA) Preemption was not granted by the USEPA until June 30, 2009. The CARB responded by amending its original regulation, now referred to as Low Emission Vehicle III, to take effect for model years starting in 2017 to 2025.

Executive Order S-3-05 (2005). Governor Arnold Schwarzenegger signed Executive Order S-3-05 on June 1, 2005, which proclaimed that California is vulnerable to the impacts of climate change. To combat those concerns, the executive order established California's GHG emissions reduction targets, which established the following goals:

- GHG emissions should be reduced to 2000 levels by 2010;
- GHG emissions should be reduced to 1990 levels by 2020; and
- GHG emissions should be reduced to 80 percent below 1990 levels by 2050.

The Secretary of the California Environmental Protection Agency (CalEPA) is required to coordinate efforts of various State agencies in order to collectively and efficiently reduce GHGs. A biannual progress report must be submitted to the Governor and State Legislature disclosing the progress made toward greenhouse emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California's water supply, public health, agriculture, the coastline, and forestry, and report possible mitigation and adaptation plans to address these impacts.

The Secretary of CalEPA leads this Climate Action Team (CAT) made up of representatives from State agencies as well as numerous other boards and departments. The CAT members work to coordinate Statewide efforts to implement global warming emission reduction programs and the State's Climate Adaptation Strategy. The CAT is also responsible for reporting on the progress made toward meeting the Statewide GHG targets that were established in the executive order and further defined under AB 32, the "Global Warming Solutions Act of 2006." The first CAT Report to the Governor and

the Legislature was released in March 2006, which it laid out 46 specific emission reduction strategies for reducing GHG emissions and reaching the targets established in the Executive Order. The CAT Report to the Governor and Legislature; the most recent was released in December 2010.

Assembly Bill 32 (2006), California Global Warming Solutions Act. California's major initiative for reducing GHG emissions is AB 32, passed by the State legislature on August 31, 2006. This effort aims at reducing GHG emissions to 1990 levels by 2020. The CARB has established the level of GHG emissions in 1990 at 427 million metric tons CO_2e. The emissions target of 427 million metric tons requires the reduction of 169 million metric tons from the State's projected business-as-usual 2020 emissions of 596 million metric tons. AB 32 requires the CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The Scoping Plan was approved by the CARB on December 11, 2008, and contains the main strategies California will implement to achieve the reduction of approximately 169 million metric tons of CO_2e, or approximately 30 percent, from the State's projected 2020 emission level of 596 million metric tons of CO_2e under a business-as-usual scenario (this is a reduction of 42 million metric tons CO_2e, or almost 10 percent from 2002-2004 average emissions). The Scoping Plan also includes CARB-recommended GHG reductions for each emissions sector of the State's GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- Improved emissions standards for light-duty vehicles (estimated reductions of 31.7 million metric tons CO_2e);
- The Low-Carbon Fuel Standard (15.0 million metric tons CO_2e);
- Energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 million metric tons CO_2e); and
- A renewable portfolio standard for electricity production (21.3 million metric tons CO_2e).

The Scoping Plan identifies 18 emission reduction measures that address cap-and-trade programs, vehicle gas standards, energy efficiency, low carbon fuel standards, renewable energy, regional transportation-related GHG targets, vehicle efficiency measures, goods movement, solar roof programs, industrial emissions, high speed rail, green building strategies, recycling, sustainable forests, water, and air. The measures would result in a total reduction of 174 million metric tons CO_2e by 2020.

On August 24, 2011, the CARB unanimously approved both the new supplemental assessment and reapproved its Scoping Plan, which provides the overall roadmap and rule measures to carry out AB 32. The CARB also approved a more robust CEQA equivalent document supporting the supplemental analysis of the cap-and-trade program. The cap-and-trade took effect on January 1, 2012, with an enforceable compliance obligation that began January 1, 2013.

CARB has not yet determined what amount of GHG reductions it recommends from local government operations and local land use decisions; however, the Scoping Plan states that land use planning and urban growth decisions will play an important role in the State's GHG reductions

because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions (meanwhile, CARB is also developing an additional protocol for community emissions). CARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. The Scoping Plan states that the ultimate GHG reduction assignment to local government operations is to be determined. With regard to land use planning, the Scoping Plan expects an approximately 5.0 million metric tons CO_2e reduction due to implementation of Senate Bill 375 (SB 375).

In addition to reducing GHG emissions to 1990 levels by 2020, AB 32 directed the CARB and the CAT to identify a list of "discrete early action GHG reduction measures" that could be adopted and made enforceable by January 1, 2010. On January 18, 2007, Governor Schwarzenegger signed Executive Order S-1-07, further solidifying California's dedication to reducing GHGs by setting a new Low Carbon Fuel Standard. The Executive Order sets a target to reduce the carbon intensity of California transportation fuels by at least 10 percent by 2020 and directs the CARB to consider the Low Carbon Fuel Standard as a discrete early action measure. In 2011, U.S. District Court Judge Lawrence O'Neil issued an injunction preventing implementation of the Low Carbon Fuel Standard, ruling that it is unconstitutional. In 2012, the Ninth Circuit Court of Appeal stayed the District Court's injunction, allowing implementation of the Low Carbon Fuel Standard. The Ninth Circuit decided to uphold the Low Carbon Fuel Standard.

In June 2007, the CARB approved a list of 37 early action measures, including three discrete early action measures (Low Carbon Fuel Standard, Restrictions on GWP Refrigerants, and Landfill CH_4 Capture).[23] Discrete early action measures are measures that were required to be adopted as regulations and made effective no later than January 1, 2010, the date established by Health and Safety Code Section 38560.5. The CARB adopted additional early action measures in October 2007 that tripled the number of discrete early action measures. These measures relate to truck efficiency, port electrification, reduction of PFCs from the semiconductor industry, reduction of propellants in consumer products, proper tire inflation, and SF_6 reductions from the non-electricity sector. The combination of early action measures is estimated to reduce Statewide GHG emissions by nearly 16 million metric tons.[24]

The CARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines CARB climate change priorities until 2020, and also sets the groundwork to reach long-term goals set forth in Executive Orders S-3-05 and B-16-2012. The Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals as defined in the initial Scoping Plan. It also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land

[23] California Air Resources Board. 2007. *Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration*. October.

[24] California Air Resources Board. 2007. "ARB approves tripling of early action measures required under AB 32" News Release 07-46. October 25.

use. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan,[25] to reflect the 2030 target set by Executive Order B-30-15 and codified by Senate Bill 32 (SB 32).

Senate Bill 97 (2007). Senate Bill 97 (SB 97), signed by the Governor in August 2007 (Chapter 185, Statutes of 2007; Public Resources Code, Sections 21083.05 and 21097), acknowledges climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the OPR to prepare, develop, and transmit to the California Resources Agency guidelines for mitigating GHG emissions or the effects of GHG emissions, as required by CEQA.

The California Natural Resources Agency adopted the amendments to the CEQA Guidelines in January 2010, which went into effect in March 2010. The amendments do not identify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. The amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but preserve the discretion granted by CEQA to lead agencies in making their own determinations based on substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs when they perform individual project analyses.

Senate Bill 375 (2008). Signed into law on October 1, 2008, SB 375 supplements GHG reductions from new vehicle technology and fuel standards with reductions from more efficient land use patterns and improved transportation. Under the law, the CARB approved GHG reduction targets in February 2011 for California's 18 federally designated regional planning bodies, known as Metropolitan Planning Organizations (MPOs). The CARB may update the targets every 4 years and must update them every 8 years. MPOs in turn must demonstrate how their plans, policies and transportation investments meet the targets set by the CARB through Sustainable Community Strategies (SCS). The SCS are included with the Regional Transportation Plan (RTP), a report required by State law. However, if an MPO finds that their SCS will not meet the GHG reduction target, they may prepare an Alternative Planning Strategy (APS). The APS identifies the impediments to achieving the targets.

Executive Order B-30-15 (2015). Governor Jerry Brown signed Executive Order B-30-15 on April 29, 2015, which added the immediate target of:

- GHG emissions should be reduced to 40 percent below 1990 levels by 2030.

All State agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. CARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target, and therefore, is moving forward with the update process. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue reducing emissions.

[25] California Air Resources Board. 2017. *California's 2017 Climate Change Scoping Plan*. November.

Senate Bill 350 (2015) Clean Energy and Pollution Reduction Act. Senate Bill 350 (SB 350), signed by Governor Jerry Brown on October 7, 2015, updates and enhances AB 32 by introducing the following set of objectives in clean energy, clean air, and pollution reduction for 2030:

- Raise California's renewable portfolio standard from 33 percent to 50 percent; and
- Increasing energy efficiency in buildings by 50 percent by the year 2030.

The 50 percent renewable energy standard will be implemented by the California Public Utilities Commission for the private utilities and by the California Energy Commission for municipal utilities. Each utility must submit a procurement plan showing it will purchase clean energy to displace other non-renewable resources. The 50 percent increase in energy efficiency in buildings must be achieved through the use of existing energy efficiency retrofit funding and regulatory tools already available to state energy agencies under existing law. The addition made by this legislation requires state energy agencies to plan for, and implement those programs in a manner that achieves the energy efficiency target.

Senate Bill 32, California Global Warming Solutions Act of 2016, and Assembly Bill 197. In summer 2016 the Legislature passed, and the Governor signed, SB 32, and Assembly Bill 197 (AB 197). SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown's April 2015 Executive Order B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an Intergovernmental Panel on Climate Change (IPCC) analysis of the emissions trajectory that would stabilize atmospheric GHG concentrations at 450 parts per million CO_2e and reduce the likelihood of catastrophic impacts from climate change.

The companion bill to SB 32, AB 197, provides additional direction to CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 meant to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

Senate Bill 100. On September 10, 2018, Governor Brown signed SB 100, which raises California's RPS requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Executive Order B-55-18. Executive Order B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." Executive Order B-55-18 directs CARB to work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that,

by no later than 2045, the remaining emissions be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

1.3.4.3 San Joaquin Valley Air Pollution Control District

In August 2008, the SJVAPCD adopted the Climate Change Action Plan (CCAP).[26] The CCAP directed the SJVAPCD to develop guidance to assist lead agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project specific GHG emissions on global climate change.

In December 2009, the SJVAPCD adopted the guidance: Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA[27] and the policy: District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency.[28] The guidance and policy rely on the use of performance based standards, otherwise known as Best Performance Standards (BPS),[29] to assess significance of project-specific GHG emissions on global climate change during the environmental review process, as required by CEQA. Projects implementing BPS in accordance with SJVAPCD's guidance would be determined to have a less than significant individual and cumulative impact on GHG emissions and would not require project specific quantification of GHG emissions.

1.3.4.4 City of Merced

The City of Merced's Climate Action Plan (CAP)[30], adopted October 2012, is a community-based policy document that establishes a goal to reduce GHG emissions achieved through implementation of a variety of actions, that when implemented, will help to achieve broadly-supported community values including: 1) protecting water and air resources; 2) reducing the waste-stream to the landfill; 3) improving energy-efficiency; 4) enhancing choice in mobility; and 5) creating healthy and livable communities, while at the same time reducing greenhouse gas emissions. The GHG reduction opportunities come from a wide variety of sources in the community, including transportation, buildings, and water conservation.

In 2013, the City of Merced launched an effort, building upon the CAP, to create a suite of tools to identify and monitor near-term community GHG emission reduction efforts, adoption of new development-related codes, and to create the Urban Design Manual (UDM) that demonstrates City development policies and codes in order to develop the Programmatic Climate Action Plan (PCAP).[31]

As part of the CAP, the City adopted a community-wide GHG reduction target of 1990 levels by 2020. This target is equivalent to a 15 percent reduction below the baseline year of 2008 by 2020,

[26] San Joaquin Valley Air Pollution Control District, 2008. Climate Change Action Plan. November.
[27] San Joaquin Valley Air Pollution Control District, 2009. Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. December 17.
[28] San Joaquin Valley Air Pollution Control District, 2009. Addressing GHG Emission Impacts for Stationary Source Projects under CEQA When Serving as the Lead Agency. December 17.
[29] San Joaquin Valley Air Pollution Control District, 2009. Final Staff Report Appendix J: GHG Emission Reduction Measures – Development Projects. December 17.
[30] Merced, City of, 2012. *Merced Climate Action Plan*. October 1.
[31] Merced, City of, 2015. *City of Merced Programmatic Climate Action Plan Administrative Draft*. July.

consistent with the Statewide target established by AB 32. A key outcome of the PCAP is to provide a group of measures that are capable of achieving the target, consistent with the standards for a qualified GHG reduction strategy identified in State CEQA Guidelines Section 15183.5(b).

However, the CAP does not provide a target beyond 2020. Executive Order S-3-05 set a 2050 reduction goal of 80 percent below 1990 levels for the State. The trajectory toward the 2050 target is equivalent to a 2030 target of approximately 38 percent below baseline levels. The provisional 2030 target, a 38 percent reduction below baseline 2008 levels, is provided in the PCAP to illustrate the commitment that would be needed to be on a trajectory to achieve the 2050 reduction target identified in EO S-3-05. To achieve a reduction of approximately 38 percent below baseline 2008 levels, the City would need to increase reductions post-2020. The City would need to achieve an additional reduction of 300,790 metric tons of CO_2e beyond State and existing local actions by 2030 to achieve a reduction of approximately 38 percent below baseline levels to maintain a trajectory toward California's long-term 2050 GHG reduction goals.

In addition, the PCAP includes a performance-based development approach that includes the measures in the CAP that apply to new development projects. The Residential and Nonresidential Project Options Checklists in Appendix A of the PCAP summarize the criteria for a project to claim consistency with the CAP allow CEQA streamlining for purposes of analyzing GHG emissions. Projects that demonstrate consistency with the CAP by meeting the criteria on these checklists can rely on the City's analysis of GHG emissions for purposes of CEQA. Where certain CAP performance measures also have a visual component, the City provides further guidance in the UDM. The Project Options Checklists and the UDM use a performance-based approach to identify measures and performance requirements for new projects seeking consistency with the CAP. If new projects do not comply with the CAP measures or the UDM, they may elect to conduct a quantitative analysis of GHG emissions.

1.4 ENVIRONMENTAL SETTING

1.4.1 Existing Climate and Air Quality

Air quality is a function of both local climate and local sources of air pollution. The amount of a given pollutant in the atmosphere is determined by the amount of the pollutant released and the atmosphere's ability to transport and dilute the pollutant. The major determinants of transport and dilution are wind, atmospheric stability, terrain, and for photochemical pollutants, sunshine.

The project site is located within the SJVAB and is under the jurisdiction of the SJVAPCD. A region's topographic features have a direct correlation with air pollution flow and therefore are used to determine the boundary of air basins. The SJVAB is comprised of approximately 25,000 square miles and covers of eight counties including Fresno, Kings, Madera, Merced, San Joaquin, Stanislaus and Tulare, and the western portion of Kern. The SJVAB is defined by the Sierra Nevada mountains in the east (8,000 to 14,000 feet in elevation), the Coast Ranges in the west (averaging 3,000 feet in elevation), and the Tehachapi mountains in the south (6,000 to 8,000 feet in elevation). The valley is basically flat with a slight downward gradient to the northwest. The valley opens to the sea at the Carquinez Straits where the San Joaquin-Sacramento Delta empties into San Francisco Bay. An aerial

view of the SJVAB would simulate a "bowl" opening only to the north. These topographic features restrict air movement through and out of the basin.

Although marine air generally flows into the basin from the San Joaquin River Delta, the Coast Range hinders wind access into the SJVAB from the west, the Tehachapi Mountains prevent southerly passage of air flow, and the high Sierra Nevada range is a significant barrier to the east. These topographic features result in weak air flow which becomes blocked vertically by high barometric pressure over the SJVAB. As a result, the SJVAB is highly susceptible to pollutant accumulation over time. Most of the surrounding mountains are above the normal height of summer inversion layers (1,500 to 3,000 feet).

Local climatological effects, including wind speed and direction, temperature, inversion layers, precipitation and fog, can exacerbate the air quality in the SJVAB. Wind speed and direction play an important role in dispersion and transport of air pollutants. Wind at the surface and aloft can disperse pollution by mixing vertically and by transporting it to other locations. For example, in the summer, wind usually originates at the north end of the SJVAB and flows in a south-southeasterly direction through the SJVAB, through Tehachapi pass, into the Southeast Desert Air Basin. In the winter, wind direction is reversed and flows in a north-northwesterly direction. In addition to the seasonal wind flow, a sea breeze flows into SJVAB during the day and a land breeze flowing out of the SJVAB at night. The diversified wind flow enhances the pollutant transport capability within SJVAB.

The annual average temperature varies throughout the SJVAB, ranging from the low 40s to high 90s, measured in degrees Fahrenheit (°F). With a more pronounced valley influence, inland areas show more variability in annual minimum and maximum temperatures than coastal areas. The climatological station closest to the site is the Merced (045532) AP Station. The monthly average maximum temperature recorded at this station from June 1899 to June 2016 ranged from 54.9°F in January to 97.1°F in July, with an annual average maximum of 76.3°F. The monthly average minimum temperature recorded at this station ranged from 35.6°F in December to 60.9°F in July, with an annual average minimum of 47.1°F.[32] These levels are still representative of the project area. January and December are typically the coldest months and July is typically the warmest month in this area of the SJVAB.

The majority of annual rainfall in the SJVAB occurs between November and March. Summer rainfall is minimal and is generally limited to scattered thundershowers in desert regions and slightly heavier showers near the lower portion of the Basin and along the Sierra Nevada mountains to the east. Average monthly rainfall during that period varied from 0.01 inches in July to 2.46 inches in February, with an annual total of 6.17 inches.[33] Patterns in monthly and yearly rainfall totals are predictable due to the recognizable differences in seasons within the valley.

The vertical dispersion of air pollutants in the SJVAB is limited by the presence of persistent temperature inversions. Because of cooling of the atmosphere, air temperature usually decreases

[32] Western Regional Climate Center (WRCC). Website: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5532, accessed August 2019.

[33] Ibid.

with altitude. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. Inversions can exist at the surface, or at any height above the ground. The height of the base of the inversion is known as the "mixing height." This is the level within which pollutants can mix vertically. Air above and below the inversion base does not mix because of the differences in air density. Semi-permanent systems of high barometric pressure fronts frequently establish themselves over the SJVAB, preventing low pressure systems that might otherwise bring rain and winds that clean the air.

Inversion layers are significant in determining ozone formation, and CO and PM_{10} concentrations. Ozone and its precursors will mix and react to produce higher ozone concentrations under an inversion. The inversion will also simultaneously trap and hold directly emitted pollutants such as carbon monoxide. PM_{10} is both directly emitted and created in the atmosphere as a chemical reaction. Concentration levels of pollutants are directly related to inversion layers due to the limitation of mixing space.

Surface or radiation inversions are formed when the ground surface becomes cooler than the air above it during the night. The earth's surface goes through a radiative process on clear nights, where heat energy is transferred from the ground to a cooler night sky. As the earth's surface cools during the evening hours, the air directly above it also cools, while air higher up remains relatively warm. The inversion is destroyed when heat from the sun warms the ground, which in turn heats the lower layers of air; this heating stimulates the ground level air to float up through the inversion layer.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are lowest. Periods of low inversions and low wind speeds are conditions favorable to high concentrations of CO and PM_{10}. In the winter, the greatest pollution problems are CO and NO_x because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and oxides of nitrogen to form photochemical smog.

1.4.2 Attainment Status

The CARB is required to designate areas of the State as attainment, nonattainment or unclassified for all State standards. An *attainment* designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A *nonattainment* designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An *unclassified* designation signifies that data does not support either an attainment or nonattainment status. The California Clean Air Act divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The USEPA also designates areas as attainment, nonattainment, or classified. The air quality data are also used to monitor progress in attaining air quality standards. Table 4 provides a summary of the attainment status for the SJVAB with respect to national and State ambient air quality standards.

Table 4: Attainment Status of Criteria Pollutants in the San Joaquin Valley Air Basin

Pollutant	State	Federal
O_3 1-hour	Nonattainment/Severe	No Federal Standard[1]
O_3 8-hour	Nonattainment	Extreme Nonattainment[2]
PM_{10}	Nonattainment	Attainment[3]
$PM_{2.5}$	Nonattainment	Nonattainment[4]
CO	Attainment/Unclassified	Attainment/Unclassified
NO_2	Attainment	Attainment/Unclassified
SO_2	Attainment	Attainment/Unclassified
Lead	Attainment	No Designation/Classification
All others	Attainment/Unclassified	N/A

Source: SJVAPCD, Ambient Air Quality Standards and Valley Attainment Status.
Website: http://www.valleyair.org/aqinfo/attainment.htm, accessed August 2019.

[1] Effective June 15, 2005, the U.S. Environmental Protection Agency (USEPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. USEPA had previously classified the SJVAB as extreme nonattainment for this standard. USEPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

[2] Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, USEPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).

[3] On September 25, 2008, USEPA re-designated the San Joaquin Valley to attainment for the PM_{10} National Ambient Air Quality Standard (NAAQS) and approved the PM_{10} Maintenance Plan.

[4] The Valley is designated nonattainment for the 1997 $PM_{2.5}$ NAAQS. USEPA designated the Valley as nonattainment for the 2006 $PM_{2.5}$ NAAQS on November 13, 2009 (effective December 14, 2009).

CO = carbon monoxide
N/A = not applicable
NO_2 = nitrogen dioxide
O_3 = ozone
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SO_2 = sulfur dioxide

1.4.3 Air Quality Monitoring Results

Air quality monitoring stations are located throughout the nation and maintained by the local air pollution control district and state air quality regulating agencies. Ambient air data collected at permanent monitoring stations are used by the USEPA to identify regions as attainment or nonattainment depending on whether the regions met the requirements stated in the primary NAAQS. Attainment areas are required to maintain their status through moderate, yet effective air quality maintenance plans. Nonattainment areas are imposed with additional restrictions as required by the USEPA. In addition, different classifications of attainment such as marginal, moderate, serious, severe, and extreme are used to classify each air basin in the state on a pollutant-by-pollutant basis. Different classifications have different mandated attainment dates and are used as guidelines to create air quality management strategies to improve air quality and comply with the NAAQS by the attainment date. A region is determined to be unclassified when the data collected from the air quality monitoring stations do not support a designation of attainment or nonattainment, due to lack of information, or a conclusion cannot be made with the available data.

The SJVAPCD, together with CARB, maintains ambient air quality monitoring stations in the SJVAB. The air quality monitoring station closest to the site is the Merced – 2334 M Street, which monitors criteria air pollutant data. The air quality trends from this station are used to represent the ambient air quality in the project area. Ambient air quality in the project area from 2016 to 2018 is shown in

Table 5. The pollutants monitored were $PM_{2.5}$ and PM_{10}. Air quality trends for O_3 and NO_2 are not available at the 2334 M Street monitoring station, and were obtained from the Merced – S. Coffee Avenue monitoring station. Air quality trends for CO and SO_2 are not monitored in Merced County; therefore, CO data were obtained from the Madera County – Road 29 ½, north of Avenue 8 monitoring station and SO_2 data were obtained from the Fresno – 3727 N. First Street monitoring station.

As indicated in the monitoring results, the State 1-hour O_3 standard was exceeded 2 times in 2016 and 4 times in 2018 and the State 8-hour O_3 standard was exceeded 29 times in 2016, 17 times in 2017, and 23 times in 2018. In addition, the federal 8-hour O_3 standard was exceeded 28 times in 2016, 16 times in 2017, and 21 times in 2018. The State PM_{10} standard was exceeded 6 times in 2016, 12 times in 2017, and 10 times in 2018. The federal PM_{10} standard was not exceeded during the 3-year period. The federal $PM_{2.5}$ standard was exceeded 2 times in 2016, 6 times in 2017, and 10 times in 2018. The CO, NO_2, and SO_2 standards were not exceeded in this area during the 3-year period.

1.4.4 Greenhouse Gas Emissions Inventory

An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, United States, California, and local GHG emission inventories.

1.4.4.1 Global Emissions

Worldwide emissions of GHGs in 2016 totaled approximately 26 billion metric tons of CO_2e.[34] Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change (UNFCCC).

1.4.4.2 United States Emissions

In 2015, the United States emitted about 6.6 billion metric tons of CO_2e or about 21 metric tons per year per person. The total 2015 CO_2e emissions represent a 3.5 percent increase since 1990 but a 10 percent decrease since 2005. Of the six major sectors nationwide – residential, commercial, agricultural, industry, transportation, and electricity generation – electricity generation accounts for the highest amount of GHG emissions (approximately 29 percent), with transportation second at 27 percent; these emissions are generated entirely from direct fossil fuel combustion.[35]

[34] United Nations Framework Convention on Climate Change (UNFCCC). 2016. GHG data from UNFCCC. Website: https://unfccc.int/process/transparency-and-reporting/greenhouse-gas-data/ghg-data-unfccc, accessed August 2019.

[35] U.S. Environmental Protection Agency. 2017. Inventory of U.S. Greenhouse Gas Emissions and Sinks. 1990-2015. Available online at: www.epa.gov/sites/production/files/2017-02/documents/2017_complete_report.pdf, accessed August 2019.

Table 5: Ambient Air Quality Monitored in the Project Vicinity

Pollutant	Standard	2016	2017	2018
Carbon Monoxide (CO)[1]				
Maximum 1-hr concentration (ppm)		5.1	3.1	1.9
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hr concentration (ppm)		2.3	1.2	1.2
Number of days exceeded:	State: ≥ 9.0 ppm	0	0	0
	Federal: ≥ 9.0 ppm	0	0	0
Ozone (O_3)[2]				
Maximum 1-hr concentration (ppm)		0.097	0.093	0.104
Number of days exceeded:	State: > 0.09 ppm	2	0	4
Maximum 8-hr concentration (ppm)		0.087	0.085	0.084
Number of days exceeded:	State: > 0.070 ppm	29	17	23
	Federal: > 0.070 ppm	28	16	21
Coarse Particulates (PM_{10})[3]				
Maximum 24-hr concentration (µg/m^3)		64.5	146.6	142.7
Number of days exceeded:	State: > 50 µg/m^3	6	12	10
	Federal: > 150 µg/m^3	0	0	0
Annual arithmetic average concentration (µg/m^3)		29.5	35.8	34.6
Exceeded for the year:	State: > 20 µg/m^3	Yes	Yes	Yes
Fine Particulates ($PM_{2.5}$)[3]				
Maximum 24-hr concentration (µg/m^3)		42.8	66.7	94.7
Number of days exceeded:	Federal: > 35 µg/m^3	2	6	10
Annual arithmetic average concentration (µg/m^3)		11.1	12.6	14.2
Exceeded for the year:	State: > 12 µg/m^3	No	Yes	Yes
	Federal: > 15 µg/m^3	No	No	No
Nitrogen Dioxide (NO_2)[2]				
Maximum 1-hr concentration (ppm)		0.035	0.038	0.046
Number of days exceeded:	State: > 0.18 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.006	0.007	0.007
Exceeded for the year:	State: > 0.030 ppm	No	No	No
	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO_2)[4]				
Maximum 24-hr concentration (ppm)		0.002	0.002	0.003
Number of days exceeded:	State: > 0.04 ppm	No	No	No
	Federal: > 0.14 ppm	0.001	0.001	0.001
Annual arithmetic average concentration (ppm)		No	No	No
Exceeded for the year:	Federal: > 0.030 ppm	No	No	No

Source: United States Environmental Protection Agency. 2016–2018 Air Quality Data. Website: https://www.epa.gov/outdoor-air-quality-data, accessed August 2019. California Air Resources Board (CARB). iADAM: Air Quality Data Statistics. Website: http://www.arb.ca.gov/adam/welcome.html, accessed August 2019.

[1] Data from the Madera County – Road 29 ½, north of Avenue 8 monitoring site.
[2] Data from the Merced – S. Coffee Avenue monitoring site.
[3] Data from the Merced – 2334 M Street monitoring site.
[4] Data from the Fresno – 3727 N. First Street monitoring site.

µg/m^3 = micrograms per cubic meter
hr = hour
ND = no data available
O_3 = ozone
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ppm = parts per million

1.4.4.3 State of California Emissions

According to CARB emission inventory estimates, the State emitted approximately 429.4 million metric tons of CO_2e (million metric tons CO_2e) emissions in 2016. This is a decrease of 12 million metric tons CO_2e since 2015.[36]

The CARB estimates that transportation was the source of approximately 39 percent of the State's GHG emissions in 2016, followed by industrial sources at 21 percent and electricity generation at 16 percent. The remaining sources of GHG emissions were residential and commercial activities at 9 percent, agriculture at 8 percent, high-GWP gases at 5 percent, and recycling and waste at 2 percent.[37]

1.4.4.4 City of Merced Greenhouse Gas Emissions

The City of Merced developed a baseline community-wide GHG emissions inventory for calendar year 2008. Table 6 below identifies the sources of emissions from community-wide activities. In 2008, the community emitted 599.090 metric tons of CO_2e, most of which was the result of transportation (39 percent) and nonresidential and residential energy use (39 percent and 19 percent respectively).[38]

Table 6: City of Merced 2008 Community Greenhouse Gas Emissions

Sector	Metric Tons of CO_2e	Percentage
Transportation	235,570	39%
Nonresidential Energy	216,680	36%
Residential Energy	115,110	19%
Solid Waste	18,750	3%
Water and Wastewater	6,670	1%
Off-road Equipment	6,310	1%
Total	**599,090**	**100**

Source: City of Merced (2015).

1.5 METHODOLOGY

1.5.1 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 version 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.

36 California Air Resources Board. 2018. op. cit.
37 Ibid.
38 Merced, City of, 2015. op. cit.

1.5.2 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. 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 SJVAPCD 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.

1.5.3 Greenhouse Gas Emissions

There are two aspects of the proposed project that would result in the emissions of GHGs: construction and operation. During construction of the project, GHG emissions would be emitted through the operation of construction equipment and from worker and vendor vehicles, each of which typically uses fossil-based fuels to operate. During operations, there would be many sources of GHG emissions, including area sources (i.e. landscaping), energy consumption, on-road transportation, solid waste, and water use. CalEEMod was used to estimate the project's GHG emissions.

1.6 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;
- 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;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) affecting a substantial number of people.

The SJVAPCD has established thresholds of significance for criteria pollutant emissions generated during construction and operation of projects as shown in Table 7.

Table 7: SJVAPCD Construction and Operation Thresholds of Significance (Tons per Year)

	CO	NO_x	ROG	SO_x	PM_{10}	$PM_{2.5}$
Construction Thresholds	100	10	10	27	15	15
Operation Thresholds	100	10	10	27	15	15

Source: SJVAPCD, 2015. Guidance for Assessing and Mitigating Air Quality Impacts. March 2018.

The emissions thresholds in the SJVAPCD GAMAQI 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 SJVAPCD has also established a threshold for both carcinogenic and non-carcinogenic TACs. A community is at risk, or impacts are considered significant, when individual risk exposure to carcinogenic TACs equals or exceeds 20 in one million. Carcinogenic risk is expressed as cancer cases per one million. A community is at risk, or impacts are considered significant, when individual risk exposure to non-carcinogenic TACs equals or exceeds a hazard index of 1 for both acute and chronic TACs. Non-carcinogenic hazard indices are expressed as a ratio of expected exposure levels to acceptable exposure levels.

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

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

- Conflict with an applicable plan, policy or regulation adopted for the purpose of reduction the emissions of greenhouse gases.

Section 15064.4 of the CEQA Guidelines states that: "A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." In performing that analysis, the lead agency has discretion to determine whether to use a model or methodology to quantify GHG emissions, or to rely on a qualitative analysis or performance-based standards. In making a determination as to the significance of potential impacts, the lead agency then considers the extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting, whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project, and the extent to which the project complies with regulations or requirements adopted to implement a Statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The SJVAPCD's *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA*[39] suggests project GHG emissions would considered less than significant if a project meets any of the following conditions: is exempt from CEQA requirements; complies with an approved GHG emission reduction plan or GHG mitigation program; or implements BPS. Additionally, projects that demonstrate that GHG emissions would be reduced or mitigated by at

[39] San Joaquin Valley Air Pollution Control District, 2009. *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA*. December 17. Available online at: www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf (accessed July 2019).

least 29 percent compared to BAU, including GHG emission reductions achieved since the 2002-2004 baseline period, would be considered less than significant.

The City of Merced PCAP is considered a qualified GHG reduction plan. Therefore, the proposed project's GHG emissions would not be considered a significant impact if the proposed project would be consistent with the PCAP.

1.7 IMPACTS AND MITIGATION MEASURES

Air pollutant emissions associated with the project would occur over the short term from construction activities (e.g., fugitive dust from site preparation and grading) and emissions from equipment exhaust. Long-term regional emissions associated with the project would be related to vehicular trips and from energy consumption (e.g., electricity usage) used by future tenants of the project. The analysis of project related air impacts are described in this section.

1.7.1 Air Quality Impacts

1.7.1.1 Consistency with Applicable Air Quality Plans

An air quality plan describes air pollution control strategies to be implemented by a city, county, or region classified as a non-attainment area. The main purpose of the air quality plan is to bring the area into compliance with the requirements of the federal and State air quality standards. To bring the San Joaquin Valley into attainment, the SJVAPCD has developed the 2013 Plan for the Revoked 1-Hour Ozone Standard, adopted on September 19, 2013.[40] The SJVAPCD also adopted the 2016 Plan for the 2008 8-Hour Ozone Standard in June 2016 to satisfy Clean Air Act requirements and ensure attainment of the 75 parts per billion (ppb) 8-hour ozone standard.[41]

To assure the SJVAB's continued attainment of the USEPA PM_{10} standard, the SJVAPCD adopted the 2007 PM_{10} Maintenance Plan in September 2007.[42] SJVAPCD Regulation VIII (Fugitive PM_{10} Prohibitions) is designed to reduce PM_{10} emissions generated by human activity. The SJVAPCD adopted the 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards in November 2018 to address the USEPA 1997 annual $PM_{2.5}$ standard of 15 µg/m^3 and 24-hour $PM_{2.5}$ standard of 65 µg/m^3, the 2006 24-hour $PM_{2.5}$ standard of 35 µg/m^3, and the 2012 annual $PM_{2.5}$ standard of 12 µg/m^3.[43]

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40 San Joaquin Valley Air Pollution Control District (SJVAPCD), 2013. *2013 Plan for the Revoked 1-Hour Ozone Standard*. September 19. Website: www.valleyair.org/Air_Quality_Plans/Ozone-OneHourPlan-2013.htm, accessed August 2019.

41 San Joaquin Valley Air Pollution Control District (SJVAPCD), 2016. *2016 Plan for the 2008 8-Hour Ozone Standard*. June 16. Website: www.valleyair.org/Air_Quality_Plans/Ozone-Plan-2016.htm, accessed August 2019.

42 San Joaquin Valley Air Pollution Control District, 2007. *2007 PM_{10} Maintenance Plan and Request for Redesignation*. Available online at: www.valleyair.org/Air_Quality_Plans/docs/Maintenance%20Plan10-25-07.pdf (accessed August 2019).

43 San Joaquin Valley Air Pollution Control District, 2018. *2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards*. November 15. Website: http://valleyair.org/pmplans/documents/2018/pm-plan-adopted/2018-Plan-for-the-1997-2006-and-2012-PM2.5-Standards.pdf (accessed August 2019).

CEQA requires that certain projects be analyzed for consistency with the applicable air quality plan. For a project to be consistent with SJVAPCD air quality plans, the pollutants emitted from a project should not exceed the SJVAPCD emission thresholds or cause a significant impact on air quality. In addition, emission reductions achieved through implementation of offset requirements are a major component of the SJVAPCD air quality plans. As discussed below, construction of the project would not result in the generation of criteria air pollutants that would exceed SJVAPCD thresholds of significance. Implementation of Mitigation Measure AIR-1 would further reduce construction dust impacts. Operational emissions associated with the project would not exceed SJVAPCD established significance thresholds for ROG, NO_x, CO, sulfur oxides (SO_x), PM_{10}, or $PM_{2.5}$ emissions. With implementation of Rule 9510, NO_x and PM_{10} emissions would further be reduced. Therefore, the project would not conflict with or obstruct implementation of SJVAPCD air quality plans.

1.7.1.2 Criteria Pollutant Analysis

The SJVAB is designated as non-attainment for O_3 and $PM_{2.5}$ for federal standards and non-attainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards. The SJVAPCD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SJVAPCD 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. The following analysis assesses the potential project-level construction- and operation-related air quality impacts.

Short-Term Construction Emissions. During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by grading, paving, building, 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 PM_{10}), and TACs such as diesel exhaust particulate matter.

Project construction activities would include grading, paving, and building activities. Construction-related effects on air quality from the proposed project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} 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.

Fugitive dust emissions are generally associated with land clearing and exposure of soils to the air and wind, as well as cut-and-fill grading operations. Dust generated during construction varies substantially on a project-by-project basis, depending on the level of activity, the specific operations, and weather conditions at the time of construction. The project would be required to comply with District Regulation VIII (Fugitive PM_{10} Prohibition) to control fugitive dust. SJVAPCD Rule 8011, General Requirements, and Rule 8021, Construction, Demolition Excavation, Extraction, and Other Earthmoving Activities, would also be applicable.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_x, volatile organic compounds (VOCs) and some soot particulate ($PM_{2.5}$ and PM_{10}) 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 idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the project using CalEEMod. Table 8 lists the tentative project construction schedule for the project based on a start date in September 2020. Other construction details are not yet known; therefore, default assumptions (e.g., construction duration and fleet activities) from CalEEMod were used. Based on CalEEMod default assumptions, this analysis assumes a 21-month construction period. Table 9 lists the potential construction equipment to be used during project construction under each phase of construction. Construction-related emissions are presented in Table 10. CalEEMod output sheets are included in Attachment A.

Table 8: Tentative Project Construction Schedule

Phase Number	Phase Name	Phase Start Date	Phase End Date	Number of Days/Week	Number of Days
1	Site Preparation	9/7/2020	9/18/2020	5	10
2	Grading	9/19/2020	11/6/2020	5	35
3	Building Construction	11/7/2020	4/8/2022	5	370
4	Paving	4/9/2022	5/6/2022	5	20
5	Architectural Coating	5/7/2022	6/3/2022	5	20

Source: Compiled by LSA using CalEEMod defaults (September 2019).

Table 9: Diesel Construction Equipment Utilized by Construction Phase

Construction Phase	Off-Road Equipment Type	Off-Road Equipment Unit Amount	Hours Used per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	3	8	247	0.40
	Tractors/Loaders/Backhoes	4	8	97	0.37
Grading	Excavators	2	8	158	0.38
	Graders	1	8	187	0.41
	Rubber Tired Dozers	1	8	247	0.40
	Scrapers	2	8	367	0.48
	Tractors/Loaders/Backhoes	2	8	97	0.37
Building Construction	Cranes	1	7	231	0.29
	Forklifts	3	8	89	0.20
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/Backhoes	3	7	97	0.37
	Welders	1	8	46	0.45
Architectural Coating	Air Compressors	1	6	78	0.48
Paving	Pavers	2	8	130	0.42
	Paving Equipment	2	8	132	0.36
	Rollers	2	8	80	0.38

Source: Compiled by LSA using CalEEMod defaults (September 2019).

Table 10: Project Construction Emissions

Construction Year	Total Regional Pollutant Emissions[1] (tons/year)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2020	0.2	1.9	1.4	<0.1	0.4	0.2
2021	0.6	5.1	4.4	<0.1	0.8	0.3
2022	2.2	1.4	1.3	<0.1	0.2	0.1
Maximum	**2.2**	**5.1**	**4.4**	**<0.1**	**0.8**	**0.3**
SJVAPCD Thresholds	**10.0**	**10.0**	**100.0**	**27.0**	**15.0**	**15.0**
Significant Emissions?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA (September 2019).

[1] All on-site and off-site emissions are presented as construction mitigation in the CalEEMod model output files.

CO = carbon monoxide
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SJVAPCD = San Joaquin Valley Air Pollution Control District
SO_X = sulfur oxides
ROG = reactive organic gases

As shown in Table 10, construction emissions associated with the project would not exceed the SJVAPCD's thresholds for ROG, NO_x, CO, SO_x, $PM_{2.5,}$ or PM_{10} emissions. In addition to the construction period thresholds of significance, the SJVAPCD has implemented Regulation VIII measures for dust control during construction. These control measures are intended to reduce the amount of PM_{10} emissions during the construction period. Implementation of Mitigation Measure AIR-1 would ensure that the proposed project complies with Regulation VIII and further reduces the short-term construction period air quality impacts.

Mitigation Measure AIR-1 Consistent with SJVAPCD Regulation VIII (Fugitive PM_{10} Prohibitions), the following controls are required to be included as specifications for the proposed project and implemented at the construction site:

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.)
- Following the addition of materials to, or the removal of materials from, the surface of out-door storage piles, said piles shall be effectively stabilized of fugitive dust emission utilizing sufficient water or chemical stabilizer/suppressant.

As shown in Table 10, the short-term construction emissions associated with the project would be well below SJVAPCD established significance thresholds. Therefore, construction of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State AAQS.

Long-Term Operational Emissions. Long-term air pollutant emission impacts are those associated with area sources and mobile sources related to the proposed project. In addition to the short-term construction emissions, the project would also generate long-term air pollutant emissions, such as those associated with changes in permanent use of the project site. These long-term emissions are

primarily mobile source emissions that would result from vehicle trips associated with the proposed project. Area sources, such as landscape equipment would also result in pollutant emissions.

PM_{10} 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 PM_{10} occurs when vehicle tires pulverize small rocks and pavement and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles.

Energy source emissions result from activities in buildings for which electricity and natural gas are used. 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 for the proposed project could include building mechanical systems, such as heating and air conditioning, lighting, and plug-in electronics, such as refrigerators or computers. Greater building or appliance efficiency reduces the amount of energy for a given activity and thus lowers the resultant emissions. The emission factor is determined by the fuel source, with cleaner energy sources, like renewable energy, producing fewer emissions than conventional sources. The project would comply with the 2019 California Building Standards Code (California Code of Regulations, Title 24), which was accounted for in CalEEMod. Area source emissions associated with the project would include emissions from the use of architectural coatings, consumer products, and landscaping equipment.

Emission estimates for operation of the project were calculated using CalEEMod. Model results are shown in Table 11. For purposes of evaluating the proposed project, the air district in CalEEMod was specified as the SJVAPCD and the climate zone of 3 was selected with the urban land use setting. Based on this climate zone, CalEEMod assumed a wind speed of 2.7 meters per second and precipitation frequency of 45 days per year. The operational year was assumed to be 2022. The utility company for the region was selected as Pacific Gas & Electric Company (PG&E) and the CO_2 intensity was determined to be 328.8 pounds per megawatt hour based on a 5-year average estimated by PG&E.

Trip generation rates for the project were estimated based on the latest project site plan and take into account reductions associated with internal capture and pass-by trips, as identified in the Traffic Impact Assessment.[44] As such, this analysis assumes that the proposed project would generate approximately 8,557 average daily trips. Fleet mix percentages were revised based data for similar shopping centers projects in the Central Valley. Where project-specific data were not available, default assumptions from CalEEMod were used to estimate project emissions.

The primary emissions associated with the project are regional in nature, meaning that air pollutants are rapidly dispersed on release or, in the case of vehicle emissions associated with the project; emissions are released in other areas of the Air Basin. The annual emissions associated with project operational trip generation, energy, and area sources are identified in Table 11 for ROG, NO_x, CO, sulfur oxides (SO_x), PM_{10}, and $PM_{2.5}$. CalEEMod output sheets are included in Attachment A.

[44] JLB Traffic Engineering, Inc., 2019. *Draft Traffic Impact Analysis Merced Mixed-Use Development Located on the Northeast Corner of "G" Street and Yosemite Avenue*. August 6.

Table 11: Project Operational Emissions

Source	Pollutant Emissions (tons/year)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	1.3	<0.1	0.4	<0.1	<0.1	<0.1
Energy	<0.1	0.3	0.2	<0.1	<0.1	<0.1
Mobile	1.9	2.7	15.7	<0.1	3.9	1.1
Total Project Emissions	**3.2**	**3.0**	**16.3**	**<0.1**	**3.9**	**1.1**
SJVAPCD Thresholds	**10.0**	**10.0**	**100.0**	**27.0**	**15.0**	**15.0**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA (September 2019).
CO = carbon monoxide
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SJVAPCD = San Joaquin Valley Air Pollution Control District
SO_x = sulfur oxides
ROG = reactive organic gases

The results shown in Table 11 indicate the project would not exceed the significance criteria for annual ROG, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$ emissions; therefore, the proposed project would not have a significant effect on regional air quality. As shown in Table 11, SJVAPCD emissions of ROG, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ would be below the thresholds. Therefore, operation of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State AAQS.

The project would be required to implement District Rule 9510 (Indirect Source Review [ISR]) as the project would develop more than 2,000 square feet of commercial space. Implementation of Rule 9510 would reduce operational emissions of NO_x and PM_{10} by 33.3 percent and 50 percent respectively. The Air Impact Assessment must be submitted to the SJVAPCD consistent with Rule 9510 prior to obtaining building permits.

CO Analysis. There is a direct relationship between traffic and circulation congestion and CO impacts because exhaust fumes from vehicular traffic are the primary source of CO, which is a localized gas that dissipates very quickly under normal meteorological conditions. Therefore, CO concentrations decrease substantially as distance from the source increases. The highest CO concentrations are typically found in areas directly adjacent to congested roadway intersections. These areas of vehicle congestion have historically had the potential to create pockets of elevated levels of CO that are called "hot spots." However, with the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the project vicinity have steadily declined.

With implementation of future intersection improvements recommended in the Traffic Impact Assessment, the project would not substantially affect the existing LOS at each intersection of the project vicinity. Given the existing CO concentrations in the project area are relatively low, project-related vehicles are not expected to contribute significantly to increased levels of CO concentrations in the project area. The project is not expected to result in CO concentrations that would exceed the State or federal CO standards. Because no new CO hot spots would occur, there would be no project-related impacts on CO concentrations.

1.7.1.3 Health Risk on Nearby Sensitive Receptors

Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to diesel particulate matter are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to diesel particulate matter. Exposure from diesel exhaust associated with construction activity contributes to both cancer and chronic non-cancer health risks.

According to the SJVAPCD, a project would result in a significant impact if it would expose sensitive receptors to TACs resulting in an increased cancer risk greater than 20.0 in one million or an increased non-cancer risk of greater than 1.0 on the hazard index (chronic or acute). Impacts from substantial pollutant concentrations are discussed below.

A construction HRA was prepared for the proposed project, which evaluates construction period health risk to off-site receptors. The project site is located adjacent to existing residential uses that could be exposed to diesel emission exhaust during the construction period. To estimate the potential cancer risk associated with construction of the proposed project from equipment exhaust (including diesel particulate matter), a dispersion model was used to translate an emission rate from the source location to a concentration at the receptor location of interest (i.e., a nearby residence and worksites). Dispersion modeling varies from a simpler, more conservative screening-level analysis to a more complex and refined detailed analysis. This refined assessment was conducted using the CARB exposure methodology with the air dispersion modeling performed using the USEPA dispersion model AERMOD. The model provides a detailed estimate of exhaust concentrations based on site and source geometry, source emissions strength, distance from the source to the receptor, and meteorological data. Construction equipment is unknown at this time; therefore, the CalEEMod default of Tier 0 was used. Table 12 identifies the results of the analysis utilizing the CalEEMod default of Tier 0 construction Equipment. Model snap shots of the sources are shown in Appendix B.

Table 12: Unmitigated Inhalation Health Risks from Project Construction to Off-Site Receptors

	Carcinogenic Inhalation Health Risk in One Million	Chronic Inhalation Hazard Index
Maximum Exposed Individual Location (Residential)	45.3	0.041
Threshold	**20.0**	**1.0**

Source: LSA (September 2019).

As shown in Table 12, the risk would be 45.3 in one million, which would exceed the SJVAPCD cancer risk threshold of 10 in one million. The highest chronic hazard index would be 0.041, which would not exceed the threshold of 1.0. As indicated above, the cancer risk of 45.1 in one million would exceed the SVJAPCD's threshold.

Implementation of Mitigation Measure AIR-2 would be required to reduce substantial pollutant concentrations during project construction and would reduce this impact of the project to a less-than-significant level.

Mitigation Measure AIR-2 The project contractor shall ensure all off-road diesel-powered construction equipment of 50 horsepower or more used for the project meet the California Air Resources Board (CARB) Tier 2 with a Level 3 Diesel Particulate Filter emissions standards or equivalent.

Table 13 identifies the results of the analysis with implementation of Mitigation Measure AIR-2.

Table 13: Mitigated Inhalation Health Risks from Project Construction to Off-Site Receptors

	Carcinogenic Inhalation Health Risk in One Million	Chronic Inhalation Hazard Index
Maximum Exposed Individual Location (Residential)	8.8	0.0086
Threshold	**20.0**	**1.0**

Source: LSA (September 2019).

As shown in Table 13, the risk with implementation of Mitigation Measure AIR-2 would be 8.8 in one million, which would not exceed the SJVAPCD cancer risk of 10 in one million threshold. Therefore, with implementation of Mitigation Measure AIR-2, construction of the project would not exceed SJVAPCD thresholds and would not expose nearby sensitive receptors to substantial pollutant concentrations. In addition, once the proposed project is constructed, the project would not be a significant source of long-term operational emissions. All gasoline dispensing operations associated with the project would be subject to SJVAPCD Rule 4622 which would limit emissions of gasoline vapors from the transfer of gasoline into motor vehicle fuel tanks. Therefore, with implementation of Mitigation Measure AIR-2, the proposed project would not expose sensitive receptors to substantial pollutant concentrations.

1.7.1.4 Odors

Heavy-duty equipment in the project area during construction would emit odors, primarily from the equipment exhaust. However, the construction activity would cease to occur after individual construction is completed. No other sources of objectionable odors have been identified for the project, and no mitigation measures are required.

The SJVAPCD addresses odor criteria within the GAMAQI. The district has not established a rule or standard regarding odor emissions, rather, the district has a nuisance rule: “Any project with the potential to frequently expose members of the public to objectionable odors should be deemed to have a significant impact.” The proposed uses are not anticipated to emit any objectionable odors. The gas station could release localized odors; however, all the gasoline dispensers would be equipped with vapor recovery systems. In addition, such odors in general would be confined mainly

to the project site and would readily dissipate. Therefore, the proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

1.7.2 Greenhouse Gas Impacts

1.7.2.1 Generate Greenhouse Gas Emissions

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

Construction GHG Emissions. Construction activities associated with the proposed 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 CO_2, CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

The SJVAPCD does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are encouraged to quantify and disclose GHG emissions that would occur during construction. Using CalEEMod, it is estimated that construction of the proposed project would generate approximately 2,138.3 metric tons of CO_2e. Table 14 lists the annual GHG emissions for each construction phase (details are provided in the CalEEMod output in Appendix A).

Table 14: Greenhouse Gas Construction Emissions

Construction Year	Peak Annual Emissions (Metric Tons CO_2e per Year)			
	CO_2	CH_4	N_2O	CO_2e
2020	328.3	0.1	0.0	329.7
2021	1,403.5	0.1	0.0	1,406.9
2022	400.7	<0.1	0.0	401.7
Total Construction Emissions				**2,138.3**

Source: Compiled by LSA (September 2019).
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
N_2O = nitrous oxide

Implementation of the Mitigation Measure AIR-1 would reduce GHG emissions by reducing the amount of construction vehicle idling and by requiring the use of properly maintained equipment.

Operational GHG Emissions. Long-term GHG emissions are typically generated from mobile sources (e.g., vehicle trips), area sources (e.g., maintenance activities and landscaping), indirect emissions from sources associated with energy consumption, waste sources (land filling and waste disposal), and water sources (water supply and conveyance, treatment, and distribution). 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. Energy source emissions would be generated at off-site utility providers as a result of increased electricity demand generated by the project. Waste source emissions generated by the proposed

project include energy generated by land filling and other methods of disposal related to transporting and managing project generated waste. In addition, water source emissions associated with the proposed project are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment. Operational GHG emissions were estimated using CalEEMod and the results are presented in Table 15.

Table 15: Operational Greenhouse Gas Emissions

Operational Source	Pollutant Emissions (Metric Tons CO_2e per Year)					
	Bio-CO_2	NBio-CO_2	Combined CO_2	CH_4	N_2O	Total CO_2e
Area	0.0	21.4	21.4	<0.1	<0.1	21.5
Energy	0.0	649.2	649.2	<0.1	<0.1	653.6
Mobile	0.0	3,615.9	3,615.9	0.1	0.0	3,619.6
Waste	153.3	0.0	153.3	9.1	0.0	379.8
Water	7.2	21.2	28.4	0.7	<0.1	52.1
Total Project Emissions						**4,726.6**

Source: Compiled by LSA (September 2019).
Bio-CO_2 = biologically generated CO_2
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
N_2O = nitrous oxide
NBio-CO_2 = non-biologically generated CO_2

As shown in Table 15, the project would generate 4,726.6 metric tons of CO_2e per year. As discussed above, the City of Merced PCAP is considered a qualified GHG reduction plan and includes a performance-based development approach that includes the measures in the CAP that apply to new development projects. Therefore, the proposed project's GHG emissions would not be considered a significant impact if the proposed project would be consistent with the PCAP. Although the proposed project would likely implement many of the measures the PCAP has included, the exact selections and corresponding total percent reduction cannot be determined. The PCAP states that new projects that do not comply with the CAP measures or the UDM, they may elect to conduct a quantitative analysis of GHG emissions.

Because the project would begin operations in the post-2020 timeframe, the City's 2020 reduction targets would not apply. Therefore, to be conservative, this analysis evaluates the proposed project's potential GHG emissions based on the City's PCAP provisional 2030 target of approximately 38 percent below 2008 baseline levels.

Table 16 provides a comparison of the estimated metric tons of CO_2e per year emissions from the project's operational activities in 2008 and 2030. As provided in Table 16, the project's estimated annual GHG emissions would be approximately 12,426.0 metric tons of CO_2e under 2008 BAU conditions and 6,919.1 metric tons of CO_2e in 2030 for project operations. This represents a 49 percent decrease in emissions, which meets the City's provisional 2030 target of approximately 38 percent below 2008 baseline levels.

Table 16: Comparison of 2030 Project and 2008 Business-As-Usual GHG Emissions

Emissions Source	GHG Emissions (Metric Tons CO_2e per Year)		Percent Reduction
	2008	2030	
Area	21.5	21.5	0
Energy	1,669.2	653.6	61
Mobile	10,155.2	5,812.0	43
Waste	506.4	379.8	25
Water	73.7	52.1	29
Total Operational	**13,649.1**	**6,919.1**	**49**
City of Merced PCAP Criteria	38 percent reduction from BAU		
Significant impact?	**No**		

Source: LSA (September 2019).

In addition, the project, and vehicles traveling to the project site, would implement several measures required by State regulations to reduce GHG emissions, including the following:

- Pavley II (LEV III) Advanced Clean Cars Program;
- 2016 California Green Building Code Standards;
- Renewable Portfolio Standard;
- California Model Water Efficient Landscape Ordinance; and
- CalRecycle Waste Diversion and Recycling Mandate.

The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all vehicles by 2020. The California Green Building Code Standards reduce GHGs by including a variety of different measures, including reduction of construction waste, wastewater, water use, and building energy use. The 2019 Building Energy Efficiency Standards, which will take effect on January 1, 2020, were included in the CalEEMod analysis and are anticipated to reduce energy use by 30 percent compared to the 2016 standards, representing a substantial reduction compared to 2008 levels. The Renewable Portfolio Standard requires electricity purchased for use at the project site to be composed of at least 33 percent renewable energy by 2020. The Water Efficient Landscape Ordinance will reduce outdoor water use by 20 percent and the CalRecycle Waste Diversion and Recycling Mandate will reduce solid waste production by 25 percent.

Implementation of these measures is expected to allow the State to achieve AB 32 emission targets by 2020. The proposed project would not be operational until 2022; however, SB 32, signed in 2016, effectively establishes a new GHG reduction goal for Statewide emissions of 40 percent below 1990 levels by 2030. Therefore, operation of the proposed project would be consistent with the SB 32 goal. Therefore, at this time no additional regulations are required from new development beyond those already established by the State to achieve the AB 32 and SB 32 targets. Therefore, the BAU analysis that indicates that the project would achieve the reductions required by regulations to

meet the AB 32 and SB 32 targets and demonstrates that the project's GHG emissions would not be significant.

1.7.2.2 Consistency with Greenhouse Gas Reduction Plans

The SJVAPCD has adopted a CCAP, which includes suggested BPS for proposed development projects. Appendix J of the SJVAPCD Final Staff Report for the CCAP contains GHG reduction measures that would be applicable to the proposed project. The proposed project's consistency with these measures is included in Table 17 below. As shown in Table 17, the project would be consistent with the CCAP measures.

Absent any other local or regional Climate Action Plan, the proposed project was analyzed for consistency with the CARB's adopted Scoping Plan. The proposed project would be consistent with the Scoping Plan measures, including the following.

- **California Light-Duty Vehicle Greenhouse Gas Standards**. The standards would be applicable to light-duty vehicles that would access the project site.

- **Energy Efficiency**. The project would increase its energy efficiency through compliance with the new Title 24 standards.

- **Low Carbon Fuel Standard**. Vehicles that access the project site would comply with the standard, by way of consuming transportation fuel that will meet the goal of a 10 percent reduction in carbon intensity by 2020.

- **Recycling and Waste**. The project would contribute toward a Statewide reduction in waste by utilizing the City of Clovis recycling services, which have consistently exceeded State recycling mandates.

Based on Table 17 and the discussion above, the proposed project would not conflict with plans, policies, or regulations adopted for the purpose of reducing the emissions of GHG.

Table 17: Consistency with the SJVAPCD's Climate Change Action Plan Measures

Measure Name	Estimated CO_2e Point Reductions	Measure Description	Discussion
Bicycle/Pedestrian/Transit Measures			
1 – Bike parking	0.625	Non-residential projects provide plentiful short-term and long-term bicycle parking facilities to meet peak season maximum demand. Short term facilities are provided at a minimum ratio of one bike rack space per 20 vehicle spaces. Long-term facilities provide a minimum ratio of one long-term bicycle storage space per 20 employee parking spaces.	***Consistent.*** The proposed project would provide the required parking for bicycles, consistent with City standards.
3 – Bike parking at multi-unit residential	0.625	Long-term bicycle parking is provided at apartment complexes or condominiums without garages. Project provides one long-term bicycle parking space for each unit without a garage. Long-term facilities shall consist of one of the following: a bicycle locker, a locked room with standard racks and access limited to bicyclists only, or a standard rack in a location that is staffed and/or monitored by video surveillance 24 hours per day.	***Consistent.*** The proposed project would provide secured bicycle parking for the residential multi-family apartment project. Specific locations and amenities will be provided in the final design stage of the project.
5 – Pedestrian network	1	The project provides a pedestrian access network that internally links all uses and connects to existing external streets and pedestrian facilities. Existing facilities are defined as those facilities that are physically constructed and ready for use prior to the first 20 percent of the projects occupancy permits being granted.	***Consistent.*** The proposed project includes pedestrian accommodations throughout the project site and connecting off-site to existing external streets and pedestrian facilities.
6 – Pedestrian barriers minimized	1	Site design and building placement minimize barriers to pedestrian access and interconnectivity. Physical barriers such as walls, berms, landscaping, and slopes between residential and nonresidential uses that impede bicycle or pedestrian circulation are eliminated. Barriers to pedestrian access of neighboring facilities and sites are minimized. This measure is not meant to prevent the limited use of barriers to ensure public safety by prohibiting access to hazardous areas, etc.	***Consistent.*** The proposed project would provide pedestrian accommodations throughout the project site and connecting off-site to existing external streets and pedestrian facilities.

Table 17: Consistency with the SJVAPCD's Climate Change Action Plan Measures

Measure Name	Estimated CO_2e Point Reductions	Measure Description	Discussion
Parking Measures			
13 – Pedestrian pathway through parking	0.5	Provide a parking lot design that includes clearly marked and shaded pedestrian pathways between transit facilities and building entrances. Pathway must connect to all transit facilities internal or adjacent to project site. Site plan should demonstrate how the pathways are clearly marked, shaded, and are placed between transit facilities and building entrances.	***Consistent.*** The proposed project would provide pedestrian accommodations throughout the project site and connecting off-site to existing external streets and pedestrian facilities.
14c – Off street parking	0.1	For 0.1 percent reduction, the project is not among high-density or mixed uses, is not connected to pedestrian or bicycle access ways, or is among uses that do not also hide parking. This point value is reflective of the importance that other pedestrian and density measures be in place in order for this measure to be effective.	***Consistent.*** The proposed project would provide off-street parking and is not located among high-density or mixed uses, is not connected to bicycle access ways, ands among uses that do not also hide parking.
Site Design Measures			
16 – Orientation toward existing transit, bikeway, or pedestrian corridor	0.5	Project is oriented towards existing transit, bicycle, or pedestrian corridor. Setback distance is minimized. Setback distance between project and adjacent uses is reduced to the minimum allowed under jurisdiction code. Setback distance between different buildings on project site is reduced to the minimum allowed under jurisdiction code. Setbacks between project buildings and sidewalks is reduced to the minimum allowed under jurisdiction code. Buildings are oriented towards street frontage. Primary entrances to buildings are located along public street frontage. Project provides bicycle access to existing bicycle corridor. Project provides access to existing pedestrian corridor.	***Consistent.*** The proposed project is not oriented towards existing transit, bicycle, or pedestrian corridor. However, the project site is located in an area with various land uses, including single-family residential, medical, commercial, religious, and school uses, which would facilitate non-motorized traffic. Therefore, the proposed project would minimize barriers for pedestrians and bicyclists.
Mixed-Use Measures			
22 – Urban Mixed-Use Measure	-	Development of projects predominantly characterized by properties on which various uses, such as office, commercial, institutional, and residential are combined in a single building or on a single site in an integrated development project with functional inter-relationships and a coherent physical design. Mitigation points for this measure depend on job to housing ratio.	***Consistent.*** The proposed project would include a variety of uses, including medical-dental office space, a hotel, fast-food restaurants with drive-through windows, a gasoline/service station, shopping center uses, a high-turnover (sit-down) restaurant, general office space, a day care center, a drive-in bank, and residential uses.

Table 17: Consistency with the SJVAPCD's Climate Change Action Plan Measures

Measure Name	Estimated CO_2e Point Reductions	Measure Description	Discussion
Additional GHG Emission Reduction Measures Requiring Additional Investigation			
5 – Site design measures	–	Site design to minimize the need for external trips by including services/facilities for day care, banking/ATM, restaurants, vehicle refueling, and shopping.	***Consistent.*** The proposed project would include a variety of uses, including medical-dental office space, a hotel, fast-food restaurants with drive-through windows, a gasoline/service station, shopping center uses, a high-turnover (sit-down) restaurant, general office space, a day care center, a drive-in bank, and residential uses.
6 – Other Mixed Use	–	All residential units are within 1/4 mile of parks, schools or other civic uses.	***Consistent.*** The project site is located in an area developed with single-family residential, medical, commercial, religious, and school uses. Mercy Medical Center Hospital is located approximately 0.1 mile north of the project site, Merced College is located approximately 0.1 mile west of the project site, and Cruickshank Middle School is located approximately 0.2 mile northeast of the project site.
7 – Mixed-Use	–	Include mixed-use, infill, and higher density in development projects to support the reduction of vehicle trips, promote alternatives to individual vehicle travel, and promote efficient delivery of services and goods.	***Consistent.*** The proposed project would include a variety of uses, including medical-dental office space, a hotel, fast-food restaurants with drive-through windows, a gasoline/service station, shopping center uses, a high-turnover (sit-down) restaurant, general office space, a day care center, a drive-in bank, and residential uses.
9 – Natural Gas Stove	–	Project features only natural gas or electric stoves in residences.	***Consistent.*** The proposed project would include only natural gas or electric stoves in residences.
11 – Vehicle idling	–	Limit idling time for commercial vehicles, including delivery and construction vehicles.	***Consistent.*** The proposed project would comply with rules and regulations for idling time for commercial vehicles, including delivery and construction vehicles.
16 – Energy Efficient Appliances	–	Install energy efficient heating and cooling systems, appliances and equipment, and control systems.	***Consistent.*** The proposed project would comply with the 2019 Building Energy Efficiency Standards, and would install energy efficient heating and cooling systems, appliances and equipment, and control systems.
20 – Tree planting	–	Protect existing trees and encourage the planting of new trees. Adopt a tree protection and replacement ordinance, e.g., requiring that trees larger than a specified diameter that are removed to accommodate development must be replaced at a set ratio.	***Consistent.*** The proposed project would include trees and landscaping throughout the project site consistent with City requirements.

Source: San Joaquin Valley Air Pollution Control District (2009) and LSA (September 2019).

1.8 CONCLUSION

Based on the analysis presented above, construction of the proposed project would not result in the generation of criteria air pollutants that would exceed SJVAPCD thresholds of significance. Implementation of Mitigation Measure AIR-1 would further reduce construction dust impacts. As discussed above, the proposed project's construction emissions of criteria pollutants are estimated to be well below the emissions threshold established for the region. Operational emissions associated with the proposed project would also not exceed SJVAPCD established significance thresholds. With implementation of Mitigation Measure AIR-2, the proposed project is not expected to produce significant emissions that would affect nearby sensitive receptors. The proposed project would also not result in objectionable odors affecting a substantial number of people. GHG emissions released during construction and operation of the project are estimated to be lower than significance thresholds, and would not be cumulatively considerable. Additionally, the project would not conflict with the goals and objectives of the SJVAPCD's CCAP or any other State or regional plan, policy or regulation of an agency adopted for the purpose of reducing GHG emissions.

APPENDIX A

CALEEMOD OUTPUT SHEETS

Yosemite Crossing

San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Bank (with Drive-Through)	3.56	1000sqft	0.08	3,560.00	0
General Office Building	12.00	1000sqft	0.28	12,000.00	0
Medical Office Building	66.47	1000sqft	1.53	66,465.00	0
Day-Care Center	4.80	1000sqft	0.11	4,804.00	0
Parking Lot	912.00	1000sqft	12.97	912,000.00	0
Fast Food Restaurant with Drive Thru	7.90	1000sqft	0.18	7,898.00	0
High Turnover (Sit Down Restaurant)	5.00	1000sqft	0.11	5,000.00	0
Hotel	128.00	Room	2.99	80,104.00	0
Apartments Low Rise	48.00	Dwelling Unit	2.69	48,000.00	152
Gasoline/Service Station	12.00	Pump	0.04	3,130.00	0
Regional Shopping Center	18.22	1000sqft	0.42	18,222.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	328.8	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Yosemite Crossing - San Joaquin Valley Unified APCD Air District, Annual

Project Characteristics - CO2 intensity factor based on 5-year average (PG&E 2015)

Land Use - Based on site plan dated 07/24/19 and Traffic Impact Analysis dated 08/06/19

Construction Phase - Default construction schedule with September 2020 start date

Vehicle Trips - Based on site plan dated 07/24/19 and Traffic Impact Analysis dated 08/06/19

Mobile Land Use Mitigation -

Area Mitigation - Assuming only natural gas hearth

Energy Mitigation - The project would be consistent with California's 2019 Building Energy Efficiency Standards, which will take effect on January 1, 2020

Water Mitigation - Compliance with the Water Efficient Landscape Ordinance will reduce outdoor water use by 20 percent.

Waste Mitigation - The CalRecycle Waste Diversion and Recycling Mandate will reduce solid waste production by 25 percent.

Fleet Mix - Revised fleet mix percentages based on data for a similar shopping center project in the central valley. LDA was revised to 0.64486, LHD2 was revised to 0.001, MHD was revised to 0.003, and HHD was revised to 0.001. All other fleet mix percentages are default.

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	0.11	1.0000e-003
tblFleetMix	HHD	0.11	1.0000e-003
tblFleetMix	HHD	0.11	1.0000e-003
tblFleetMix	HHD	0.11	1.0000e-003
tblFleetMix	HHD	0.11	1.0000e-003
tblFleetMix	HHD	0.11	1.0000e-003
tblFleetMix	HHD	0.11	1.0000e-003
tblFleetMix	HHD	0.11	1.0000e-003
tblFleetMix	HHD	0.11	1.0000e-003
tblFleetMix	HHD	0.11	1.0000e-003
tblFleetMix	HHD	0.11	1.0000e-003
tblFleetMix	LDA	0.51	0.64
tblFleetMix	LDA	0.51	0.66
tblFleetMix	LDA	0.51	0.66
tblFleetMix	LDA	0.51	0.66

tblFleetMix	LDA	0.51	0.66
tblFleetMix	LDA	0.51	0.66
tblFleetMix	LDA	0.51	0.66
tblFleetMix	LDA	0.51	0.66
tblFleetMix	LDA	0.51	0.66
tblFleetMix	LDA	0.51	0.66
tblFleetMix	LDA	0.51	0.66
tblFleetMix	LHD2	5.0970e-003	1.0000e-003
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tblFleetMix	LHD2	5.0970e-003	1.0000e-003
tblFleetMix	LHD2	5.0970e-003	1.0000e-003
tblFleetMix	LHD2	5.0970e-003	1.0000e-003
tblFleetMix	LHD2	5.0970e-003	1.0000e-003
tblFleetMix	LHD2	5.0970e-003	1.0000e-003
tblFleetMix	LHD2	5.0970e-003	1.0000e-003
tblFleetMix	LHD2	5.0970e-003	1.0000e-003
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tblFleetMix	MHD	0.02	3.0000e-003
tblFleetMix	MHD	0.02	3.0000e-003
tblFleetMix	MHD	0.02	3.0000e-003
tblFleetMix	MHD	0.02	3.0000e-003
tblFleetMix	MHD	0.02	3.0000e-003
tblFleetMix	MHD	0.02	3.0000e-003
tblFleetMix	MHD	0.02	3.0000e-003
tblFleetMix	MHD	0.02	3.0000e-003

tblFleetMix	MHD	0.02	3.0000e-003
tblFleetMix	MHD	0.02	3.0000e-003
tblLandUse	LandUseSquareFeet	66,470.00	66,465.00
tblLandUse	LandUseSquareFeet	4,800.00	4,804.00
tblLandUse	LandUseSquareFeet	7,900.00	7,898.00
tblLandUse	LandUseSquareFeet	185,856.00	80,104.00
tblLandUse	LandUseSquareFeet	1,694.10	3,130.00
tblLandUse	LandUseSquareFeet	18,220.00	18,222.00
tblLandUse	LotAcreage	20.94	12.97
tblLandUse	LotAcreage	4.27	2.99
tblLandUse	LotAcreage	3.00	2.69
tblProjectCharacteristics	CO2IntensityFactor	641.35	328.8
tblVehicleTrips	ST_TR	7.16	6.15
tblVehicleTrips	ST_TR	86.32	85.00
tblVehicleTrips	ST_TR	6.21	47.67
tblVehicleTrips	ST_TR	722.03	296.72
tblVehicleTrips	ST_TR	168.56	124.17
tblVehicleTrips	ST_TR	2.46	8.17
tblVehicleTrips	ST_TR	158.37	95.37
tblVehicleTrips	ST_TR	8.19	7.02
tblVehicleTrips	ST_TR	8.96	29.23
tblVehicleTrips	ST_TR	49.97	26.32
tblVehicleTrips	SU_TR	6.07	6.15
tblVehicleTrips	SU_TR	31.90	85.00
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tblVehicleTrips	SU_TR	542.72	296.72
tblVehicleTrips	SU_TR	168.56	124.17

tblVehicleTrips	SU_TR	1.05	8.17
tblVehicleTrips	SU_TR	131.84	95.37
tblVehicleTrips	SU_TR	5.95	7.02
tblVehicleTrips	SU_TR	1.55	29.23
tblVehicleTrips	SU_TR	25.24	26.32
tblVehicleTrips	WD_TR	6.59	6.15
tblVehicleTrips	WD_TR	148.15	85.00
tblVehicleTrips	WD_TR	74.06	47.67
tblVehicleTrips	WD_TR	496.12	296.72
tblVehicleTrips	WD_TR	168.56	124.17
tblVehicleTrips	WD_TR	11.03	8.17
tblVehicleTrips	WD_TR	127.15	95.37
tblVehicleTrips	WD_TR	8.17	7.02
tblVehicleTrips	WD_TR	36.13	29.23
tblVehicleTrips	WD_TR	42.70	26.32

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1965	1.9397	1.3726	3.6400e-003	0.3466	0.0738	0.4205	0.1409	0.0685	0.2094	0.0000	328.2532	328.2532	0.0571	0.0000	329.6818
2021	0.5772	5.1438	4.3548	0.0154	0.6760	0.1362	0.8122	0.1834	0.1282	0.3116	0.0000	1,403.5291	1,403.5291	0.1348	0.0000	1,406.8991
2022	2.2152	1.4010	1.3010	4.3900e-003	0.1903	0.0376	0.2279	0.0516	0.0353	0.0869	0.0000	400.6888	400.6888	0.0420	0.0000	401.7395
Maximum	**2.2152**	**5.1438**	**4.3548**	**0.0154**	**0.6760**	**0.1362**	**0.8122**	**0.1834**	**0.1282**	**0.3116**	**0.0000**	**1,403.5291**	**1,403.5291**	**0.1348**	**0.0000**	**1,406.8991**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1965	1.9397	1.3726	3.6400e-003	0.3466	0.0738	0.4205	0.1409	0.0685	0.2094	0.0000	328.2530	328.2530	0.0571	0.0000	329.6816
2021	0.5772	5.1438	4.3548	0.0154	0.6760	0.1362	0.8122	0.1834	0.1282	0.3116	0.0000	1,403.5288	1,403.5288	0.1348	0.0000	1,406.8988
2022	2.2152	1.4010	1.3010	4.3900e-003	0.1903	0.0376	0.2279	0.0516	0.0353	0.0869	0.0000	400.6887	400.6887	0.0420	0.0000	401.7394
Maximum	**2.2152**	**5.1438**	**4.3548**	**0.0154**	**0.6760**	**0.1362**	**0.8122**	**0.1834**	**0.1282**	**0.3116**	**0.0000**	**1,403.5288**	**1,403.5288**	**0.1348**	**0.0000**	**1,406.8988**

Yosemite Crossing - San Joaquin Valley Unified APCD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**9-7-2020**	**12-6-2020**	1.6804	1.6804
2	**12-7-2020**	**3-6-2021**	1.4571	1.4571
3	**3-7-2021**	**6-6-2021**	1.4398	1.4398
4	**6-7-2021**	**9-6-2021**	1.4370	1.4370
5	**9-7-2021**	**12-6-2021**	1.4288	1.4288
6	**12-7-2021**	**3-6-2022**	1.3357	1.3357
7	**3-7-2022**	**6-6-2022**	2.6796	2.6796
		Highest	2.6796	2.6796

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.3048	0.0303	0.8731	1.7600e-003		0.0847	0.0847		0.0847	0.0847	10.8749	21.3970	32.2720	0.0519	3.8000e-004	33.6819
Energy	0.0371	0.3356	0.2689	2.0300e-003		0.0257	0.0257		0.0257	0.0257	0.0000	741.8625	741.8625	0.0401	0.0136	746.9077
Mobile	1.9750	2.8834	17.0080	0.0448	4.3309	0.0404	4.3712	1.1573	0.0375	1.1949	0.0000	4,067.7520	4,067.7520	0.1623	0.0000	4,071.8088
Waste						0.0000	0.0000		0.0000	0.0000	204.3835	0.0000	204.3835	12.0787	0.0000	506.3514
Water						0.0000	0.0000		0.0000	0.0000	7.1761	21.9177	29.0938	0.7390	0.0178	52.8738
Total	**3.3169**	**3.2492**	**18.1500**	**0.0486**	**4.3309**	**0.1507**	**4.4816**	**1.1573**	**0.1479**	**1.3052**	**222.4345**	**4,852.9293**	**5,075.3638**	**13.0719**	**0.0318**	**5,411.6235**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2500	0.0222	0.3752	1.3000e-004		3.4600e-003	3.4600e-003		3.4600e-003	3.4600e-003	0.0000	21.3970	21.3970	1.0200e-003	3.8000e-004	21.5360
Energy	0.0310	0.2803	0.2254	1.6900e-003		0.0214	0.0214		0.0214	0.0214	0.0000	649.1885	649.1885	0.0361	0.0119	653.6284
Mobile	1.9279	2.6575	15.7214	0.0399	3.8198	0.0366	3.8564	1.0208	0.0340	1.0548	0.0000	3,615.9194	3,615.9194	0.1477	0.0000	3,619.6113
Waste						0.0000	0.0000		0.0000	0.0000	153.2876	0.0000	153.2876	9.0590	0.0000	379.7636
Water						0.0000	0.0000		0.0000	0.0000	7.1761	21.1849	28.3610	0.7389	0.0178	52.1354
Total	**3.2089**	**2.9600**	**16.3220**	**0.0417**	**3.8198**	**0.0615**	**3.8813**	**1.0208**	**0.0589**	**1.0797**	**160.4637**	**4,307.6899**	**4,468.1536**	**9.9827**	**0.0300**	**4,726.6747**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**3.26**	**8.90**	**10.07**	**14.26**	**11.80**	**59.21**	**13.39**	**11.80**	**60.18**	**17.28**	**27.86**	**11.24**	**11.96**	**23.63**	**5.39**	**12.66**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/7/2020	9/18/2020	5	10	
2	Grading	Grading	9/19/2020	11/6/2020	5	35	
3	Building Construction	Building Construction	11/7/2020	4/8/2022	5	370	
4	Paving	Paving	4/9/2022	5/6/2022	5	20	
5	Architectural Coating	Architectural Coating	5/7/2022	6/3/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 12.97

Residential Indoor: 97,200; Residential Outdoor: 32,400; Non-Residential Indoor: 301,775; Non-Residential Outdoor: 100,592; Striped Parking Area: 54,720 (Architectural Coating – sqft)

OffRoad Equipment

Yosemite Crossing - San Joaquin Valley Unified APCD Air District, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	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	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	492.00	188.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	98.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

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	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	**0.0204**	**0.2121**	**0.1076**	**1.9000e-004**	**0.0903**	**0.0110**	**0.1013**	**0.0497**	**0.0101**	**0.0598**	**0.0000**	**16.7153**	**16.7153**	**5.4100e-003**	**0.0000**	**16.8505**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.6000e-004	2.6200e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6461	0.6461	2.0000e-005	0.0000	0.6466
Total	**3.8000e-004**	**2.6000e-004**	**2.6200e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6461**	**0.6461**	**2.0000e-005**	**0.0000**	**0.6466**

3.2 Site Preparation - 2020

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	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	**0.0204**	**0.2121**	**0.1076**	**1.9000e-004**	**0.0903**	**0.0110**	**0.1013**	**0.0497**	**0.0101**	**0.0598**	**0.0000**	**16.7153**	**16.7153**	**5.4100e-003**	**0.0000**	**16.8505**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.6000e-004	2.6200e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6461	0.6461	2.0000e-005	0.0000	0.6466
Total	**3.8000e-004**	**2.6000e-004**	**2.6200e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6461**	**0.6461**	**2.0000e-005**	**0.0000**	**0.6466**

3.3 Grading - 2020

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					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0779	0.8785	0.5593	1.0900e-003		0.0380	0.0380		0.0350	0.0350	0.0000	95.3475	95.3475	0.0308	0.0000	96.1185
Total	**0.0779**	**0.8785**	**0.5593**	**1.0900e-003**	**0.1518**	**0.0380**	**0.1898**	**0.0629**	**0.0350**	**0.0979**	**0.0000**	**95.3475**	**95.3475**	**0.0308**	**0.0000**	**96.1185**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4800e-003	1.0000e-003	0.0102	3.0000e-005	2.8000e-003	2.0000e-005	2.8200e-003	7.4000e-004	2.0000e-005	7.6000e-004	0.0000	2.5128	2.5128	7.0000e-005	0.0000	2.5146
Total	**1.4800e-003**	**1.0000e-003**	**0.0102**	**3.0000e-005**	**2.8000e-003**	**2.0000e-005**	**2.8200e-003**	**7.4000e-004**	**2.0000e-005**	**7.6000e-004**	**0.0000**	**2.5128**	**2.5128**	**7.0000e-005**	**0.0000**	**2.5146**

3.3 Grading - 2020

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					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0779	0.8785	0.5593	1.0900e-003		0.0380	0.0380		0.0350	0.0350	0.0000	95.3474	95.3474	0.0308	0.0000	96.1183
Total	**0.0779**	**0.8785**	**0.5593**	**1.0900e-003**	**0.1518**	**0.0380**	**0.1898**	**0.0629**	**0.0350**	**0.0979**	**0.0000**	**95.3474**	**95.3474**	**0.0308**	**0.0000**	**96.1183**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4800e-003	1.0000e-003	0.0102	3.0000e-005	2.8000e-003	2.0000e-005	2.8200e-003	7.4000e-004	2.0000e-005	7.6000e-004	0.0000	2.5128	2.5128	7.0000e-005	0.0000	2.5146
Total	**1.4800e-003**	**1.0000e-003**	**0.0102**	**3.0000e-005**	**2.8000e-003**	**2.0000e-005**	**2.8200e-003**	**7.4000e-004**	**2.0000e-005**	**7.6000e-004**	**0.0000**	**2.5128**	**2.5128**	**7.0000e-005**	**0.0000**	**2.5146**

3.4 Building Construction - 2020

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	0.0413	0.3741	0.3286	5.2000e-004		0.0218	0.0218		0.0205	0.0205	0.0000	45.1640	45.1640	0.0110	0.0000	45.4394
Total	**0.0413**	**0.3741**	**0.3286**	**5.2000e-004**		**0.0218**	**0.0218**		**0.0205**	**0.0205**	**0.0000**	**45.1640**	**45.1640**	**0.0110**	**0.0000**	**45.4394**

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	0.0145	0.4462	0.0846	1.0400e-003	0.0243	2.4600e-003	0.0268	7.0200e-003	2.3500e-003	9.3700e-003	0.0000	98.9892	98.9892	7.8200e-003	0.0000	99.1846
Worker	0.0406	0.0275	0.2798	7.6000e-004	0.0767	5.5000e-004	0.0773	0.0204	5.0000e-004	0.0209	0.0000	68.8783	68.8783	1.9700e-003	0.0000	68.9276
Total	**0.0551**	**0.4738**	**0.3644**	**1.8000e-003**	**0.1010**	**3.0100e-003**	**0.1040**	**0.0274**	**2.8500e-003**	**0.0303**	**0.0000**	**167.8675**	**167.8675**	**9.7900e-003**	**0.0000**	**168.1123**

3.4 Building Construction - 2020

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	0.0413	0.3741	0.3286	5.2000e-004		0.0218	0.0218		0.0205	0.0205	0.0000	45.1639	45.1639	0.0110	0.0000	45.4394
Total	**0.0413**	**0.3741**	**0.3286**	**5.2000e-004**		**0.0218**	**0.0218**		**0.0205**	**0.0205**	**0.0000**	**45.1639**	**45.1639**	**0.0110**	**0.0000**	**45.4394**

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	0.0145	0.4462	0.0846	1.0400e-003	0.0243	2.4600e-003	0.0268	7.0200e-003	2.3500e-003	9.3700e-003	0.0000	98.9892	98.9892	7.8200e-003	0.0000	99.1846
Worker	0.0406	0.0275	0.2798	7.6000e-004	0.0767	5.5000e-004	0.0773	0.0204	5.0000e-004	0.0209	0.0000	68.8783	68.8783	1.9700e-003	0.0000	68.9276
Total	**0.0551**	**0.4738**	**0.3644**	**1.8000e-003**	**0.1010**	**3.0100e-003**	**0.1040**	**0.0274**	**2.8500e-003**	**0.0303**	**0.0000**	**167.8675**	**167.8675**	**9.7900e-003**	**0.0000**	**168.1123**

3.4 Building Construction - 2021

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	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2867	302.2867	0.0729	0.0000	304.1099
Total	**0.2481**	**2.2749**	**2.1631**	**3.5100e-003**		**0.1251**	**0.1251**		**0.1176**	**0.1176**	**0.0000**	**302.2867**	**302.2867**	**0.0729**	**0.0000**	**304.1099**

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	0.0791	2.7051	0.4935	6.9100e-003	0.1626	7.6100e-003	0.1703	0.0470	7.2800e-003	0.0543	0.0000	656.3118	656.3118	0.0501	0.0000	657.5646
Worker	0.2500	0.1638	1.6982	4.9200e-003	0.5133	3.5300e-003	0.5168	0.1364	3.2500e-003	0.1397	0.0000	444.9307	444.9307	0.0118	0.0000	445.2247
Total	**0.3291**	**2.8689**	**2.1917**	**0.0118**	**0.6760**	**0.0111**	**0.6871**	**0.1834**	**0.0105**	**0.1940**	**0.0000**	**1,101.2425**	**1,101.2425**	**0.0619**	**0.0000**	**1,102.7893**

3.4 Building Construction - 2021

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	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2863	302.2863	0.0729	0.0000	304.1095
Total	**0.2481**	**2.2749**	**2.1631**	**3.5100e-003**		**0.1251**	**0.1251**		**0.1176**	**0.1176**	**0.0000**	**302.2863**	**302.2863**	**0.0729**	**0.0000**	**304.1095**

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	0.0791	2.7051	0.4935	6.9100e-003	0.1626	7.6100e-003	0.1703	0.0470	7.2800e-003	0.0543	0.0000	656.3118	656.3118	0.0501	0.0000	657.5646
Worker	0.2500	0.1638	1.6982	4.9200e-003	0.5133	3.5300e-003	0.5168	0.1364	3.2500e-003	0.1397	0.0000	444.9307	444.9307	0.0118	0.0000	445.2247
Total	**0.3291**	**2.8689**	**2.1917**	**0.0118**	**0.6760**	**0.0111**	**0.6871**	**0.1834**	**0.0105**	**0.1940**	**0.0000**	**1,101.2425**	**1,101.2425**	**0.0619**	**0.0000**	**1,102.7893**

3.4 Building Construction - 2022

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	0.0597	0.5466	0.5727	9.4000e-004		0.0283	0.0283		0.0266	0.0266	0.0000	81.1038	81.1038	0.0194	0.0000	81.5896
Total	**0.0597**	**0.5466**	**0.5727**	**9.4000e-004**		**0.0283**	**0.0283**		**0.0266**	**0.0266**	**0.0000**	**81.1038**	**81.1038**	**0.0194**	**0.0000**	**81.5896**

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	0.0197	0.6873	0.1221	1.8400e-003	0.0436	1.7700e-003	0.0454	0.0126	1.6900e-003	0.0143	0.0000	174.3877	174.3877	0.0130	0.0000	174.7117
Worker	0.0621	0.0392	0.4150	1.2700e-003	0.1377	9.2000e-004	0.1386	0.0366	8.5000e-004	0.0374	0.0000	115.0657	115.0657	2.8100e-003	0.0000	115.1360
Total	**0.0818**	**0.7265**	**0.5371**	**3.1100e-003**	**0.1813**	**2.6900e-003**	**0.1840**	**0.0492**	**2.5400e-003**	**0.0517**	**0.0000**	**289.4534**	**289.4534**	**0.0158**	**0.0000**	**289.8477**

3.4 Building Construction - 2022

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	0.0597	0.5466	0.5727	9.4000e-004		0.0283	0.0283		0.0266	0.0266	0.0000	81.1037	81.1037	0.0194	0.0000	81.5895
Total	**0.0597**	**0.5466**	**0.5727**	**9.4000e-004**		**0.0283**	**0.0283**		**0.0266**	**0.0266**	**0.0000**	**81.1037**	**81.1037**	**0.0194**	**0.0000**	**81.5895**

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	0.0197	0.6873	0.1221	1.8400e-003	0.0436	1.7700e-003	0.0454	0.0126	1.6900e-003	0.0143	0.0000	174.3877	174.3877	0.0130	0.0000	174.7117
Worker	0.0621	0.0392	0.4150	1.2700e-003	0.1377	9.2000e-004	0.1386	0.0366	8.5000e-004	0.0374	0.0000	115.0657	115.0657	2.8100e-003	0.0000	115.1360
Total	**0.0818**	**0.7265**	**0.5371**	**3.1100e-003**	**0.1813**	**2.6900e-003**	**0.1840**	**0.0492**	**2.5400e-003**	**0.0517**	**0.0000**	**289.4534**	**289.4534**	**0.0158**	**0.0000**	**289.8477**

3.5 Paving - 2022

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	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0276	20.0276	6.4800e-003	0.0000	20.1895
Paving	0.0170					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0280**	**0.1113**	**0.1458**	**2.3000e-004**		**5.6800e-003**	**5.6800e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**20.0276**	**20.0276**	**6.4800e-003**	**0.0000**	**20.1895**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	3.4000e-004	3.6200e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0029
Total	**5.4000e-004**	**3.4000e-004**	**3.6200e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0023**	**1.0023**	**2.0000e-005**	**0.0000**	**1.0029**

3.5 Paving - 2022

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	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0275	20.0275	6.4800e-003	0.0000	20.1895
Paving	0.0170					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0280**	**0.1113**	**0.1458**	**2.3000e-004**		**5.6800e-003**	**5.6800e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**20.0275**	**20.0275**	**6.4800e-003**	**0.0000**	**20.1895**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	3.4000e-004	3.6200e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0029
Total	**5.4000e-004**	**3.4000e-004**	**3.6200e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0023**	**1.0023**	**2.0000e-005**	**0.0000**	**1.0029**

3.6 Architectural Coating - 2022

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	2.0395					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**2.0415**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5300e-003	2.2300e-003	0.0236	7.0000e-005	7.8300e-003	5.0000e-005	7.8900e-003	2.0800e-003	5.0000e-005	2.1300e-003	0.0000	6.5485	6.5485	1.6000e-004	0.0000	6.5525
Total	**3.5300e-003**	**2.2300e-003**	**0.0236**	**7.0000e-005**	**7.8300e-003**	**5.0000e-005**	**7.8900e-003**	**2.0800e-003**	**5.0000e-005**	**2.1300e-003**	**0.0000**	**6.5485**	**6.5485**	**1.6000e-004**	**0.0000**	**6.5525**

3.6 Architectural Coating - 2022

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	2.0395					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**2.0415**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5300e-003	2.2300e-003	0.0236	7.0000e-005	7.8300e-003	5.0000e-005	7.8900e-003	2.0800e-003	5.0000e-005	2.1300e-003	0.0000	6.5485	6.5485	1.6000e-004	0.0000	6.5525
Total	**3.5300e-003**	**2.2300e-003**	**0.0236**	**7.0000e-005**	**7.8300e-003**	**5.0000e-005**	**7.8900e-003**	**2.0800e-003**	**5.0000e-005**	**2.1300e-003**	**0.0000**	**6.5485**	**6.5485**	**1.6000e-004**	**0.0000**	**6.5525**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.9279	2.6575	15.7214	0.0399	3.8198	0.0366	3.8564	1.0208	0.0340	1.0548	0.0000	3,615.9194	3,615.9194	0.1477	0.0000	3,619.6113
Unmitigated	1.9750	2.8834	17.0080	0.0448	4.3309	0.0404	4.3712	1.1573	0.0375	1.1949	0.0000	4,067.7520	4,067.7520	0.1623	0.0000	4,071.8088

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	295.20	295.20	295.20	855,436	754,494
Bank (with Drive-Through)	302.60	302.60	302.60	279,898	246,870
Day-Care Center	228.82	228.82	228.82	269,460	237,664
Fast Food Restaurant with Drive Thru	2,344.09	2,344.09	2344.09	2,190,140	1,931,704
Gasoline/Service Station	1,490.04	1,490.04	1490.04	858,514	757,209
General Office Building	98.04	98.04	98.04	234,291	206,645
High Turnover (Sit Down Restaurant)	476.85	476.85	476.85	553,272	487,986
Hotel	898.56	898.56	898.56	1,707,202	1,505,752
Medical Office Building	1,942.92	1,942.92	1942.92	3,802,776	3,354,049
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	479.55	479.55	479.55	840,798	741,584
Total	8,556.66	8,556.66	8,556.66	11,591,787	10,223,956

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	45.60	19.00	35.40	86	11	3
Bank (with Drive-Through)	9.50	7.30	7.30	6.60	74.40	19.00	27	26	47
Day-Care Center	9.50	7.30	7.30	12.70	82.30	5.00	28	58	14
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	29	21	50
Gasoline/Service Station	9.50	7.30	7.30	2.00	79.00	19.00	14	27	59
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.644860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
Bank (with Drive-Through)	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
Day-Care Center	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
Fast Food Restaurant with Drive Thru	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
Gasoline/Service Station	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
General Office Building	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
High Turnover (Sit Down Restaurant)	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
Hotel	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
Medical Office Building	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
Parking Lot	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
Regional Shopping Center	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Yosemite Crossing - San Joaquin Valley Unified APCD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	342.3176	342.3176	0.0302	6.2500e-003	344.9339
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	374.3804	374.3804	0.0330	6.8300e-003	377.2418
NaturalGas Mitigated	0.0310	0.2803	0.2254	1.6900e-003		0.0214	0.0214		0.0214	0.0214	0.0000	306.8709	306.8709	5.8800e-003	5.6300e-003	308.6945
NaturalGas Unmitigated	0.0371	0.3356	0.2689	2.0300e-003		0.0257	0.0257		0.0257	0.0257	0.0000	367.4821	367.4821	7.0400e-003	6.7400e-003	369.6659

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	678550	3.6600e-003	0.0313	0.0133	2.0000e-004		2.5300e-003	2.5300e-003		2.5300e-003	2.5300e-003	0.0000	36.2100	36.2100	6.9000e-004	6.6000e-004	36.4252
Bank (with Drive-Through)	74297.2	4.0000e-004	3.6400e-003	3.0600e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	3.9648	3.9648	8.0000e-005	7.0000e-005	3.9883
Day-Care Center	120628	6.5000e-004	5.9100e-003	4.9700e-003	4.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	6.4372	6.4372	1.2000e-004	1.2000e-004	6.4755
Fast Food Restaurant with Drive Thru	1.6619e+006	8.9600e-003	0.0815	0.0684	4.9000e-004		6.1900e-003	6.1900e-003		6.1900e-003	6.1900e-003	0.0000	88.6852	88.6852	1.7000e-003	1.6300e-003	89.2122
Gasoline/Service Station	65323.1	3.5000e-004	3.2000e-003	2.6900e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4859	3.4859	7.0000e-005	6.0000e-005	3.5066
General Office Building	156600	8.4000e-004	7.6800e-003	6.4500e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	8.3568	8.3568	1.6000e-004	1.5000e-004	8.4064
High Turnover (Sit Down Restaurant)	1.0521e+006	5.6700e-003	0.0516	0.0433	3.1000e-004		3.9200e-003	3.9200e-003		3.9200e-003	3.9200e-003	0.0000	56.1441	56.1441	1.0800e-003	1.0300e-003	56.4777
Hotel	2.01462e+006	0.0109	0.0988	0.0830	5.9000e-004		7.5100e-003	7.5100e-003		7.5100e-003	7.5100e-003	0.0000	107.5076	107.5076	2.0600e-003	1.9700e-003	108.1464
Medical Office Building	867368	4.6800e-003	0.0425	0.0357	2.6000e-004		3.2300e-003	3.2300e-003		3.2300e-003	3.2300e-003	0.0000	46.2861	46.2861	8.9000e-004	8.5000e-004	46.5611
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
Regional Shopping Center	194975	1.0500e-003	9.5600e-003	8.0300e-003	6.0000e-005		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	10.4046	10.4046	2.0000e-004	1.9000e-004	10.4665
Total		**0.0371**	**0.3356**	**0.2689**	**2.0400e-003**		**0.0257**	**0.0257**		**0.0257**	**0.0257**	**0.0000**	**367.4821**	**367.4821**	**7.0500e-003**	**6.7300e-003**	**369.6659**

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	528596	2.8500e-003	0.0244	0.0104	1.6000e-004		1.9700e-003	1.9700e-003		1.9700e-003	1.9700e-003	0.0000	28.2079	28.2079	5.4000e-004	5.2000e-004	28.3755
Bank (with Drive-Through)	56109.2	3.0000e-004	2.7500e-003	2.3100e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	2.9942	2.9942	6.0000e-005	5.0000e-005	3.0120
Day-Care Center	87207	4.7000e-004	4.2700e-003	3.5900e-003	3.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	4.6537	4.6537	9.0000e-005	9.0000e-005	4.6814
Fast Food Restaurant with Drive Thru	1.57726e+006	8.5000e-003	0.0773	0.0650	4.6000e-004		5.8800e-003	5.8800e-003		5.8800e-003	5.8800e-003	0.0000	84.1687	84.1687	1.6100e-003	1.5400e-003	84.6689
Gasoline/Service Station	49331.9	2.7000e-004	2.4200e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6325	2.6325	5.0000e-005	5.0000e-005	2.6482
General Office Building	110628	6.0000e-004	5.4200e-003	4.5600e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.9035	5.9035	1.1000e-004	1.1000e-004	5.9386
High Turnover (Sit Down Restaurant)	998520	5.3800e-003	0.0490	0.0411	2.9000e-004		3.7200e-003	3.7200e-003		3.7200e-003	3.7200e-003	0.0000	53.2848	53.2848	1.0200e-003	9.8000e-004	53.6015
Hotel	1.58229e+006	8.5300e-003	0.0776	0.0652	4.7000e-004		5.8900e-003	5.8900e-003		5.8900e-003	5.8900e-003	0.0000	84.4373	84.4373	1.6200e-003	1.5500e-003	84.9390
Medical Office Building	612741	3.3000e-003	0.0300	0.0252	1.8000e-004		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	32.6982	32.6982	6.3000e-004	6.0000e-004	32.8925
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
Regional Shopping Center	147853	8.0000e-004	7.2500e-003	6.0900e-003	4.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	7.8900	7.8900	1.5000e-004	1.4000e-004	7.9369
Total		**0.0310**	**0.2803**	**0.2254**	**1.6900e-003**		**0.0214**	**0.0214**		**0.0214**	**0.0214**	**0.0000**	**306.8709**	**306.8709**	**5.8800e-003**	**5.6300e-003**	**308.6944**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	224521	33.4853	2.9500e-003	6.1000e-004	33.7413
Bank (with Drive-Through)	31399.2	4.6829	4.1000e-004	9.0000e-005	4.7187
Day-Care Center	33724.1	5.0297	4.4000e-004	9.0000e-005	5.0681
Fast Food Restaurant with Drive Thru	228805	34.1243	3.0100e-003	6.2000e-004	34.3851
Gasoline/Service Station	27606.6	4.1173	3.6000e-004	8.0000e-005	4.1488
General Office Building	109440	16.3220	1.4400e-003	3.0000e-004	16.4468
High Turnover (Sit Down Restaurant)	144850	21.6031	1.9100e-003	3.9000e-004	21.7682
Hotel	636026	94.8576	8.3700e-003	1.7300e-003	95.5826
Medical Office Building	606161	90.4035	7.9700e-003	1.6500e-003	91.0945
Parking Lot	319200	47.6059	4.2000e-003	8.7000e-004	47.9697
Regional Shopping Center	148509	22.1489	1.9500e-003	4.0000e-004	22.3181
Total		**374.3804**	**0.0330**	**6.8300e-003**	**377.2418**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	214522	31.9940	2.8200e-003	5.8000e-004	32.2385
Bank (with Drive-Through)	29305.9	4.3707	3.9000e-004	8.0000e-005	4.4041
Day-Care Center	30639.9	4.5697	4.0000e-004	8.0000e-005	4.6046
Fast Food Restaurant with Drive Thru	213285	31.8097	2.8100e-003	5.8000e-004	32.0528
Gasoline/Service Station	25766.2	3.8428	3.4000e-004	7.0000e-005	3.8722
General Office Building	100008	14.9153	1.3200e-003	2.7000e-004	15.0293
High Turnover (Sit Down Restaurant)	135025	20.1378	1.7800e-003	3.7000e-004	20.2917
Hotel	536777	80.0555	7.0600e-003	1.4600e-003	80.6674
Medical Office Building	553919	82.6122	7.2900e-003	1.5100e-003	83.2436
Parking Lot	319200	47.6059	4.2000e-003	8.7000e-004	47.9697
Regional Shopping Center	136811	20.4041	1.8000e-003	3.7000e-004	20.5601
Total		**342.3176**	**0.0302**	**6.2400e-003**	**344.9340**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2500	0.0222	0.3752	1.3000e-004		3.4600e-003	3.4600e-003		3.4600e-003	3.4600e-003	0.0000	21.3970	21.3970	1.0200e-003	3.8000e-004	21.5360
Unmitigated	1.3048	0.0303	0.8731	1.7600e-003		0.0847	0.0847		0.0847	0.0847	10.8749	21.3970	32.2720	0.0519	3.8000e-004	33.6819

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	0.2040					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0569	0.0261	0.5055	1.7400e-003		0.0827	0.0827		0.0827	0.0827	10.8749	20.7940	31.6689	0.0512	3.8000e-004	33.0634
Landscaping	0.0118	4.2100e-003	0.3676	2.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	0.6031	0.6031	6.2000e-004	0.0000	0.6185
Total	**1.3048**	**0.0303**	**0.8731**	**1.7600e-003**		**0.0847**	**0.0847**		**0.0847**	**0.0847**	**10.8749**	**21.3970**	**32.2720**	**0.0519**	**3.8000e-004**	**33.6819**

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	0.2040					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.1000e-003	0.0180	7.6400e-003	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	20.7940	20.7940	4.0000e-004	3.8000e-004	20.9175
Landscaping	0.0118	4.2100e-003	0.3676	2.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	0.6031	0.6031	6.2000e-004	0.0000	0.6185
Total	**1.2500**	**0.0222**	**0.3752**	**1.3000e-004**		**3.4600e-003**	**3.4600e-003**		**3.4600e-003**	**3.4600e-003**	**0.0000**	**21.3970**	**21.3970**	**1.0200e-003**	**3.8000e-004**	**21.5360**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	28.3610	0.7389	0.0178	52.1354
Unmitigated	29.0938	0.7390	0.0178	52.8738

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	3.12739 / 1.97162	4.5452	0.1022	2.4700e-003	7.8370
Bank (with Drive-Through)	0.141058 / 0.0864546	0.2037	4.6100e-003	1.1000e-004	0.3522
Day-Care Center	0.20587 / 0.52938	0.5078	6.7500e-003	1.7000e-004	0.7261
Fast Food Restaurant with Drive Thru	2.39792 / 0.153058	2.7758	0.0783	1.8800e-003	5.2944
Gasoline/Service Station	0.159383 / 0.0976861	0.2302	5.2100e-003	1.3000e-004	0.3979
General Office Building	2.1328 / 1.3072	3.0802	0.0697	1.6800e-003	5.3250
High Turnover (Sit Down Restaurant)	1.51767 / 0.0968725	1.7568	0.0496	1.1900e-003	3.3509
Hotel	3.24695 / 0.360772	3.8387	0.1061	2.5500e-003	7.2497
Medical Office Building	8.34069 / 1.5887	10.2064	0.2725	6.5600e-003	18.9711
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.3496 / 0.827175	1.9491	0.0441	1.0700e-003	3.3696
Total		**29.0938**	**0.7390**	**0.0178**	**52.8738**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	3.12739 / 1.57729	4.3393	0.1022	2.4700e-003	7.6296
Bank (with Drive-Through)	0.141058 / 0.0691637	0.1947	4.6100e-003	1.1000e-004	0.3431
Day-Care Center	0.20587 / 0.423504	0.4525	6.7400e-003	1.7000e-004	0.6704
Fast Food Restaurant with Drive Thru	2.39792 / 0.122447	2.7598	0.0783	1.8800e-003	5.2783
Gasoline/Service Station	0.159383 / 0.0781489	0.2200	5.2100e-003	1.3000e-004	0.3877
General Office Building	2.1328 / 1.04576	2.9437	0.0697	1.6800e-003	5.1875
High Turnover (Sit Down Restaurant)	1.51767 / 0.077498	1.7467	0.0496	1.1900e-003	3.3407
Hotel	3.24695 / 0.288617	3.8011	0.1061	2.5500e-003	7.2118
Medical Office Building	8.34069 / 1.27096	10.0405	0.2724	6.5500e-003	18.8039
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.3496 / 0.66174	1.8627	0.0441	1.0600e-003	3.2826
Total		**28.3610**	**0.7389**	**0.0178**	**52.1354**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	153.2876	9.0590	0.0000	379.7636
Unmitigated	204.3835	12.0787	0.0000	506.3514

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	22.08	4.4820	0.2649	0.0000	11.1041
Bank (with Drive-Through)	3.32	0.6739	0.0398	0.0000	1.6696
Day-Care Center	6.24	1.2667	0.0749	0.0000	3.1381
Fast Food Restaurant with Drive Thru	91	18.4722	1.0917	0.0000	45.7640
Gasoline/Service Station	6.47	1.3134	0.0776	0.0000	3.2538
General Office Building	11.16	2.2654	0.1339	0.0000	5.6124
High Turnover (Sit Down Restaurant)	59.5	12.0780	0.7138	0.0000	29.9226
Hotel	70.08	14.2256	0.8407	0.0000	35.2433
Medical Office Building	717.88	145.7232	8.6120	0.0000	361.0229
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	19.13	3.8832	0.2295	0.0000	9.6205
Total		**204.3835**	**12.0787**	**0.0000**	**506.3514**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	16.56	3.3615	0.1987	0.0000	8.3281
Bank (with Drive-Through)	2.49	0.5055	0.0299	0.0000	1.2522
Day-Care Center	4.68	0.9500	0.0561	0.0000	2.3536
Fast Food Restaurant with Drive Thru	68.25	13.8541	0.8188	0.0000	34.3230
Gasoline/Service Station	4.8525	0.9850	0.0582	0.0000	2.4403
General Office Building	8.37	1.6990	0.1004	0.0000	4.2093
High Turnover (Sit Down Restaurant)	44.625	9.0585	0.5353	0.0000	22.4420
Hotel	52.56	10.6692	0.6305	0.0000	26.4325
Medical Office Building	538.41	109.2924	6.4590	0.0000	270.7672
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	14.3475	2.9124	0.1721	0.0000	7.2154
Total		**153.2876**	**9.0590**	**0.0000**	**379.7636**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Yosemite Crossing - Mitigated Construction

San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Bank (with Drive-Through)	3.56	1000sqft	0.08	3,560.00	0
General Office Building	12.00	1000sqft	0.28	12,000.00	0
Medical Office Building	66.47	1000sqft	1.53	66,465.00	0
Day-Care Center	4.80	1000sqft	0.11	4,804.00	0
Parking Lot	912.00	1000sqft	12.97	912,000.00	0
Fast Food Restaurant with Drive Thru	7.90	1000sqft	0.18	7,898.00	0
High Turnover (Sit Down Restaurant)	5.00	1000sqft	0.11	5,000.00	0
Hotel	128.00	Room	2.99	80,104.00	0
Apartments Low Rise	48.00	Dwelling Unit	2.69	48,000.00	152
Gasoline/Service Station	12.00	Pump	0.04	3,130.00	0
Regional Shopping Center	18.22	1000sqft	0.42	18,222.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	328.8	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Yosemite Crossing - Mitigated Construction - San Joaquin Valley Unified APCD Air District, Annual

Project Characteristics - CO2 intensity factor based on 5-year average (PG&E 2015)

Land Use - Based on site plan dated 07/24/19 and Traffic Impact Analysis dated 08/06/19

Construction Phase - Default construction schedule with September 2020 start date

Vehicle Trips - Based on site plan dated 07/24/19 and Traffic Impact Analysis dated 08/06/19

Construction Off-road Equipment Mitigation - Tier 2 construction equipment with level 3 diesel particulate filters

Mobile Land Use Mitigation -

Area Mitigation - Assuming only natural gas hearth

Energy Mitigation - The project would be consistent with California's 2019 Building Energy Efficiency Standards, which will take effect on January 1, 2020

Water Mitigation - Compliance with the Water Efficient Landscape Ordinance will reduce outdoor water use by 20 percent.

Waste Mitigation - The CalRecycle Waste Diversion and Recycling Mandate will reduce solid waste production by 25 percent.

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tblVehicleTrips	WD_TR	168.56	124.17
tblVehicleTrips	WD_TR	11.03	8.17
tblVehicleTrips	WD_TR	127.15	95.37
tblVehicleTrips	WD_TR	8.17	7.02
tblVehicleTrips	WD_TR	36.13	29.23
tblVehicleTrips	WD_TR	42.70	26.32

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1965	1.9397	1.3726	3.6400e-003	0.3466	0.0738	0.4205	0.1409	0.0685	0.2094	0.0000	328.2532	328.2532	0.0571	0.0000	329.6818
2021	0.5772	5.1438	4.3548	0.0154	0.6760	0.1362	0.8122	0.1834	0.1282	0.3116	0.0000	1,403.5291	1,403.5291	0.1348	0.0000	1,406.8991
2022	2.2152	1.4010	1.3010	4.3900e-003	0.1903	0.0376	0.2279	0.0516	0.0353	0.0869	0.0000	400.6888	400.6888	0.0420	0.0000	401.7395
Maximum	**2.2152**	**5.1438**	**4.3548**	**0.0154**	**0.6760**	**0.1362**	**0.8122**	**0.1834**	**0.1282**	**0.3116**	**0.0000**	**1,403.5291**	**1,403.5291**	**0.1348**	**0.0000**	**1,406.8991**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1158	1.9996	1.4832	3.6400e-003	0.3466	9.8800e-003	0.3565	0.1409	9.7300e-003	0.1507	0.0000	328.2530	328.2530	0.0571	0.0000	329.6816
2021	0.4702	5.9427	4.5242	0.0154	0.6760	0.0288	0.7048	0.1834	0.0282	0.2116	0.0000	1,403.5288	1,403.5288	0.1348	0.0000	1,406.8988
2022	2.1907	1.7782	1.3812	4.3900e-003	0.1903	8.6300e-003	0.1990	0.0516	8.4800e-003	0.0601	0.0000	400.6887	400.6887	0.0420	0.0000	401.7394
Maximum	**2.1907**	**5.9427**	**4.5242**	**0.0154**	**0.6760**	**0.0288**	**0.7048**	**0.1834**	**0.0282**	**0.2116**	**0.0000**	**1,403.5288**	**1,403.5288**	**0.1348**	**0.0000**	**1,406.8988**

Yosemite Crossing - Mitigated Construction - San Joaquin Valley Unified APCD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**7.10**	**-14.57**	**-5.13**	**0.00**	**0.00**	**80.88**	**13.71**	**0.00**	**79.98**	**30.51**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**9-7-2020**	**12-6-2020**	1.6804	1.6385
2	**12-7-2020**	**3-6-2021**	1.4571	1.6099
3	**3-7-2021**	**6-6-2021**	1.4398	1.6140
4	**6-7-2021**	**9-6-2021**	1.4370	1.6112
5	**9-7-2021**	**12-6-2021**	1.4288	1.6011
6	**12-7-2021**	**3-6-2022**	1.3357	1.5528
7	**3-7-2022**	**6-6-2022**	2.6796	2.8625
		Highest	2.6796	2.8625

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.3048	0.0303	0.8731	1.7600e-003		0.0847	0.0847		0.0847	0.0847	10.8749	21.3970	32.2720	0.0519	3.8000e-004	33.6819
Energy	0.0371	0.3356	0.2689	2.0300e-003		0.0257	0.0257		0.0257	0.0257	0.0000	741.8625	741.8625	0.0401	0.0136	746.9077
Mobile	1.9750	2.8834	17.0080	0.0448	4.3309	0.0404	4.3712	1.1573	0.0375	1.1949	0.0000	4,067.7520	4,067.7520	0.1623	0.0000	4,071.8088
Waste						0.0000	0.0000		0.0000	0.0000	204.3835	0.0000	204.3835	12.0787	0.0000	506.3514
Water						0.0000	0.0000		0.0000	0.0000	7.1761	21.9177	29.0938	0.7390	0.0178	52.8738
Total	**3.3169**	**3.2492**	**18.1500**	**0.0486**	**4.3309**	**0.1507**	**4.4816**	**1.1573**	**0.1479**	**1.3052**	**222.4345**	**4,852.9293**	**5,075.3638**	**13.0719**	**0.0318**	**5,411.6235**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2500	0.0222	0.3752	1.3000e-004		3.4600e-003	3.4600e-003		3.4600e-003	3.4600e-003	0.0000	21.3970	21.3970	1.0200e-003	3.8000e-004	21.5360
Energy	0.0310	0.2803	0.2254	1.6900e-003		0.0214	0.0214		0.0214	0.0214	0.0000	649.1885	649.1885	0.0361	0.0119	653.6284
Mobile	1.9279	2.6575	15.7214	0.0399	3.8198	0.0366	3.8564	1.0208	0.0340	1.0548	0.0000	3,615.9194	3,615.9194	0.1477	0.0000	3,619.6113
Waste						0.0000	0.0000		0.0000	0.0000	153.2876	0.0000	153.2876	9.0590	0.0000	379.7636
Water						0.0000	0.0000		0.0000	0.0000	7.1761	21.1849	28.3610	0.7389	0.0178	52.1354
Total	**3.2089**	**2.9600**	**16.3220**	**0.0417**	**3.8198**	**0.0615**	**3.8813**	**1.0208**	**0.0589**	**1.0797**	**160.4637**	**4,307.6899**	**4,468.1536**	**9.9827**	**0.0300**	**4,726.6747**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**3.26**	**8.90**	**10.07**	**14.26**	**11.80**	**59.21**	**13.39**	**11.80**	**60.18**	**17.28**	**27.86**	**11.24**	**11.96**	**23.63**	**5.39**	**12.66**

3.0 Construction Detail

Construction Phase

Yosemite Crossing - Mitigated Construction - San Joaquin Valley Unified APCD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/7/2020	9/18/2020	5	10	
2	Grading	Grading	9/19/2020	11/6/2020	5	35	
3	Building Construction	Building Construction	11/7/2020	4/8/2022	5	370	
4	Paving	Paving	4/9/2022	5/6/2022	5	20	
5	Architectural Coating	Architectural Coating	5/7/2022	6/3/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 12.97

Residential Indoor: 97,200; Residential Outdoor: 32,400; Non-Residential Indoor: 301,775; Non-Residential Outdoor: 100,592; Striped Parking Area: 54,720 (Architectural Coating – sqft)

OffRoad Equipment

Yosemite Crossing - Mitigated Construction - San Joaquin Valley Unified APCD Air District, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	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	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	492.00	188.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	98.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

3.2 Site Preparation - 2020

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	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	**0.0204**	**0.2121**	**0.1076**	**1.9000e-004**	**0.0903**	**0.0110**	**0.1013**	**0.0497**	**0.0101**	**0.0598**	**0.0000**	**16.7153**	**16.7153**	**5.4100e-003**	**0.0000**	**16.8505**

3.2 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.6000e-004	2.6200e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6461	0.6461	2.0000e-005	0.0000	0.6466
Total	**3.8000e-004**	**2.6000e-004**	**2.6200e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6461**	**0.6461**	**2.0000e-005**	**0.0000**	**0.6466**

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	6.0500e-003	0.1686	0.1148	1.9000e-004		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	**6.0500e-003**	**0.1686**	**0.1148**	**1.9000e-004**	**0.0903**	**7.1000e-004**	**0.0910**	**0.0497**	**7.1000e-004**	**0.0504**	**0.0000**	**16.7153**	**16.7153**	**5.4100e-003**	**0.0000**	**16.8505**

3.2 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.6000e-004	2.6200e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6461	0.6461	2.0000e-005	0.0000	0.6466
Total	**3.8000e-004**	**2.6000e-004**	**2.6200e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6461**	**0.6461**	**2.0000e-005**	**0.0000**	**0.6466**

3.3 Grading - 2020

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					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0779	0.8785	0.5593	1.0900e-003		0.0380	0.0380		0.0350	0.0350	0.0000	95.3475	95.3475	0.0308	0.0000	96.1185
Total	**0.0779**	**0.8785**	**0.5593**	**1.0900e-003**	**0.1518**	**0.0380**	**0.1898**	**0.0629**	**0.0350**	**0.0979**	**0.0000**	**95.3475**	**95.3475**	**0.0308**	**0.0000**	**96.1185**

3.3 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4800e-003	1.0000e-003	0.0102	3.0000e-005	2.8000e-003	2.0000e-005	2.8200e-003	7.4000e-004	2.0000e-005	7.6000e-004	0.0000	2.5128	2.5128	7.0000e-005	0.0000	2.5146
Total	**1.4800e-003**	**1.0000e-003**	**0.0102**	**3.0000e-005**	**2.8000e-003**	**2.0000e-005**	**2.8200e-003**	**7.4000e-004**	**2.0000e-005**	**7.6000e-004**	**0.0000**	**2.5128**	**2.5128**	**7.0000e-005**	**0.0000**	**2.5146**

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					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.8967	0.6426	1.0900e-003		3.5000e-003	3.5000e-003		3.5000e-003	3.5000e-003	0.0000	95.3474	95.3474	0.0308	0.0000	96.1183
Total	**0.0317**	**0.8967**	**0.6426**	**1.0900e-003**	**0.1518**	**3.5000e-003**	**0.1553**	**0.0629**	**3.5000e-003**	**0.0664**	**0.0000**	**95.3474**	**95.3474**	**0.0308**	**0.0000**	**96.1183**

3.3 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4800e-003	1.0000e-003	0.0102	3.0000e-005	2.8000e-003	2.0000e-005	2.8200e-003	7.4000e-004	2.0000e-005	7.6000e-004	0.0000	2.5128	2.5128	7.0000e-005	0.0000	2.5146
Total	**1.4800e-003**	**1.0000e-003**	**0.0102**	**3.0000e-005**	**2.8000e-003**	**2.0000e-005**	**2.8200e-003**	**7.4000e-004**	**2.0000e-005**	**7.6000e-004**	**0.0000**	**2.5128**	**2.5128**	**7.0000e-005**	**0.0000**	**2.5146**

3.4 Building Construction - 2020

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	0.0413	0.3741	0.3286	5.2000e-004		0.0218	0.0218		0.0205	0.0205	0.0000	45.1640	45.1640	0.0110	0.0000	45.4394
Total	**0.0413**	**0.3741**	**0.3286**	**5.2000e-004**		**0.0218**	**0.0218**		**0.0205**	**0.0205**	**0.0000**	**45.1640**	**45.1640**	**0.0110**	**0.0000**	**45.4394**

3.4 Building Construction - 2020

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	0.0145	0.4462	0.0846	1.0400e-003	0.0243	2.4600e-003	0.0268	7.0200e-003	2.3500e-003	9.3700e-003	0.0000	98.9892	98.9892	7.8200e-003	0.0000	99.1846
Worker	0.0406	0.0275	0.2798	7.6000e-004	0.0767	5.5000e-004	0.0773	0.0204	5.0000e-004	0.0209	0.0000	68.8783	68.8783	1.9700e-003	0.0000	68.9276
Total	**0.0551**	**0.4738**	**0.3644**	**1.8000e-003**	**0.1010**	**3.0100e-003**	**0.1040**	**0.0274**	**2.8500e-003**	**0.0303**	**0.0000**	**167.8675**	**167.8675**	**9.7900e-003**	**0.0000**	**168.1123**

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	0.0211	0.4593	0.3485	5.2000e-004		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	45.1639	45.1639	0.0110	0.0000	45.4394
Total	**0.0211**	**0.4593**	**0.3485**	**5.2000e-004**		**2.6400e-003**	**2.6400e-003**		**2.6400e-003**	**2.6400e-003**	**0.0000**	**45.1639**	**45.1639**	**0.0110**	**0.0000**	**45.4394**

3.4 Building Construction - 2020

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	0.0145	0.4462	0.0846	1.0400e-003	0.0243	2.4600e-003	0.0268	7.0200e-003	2.3500e-003	9.3700e-003	0.0000	98.9892	98.9892	7.8200e-003	0.0000	99.1846
Worker	0.0406	0.0275	0.2798	7.6000e-004	0.0767	5.5000e-004	0.0773	0.0204	5.0000e-004	0.0209	0.0000	68.8783	68.8783	1.9700e-003	0.0000	68.9276
Total	**0.0551**	**0.4738**	**0.3644**	**1.8000e-003**	**0.1010**	**3.0100e-003**	**0.1040**	**0.0274**	**2.8500e-003**	**0.0303**	**0.0000**	**167.8675**	**167.8675**	**9.7900e-003**	**0.0000**	**168.1123**

3.4 Building Construction - 2021

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	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2867	302.2867	0.0729	0.0000	304.1099
Total	**0.2481**	**2.2749**	**2.1631**	**3.5100e-003**		**0.1251**	**0.1251**		**0.1176**	**0.1176**	**0.0000**	**302.2867**	**302.2867**	**0.0729**	**0.0000**	**304.1099**

3.4 Building Construction - 2021

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	0.0791	2.7051	0.4935	6.9100e-003	0.1626	7.6100e-003	0.1703	0.0470	7.2800e-003	0.0543	0.0000	656.3118	656.3118	0.0501	0.0000	657.5646
Worker	0.2500	0.1638	1.6982	4.9200e-003	0.5133	3.5300e-003	0.5168	0.1364	3.2500e-003	0.1397	0.0000	444.9307	444.9307	0.0118	0.0000	445.2247
Total	**0.3291**	**2.8689**	**2.1917**	**0.0118**	**0.6760**	**0.0111**	**0.6871**	**0.1834**	**0.0105**	**0.1940**	**0.0000**	**1,101.2425**	**1,101.2425**	**0.0619**	**0.0000**	**1,102.7893**

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	0.1411	3.0739	2.3325	3.5100e-003		0.0177	0.0177		0.0177	0.0177	0.0000	302.2863	302.2863	0.0729	0.0000	304.1095
Total	**0.1411**	**3.0739**	**2.3325**	**3.5100e-003**		**0.0177**	**0.0177**		**0.0177**	**0.0177**	**0.0000**	**302.2863**	**302.2863**	**0.0729**	**0.0000**	**304.1095**

3.4 Building Construction - 2021

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	0.0791	2.7051	0.4935	6.9100e-003	0.1626	7.6100e-003	0.1703	0.0470	7.2800e-003	0.0543	0.0000	656.3118	656.3118	0.0501	0.0000	657.5646
Worker	0.2500	0.1638	1.6982	4.9200e-003	0.5133	3.5300e-003	0.5168	0.1364	3.2500e-003	0.1397	0.0000	444.9307	444.9307	0.0118	0.0000	445.2247
Total	**0.3291**	**2.8689**	**2.1917**	**0.0118**	**0.6760**	**0.0111**	**0.6871**	**0.1834**	**0.0105**	**0.1940**	**0.0000**	**1,101.2425**	**1,101.2425**	**0.0619**	**0.0000**	**1,102.7893**

3.4 Building Construction - 2022

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	0.0597	0.5466	0.5727	9.4000e-004		0.0283	0.0283		0.0266	0.0266	0.0000	81.1038	81.1038	0.0194	0.0000	81.5896
Total	**0.0597**	**0.5466**	**0.5727**	**9.4000e-004**		**0.0283**	**0.0283**		**0.0266**	**0.0266**	**0.0000**	**81.1038**	**81.1038**	**0.0194**	**0.0000**	**81.5896**

3.4 Building Construction - 2022

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	0.0197	0.6873	0.1221	1.8400e-003	0.0436	1.7700e-003	0.0454	0.0126	1.6900e-003	0.0143	0.0000	174.3877	174.3877	0.0130	0.0000	174.7117
Worker	0.0621	0.0392	0.4150	1.2700e-003	0.1377	9.2000e-004	0.1386	0.0366	8.5000e-004	0.0374	0.0000	115.0657	115.0657	2.8100e-003	0.0000	115.1360
Total	**0.0818**	**0.7265**	**0.5371**	**3.1100e-003**	**0.1813**	**2.6900e-003**	**0.1840**	**0.0492**	**2.5400e-003**	**0.0517**	**0.0000**	**289.4534**	**289.4534**	**0.0158**	**0.0000**	**289.8477**

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	0.0378	0.8244	0.6256	9.4000e-004		4.7400e-003	4.7400e-003		4.7400e-003	4.7400e-003	0.0000	81.1037	81.1037	0.0194	0.0000	81.5895
Total	**0.0378**	**0.8244**	**0.6256**	**9.4000e-004**		**4.7400e-003**	**4.7400e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**81.1037**	**81.1037**	**0.0194**	**0.0000**	**81.5895**

3.4 Building Construction - 2022

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	0.0197	0.6873	0.1221	1.8400e-003	0.0436	1.7700e-003	0.0454	0.0126	1.6900e-003	0.0143	0.0000	174.3877	174.3877	0.0130	0.0000	174.7117
Worker	0.0621	0.0392	0.4150	1.2700e-003	0.1377	9.2000e-004	0.1386	0.0366	8.5000e-004	0.0374	0.0000	115.0657	115.0657	2.8100e-003	0.0000	115.1360
Total	**0.0818**	**0.7265**	**0.5371**	**3.1100e-003**	**0.1813**	**2.6900e-003**	**0.1840**	**0.0492**	**2.5400e-003**	**0.0517**	**0.0000**	**289.4534**	**289.4534**	**0.0158**	**0.0000**	**289.8477**

3.5 Paving - 2022

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	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0276	20.0276	6.4800e-003	0.0000	20.1895
Paving	0.0170					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0280**	**0.1113**	**0.1458**	**2.3000e-004**		**5.6800e-003**	**5.6800e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**20.0276**	**20.0276**	**6.4800e-003**	**0.0000**	**20.1895**

3.5 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	3.4000e-004	3.6200e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0029
Total	**5.4000e-004**	**3.4000e-004**	**3.6200e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0023**	**1.0023**	**2.0000e-005**	**0.0000**	**1.0029**

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	9.3100e-003	0.2012	0.1730	2.3000e-004		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	20.0275	20.0275	6.4800e-003	0.0000	20.1895
Paving	0.0170					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0263**	**0.2012**	**0.1730**	**2.3000e-004**		**1.0000e-003**	**1.0000e-003**		**1.0000e-003**	**1.0000e-003**	**0.0000**	**20.0275**	**20.0275**	**6.4800e-003**	**0.0000**	**20.1895**

3.5 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	3.4000e-004	3.6200e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0029
Total	**5.4000e-004**	**3.4000e-004**	**3.6200e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0023**	**1.0023**	**2.0000e-005**	**0.0000**	**1.0029**

3.6 Architectural Coating - 2022

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	2.0395					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**2.0415**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5300e-003	2.2300e-003	0.0236	7.0000e-005	7.8300e-003	5.0000e-005	7.8900e-003	2.0800e-003	5.0000e-005	2.1300e-003	0.0000	6.5485	6.5485	1.6000e-004	0.0000	6.5525
Total	**3.5300e-003**	**2.2300e-003**	**0.0236**	**7.0000e-005**	**7.8300e-003**	**5.0000e-005**	**7.8900e-003**	**2.0800e-003**	**5.0000e-005**	**2.1300e-003**	**0.0000**	**6.5485**	**6.5485**	**1.6000e-004**	**0.0000**	**6.5525**

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	2.0395					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1400e-003	0.0235	0.0183	3.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**2.0406**	**0.0235**	**0.0183**	**3.0000e-005**		**1.4000e-004**	**1.4000e-004**		**1.4000e-004**	**1.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5300e-003	2.2300e-003	0.0236	7.0000e-005	7.8300e-003	5.0000e-005	7.8900e-003	2.0800e-003	5.0000e-005	2.1300e-003	0.0000	6.5485	6.5485	1.6000e-004	0.0000	6.5525
Total	**3.5300e-003**	**2.2300e-003**	**0.0236**	**7.0000e-005**	**7.8300e-003**	**5.0000e-005**	**7.8900e-003**	**2.0800e-003**	**5.0000e-005**	**2.1300e-003**	**0.0000**	**6.5485**	**6.5485**	**1.6000e-004**	**0.0000**	**6.5525**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.9279	2.6575	15.7214	0.0399	3.8198	0.0366	3.8564	1.0208	0.0340	1.0548	0.0000	3,615.9194	3,615.9194	0.1477	0.0000	3,619.6113
Unmitigated	1.9750	2.8834	17.0080	0.0448	4.3309	0.0404	4.3712	1.1573	0.0375	1.1949	0.0000	4,067.7520	4,067.7520	0.1623	0.0000	4,071.8088

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	295.20	295.20	295.20	855,436	754,494
Bank (with Drive-Through)	302.60	302.60	302.60	279,898	246,870
Day-Care Center	228.82	228.82	228.82	269,460	237,664
Fast Food Restaurant with Drive Thru	2,344.09	2,344.09	2344.09	2,190,140	1,931,704
Gasoline/Service Station	1,490.04	1,490.04	1490.04	858,514	757,209
General Office Building	98.04	98.04	98.04	234,291	206,645
High Turnover (Sit Down Restaurant)	476.85	476.85	476.85	553,272	487,986
Hotel	898.56	898.56	898.56	1,707,202	1,505,752
Medical Office Building	1,942.92	1,942.92	1942.92	3,802,776	3,354,049
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	479.55	479.55	479.55	840,798	741,584
Total	8,556.66	8,556.66	8,556.66	11,591,787	10,223,956

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	45.60	19.00	35.40	86	11	3
Bank (with Drive-Through)	9.50	7.30	7.30	6.60	74.40	19.00	27	26	47
Day-Care Center	9.50	7.30	7.30	12.70	82.30	5.00	28	58	14
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	29	21	50
Gasoline/Service Station	9.50	7.30	7.30	2.00	79.00	19.00	14	27	59
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.644860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
Bank (with Drive-Through)	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
Day-Care Center	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
Fast Food Restaurant with Drive Thru	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
Gasoline/Service Station	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
General Office Building	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
High Turnover (Sit Down Restaurant)	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
Hotel	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
Medical Office Building	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
Parking Lot	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741
Regional Shopping Center	0.664860	0.031902	0.170344	0.119204	0.018408	0.001000	0.003000	0.001000	0.001794	0.001564	0.005229	0.000954	0.000741

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	342.3176	342.3176	0.0302	6.2500e-003	344.9339
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	374.3804	374.3804	0.0330	6.8300e-003	377.2418
NaturalGas Mitigated	0.0310	0.2803	0.2254	1.6900e-003		0.0214	0.0214		0.0214	0.0214	0.0000	306.8709	306.8709	5.8800e-003	5.6300e-003	308.6945
NaturalGas Unmitigated	0.0371	0.3356	0.2689	2.0300e-003		0.0257	0.0257		0.0257	0.0257	0.0000	367.4821	367.4821	7.0400e-003	6.7400e-003	369.6659

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	678550	3.6600e-003	0.0313	0.0133	2.0000e-004		2.5300e-003	2.5300e-003		2.5300e-003	2.5300e-003	0.0000	36.2100	36.2100	6.9000e-004	6.6000e-004	36.4252
Bank (with Drive-Through)	74297.2	4.0000e-004	3.6400e-003	3.0600e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	3.9648	3.9648	8.0000e-005	7.0000e-005	3.9883
Day-Care Center	120628	6.5000e-004	5.9100e-003	4.9700e-003	4.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	6.4372	6.4372	1.2000e-004	1.2000e-004	6.4755
Fast Food Restaurant with Drive Thru	1.6619e+006	8.9600e-003	0.0815	0.0684	4.9000e-004		6.1900e-003	6.1900e-003		6.1900e-003	6.1900e-003	0.0000	88.6852	88.6852	1.7000e-003	1.6300e-003	89.2122
Gasoline/Service Station	65323.1	3.5000e-004	3.2000e-003	2.6900e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4859	3.4859	7.0000e-005	6.0000e-005	3.5066
General Office Building	156600	8.4000e-004	7.6800e-003	6.4500e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	8.3568	8.3568	1.6000e-004	1.5000e-004	8.4064
High Turnover (Sit Down Restaurant)	1.0521e+006	5.6700e-003	0.0516	0.0433	3.1000e-004		3.9200e-003	3.9200e-003		3.9200e-003	3.9200e-003	0.0000	56.1441	56.1441	1.0800e-003	1.0300e-003	56.4777
Hotel	2.01462e+006	0.0109	0.0988	0.0830	5.9000e-004		7.5100e-003	7.5100e-003		7.5100e-003	7.5100e-003	0.0000	107.5076	107.5076	2.0600e-003	1.9700e-003	108.1464
Medical Office Building	867368	4.6800e-003	0.0425	0.0357	2.6000e-004		3.2300e-003	3.2300e-003		3.2300e-003	3.2300e-003	0.0000	46.2861	46.2861	8.9000e-004	8.5000e-004	46.5611
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
Regional Shopping Center	194975	1.0500e-003	9.5600e-003	8.0300e-003	6.0000e-005		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	10.4046	10.4046	2.0000e-004	1.9000e-004	10.4665
Total		**0.0371**	**0.3356**	**0.2689**	**2.0400e-003**		**0.0257**	**0.0257**		**0.0257**	**0.0257**	**0.0000**	**367.4821**	**367.4821**	**7.0500e-003**	**6.7300e-003**	**369.6659**

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	528596	2.8500e-003	0.0244	0.0104	1.6000e-004		1.9700e-003	1.9700e-003		1.9700e-003	1.9700e-003	0.0000	28.2079	28.2079	5.4000e-004	5.2000e-004	28.3755
Bank (with Drive-Through)	56109.2	3.0000e-004	2.7500e-003	2.3100e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	2.9942	2.9942	6.0000e-005	5.0000e-005	3.0120
Day-Care Center	87207	4.7000e-004	4.2700e-003	3.5900e-003	3.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	4.6537	4.6537	9.0000e-005	9.0000e-005	4.6814
Fast Food Restaurant with Drive Thru	1.57726e+006	8.5000e-003	0.0773	0.0650	4.6000e-004		5.8800e-003	5.8800e-003		5.8800e-003	5.8800e-003	0.0000	84.1687	84.1687	1.6100e-003	1.5400e-003	84.6689
Gasoline/Service Station	49331.9	2.7000e-004	2.4200e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6325	2.6325	5.0000e-005	5.0000e-005	2.6482
General Office Building	110628	6.0000e-004	5.4200e-003	4.5600e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.9035	5.9035	1.1000e-004	1.1000e-004	5.9386
High Turnover (Sit Down Restaurant)	998520	5.3800e-003	0.0490	0.0411	2.9000e-004		3.7200e-003	3.7200e-003		3.7200e-003	3.7200e-003	0.0000	53.2848	53.2848	1.0200e-003	9.8000e-004	53.6015
Hotel	1.58229e+006	8.5300e-003	0.0776	0.0652	4.7000e-004		5.8900e-003	5.8900e-003		5.8900e-003	5.8900e-003	0.0000	84.4373	84.4373	1.6200e-003	1.5500e-003	84.9390
Medical Office Building	612741	3.3000e-003	0.0300	0.0252	1.8000e-004		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	32.6982	32.6982	6.3000e-004	6.0000e-004	32.8925
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
Regional Shopping Center	147853	8.0000e-004	7.2500e-003	6.0900e-003	4.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	7.8900	7.8900	1.5000e-004	1.4000e-004	7.9369
Total		**0.0310**	**0.2803**	**0.2254**	**1.6900e-003**		**0.0214**	**0.0214**		**0.0214**	**0.0214**	**0.0000**	**306.8709**	**306.8709**	**5.8800e-003**	**5.6300e-003**	**308.6944**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	224521	33.4853	2.9500e-003	6.1000e-004	33.7413
Bank (with Drive-Through)	31399.2	4.6829	4.1000e-004	9.0000e-005	4.7187
Day-Care Center	33724.1	5.0297	4.4000e-004	9.0000e-005	5.0681
Fast Food Restaurant with Drive Thru	228805	34.1243	3.0100e-003	6.2000e-004	34.3851
Gasoline/Service Station	27606.6	4.1173	3.6000e-004	8.0000e-005	4.1488
General Office Building	109440	16.3220	1.4400e-003	3.0000e-004	16.4468
High Turnover (Sit Down Restaurant)	144850	21.6031	1.9100e-003	3.9000e-004	21.7682
Hotel	636026	94.8576	8.3700e-003	1.7300e-003	95.5826
Medical Office Building	606161	90.4035	7.9700e-003	1.6500e-003	91.0945
Parking Lot	319200	47.6059	4.2000e-003	8.7000e-004	47.9697
Regional Shopping Center	148509	22.1489	1.9500e-003	4.0000e-004	22.3181
Total		**374.3804**	**0.0330**	**6.8300e-003**	**377.2418**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	214522	31.9940	2.8200e-003	5.8000e-004	32.2385
Bank (with Drive-Through)	29305.9	4.3707	3.9000e-004	8.0000e-005	4.4041
Day-Care Center	30639.9	4.5697	4.0000e-004	8.0000e-005	4.6046
Fast Food Restaurant with Drive Thru	213285	31.8097	2.8100e-003	5.8000e-004	32.0528
Gasoline/Service Station	25766.2	3.8428	3.4000e-004	7.0000e-005	3.8722
General Office Building	100008	14.9153	1.3200e-003	2.7000e-004	15.0293
High Turnover (Sit Down Restaurant)	135025	20.1378	1.7800e-003	3.7000e-004	20.2917
Hotel	536777	80.0555	7.0600e-003	1.4600e-003	80.6674
Medical Office Building	553919	82.6122	7.2900e-003	1.5100e-003	83.2436
Parking Lot	319200	47.6059	4.2000e-003	8.7000e-004	47.9697
Regional Shopping Center	136811	20.4041	1.8000e-003	3.7000e-004	20.5601
Total		**342.3176**	**0.0302**	**6.2400e-003**	**344.9340**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2500	0.0222	0.3752	1.3000e-004		3.4600e-003	3.4600e-003		3.4600e-003	3.4600e-003	0.0000	21.3970	21.3970	1.0200e-003	3.8000e-004	21.5360
Unmitigated	1.3048	0.0303	0.8731	1.7600e-003		0.0847	0.0847		0.0847	0.0847	10.8749	21.3970	32.2720	0.0519	3.8000e-004	33.6819

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	0.2040					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0569	0.0261	0.5055	1.7400e-003		0.0827	0.0827		0.0827	0.0827	10.8749	20.7940	31.6689	0.0512	3.8000e-004	33.0634
Landscaping	0.0118	4.2100e-003	0.3676	2.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	0.6031	0.6031	6.2000e-004	0.0000	0.6185
Total	**1.3048**	**0.0303**	**0.8731**	**1.7600e-003**		**0.0847**	**0.0847**		**0.0847**	**0.0847**	**10.8749**	**21.3970**	**32.2720**	**0.0519**	**3.8000e-004**	**33.6819**

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	0.2040					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.1000e-003	0.0180	7.6400e-003	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	20.7940	20.7940	4.0000e-004	3.8000e-004	20.9175
Landscaping	0.0118	4.2100e-003	0.3676	2.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	0.6031	0.6031	6.2000e-004	0.0000	0.6185
Total	**1.2500**	**0.0222**	**0.3752**	**1.3000e-004**		**3.4600e-003**	**3.4600e-003**		**3.4600e-003**	**3.4600e-003**	**0.0000**	**21.3970**	**21.3970**	**1.0200e-003**	**3.8000e-004**	**21.5360**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	28.3610	0.7389	0.0178	52.1354
Unmitigated	29.0938	0.7390	0.0178	52.8738

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	3.12739 / 1.97162	4.5452	0.1022	2.4700e-003	7.8370
Bank (with Drive-Through)	0.141058 / 0.0864546	0.2037	4.6100e-003	1.1000e-004	0.3522
Day-Care Center	0.20587 / 0.52938	0.5078	6.7500e-003	1.7000e-004	0.7261
Fast Food Restaurant with Drive Thru	2.39792 / 0.153058	2.7758	0.0783	1.8800e-003	5.2944
Gasoline/Service Station	0.159383 / 0.0976861	0.2302	5.2100e-003	1.3000e-004	0.3979
General Office Building	2.1328 / 1.3072	3.0802	0.0697	1.6800e-003	5.3250
High Turnover (Sit Down Restaurant)	1.51767 / 0.0968725	1.7568	0.0496	1.1900e-003	3.3509
Hotel	3.24695 / 0.360772	3.8387	0.1061	2.5500e-003	7.2497
Medical Office Building	8.34069 / 1.5887	10.2064	0.2725	6.5600e-003	18.9711
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.3496 / 0.827175	1.9491	0.0441	1.0700e-003	3.3696
Total		**29.0938**	**0.7390**	**0.0178**	**52.8738**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	3.12739 / 1.57729	4.3393	0.1022	2.4700e-003	7.6296
Bank (with Drive-Through)	0.141058 / 0.0691637	0.1947	4.6100e-003	1.1000e-004	0.3431
Day-Care Center	0.20587 / 0.423504	0.4525	6.7400e-003	1.7000e-004	0.6704
Fast Food Restaurant with Drive Thru	2.39792 / 0.122447	2.7598	0.0783	1.8800e-003	5.2783
Gasoline/Service Station	0.159383 / 0.0781489	0.2200	5.2100e-003	1.3000e-004	0.3877
General Office Building	2.1328 / 1.04576	2.9437	0.0697	1.6800e-003	5.1875
High Turnover (Sit Down Restaurant)	1.51767 / 0.077498	1.7467	0.0496	1.1900e-003	3.3407
Hotel	3.24695 / 0.288617	3.8011	0.1061	2.5500e-003	7.2118
Medical Office Building	8.34069 / 1.27096	10.0405	0.2724	6.5500e-003	18.8039
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.3496 / 0.66174	1.8627	0.0441	1.0600e-003	3.2826
Total		**28.3610**	**0.7389**	**0.0178**	**52.1354**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Yosemite Crossing - Mitigated Construction - San Joaquin Valley Unified APCD Air District, Annual

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	153.2876	9.0590	0.0000	379.7636
Unmitigated	204.3835	12.0787	0.0000	506.3514

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	22.08	4.4820	0.2649	0.0000	11.1041
Bank (with Drive-Through)	3.32	0.6739	0.0398	0.0000	1.6696
Day-Care Center	6.24	1.2667	0.0749	0.0000	3.1381
Fast Food Restaurant with Drive Thru	91	18.4722	1.0917	0.0000	45.7640
Gasoline/Service Station	6.47	1.3134	0.0776	0.0000	3.2538
General Office Building	11.16	2.2654	0.1339	0.0000	5.6124
High Turnover (Sit Down Restaurant)	59.5	12.0780	0.7138	0.0000	29.9226
Hotel	70.08	14.2256	0.8407	0.0000	35.2433
Medical Office Building	717.88	145.7232	8.6120	0.0000	361.0229
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	19.13	3.8832	0.2295	0.0000	9.6205
Total		**204.3835**	**12.0787**	**0.0000**	**506.3514**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	16.56	3.3615	0.1987	0.0000	8.3281
Bank (with Drive-Through)	2.49	0.5055	0.0299	0.0000	1.2522
Day-Care Center	4.68	0.9500	0.0561	0.0000	2.3536
Fast Food Restaurant with Drive Thru	68.25	13.8541	0.8188	0.0000	34.3230
Gasoline/Service Station	4.8525	0.9850	0.0582	0.0000	2.4403
General Office Building	8.37	1.6990	0.1004	0.0000	4.2093
High Turnover (Sit Down Restaurant)	44.625	9.0585	0.5353	0.0000	22.4420
Hotel	52.56	10.6692	0.6305	0.0000	26.4325
Medical Office Building	538.41	109.2924	6.4590	0.0000	270.7672
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	14.3475	2.9124	0.1721	0.0000	7.2154
Total		**153.2876**	**9.0590**	**0.0000**	**379.7636**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Yosemite Crossing - 2008 BAU

San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Bank (with Drive-Through)	3.56	1000sqft	0.08	3,560.00	0
General Office Building	12.00	1000sqft	0.28	12,000.00	0
Medical Office Building	66.47	1000sqft	1.53	66,465.00	0
Day-Care Center	4.80	1000sqft	0.11	4,804.00	0
Parking Lot	912.00	Space	12.97	364,800.00	0
Fast Food Restaurant with Drive Thru	7.90	1000sqft	0.18	7,898.00	0
High Turnover (Sit Down Restaurant)	5.00	1000sqft	0.11	5,000.00	0
Hotel	128.00	Room	2.99	185,856.00	0
Apartments Low Rise	48.00	Dwelling Unit	2.69	48,000.00	152
Gasoline/Service Station	12.00	Pump	0.04	3,130.00	0
Regional Shopping Center	18.22	1000sqft	0.42	18,222.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2010
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Yosemite Crossing - 2008 BAU - San Joaquin Valley Unified APCD Air District, Annual

Project Characteristics - CalEEMod does not have 2008 operational year, therefore 2010 was selected to be conservative.

Land Use - Based on site plan dated 07/24/19 and Traffic Impact Analysis dated 08/06/19

Construction Phase - Operational run only

Energy Use - Using historical data

Vehicle Trips -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	66,470.00	66,465.00
tblLandUse	LandUseSquareFeet	4,800.00	4,804.00
tblLandUse	LandUseSquareFeet	7,900.00	7,898.00
tblLandUse	LandUseSquareFeet	1,694.10	3,130.00
tblLandUse	LandUseSquareFeet	18,220.00	18,222.00
tblLandUse	LotAcreage	8.21	12.97
tblLandUse	LotAcreage	4.27	2.99
tblLandUse	LotAcreage	3.00	2.69
tblWoodstoves	NumberCatalytic	2.69	0.00
tblWoodstoves	NumberNoncatalytic	2.69	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2006	0.5880	3.8838	2.7180	0.0269	0.3098	0.2075	0.5173	0.1309	0.2064	0.3373	0.0000	307.6835	307.6835	0.0591	0.0000	309.1596
2007	2.1114	11.2582	11.1915	0.0826	0.4188	0.6149	1.0337	0.1136	0.6077	0.7213	0.0000	1,105.0216	1,105.0216	0.2452	0.0000	1,111.1521
2008	5.0361	3.4477	3.2712	0.0249	0.1168	0.1929	0.3097	0.0317	0.1910	0.2227	0.0000	325.3758	325.3758	0.0710	0.0000	327.1510
Maximum	**5.0361**	**11.2582**	**11.1915**	**0.0826**	**0.4188**	**0.6149**	**1.0337**	**0.1309**	**0.6077**	**0.7213**	**0.0000**	**1,105.0216**	**1,105.0216**	**0.2452**	**0.0000**	**1,111.1521**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2006	0.5880	3.8838	2.7180	0.0269	0.3098	0.2075	0.5173	0.1309	0.2064	0.3373	0.0000	307.6833	307.6833	0.0590	0.0000	309.1594
2007	2.1114	11.2582	11.1915	0.0826	0.4188	0.6149	1.0337	0.1136	0.6077	0.7213	0.0000	1,105.0212	1,105.0212	0.2452	0.0000	1,111.1517
2008	5.0361	3.4477	3.2712	0.0249	0.1168	0.1929	0.3097	0.0317	0.1910	0.2227	0.0000	325.3756	325.3756	0.0710	0.0000	327.1508
Maximum	**5.0361**	**11.2582**	**11.1915**	**0.0826**	**0.4188**	**0.6149**	**1.0337**	**0.1309**	**0.6077**	**0.7213**	**0.0000**	**1,105.0212**	**1,105.0212**	**0.2452**	**0.0000**	**1,111.1517**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**9-4-2006**	**12-3-2006**	3.4751	3.4751
2	**12-4-2006**	**3-3-2007**	3.3259	3.3259
3	**3-4-2007**	**6-3-2007**	3.3537	3.3537
4	**6-4-2007**	**9-3-2007**	3.3335	3.3335
5	**9-4-2007**	**12-3-2007**	3.3434	3.3434
6	**12-4-2007**	**3-3-2008**	3.3628	3.3628
7	**3-4-2008**	**6-3-2008**	6.1292	6.1292
		Highest	6.1292	6.1292

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.8652	0.0226	0.3989	1.3000e-004		3.3700e-003	3.3700e-003		3.3700e-003	3.3700e-003	0.0000	21.3970	21.3970	1.1800e-003	3.8000e-004	21.5402
Energy	0.0554	0.5016	0.4070	3.0200e-003		0.0383	0.0383		0.0383	0.0383	0.0000	1,661.5933	1,661.5933	0.0609	0.0205	1,669.2140
Mobile	11.0889	47.9125	86.1430	0.1102	5.5512	1.2665	6.8177	1.4960	1.2096	2.7056	0.0000	10,096.0645	10,096.0645	2.3664	0.0000	10,155.2238
Waste						0.0000	0.0000		0.0000	0.0000	204.3835	0.0000	204.3835	12.0787	0.0000	506.3514
Water						0.0000	0.0000		0.0000	0.0000	7.1761	42.7522	49.9283	0.7390	0.0178	73.7083
Total	**13.0095**	**48.4367**	**86.9489**	**0.1133**	**5.5512**	**1.3082**	**6.8594**	**1.4960**	**1.2513**	**2.7473**	**211.5596**	**11,821.8070**	**12,033.3665**	**15.2461**	**0.0387**	**12,426.0376**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.8652	0.0226	0.3989	1.3000e-004		3.3700e-003	3.3700e-003		3.3700e-003	3.3700e-003	0.0000	21.3970	21.3970	1.1800e-003	3.8000e-004	21.5402
Energy	0.0554	0.5016	0.4070	3.0200e-003		0.0383	0.0383		0.0383	0.0383	0.0000	1,661.5933	1,661.5933	0.0609	0.0205	1,669.2140
Mobile	11.0889	47.9125	86.1430	0.1102	5.5512	1.2665	6.8177	1.4960	1.2096	2.7056	0.0000	10,096.0645	10,096.0645	2.3664	0.0000	10,155.2238
Waste						0.0000	0.0000		0.0000	0.0000	204.3835	0.0000	204.3835	12.0787	0.0000	506.3514
Water						0.0000	0.0000		0.0000	0.0000	7.1761	42.7522	49.9283	0.7390	0.0178	73.7083
Total	**13.0095**	**48.4367**	**86.9489**	**0.1133**	**5.5512**	**1.3082**	**6.8594**	**1.4960**	**1.2513**	**2.7473**	**211.5596**	**11,821.8070**	**12,033.3665**	**15.2461**	**0.0387**	**12,426.0376**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/4/2006	9/15/2006	5	10	
2	Grading	Grading	9/16/2006	11/3/2006	5	35	
3	Building Construction	Building Construction	11/4/2006	4/4/2008	5	370	
4	Paving	Paving	4/5/2008	5/2/2008	5	20	
5	Architectural Coating	Architectural Coating	5/3/2008	5/30/2008	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 12.97

Residential Indoor: 97,200; Residential Outdoor: 32,400; Non-Residential Indoor: 460,403; Non-Residential Outdoor: 153,468; Striped Parking Area: 21,888 (Architectural Coating – sqft)

OffRoad Equipment

Yosemite Crossing - 2008 BAU - San Joaquin Valley Unified APCD Air District, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	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	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	306.00	115.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	61.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2006

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	0.0467	0.3496	0.1316	2.2500e-003		0.0216	0.0216		0.0216	0.0216	0.0000	20.0023	20.0023	3.8000e-003	0.0000	20.0974
Total	**0.0467**	**0.3496**	**0.1316**	**2.2500e-003**	**0.0903**	**0.0216**	**0.1119**	**0.0497**	**0.0216**	**0.0712**	**0.0000**	**20.0023**	**20.0023**	**3.8000e-003**	**0.0000**	**20.0974**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4200e-003	1.4100e-003	0.0132	1.0000e-005	7.2000e-004	2.0000e-005	7.4000e-004	1.9000e-004	2.0000e-005	2.1000e-004	0.0000	0.7805	0.7805	1.0000e-004	0.0000	0.7830
Total	**1.4200e-003**	**1.4100e-003**	**0.0132**	**1.0000e-005**	**7.2000e-004**	**2.0000e-005**	**7.4000e-004**	**1.9000e-004**	**2.0000e-005**	**2.1000e-004**	**0.0000**	**0.7805**	**0.7805**	**1.0000e-004**	**0.0000**	**0.7830**

3.2 Site Preparation - 2006

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	0.0467	0.3496	0.1316	2.2500e-003		0.0216	0.0216		0.0216	0.0216	0.0000	20.0023	20.0023	3.8000e-003	0.0000	20.0974
Total	**0.0467**	**0.3496**	**0.1316**	**2.2500e-003**	**0.0903**	**0.0216**	**0.1119**	**0.0497**	**0.0216**	**0.0712**	**0.0000**	**20.0023**	**20.0023**	**3.8000e-003**	**0.0000**	**20.0974**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4200e-003	1.4100e-003	0.0132	1.0000e-005	7.2000e-004	2.0000e-005	7.4000e-004	1.9000e-004	2.0000e-005	2.1000e-004	0.0000	0.7805	0.7805	1.0000e-004	0.0000	0.7830
Total	**1.4200e-003**	**1.4100e-003**	**0.0132**	**1.0000e-005**	**7.2000e-004**	**2.0000e-005**	**7.4000e-004**	**1.9000e-004**	**2.0000e-005**	**2.1000e-004**	**0.0000**	**0.7805**	**0.7805**	**1.0000e-004**	**0.0000**	**0.7830**

3.3 Grading - 2006

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					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2108	1.8019	0.8065	0.0120		0.0916	0.0916		0.0916	0.0916	0.0000	114.5135	114.5135	0.0172	0.0000	114.9428
Total	**0.2108**	**1.8019**	**0.8065**	**0.0120**	**0.1518**	**0.0916**	**0.2434**	**0.0629**	**0.0916**	**0.1545**	**0.0000**	**114.5135**	**114.5135**	**0.0172**	**0.0000**	**114.9428**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5100e-003	5.4700e-003	0.0515	3.0000e-005	2.8000e-003	7.0000e-005	2.8700e-003	7.4000e-004	6.0000e-005	8.1000e-004	0.0000	3.0353	3.0353	3.9000e-004	0.0000	3.0450
Total	**5.5100e-003**	**5.4700e-003**	**0.0515**	**3.0000e-005**	**2.8000e-003**	**7.0000e-005**	**2.8700e-003**	**7.4000e-004**	**6.0000e-005**	**8.1000e-004**	**0.0000**	**3.0353**	**3.0353**	**3.9000e-004**	**0.0000**	**3.0450**

3.3 Grading - 2006

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					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2108	1.8019	0.8065	0.0120		0.0916	0.0916		0.0916	0.0916	0.0000	114.5134	114.5134	0.0172	0.0000	114.9427
Total	**0.2108**	**1.8019**	**0.8065**	**0.0120**	**0.1518**	**0.0916**	**0.2434**	**0.0629**	**0.0916**	**0.1545**	**0.0000**	**114.5134**	**114.5134**	**0.0172**	**0.0000**	**114.9427**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5100e-003	5.4700e-003	0.0515	3.0000e-005	2.8000e-003	7.0000e-005	2.8700e-003	7.4000e-004	6.0000e-005	8.1000e-004	0.0000	3.0353	3.0353	3.9000e-004	0.0000	3.0450
Total	**5.5100e-003**	**5.4700e-003**	**0.0515**	**3.0000e-005**	**2.8000e-003**	**7.0000e-005**	**2.8700e-003**	**7.4000e-004**	**6.0000e-005**	**8.1000e-004**	**0.0000**	**3.0353**	**3.0353**	**3.9000e-004**	**0.0000**	**3.0450**

3.4 Building Construction - 2006

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	0.1503	0.8289	0.4078	6.0800e-003		0.0696	0.0696		0.0696	0.0696	0.0000	52.5722	52.5722	0.0123	0.0000	52.8789
Total	**0.1503**	**0.8289**	**0.4078**	**6.0800e-003**		**0.0696**	**0.0696**		**0.0696**	**0.0696**	**0.0000**	**52.5722**	**52.5722**	**0.0123**	**0.0000**	**52.8789**

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	0.0770	0.8008	0.4071	5.9700e-003	0.0153	0.0234	0.0387	4.4100e-003	0.0224	0.0268	0.0000	63.7062	63.7062	0.0185	0.0000	64.1695
Worker	0.0963	0.0957	0.9004	6.0000e-004	0.0489	1.2100e-003	0.0501	0.0130	1.1200e-003	0.0141	0.0000	53.0735	53.0735	6.7800e-003	0.0000	53.2432
Total	**0.1733**	**0.8965**	**1.3074**	**6.5700e-003**	**0.0642**	**0.0247**	**0.0888**	**0.0174**	**0.0235**	**0.0410**	**0.0000**	**116.7798**	**116.7798**	**0.0253**	**0.0000**	**117.4126**

3.4 Building Construction - 2006

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	0.1503	0.8289	0.4078	6.0800e-003		0.0696	0.0696		0.0696	0.0696	0.0000	52.5721	52.5721	0.0123	0.0000	52.8788
Total	**0.1503**	**0.8289**	**0.4078**	**6.0800e-003**		**0.0696**	**0.0696**		**0.0696**	**0.0696**	**0.0000**	**52.5721**	**52.5721**	**0.0123**	**0.0000**	**52.8788**

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	0.0770	0.8008	0.4071	5.9700e-003	0.0153	0.0234	0.0387	4.4100e-003	0.0224	0.0268	0.0000	63.7062	63.7062	0.0185	0.0000	64.1695
Worker	0.0963	0.0957	0.9004	6.0000e-004	0.0489	1.2100e-003	0.0501	0.0130	1.1200e-003	0.0141	0.0000	53.0735	53.0735	6.7800e-003	0.0000	53.2432
Total	**0.1733**	**0.8965**	**1.3074**	**6.5700e-003**	**0.0642**	**0.0247**	**0.0888**	**0.0174**	**0.0235**	**0.0410**	**0.0000**	**116.7798**	**116.7798**	**0.0253**	**0.0000**	**117.4126**

3.4 Building Construction - 2007

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	0.9808	5.4086	2.6607	0.0397		0.4541	0.4541		0.4541	0.4541	0.0000	343.0336	343.0336	0.0801	0.0000	345.0348
Total	**0.9808**	**5.4086**	**2.6607**	**0.0397**		**0.4541**	**0.4541**		**0.4541**	**0.4541**	**0.0000**	**343.0336**	**343.0336**	**0.0801**	**0.0000**	**345.0348**

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	0.5021	5.2250	2.6560	0.0390	0.0995	0.1529	0.2524	0.0288	0.1463	0.1750	0.0000	415.6832	415.6832	0.1209	0.0000	418.7057
Worker	0.6285	0.6247	5.8748	3.9200e-003	0.3193	7.9000e-003	0.3272	0.0849	7.3300e-003	0.0922	0.0000	346.3048	346.3048	0.0443	0.0000	347.4116
Total	**1.1306**	**5.8496**	**8.5308**	**0.0429**	**0.4188**	**0.1608**	**0.5796**	**0.1136**	**0.1536**	**0.2672**	**0.0000**	**761.9880**	**761.9880**	**0.1652**	**0.0000**	**766.1173**

3.4 Building Construction - 2007

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	0.9808	5.4086	2.6607	0.0397		0.4541	0.4541		0.4541	0.4541	0.0000	343.0332	343.0332	0.0801	0.0000	345.0344
Total	**0.9808**	**5.4086**	**2.6607**	**0.0397**		**0.4541**	**0.4541**		**0.4541**	**0.4541**	**0.0000**	**343.0332**	**343.0332**	**0.0801**	**0.0000**	**345.0344**

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	0.5021	5.2250	2.6560	0.0390	0.0995	0.1529	0.2524	0.0288	0.1463	0.1750	0.0000	415.6832	415.6832	0.1209	0.0000	418.7057
Worker	0.6285	0.6247	5.8748	3.9200e-003	0.3193	7.9000e-003	0.3272	0.0849	7.3300e-003	0.0922	0.0000	346.3048	346.3048	0.0443	0.0000	347.4116
Total	**1.1306**	**5.8496**	**8.5308**	**0.0429**	**0.4188**	**0.1608**	**0.5796**	**0.1136**	**0.1536**	**0.2672**	**0.0000**	**761.9880**	**761.9880**	**0.1652**	**0.0000**	**766.1173**

3.4 Building Construction - 2008

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	0.2593	1.4299	0.7034	0.0105		0.1201	0.1201		0.1201	0.1201	0.0000	90.6871	90.6871	0.0212	0.0000	91.2161
Total	**0.2593**	**1.4299**	**0.7034**	**0.0105**		**0.1201**	**0.1201**		**0.1201**	**0.1201**	**0.0000**	**90.6871**	**90.6871**	**0.0212**	**0.0000**	**91.2161**

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	0.1328	1.3813	0.7022	0.0103	0.0263	0.0404	0.0667	7.6000e-003	0.0387	0.0463	0.0000	109.8933	109.8933	0.0320	0.0000	110.6923
Worker	0.1662	0.1651	1.5531	1.0400e-003	0.0844	2.0900e-003	0.0865	0.0224	1.9400e-003	0.0244	0.0000	91.5518	91.5518	0.0117	0.0000	91.8445
Total	**0.2989**	**1.5465**	**2.2553**	**0.0113**	**0.1107**	**0.0425**	**0.1532**	**0.0300**	**0.0406**	**0.0706**	**0.0000**	**201.4451**	**201.4451**	**0.0437**	**0.0000**	**202.5368**

3.4 Building Construction - 2008

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	0.2593	1.4299	0.7034	0.0105		0.1201	0.1201		0.1201	0.1201	0.0000	90.6869	90.6869	0.0212	0.0000	91.2160
Total	**0.2593**	**1.4299**	**0.7034**	**0.0105**		**0.1201**	**0.1201**		**0.1201**	**0.1201**	**0.0000**	**90.6869**	**90.6869**	**0.0212**	**0.0000**	**91.2160**

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	0.1328	1.3813	0.7022	0.0103	0.0263	0.0404	0.0667	7.6000e-003	0.0387	0.0463	0.0000	109.8933	109.8933	0.0320	0.0000	110.6923
Worker	0.1662	0.1651	1.5531	1.0400e-003	0.0844	2.0900e-003	0.0865	0.0224	1.9400e-003	0.0244	0.0000	91.5518	91.5518	0.0117	0.0000	91.8445
Total	**0.2989**	**1.5465**	**2.2553**	**0.0113**	**0.1107**	**0.0425**	**0.1532**	**0.0300**	**0.0406**	**0.0706**	**0.0000**	**201.4451**	**201.4451**	**0.0437**	**0.0000**	**202.5368**

3.5 Paving - 2008

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	0.0579	0.4167	0.1800	2.7000e-003		0.0264	0.0264		0.0264	0.0264	0.0000	24.0995	24.0995	4.7200e-003	0.0000	24.2176
Paving	0.0170					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0749**	**0.4167**	**0.1800**	**2.7000e-003**		**0.0264**	**0.0264**		**0.0264**	**0.0264**	**0.0000**	**24.0995**	**24.0995**	**4.7200e-003**	**0.0000**	**24.2176**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3600e-003	2.3500e-003	0.0221	1.0000e-005	1.2000e-003	3.0000e-005	1.2300e-003	3.2000e-004	3.0000e-005	3.5000e-004	0.0000	1.3008	1.3008	1.7000e-004	0.0000	1.3050
Total	**2.3600e-003**	**2.3500e-003**	**0.0221**	**1.0000e-005**	**1.2000e-003**	**3.0000e-005**	**1.2300e-003**	**3.2000e-004**	**3.0000e-005**	**3.5000e-004**	**0.0000**	**1.3008**	**1.3008**	**1.7000e-004**	**0.0000**	**1.3050**

3.5 Paving - 2008

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	0.0579	0.4167	0.1800	2.7000e-003		0.0264	0.0264		0.0264	0.0264	0.0000	24.0995	24.0995	4.7200e-003	0.0000	24.2175
Paving	0.0170					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0749**	**0.4167**	**0.1800**	**2.7000e-003**		**0.0264**	**0.0264**		**0.0264**	**0.0264**	**0.0000**	**24.0995**	**24.0995**	**4.7200e-003**	**0.0000**	**24.2175**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3600e-003	2.3500e-003	0.0221	1.0000e-005	1.2000e-003	3.0000e-005	1.2300e-003	3.2000e-004	3.0000e-005	3.5000e-004	0.0000	1.3008	1.3008	1.7000e-004	0.0000	1.3050
Total	**2.3600e-003**	**2.3500e-003**	**0.0221**	**1.0000e-005**	**1.2000e-003**	**3.0000e-005**	**1.2300e-003**	**3.2000e-004**	**3.0000e-005**	**3.5000e-004**	**0.0000**	**1.3008**	**1.3008**	**1.7000e-004**	**0.0000**	**1.3050**

3.6 Architectural Coating - 2008

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	4.3836					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5200e-003	0.0428	0.0208	3.0000e-004		3.8400e-003	3.8400e-003		3.8400e-003	3.8400e-003	0.0000	2.5533	2.5533	6.2000e-004	0.0000	2.5686
Total	**4.3911**	**0.0428**	**0.0208**	**3.0000e-004**		**3.8400e-003**	**3.8400e-003**		**3.8400e-003**	**3.8400e-003**	**0.0000**	**2.5533**	**2.5533**	**6.2000e-004**	**0.0000**	**2.5686**

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-003	9.5400e-003	0.0897	6.0000e-005	4.8800e-003	1.2000e-004	5.0000e-003	1.3000e-003	1.1000e-004	1.4100e-003	0.0000	5.2900	5.2900	6.8000e-004	0.0000	5.3069
Total	**9.6000e-003**	**9.5400e-003**	**0.0897**	**6.0000e-005**	**4.8800e-003**	**1.2000e-004**	**5.0000e-003**	**1.3000e-003**	**1.1000e-004**	**1.4100e-003**	**0.0000**	**5.2900**	**5.2900**	**6.8000e-004**	**0.0000**	**5.3069**

3.6 Architectural Coating - 2008

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	4.3836					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5200e-003	0.0428	0.0208	3.0000e-004		3.8400e-003	3.8400e-003		3.8400e-003	3.8400e-003	0.0000	2.5533	2.5533	6.2000e-004	0.0000	2.5686
Total	**4.3911**	**0.0428**	**0.0208**	**3.0000e-004**		**3.8400e-003**	**3.8400e-003**		**3.8400e-003**	**3.8400e-003**	**0.0000**	**2.5533**	**2.5533**	**6.2000e-004**	**0.0000**	**2.5686**

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-003	9.5400e-003	0.0897	6.0000e-005	4.8800e-003	1.2000e-004	5.0000e-003	1.3000e-003	1.1000e-004	1.4100e-003	0.0000	5.2900	5.2900	6.8000e-004	0.0000	5.3069
Total	**9.6000e-003**	**9.5400e-003**	**0.0897**	**6.0000e-005**	**4.8800e-003**	**1.2000e-004**	**5.0000e-003**	**1.3000e-003**	**1.1000e-004**	**1.4100e-003**	**0.0000**	**5.2900**	**5.2900**	**6.8000e-004**	**0.0000**	**5.3069**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	11.0889	47.9125	86.1430	0.1102	5.5512	1.2665	6.8177	1.4960	1.2096	2.7056	0.0000	10,096.0645	10,096.0645	2.3664	0.0000	10,155.2238
Unmitigated	11.0889	47.9125	86.1430	0.1102	5.5512	1.2665	6.8177	1.4960	1.2096	2.7056	0.0000	10,096.0645	10,096.0645	2.3664	0.0000	10,155.2238

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	316.32	343.68	291.36	917,631	917,631
Bank (with Drive-Through)	527.41	307.30	113.56	404,073	404,073
Day-Care Center	355.49	29.81	27.98	308,746	308,746
Fast Food Restaurant with Drive Thru	3,919.35	5,704.04	4287.49	3,949,294	3,949,294
Gasoline/Service Station	2,022.72	2,022.72	2022.72	1,165,427	1,165,427
General Office Building	132.36	29.52	12.60	240,314	240,314
High Turnover (Sit Down Restaurant)	635.75	791.85	659.20	767,399	767,399
Hotel	1,045.76	1,048.32	761.60	1,910,440	1,910,440
Medical Office Building	2,401.56	595.57	103.03	3,552,801	3,552,801
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	777.99	910.45	459.87	1,317,558	1,317,558
Total	12,134.72	11,783.26	8,739.42	14,533,683	14,533,683

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	45.60	19.00	35.40	86	11	3
Bank (with Drive-Through)	9.50	7.30	7.30	6.60	74.40	19.00	27	26	47
Day-Care Center	9.50	7.30	7.30	12.70	82.30	5.00	28	58	14
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	29	21	50
Gasoline/Service Station	9.50	7.30	7.30	2.00	79.00	19.00	14	27	59
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.422984	0.052650	0.154628	0.194025	0.043720	0.008834	0.019253	0.089962	0.001921	0.002254	0.007059	0.001063	0.001647
Bank (with Drive-Through)	0.422984	0.052650	0.154628	0.194025	0.043720	0.008834	0.019253	0.089962	0.001921	0.002254	0.007059	0.001063	0.001647
Day-Care Center	0.422984	0.052650	0.154628	0.194025	0.043720	0.008834	0.019253	0.089962	0.001921	0.002254	0.007059	0.001063	0.001647
Fast Food Restaurant with Drive Thru	0.422984	0.052650	0.154628	0.194025	0.043720	0.008834	0.019253	0.089962	0.001921	0.002254	0.007059	0.001063	0.001647
Gasoline/Service Station	0.422984	0.052650	0.154628	0.194025	0.043720	0.008834	0.019253	0.089962	0.001921	0.002254	0.007059	0.001063	0.001647
General Office Building	0.422984	0.052650	0.154628	0.194025	0.043720	0.008834	0.019253	0.089962	0.001921	0.002254	0.007059	0.001063	0.001647
High Turnover (Sit Down Restaurant)	0.422984	0.052650	0.154628	0.194025	0.043720	0.008834	0.019253	0.089962	0.001921	0.002254	0.007059	0.001063	0.001647
Hotel	0.422984	0.052650	0.154628	0.194025	0.043720	0.008834	0.019253	0.089962	0.001921	0.002254	0.007059	0.001063	0.001647
Medical Office Building	0.422984	0.052650	0.154628	0.194025	0.043720	0.008834	0.019253	0.089962	0.001921	0.002254	0.007059	0.001063	0.001647
Parking Lot	0.422984	0.052650	0.154628	0.194025	0.043720	0.008834	0.019253	0.089962	0.001921	0.002254	0.007059	0.001063	0.001647
Regional Shopping Center	0.422984	0.052650	0.154628	0.194025	0.043720	0.008834	0.019253	0.089962	0.001921	0.002254	0.007059	0.001063	0.001647

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,113.1808	1,113.1808	0.0503	0.0104	1,117.5426
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,113.1808	1,113.1808	0.0503	0.0104	1,117.5426
NaturalGas Mitigated	0.0554	0.5016	0.4070	3.0200e-003		0.0383	0.0383		0.0383	0.0383	0.0000	548.4125	548.4125	0.0105	0.0101	551.6714
NaturalGas Unmitigated	0.0554	0.5016	0.4070	3.0200e-003		0.0383	0.0383		0.0383	0.0383	0.0000	548.4125	548.4125	0.0105	0.0101	551.6714

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	751960	4.0500e-003	0.0347	0.0147	2.2000e-004		2.8000e-003	2.8000e-003		2.8000e-003	2.8000e-003	0.0000	40.1274	40.1274	7.7000e-004	7.4000e-004	40.3659
Bank (with Drive-Through)	84621.2	4.6000e-004	4.1500e-003	3.4800e-003	2.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	4.5157	4.5157	9.0000e-005	8.0000e-005	4.5425
Day-Care Center	139989	7.5000e-004	6.8600e-003	5.7600e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4703	7.4703	1.4000e-004	1.4000e-004	7.5147
Fast Food Restaurant with Drive Thru	1.68812e+006	9.1000e-003	0.0828	0.0695	5.0000e-004		6.2900e-003	6.2900e-003		6.2900e-003	6.2900e-003	0.0000	90.0844	90.0844	1.7300e-003	1.6500e-003	90.6198
Gasoline/Service Station	74400.1	4.0000e-004	3.6500e-003	3.0600e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	3.9703	3.9703	8.0000e-005	7.0000e-005	3.9939
General Office Building	187920	1.0100e-003	9.2100e-003	7.7400e-003	6.0000e-005		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	10.0281	10.0281	1.9000e-004	1.8000e-004	10.0877
High Turnover (Sit Down Restaurant)	1.0687e+006	5.7600e-003	0.0524	0.0440	3.1000e-004		3.9800e-003	3.9800e-003		3.9800e-003	3.9800e-003	0.0000	57.0299	57.0299	1.0900e-003	1.0500e-003	57.3688
Hotel	5.01254e+006	0.0270	0.2457	0.2064	1.4700e-003		0.0187	0.0187		0.0187	0.0187	0.0000	267.4880	267.4880	5.1300e-003	4.9000e-003	269.0776
Medical Office Building	1.04084e+006	5.6100e-003	0.0510	0.0429	3.1000e-004		3.8800e-003	3.8800e-003		3.8800e-003	3.8800e-003	0.0000	55.5433	55.5433	1.0600e-003	1.0200e-003	55.8734
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
Regional Shopping Center	227775	1.2300e-003	0.0112	9.3800e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.1549	12.1549	2.3000e-004	2.2000e-004	12.2272
Total		**0.0554**	**0.5016**	**0.4069**	**3.0200e-003**		**0.0383**	**0.0383**		**0.0383**	**0.0383**	**0.0000**	**548.4125**	**548.4125**	**0.0105**	**0.0101**	**551.6714**

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	751960	4.0500e-003	0.0347	0.0147	2.2000e-004		2.8000e-003	2.8000e-003		2.8000e-003	2.8000e-003	0.0000	40.1274	40.1274	7.7000e-004	7.4000e-004	40.3659
Bank (with Drive-Through)	84621.2	4.6000e-004	4.1500e-003	3.4800e-003	2.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	4.5157	4.5157	9.0000e-005	8.0000e-005	4.5425
Day-Care Center	139989	7.5000e-004	6.8600e-003	5.7600e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4703	7.4703	1.4000e-004	1.4000e-004	7.5147
Fast Food Restaurant with Drive Thru	1.68812e+006	9.1000e-003	0.0828	0.0695	5.0000e-004		6.2900e-003	6.2900e-003		6.2900e-003	6.2900e-003	0.0000	90.0844	90.0844	1.7300e-003	1.6500e-003	90.6198
Gasoline/Service Station	74400.1	4.0000e-004	3.6500e-003	3.0600e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	3.9703	3.9703	8.0000e-005	7.0000e-005	3.9939
General Office Building	187920	1.0100e-003	9.2100e-003	7.7400e-003	6.0000e-005		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	10.0281	10.0281	1.9000e-004	1.8000e-004	10.0877
High Turnover (Sit Down Restaurant)	1.0687e+006	5.7600e-003	0.0524	0.0440	3.1000e-004		3.9800e-003	3.9800e-003		3.9800e-003	3.9800e-003	0.0000	57.0299	57.0299	1.0900e-003	1.0500e-003	57.3688
Hotel	5.01254e+006	0.0270	0.2457	0.2064	1.4700e-003		0.0187	0.0187		0.0187	0.0187	0.0000	267.4880	267.4880	5.1300e-003	4.9000e-003	269.0776
Medical Office Building	1.04084e+006	5.6100e-003	0.0510	0.0429	3.1000e-004		3.8800e-003	3.8800e-003		3.8800e-003	3.8800e-003	0.0000	55.5433	55.5433	1.0600e-003	1.0200e-003	55.8734
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
Regional Shopping Center	227775	1.2300e-003	0.0112	9.3800e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.1549	12.1549	2.3000e-004	2.2000e-004	12.2272
Total		**0.0554**	**0.5016**	**0.4069**	**3.0200e-003**		**0.0383**	**0.0383**		**0.0383**	**0.0383**	**0.0000**	**548.4125**	**548.4125**	**0.0105**	**0.0101**	**551.6714**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	189132	55.0207	2.4900e-003	5.1000e-004	55.2363
Bank (with Drive-Through)	35706.8	10.3875	4.7000e-004	1.0000e-004	10.4282
Day-Care Center	40305.6	11.7254	5.3000e-004	1.1000e-004	11.7713
Fast Food Restaurant with Drive Thru	254395	74.0063	3.3500e-003	6.9000e-004	74.2963
Gasoline/Service Station	31393.9	9.1329	4.1000e-004	9.0000e-005	9.1686
General Office Building	127320	37.0389	1.6700e-003	3.5000e-004	37.1840
High Turnover (Sit Down Restaurant)	161050	46.8513	2.1200e-003	4.4000e-004	47.0349
Hotel	1.78608e+006	519.5900	0.0235	4.8600e-003	521.6259
Medical Office Building	705194	205.1489	9.2800e-003	1.9200e-003	205.9528
Parking Lot	321024	93.3896	4.2200e-003	8.7000e-004	93.7555
Regional Shopping Center	174931	50.8895	2.3000e-003	4.8000e-004	51.0889
Total		**1,113.1808**	**0.0503**	**0.0104**	**1,117.5426**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	189132	55.0207	2.4900e-003	5.1000e-004	55.2363
Bank (with Drive-Through)	35706.8	10.3875	4.7000e-004	1.0000e-004	10.4282
Day-Care Center	40305.6	11.7254	5.3000e-004	1.1000e-004	11.7713
Fast Food Restaurant with Drive Thru	254395	74.0063	3.3500e-003	6.9000e-004	74.2963
Gasoline/Service Station	31393.9	9.1329	4.1000e-004	9.0000e-005	9.1686
General Office Building	127320	37.0389	1.6700e-003	3.5000e-004	37.1840
High Turnover (Sit Down Restaurant)	161050	46.8513	2.1200e-003	4.4000e-004	47.0349
Hotel	1.78608e+006	519.5900	0.0235	4.8600e-003	521.6259
Medical Office Building	705194	205.1489	9.2800e-003	1.9200e-003	205.9528
Parking Lot	321024	93.3896	4.2200e-003	8.7000e-004	93.7555
Regional Shopping Center	174931	50.8895	2.3000e-003	4.8000e-004	51.0889
Total		**1,113.1808**	**0.0503**	**0.0104**	**1,117.5426**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.8652	0.0226	0.3989	1.3000e-004		3.3700e-003	3.3700e-003		3.3700e-003	3.3700e-003	0.0000	21.3970	21.3970	1.1800e-003	3.8000e-004	21.5402
Unmitigated	1.8652	0.0226	0.3989	1.3000e-004		3.3700e-003	3.3700e-003		3.3700e-003	3.3700e-003	0.0000	21.3970	21.3970	1.1800e-003	3.8000e-004	21.5402

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	0.4384					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4098					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.1000e-003	0.0180	7.6400e-003	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	20.7940	20.7940	4.0000e-004	3.8000e-004	20.9175
Landscaping	0.0149	4.6600e-003	0.3913	2.0000e-005		1.9200e-003	1.9200e-003		1.9200e-003	1.9200e-003	0.0000	0.6031	0.6031	7.8000e-004	0.0000	0.6227
Total	**1.8652**	**0.0226**	**0.3989**	**1.3000e-004**		**3.3700e-003**	**3.3700e-003**		**3.3700e-003**	**3.3700e-003**	**0.0000**	**21.3970**	**21.3970**	**1.1800e-003**	**3.8000e-004**	**21.5402**

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	0.4384					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4098					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.1000e-003	0.0180	7.6400e-003	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	20.7940	20.7940	4.0000e-004	3.8000e-004	20.9175
Landscaping	0.0149	4.6600e-003	0.3913	2.0000e-005		1.9200e-003	1.9200e-003		1.9200e-003	1.9200e-003	0.0000	0.6031	0.6031	7.8000e-004	0.0000	0.6227
Total	**1.8652**	**0.0226**	**0.3989**	**1.3000e-004**		**3.3700e-003**	**3.3700e-003**		**3.3700e-003**	**3.3700e-003**	**0.0000**	**21.3970**	**21.3970**	**1.1800e-003**	**3.8000e-004**	**21.5402**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	49.9283	0.7390	0.0178	73.7083
Unmitigated	49.9283	0.7390	0.0178	73.7083

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	3.12739 / 1.97162	7.9226	0.1022	2.4700e-003	11.2144
Bank (with Drive-Through)	0.141058 / 0.0864546	0.3548	4.6100e-003	1.1000e-004	0.5033
Day-Care Center	0.20587 / 0.52938	0.9284	6.7500e-003	1.7000e-004	1.1467
Fast Food Restaurant with Drive Thru	2.39792 / 0.153058	4.6912	0.0783	1.8800e-003	7.2098
Gasoline/Service Station	0.159383 / 0.0976861	0.4009	5.2100e-003	1.3000e-004	0.5687
General Office Building	2.1328 / 1.3072	5.3649	0.0697	1.6800e-003	7.6097
High Turnover (Sit Down Restaurant)	1.51767 / 0.0968725	2.9691	0.0496	1.1900e-003	4.5632
Hotel	3.24695 / 0.360772	6.5085	0.1061	2.5500e-003	9.9195
Medical Office Building	8.34069 / 1.5887	17.3930	0.2725	6.5600e-003	26.1577
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.3496 / 0.827175	3.3948	0.0441	1.0700e-003	4.8153
Total		**49.9283**	**0.7390**	**0.0178**	**73.7083**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	3.12739 / 1.97162	7.9226	0.1022	2.4700e-003	11.2144
Bank (with Drive-Through)	0.141058 / 0.0864546	0.3548	4.6100e-003	1.1000e-004	0.5033
Day-Care Center	0.20587 / 0.52938	0.9284	6.7500e-003	1.7000e-004	1.1467
Fast Food Restaurant with Drive Thru	2.39792 / 0.153058	4.6912	0.0783	1.8800e-003	7.2098
Gasoline/Service Station	0.159383 / 0.0976861	0.4009	5.2100e-003	1.3000e-004	0.5687
General Office Building	2.1328 / 1.3072	5.3649	0.0697	1.6800e-003	7.6097
High Turnover (Sit Down Restaurant)	1.51767 / 0.0968725	2.9691	0.0496	1.1900e-003	4.5632
Hotel	3.24695 / 0.360772	6.5085	0.1061	2.5500e-003	9.9195
Medical Office Building	8.34069 / 1.5887	17.3930	0.2725	6.5600e-003	26.1577
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.3496 / 0.827175	3.3948	0.0441	1.0700e-003	4.8153
Total		**49.9283**	**0.7390**	**0.0178**	**73.7083**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	204.3835	12.0787	0.0000	506.3514
Unmitigated	204.3835	12.0787	0.0000	506.3514

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	22.08	4.4820	0.2649	0.0000	11.1041
Bank (with Drive-Through)	3.32	0.6739	0.0398	0.0000	1.6696
Day-Care Center	6.24	1.2667	0.0749	0.0000	3.1381
Fast Food Restaurant with Drive Thru	91	18.4722	1.0917	0.0000	45.7640
Gasoline/Service Station	6.47	1.3134	0.0776	0.0000	3.2538
General Office Building	11.16	2.2654	0.1339	0.0000	5.6124
High Turnover (Sit Down Restaurant)	59.5	12.0780	0.7138	0.0000	29.9226
Hotel	70.08	14.2256	0.8407	0.0000	35.2433
Medical Office Building	717.88	145.7232	8.6120	0.0000	361.0229
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	19.13	3.8832	0.2295	0.0000	9.6205
Total		**204.3835**	**12.0787**	**0.0000**	**506.3514**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	22.08	4.4820	0.2649	0.0000	11.1041
Bank (with Drive-Through)	3.32	0.6739	0.0398	0.0000	1.6696
Day-Care Center	6.24	1.2667	0.0749	0.0000	3.1381
Fast Food Restaurant with Drive Thru	91	18.4722	1.0917	0.0000	45.7640
Gasoline/Service Station	6.47	1.3134	0.0776	0.0000	3.2538
General Office Building	11.16	2.2654	0.1339	0.0000	5.6124
High Turnover (Sit Down Restaurant)	59.5	12.0780	0.7138	0.0000	29.9226
Hotel	70.08	14.2256	0.8407	0.0000	35.2433
Medical Office Building	717.88	145.7232	8.6120	0.0000	361.0229
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	19.13	3.8832	0.2295	0.0000	9.6205
Total		**204.3835**	**12.0787**	**0.0000**	**506.3514**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Yosemite Crossing - 2030

San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Bank (with Drive-Through)	3.56	1000sqft	0.08	3,560.00	0
General Office Building	12.00	1000sqft	0.28	12,000.00	0
Medical Office Building	66.47	1000sqft	1.53	66,465.00	0
Day-Care Center	4.80	1000sqft	0.11	4,804.00	0
Parking Lot	912.00	1000sqft	12.97	912,000.00	0
Fast Food Restaurant with Drive Thru	7.90	1000sqft	0.18	7,898.00	0
High Turnover (Sit Down Restaurant)	5.00	1000sqft	0.11	5,000.00	0
Hotel	128.00	Room	2.99	80,104.00	0
Apartments Low Rise	48.00	Dwelling Unit	2.69	48,000.00	152
Gasoline/Service Station	12.00	Pump	0.04	3,130.00	0
Regional Shopping Center	18.22	1000sqft	0.42	18,222.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	328.8	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Yosemite Crossing - 2030 - San Joaquin Valley Unified APCD Air District, Annual

Project Characteristics - CO2 intensity factor based on 5-year average (PG&E 2015)

Land Use - Based on site plan dated 07/24/19 and Traffic Impact Analysis dated 08/06/19

Construction Phase - Operational run only

Vehicle Trips - Based on site plan dated 07/24/19 and Traffic Impact Analysis dated 08/06/19

Woodstoves -

Energy Use -

Mobile Land Use Mitigation -

Area Mitigation - Assuming only natural gas hearth

Energy Mitigation - The project would be consistent with California's 2019 Building Energy Efficiency Standards, which will take effect on January 1, 2020

Water Mitigation - Compliance with the Water Efficient Landscape Ordinance will reduce outdoor water use by 20 percent.

Waste Mitigation - The CalRecycle Waste Diversion and Recycling Mandate will reduce solid waste production by 25 percent.

Fleet Mix - Revised fleet mix percentages based on data for a similar shopping center project in the central valley. LDA was revised to 0.571634, LHD2 was revised to 0.001, MHD was revised to 0.003, and HHD was revised to 0.001. All other fleet mix percentages are default.

Table Name	Column Name	Default Value	New Value
tblFleetMix	LDA	0.54	0.57
tblFleetMix	LDA	0.54	0.57
tblFleetMix	LDA	0.54	0.57
tblFleetMix	LDA	0.54	0.57
tblFleetMix	LDA	0.54	0.57
tblFleetMix	LDA	0.54	0.57
tblFleetMix	LDA	0.54	0.57
tblFleetMix	LDA	0.54	0.57
tblFleetMix	LDA	0.54	0.57
tblFleetMix	LDA	0.54	0.57
tblFleetMix	LDA	0.54	0.57
tblFleetMix	LHD1	0.01	1.0000e-003
tblFleetMix	LHD1	0.01	1.0000e-003

tblFleetMix	LHD1	0.01	1.0000e-003
tblFleetMix	LHD1	0.01	1.0000e-003
tblFleetMix	LHD1	0.01	1.0000e-003
tblFleetMix	LHD1	0.01	1.0000e-003
tblFleetMix	LHD1	0.01	1.0000e-003
tblFleetMix	LHD1	0.01	1.0000e-003
tblFleetMix	LHD1	0.01	1.0000e-003
tblFleetMix	LHD1	0.01	1.0000e-003
tblFleetMix	LHD1	0.01	1.0000e-003
tblFleetMix	LHD2	3.7490e-003	3.0000e-003
tblFleetMix	LHD2	3.7490e-003	3.0000e-003
tblFleetMix	LHD2	3.7490e-003	3.0000e-003
tblFleetMix	LHD2	3.7490e-003	3.0000e-003
tblFleetMix	LHD2	3.7490e-003	3.0000e-003
tblFleetMix	LHD2	3.7490e-003	3.0000e-003
tblFleetMix	LHD2	3.7490e-003	3.0000e-003
tblFleetMix	LHD2	3.7490e-003	3.0000e-003
tblFleetMix	LHD2	3.7490e-003	3.0000e-003
tblFleetMix	LHD2	3.7490e-003	3.0000e-003
tblFleetMix	LHD2	3.7490e-003	3.0000e-003
tblFleetMix	MHD	0.02	1.0000e-003
tblFleetMix	MHD	0.02	1.0000e-003
tblFleetMix	MHD	0.02	1.0000e-003
tblFleetMix	MHD	0.02	1.0000e-003
tblFleetMix	MHD	0.02	1.0000e-003
tblFleetMix	MHD	0.02	1.0000e-003
tblFleetMix	MHD	0.02	1.0000e-003

tblFleetMix	MHD	0.02	1.0000e-003
tblFleetMix	MHD	0.02	1.0000e-003
tblFleetMix	MHD	0.02	1.0000e-003
tblFleetMix	MHD	0.02	1.0000e-003
tblLandUse	LandUseSquareFeet	66,470.00	66,465.00
tblLandUse	LandUseSquareFeet	4,800.00	4,804.00
tblLandUse	LandUseSquareFeet	7,900.00	7,898.00
tblLandUse	LandUseSquareFeet	185,856.00	80,104.00
tblLandUse	LandUseSquareFeet	1,694.10	3,130.00
tblLandUse	LandUseSquareFeet	18,220.00	18,222.00
tblLandUse	LotAcreage	20.94	12.97
tblLandUse	LotAcreage	4.27	2.99
tblLandUse	LotAcreage	3.00	2.69
tblProjectCharacteristics	CO2IntensityFactor	641.35	328.8
tblVehicleTrips	ST_TR	7.16	6.15
tblVehicleTrips	ST_TR	86.32	85.00
tblVehicleTrips	ST_TR	6.21	47.67
tblVehicleTrips	ST_TR	722.03	296.72
tblVehicleTrips	ST_TR	168.56	124.17
tblVehicleTrips	ST_TR	2.46	8.17
tblVehicleTrips	ST_TR	158.37	95.37
tblVehicleTrips	ST_TR	8.19	7.02
tblVehicleTrips	ST_TR	8.96	29.23
tblVehicleTrips	ST_TR	49.97	26.32
tblVehicleTrips	SU_TR	6.07	6.15
tblVehicleTrips	SU_TR	31.90	85.00
tblVehicleTrips	SU_TR	5.83	47.67

tblVehicleTrips	SU_TR	542.72	296.72
tblVehicleTrips	SU_TR	168.56	124.17
tblVehicleTrips	SU_TR	1.05	8.17
tblVehicleTrips	SU_TR	131.84	95.37
tblVehicleTrips	SU_TR	5.95	7.02
tblVehicleTrips	SU_TR	1.55	29.23
tblVehicleTrips	SU_TR	25.24	26.32
tblVehicleTrips	WD_TR	6.59	6.15
tblVehicleTrips	WD_TR	148.15	85.00
tblVehicleTrips	WD_TR	74.06	47.67
tblVehicleTrips	WD_TR	496.12	296.72
tblVehicleTrips	WD_TR	168.56	124.17
tblVehicleTrips	WD_TR	11.03	8.17
tblVehicleTrips	WD_TR	127.15	95.37
tblVehicleTrips	WD_TR	8.17	7.02
tblVehicleTrips	WD_TR	36.13	29.23
tblVehicleTrips	WD_TR	42.70	26.32
tblWoodstoves	NumberCatalytic	2.69	0.00
tblWoodstoves	NumberNoncatalytic	2.69	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2028	0.1225	1.1688	1.0740	3.4200e-003	0.3492	0.0365	0.3857	0.1416	0.0338	0.1755	0.0000	307.9820	307.9820	0.0535	0.0000	309.3196
2029	0.3688	3.5898	3.3010	0.0137	0.6760	0.0732	0.7492	0.1834	0.0689	0.2523	0.0000	1,250.4913	1,250.4913	0.1120	0.0000	1,253.2921
2030	2.1665	0.8690	1.0497	4.0900e-003	0.1877	9.7700e-003	0.1975	0.0509	9.7000e-003	0.0606	0.0000	370.9072	370.9072	0.0157	0.0000	371.2999
Maximum	**2.1665**	**3.5898**	**3.3010**	**0.0137**	**0.6760**	**0.0732**	**0.7492**	**0.1834**	**0.0689**	**0.2523**	**0.0000**	**1,250.4913**	**1,250.4913**	**0.1120**	**0.0000**	**1,253.2921**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2028	0.1225	1.1688	1.0740	3.4200e-003	0.3492	0.0365	0.3857	0.1416	0.0338	0.1755	0.0000	307.9818	307.9818	0.0535	0.0000	309.3194
2029	0.3688	3.5898	3.3010	0.0137	0.6760	0.0732	0.7492	0.1834	0.0689	0.2523	0.0000	1,250.4909	1,250.4909	0.1120	0.0000	1,253.2918
2030	2.1665	0.8690	1.0497	4.0900e-003	0.1877	9.7700e-003	0.1975	0.0509	9.7000e-003	0.0606	0.0000	370.9071	370.9071	0.0157	0.0000	371.2997
Maximum	**2.1665**	**3.5898**	**3.3010**	**0.0137**	**0.6760**	**0.0732**	**0.7492**	**0.1834**	**0.0689**	**0.2523**	**0.0000**	**1,250.4909**	**1,250.4909**	**0.1120**	**0.0000**	**1,253.2918**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**9-4-2028**	**12-3-2028**	0.9889	0.9889
2	**12-4-2028**	**3-3-2029**	0.9805	0.9805
3	**3-4-2029**	**6-3-2029**	0.9973	0.9973
4	**6-4-2029**	**9-3-2029**	0.9962	0.9962
5	**9-4-2029**	**12-3-2029**	0.9878	0.9878
6	**12-4-2029**	**3-3-2030**	0.8712	0.8712
7	**3-4-2030**	**6-3-2030**	2.4567	2.4567
		Highest	2.4567	2.4567

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2498	0.0222	0.3738	1.3000e-004		3.4700e-003	3.4700e-003		3.4700e-003	3.4700e-003	0.0000	21.3970	21.3970	1.0100e-003	3.8000e-004	21.5358
Energy	0.0371	0.3356	0.2689	2.0300e-003		0.0257	0.0257		0.0257	0.0257	0.0000	741.8625	741.8625	0.0401	0.0136	746.9077
Mobile	1.3716	16.4213	10.6715	0.0676	4.3796	0.0309	4.4105	1.1717	0.0288	1.2005	0.0000	6,313.6522	6,313.6522	0.5559	0.0000	6,327.5499
Waste						0.0000	0.0000		0.0000	0.0000	204.3835	0.0000	204.3835	12.0787	0.0000	506.3514
Water						0.0000	0.0000		0.0000	0.0000	7.1761	21.9177	29.0938	0.7390	0.0178	52.8738
Total	**2.6586**	**16.7790**	**11.3143**	**0.0698**	**4.3796**	**0.0600**	**4.4396**	**1.1717**	**0.0579**	**1.2296**	**211.5596**	**7,098.8295**	**7,310.3890**	**13.4147**	**0.0318**	**7,655.2186**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2498	0.0222	0.3738	1.3000e-004		3.4700e-003	3.4700e-003		3.4700e-003	3.4700e-003	0.0000	21.3970	21.3970	1.0100e-003	3.8000e-004	21.5358
Energy	0.0310	0.2803	0.2254	1.6900e-003		0.0214	0.0214		0.0214	0.0214	0.0000	649.1885	649.1885	0.0361	0.0119	653.6284
Mobile	1.3317	16.1060	9.8600	0.0621	3.8628	0.0280	3.8909	1.0335	0.0261	1.0596	0.0000	5,798.3540	5,798.3540	0.5465	0.0000	5,812.0176
Waste						0.0000	0.0000		0.0000	0.0000	153.2876	0.0000	153.2876	9.0590	0.0000	379.7636
Water						0.0000	0.0000		0.0000	0.0000	7.1761	21.1849	28.3610	0.7389	0.0178	52.1354
Total	**2.6125**	**16.4084**	**10.4592**	**0.0639**	**3.8628**	**0.0529**	**3.9158**	**1.0335**	**0.0510**	**1.0845**	**160.4637**	**6,490.1245**	**6,650.5881**	**10.3816**	**0.0300**	**6,919.0808**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.73**	**2.21**	**7.56**	**8.44**	**11.80**	**11.80**	**11.80**	**11.80**	**11.90**	**11.80**	**24.15**	**8.57**	**9.03**	**22.61**	**5.39**	**9.62**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/4/2028	9/15/2028	5	10	
2	Grading	Grading	9/16/2028	11/3/2028	5	35	
3	Building Construction	Building Construction	11/4/2028	4/5/2030	5	370	
4	Paving	Paving	4/6/2030	5/3/2030	5	20	
5	Architectural Coating	Architectural Coating	5/4/2030	5/31/2030	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 12.97

Residential Indoor: 97,200; Residential Outdoor: 32,400; Non-Residential Indoor: 301,775; Non-Residential Outdoor: 100,592; Striped Parking Area: 54,720 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	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	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	492.00	188.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	98.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2028

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	0.0124	0.1262	0.0896	1.9000e-004		5.4300e-003	5.4300e-003		5.0000e-003	5.0000e-003	0.0000	16.7335	16.7335	5.4100e-003	0.0000	16.8688
Total	**0.0124**	**0.1262**	**0.0896**	**1.9000e-004**	**0.0903**	**5.4300e-003**	**0.0958**	**0.0497**	**5.0000e-003**	**0.0547**	**0.0000**	**16.7335**	**16.7335**	**5.4100e-003**	**0.0000**	**16.8688**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.1000e-004	1.3600e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.4835	0.4835	1.0000e-005	0.0000	0.4837
Total	**2.2000e-004**	**1.1000e-004**	**1.3600e-003**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.4835**	**0.4835**	**1.0000e-005**	**0.0000**	**0.4837**

3.2 Site Preparation - 2028

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	0.0124	0.1262	0.0896	1.9000e-004		5.4300e-003	5.4300e-003		5.0000e-003	5.0000e-003	0.0000	16.7335	16.7335	5.4100e-003	0.0000	16.8688
Total	**0.0124**	**0.1262**	**0.0896**	**1.9000e-004**	**0.0903**	**5.4300e-003**	**0.0958**	**0.0497**	**5.0000e-003**	**0.0547**	**0.0000**	**16.7335**	**16.7335**	**5.4100e-003**	**0.0000**	**16.8688**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.1000e-004	1.3600e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.4835	0.4835	1.0000e-005	0.0000	0.4837
Total	**2.2000e-004**	**1.1000e-004**	**1.3600e-003**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.4835**	**0.4835**	**1.0000e-005**	**0.0000**	**0.4837**

3.3 Grading - 2028

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					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0508	0.4890	0.4608	1.0900e-003		0.0198	0.0198		0.0182	0.0182	0.0000	95.3859	95.3859	0.0309	0.0000	96.1571
Total	**0.0508**	**0.4890**	**0.4608**	**1.0900e-003**	**0.1518**	**0.0198**	**0.1716**	**0.0629**	**0.0182**	**0.0812**	**0.0000**	**95.3859**	**95.3859**	**0.0309**	**0.0000**	**96.1571**

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	8.5000e-004	4.4000e-004	5.2900e-003	2.0000e-005	2.8000e-003	1.0000e-005	2.8100e-003	7.4000e-004	1.0000e-005	7.6000e-004	0.0000	1.8802	1.8802	3.0000e-005	0.0000	1.8809
Total	**8.5000e-004**	**4.4000e-004**	**5.2900e-003**	**2.0000e-005**	**2.8000e-003**	**1.0000e-005**	**2.8100e-003**	**7.4000e-004**	**1.0000e-005**	**7.6000e-004**	**0.0000**	**1.8802**	**1.8802**	**3.0000e-005**	**0.0000**	**1.8809**

3.3 Grading - 2028

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					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0508	0.4890	0.4608	1.0900e-003		0.0198	0.0198		0.0182	0.0182	0.0000	95.3858	95.3858	0.0309	0.0000	96.1570
Total	**0.0508**	**0.4890**	**0.4608**	**1.0900e-003**	**0.1518**	**0.0198**	**0.1716**	**0.0629**	**0.0182**	**0.0812**	**0.0000**	**95.3858**	**95.3858**	**0.0309**	**0.0000**	**96.1570**

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	8.5000e-004	4.4000e-004	5.2900e-003	2.0000e-005	2.8000e-003	1.0000e-005	2.8100e-003	7.4000e-004	1.0000e-005	7.6000e-004	0.0000	1.8802	1.8802	3.0000e-005	0.0000	1.8809
Total	**8.5000e-004**	**4.4000e-004**	**5.2900e-003**	**2.0000e-005**	**2.8000e-003**	**1.0000e-005**	**2.8100e-003**	**7.4000e-004**	**1.0000e-005**	**7.6000e-004**	**0.0000**	**1.8802**	**1.8802**	**3.0000e-005**	**0.0000**	**1.8809**

3.4 Building Construction - 2028

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	0.0274	0.2494	0.3217	5.4000e-004		0.0106	0.0106		9.9300e-003	9.9300e-003	0.0000	46.3839	46.3839	0.0109	0.0000	46.6565
Total	**0.0274**	**0.2494**	**0.3217**	**5.4000e-004**		**0.0106**	**0.0106**		**9.9300e-003**	**9.9300e-003**	**0.0000**	**46.3839**	**46.3839**	**0.0109**	**0.0000**	**46.6565**

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	6.9500e-003	0.2913	0.0466	9.9000e-004	0.0249	2.8000e-004	0.0252	7.2000e-003	2.7000e-004	7.4700e-003	0.0000	94.2558	94.2558	5.4200e-003	0.0000	94.3914
Worker	0.0240	0.0124	0.1487	5.8000e-004	0.0787	4.2000e-004	0.0791	0.0209	3.9000e-004	0.0213	0.0000	52.8593	52.8593	8.8000e-004	0.0000	52.8813
Total	**0.0310**	**0.3037**	**0.1953**	**1.5700e-003**	**0.1036**	**7.0000e-004**	**0.1043**	**0.0281**	**6.6000e-004**	**0.0288**	**0.0000**	**147.1151**	**147.1151**	**6.3000e-003**	**0.0000**	**147.2726**

3.4 Building Construction - 2028

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	0.0274	0.2494	0.3217	5.4000e-004		0.0106	0.0106		9.9300e-003	9.9300e-003	0.0000	46.3838	46.3838	0.0109	0.0000	46.6564
Total	**0.0274**	**0.2494**	**0.3217**	**5.4000e-004**		**0.0106**	**0.0106**		**9.9300e-003**	**9.9300e-003**	**0.0000**	**46.3838**	**46.3838**	**0.0109**	**0.0000**	**46.6564**

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	6.9500e-003	0.2913	0.0466	9.9000e-004	0.0249	2.8000e-004	0.0252	7.2000e-003	2.7000e-004	7.4700e-003	0.0000	94.2558	94.2558	5.4200e-003	0.0000	94.3914
Worker	0.0240	0.0124	0.1487	5.8000e-004	0.0787	4.2000e-004	0.0791	0.0209	3.9000e-004	0.0213	0.0000	52.8593	52.8593	8.8000e-004	0.0000	52.8813
Total	**0.0310**	**0.3037**	**0.1953**	**1.5700e-003**	**0.1036**	**7.0000e-004**	**0.1043**	**0.0281**	**6.6000e-004**	**0.0288**	**0.0000**	**147.1151**	**147.1151**	**6.3000e-003**	**0.0000**	**147.2726**

3.4 Building Construction - 2029

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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	0.0447	1.8887	0.2962	6.4500e-003	0.1627	1.8300e-003	0.1645	0.0470	1.7500e-003	0.0487	0.0000	612.6343	612.6343	0.0357	0.0000	613.5259
Worker	0.1457	0.0738	0.9058	3.7000e-003	0.5133	2.5600e-003	0.5159	0.1364	2.3500e-003	0.1388	0.0000	335.2021	335.2021	5.2300e-003	0.0000	335.3327
Total	**0.1903**	**1.9625**	**1.2020**	**0.0102**	**0.6760**	**4.3900e-003**	**0.6804**	**0.1834**	**4.1000e-003**	**0.1875**	**0.0000**	**947.8364**	**947.8364**	**0.0409**	**0.0000**	**948.8586**

3.4 Building Construction - 2029

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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	0.0447	1.8887	0.2962	6.4500e-003	0.1627	1.8300e-003	0.1645	0.0470	1.7500e-003	0.0487	0.0000	612.6343	612.6343	0.0357	0.0000	613.5259
Worker	0.1457	0.0738	0.9058	3.7000e-003	0.5133	2.5600e-003	0.5159	0.1364	2.3500e-003	0.1388	0.0000	335.2021	335.2021	5.2300e-003	0.0000	335.3327
Total	**0.1903**	**1.9625**	**1.2020**	**0.0102**	**0.6760**	**4.3900e-003**	**0.6804**	**0.1834**	**4.1000e-003**	**0.1875**	**0.0000**	**947.8364**	**947.8364**	**0.0409**	**0.0000**	**948.8586**

3.4 Building Construction - 2030

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	0.0452	0.2737	0.5574	1.0700e-003		5.1100e-003	5.1100e-003		5.1100e-003	5.1100e-003	0.0000	90.6871	90.6871	3.6400e-003	0.0000	90.7780
Total	**0.0452**	**0.2737**	**0.5574**	**1.0700e-003**		**5.1100e-003**	**5.1100e-003**		**5.1100e-003**	**5.1100e-003**	**0.0000**	**90.6871**	**90.6871**	**3.6400e-003**	**0.0000**	**90.7780**

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	0.0117	0.4965	0.0767	1.7000e-003	0.0430	4.8000e-004	0.0435	0.0124	4.6000e-004	0.0129	0.0000	161.4687	161.4687	9.4900e-003	0.0000	161.7059
Worker	0.0357	0.0179	0.2242	9.5000e-004	0.1357	6.3000e-004	0.1363	0.0361	5.8000e-004	0.0367	0.0000	86.3502	86.3502	1.2600e-003	0.0000	86.3817
Total	**0.0473**	**0.5143**	**0.3009**	**2.6500e-003**	**0.1787**	**1.1100e-003**	**0.1798**	**0.0485**	**1.0400e-003**	**0.0495**	**0.0000**	**247.8189**	**247.8189**	**0.0108**	**0.0000**	**248.0876**

3.4 Building Construction - 2030

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	0.0452	0.2737	0.5574	1.0700e-003		5.1100e-003	5.1100e-003		5.1100e-003	5.1100e-003	0.0000	90.6869	90.6869	3.6400e-003	0.0000	90.7779
Total	**0.0452**	**0.2737**	**0.5574**	**1.0700e-003**		**5.1100e-003**	**5.1100e-003**		**5.1100e-003**	**5.1100e-003**	**0.0000**	**90.6869**	**90.6869**	**3.6400e-003**	**0.0000**	**90.7779**

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	0.0117	0.4965	0.0767	1.7000e-003	0.0430	4.8000e-004	0.0435	0.0124	4.6000e-004	0.0129	0.0000	161.4687	161.4687	9.4900e-003	0.0000	161.7059
Worker	0.0357	0.0179	0.2242	9.5000e-004	0.1357	6.3000e-004	0.1363	0.0361	5.8000e-004	0.0367	0.0000	86.3502	86.3502	1.2600e-003	0.0000	86.3817
Total	**0.0473**	**0.5143**	**0.3009**	**2.6500e-003**	**0.1787**	**1.1100e-003**	**0.1798**	**0.0485**	**1.0400e-003**	**0.0495**	**0.0000**	**247.8189**	**247.8189**	**0.0108**	**0.0000**	**248.0876**

3.5 Paving - 2030

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	0.0139	0.0712	0.1585	2.8000e-004		3.3100e-003	3.3100e-003		3.3100e-003	3.3100e-003	0.0000	24.0995	24.0995	1.1300e-003	0.0000	24.1278
Paving	0.0170					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0308**	**0.0712**	**0.1585**	**2.8000e-004**		**3.3100e-003**	**3.3100e-003**		**3.3100e-003**	**3.3100e-003**	**0.0000**	**24.0995**	**24.0995**	**1.1300e-003**	**0.0000**	**24.1278**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	1.6000e-004	1.9800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.7631	0.7631	1.0000e-005	0.0000	0.7634
Total	**3.2000e-004**	**1.6000e-004**	**1.9800e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.7631**	**0.7631**	**1.0000e-005**	**0.0000**	**0.7634**

3.5 Paving - 2030

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	0.0139	0.0712	0.1585	2.8000e-004		3.3100e-003	3.3100e-003		3.3100e-003	3.3100e-003	0.0000	24.0995	24.0995	1.1300e-003	0.0000	24.1277
Paving	0.0170					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0308**	**0.0712**	**0.1585**	**2.8000e-004**		**3.3100e-003**	**3.3100e-003**		**3.3100e-003**	**3.3100e-003**	**0.0000**	**24.0995**	**24.0995**	**1.1300e-003**	**0.0000**	**24.1277**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	1.6000e-004	1.9800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.7631	0.7631	1.0000e-005	0.0000	0.7634
Total	**3.2000e-004**	**1.6000e-004**	**1.9800e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.7631**	**0.7631**	**1.0000e-005**	**0.0000**	**0.7634**

3.6 Architectural Coating - 2030

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	2.0395					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3100e-003	8.5600e-003	0.0180	3.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.5533	2.5533	1.0000e-004	0.0000	2.5558
Total	**2.0408**	**8.5600e-003**	**0.0180**	**3.0000e-005**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.0000e-004**	**0.0000**	**2.5558**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0600e-003	1.0300e-003	0.0129	6.0000e-005	7.8300e-003	4.0000e-005	7.8700e-003	2.0800e-003	3.0000e-005	2.1200e-003	0.0000	4.9855	4.9855	7.0000e-005	0.0000	4.9873
Total	**2.0600e-003**	**1.0300e-003**	**0.0129**	**6.0000e-005**	**7.8300e-003**	**4.0000e-005**	**7.8700e-003**	**2.0800e-003**	**3.0000e-005**	**2.1200e-003**	**0.0000**	**4.9855**	**4.9855**	**7.0000e-005**	**0.0000**	**4.9873**

3.6 Architectural Coating - 2030

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	2.0395					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3100e-003	8.5600e-003	0.0180	3.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.5533	2.5533	1.0000e-004	0.0000	2.5558
Total	**2.0408**	**8.5600e-003**	**0.0180**	**3.0000e-005**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.0000e-004**	**0.0000**	**2.5558**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0600e-003	1.0300e-003	0.0129	6.0000e-005	7.8300e-003	4.0000e-005	7.8700e-003	2.0800e-003	3.0000e-005	2.1200e-003	0.0000	4.9855	4.9855	7.0000e-005	0.0000	4.9873
Total	**2.0600e-003**	**1.0300e-003**	**0.0129**	**6.0000e-005**	**7.8300e-003**	**4.0000e-005**	**7.8700e-003**	**2.0800e-003**	**3.0000e-005**	**2.1200e-003**	**0.0000**	**4.9855**	**4.9855**	**7.0000e-005**	**0.0000**	**4.9873**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.3317	16.1060	9.8600	0.0621	3.8628	0.0280	3.8909	1.0335	0.0261	1.0596	0.0000	5,798.3540	5,798.3540	0.5465	0.0000	5,812.0176
Unmitigated	1.3716	16.4213	10.6715	0.0676	4.3796	0.0309	4.4105	1.1717	0.0288	1.2005	0.0000	6,313.6522	6,313.6522	0.5559	0.0000	6,327.5499

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	295.20	295.20	295.20	855,436	754,494
Bank (with Drive-Through)	302.60	302.60	302.60	279,898	246,870
Day-Care Center	228.82	228.82	228.82	269,460	237,664
Fast Food Restaurant with Drive Thru	2,344.09	2,344.09	2344.09	2,190,140	1,931,704
Gasoline/Service Station	1,490.04	1,490.04	1490.04	858,514	757,209
General Office Building	98.04	98.04	98.04	234,291	206,645
High Turnover (Sit Down Restaurant)	476.85	476.85	476.85	553,272	487,986
Hotel	898.56	898.56	898.56	1,707,202	1,505,752
Medical Office Building	1,942.92	1,942.92	1942.92	3,802,776	3,354,049
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	479.55	479.55	479.55	840,798	741,584
Total	8,556.66	8,556.66	8,556.66	11,591,787	10,223,956

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	45.60	19.00	35.40	86	11	3
Bank (with Drive-Through)	9.50	7.30	7.30	6.60	74.40	19.00	27	26	47
Day-Care Center	9.50	7.30	7.30	12.70	82.30	5.00	28	58	14
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	29	21	50
Gasoline/Service Station	9.50	7.30	7.30	2.00	79.00	19.00	14	27	59
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.571634	0.029508	0.177727	0.096034	0.001000	0.003000	0.001000	0.110957	0.001737	0.001254	0.004794	0.000855	0.000500
Bank (with Drive-Through)	0.571634	0.029508	0.177727	0.096034	0.001000	0.003000	0.001000	0.110957	0.001737	0.001254	0.004794	0.000855	0.000500
Day-Care Center	0.571634	0.029508	0.177727	0.096034	0.001000	0.003000	0.001000	0.110957	0.001737	0.001254	0.004794	0.000855	0.000500
Fast Food Restaurant with Drive Thru	0.571634	0.029508	0.177727	0.096034	0.001000	0.003000	0.001000	0.110957	0.001737	0.001254	0.004794	0.000855	0.000500
Gasoline/Service Station	0.571634	0.029508	0.177727	0.096034	0.001000	0.003000	0.001000	0.110957	0.001737	0.001254	0.004794	0.000855	0.000500
General Office Building	0.571634	0.029508	0.177727	0.096034	0.001000	0.003000	0.001000	0.110957	0.001737	0.001254	0.004794	0.000855	0.000500
High Turnover (Sit Down Restaurant)	0.571634	0.029508	0.177727	0.096034	0.001000	0.003000	0.001000	0.110957	0.001737	0.001254	0.004794	0.000855	0.000500
Hotel	0.571634	0.029508	0.177727	0.096034	0.001000	0.003000	0.001000	0.110957	0.001737	0.001254	0.004794	0.000855	0.000500
Medical Office Building	0.571634	0.029508	0.177727	0.096034	0.001000	0.003000	0.001000	0.110957	0.001737	0.001254	0.004794	0.000855	0.000500
Parking Lot	0.571634	0.029508	0.177727	0.096034	0.001000	0.003000	0.001000	0.110957	0.001737	0.001254	0.004794	0.000855	0.000500
Regional Shopping Center	0.571634	0.029508	0.177727	0.096034	0.001000	0.003000	0.001000	0.110957	0.001737	0.001254	0.004794	0.000855	0.000500

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Yosemite Crossing - 2030 - San Joaquin Valley Unified APCD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	342.3176	342.3176	0.0302	6.2500e-003	344.9339
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	374.3804	374.3804	0.0330	6.8300e-003	377.2418
NaturalGas Mitigated	0.0310	0.2803	0.2254	1.6900e-003		0.0214	0.0214		0.0214	0.0214	0.0000	306.8709	306.8709	5.8800e-003	5.6300e-003	308.6945
NaturalGas Unmitigated	0.0371	0.3356	0.2689	2.0300e-003		0.0257	0.0257		0.0257	0.0257	0.0000	367.4821	367.4821	7.0400e-003	6.7400e-003	369.6659

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	678550	3.6600e-003	0.0313	0.0133	2.0000e-004		2.5300e-003	2.5300e-003		2.5300e-003	2.5300e-003	0.0000	36.2100	36.2100	6.9000e-004	6.6000e-004	36.4252
Bank (with Drive-Through)	74297.2	4.0000e-004	3.6400e-003	3.0600e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	3.9648	3.9648	8.0000e-005	7.0000e-005	3.9883
Day-Care Center	120628	6.5000e-004	5.9100e-003	4.9700e-003	4.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	6.4372	6.4372	1.2000e-004	1.2000e-004	6.4755
Fast Food Restaurant with Drive Thru	1.6619e+006	8.9600e-003	0.0815	0.0684	4.9000e-004		6.1900e-003	6.1900e-003		6.1900e-003	6.1900e-003	0.0000	88.6852	88.6852	1.7000e-003	1.6300e-003	89.2122
Gasoline/Service Station	65323.1	3.5000e-004	3.2000e-003	2.6900e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4859	3.4859	7.0000e-005	6.0000e-005	3.5066
General Office Building	156600	8.4000e-004	7.6800e-003	6.4500e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	8.3568	8.3568	1.6000e-004	1.5000e-004	8.4064
High Turnover (Sit Down Restaurant)	1.0521e+006	5.6700e-003	0.0516	0.0433	3.1000e-004		3.9200e-003	3.9200e-003		3.9200e-003	3.9200e-003	0.0000	56.1441	56.1441	1.0800e-003	1.0300e-003	56.4777
Hotel	2.01462e+006	0.0109	0.0988	0.0830	5.9000e-004		7.5100e-003	7.5100e-003		7.5100e-003	7.5100e-003	0.0000	107.5076	107.5076	2.0600e-003	1.9700e-003	108.1464
Medical Office Building	867368	4.6800e-003	0.0425	0.0357	2.6000e-004		3.2300e-003	3.2300e-003		3.2300e-003	3.2300e-003	0.0000	46.2861	46.2861	8.9000e-004	8.5000e-004	46.5611
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
Regional Shopping Center	194975	1.0500e-003	9.5600e-003	8.0300e-003	6.0000e-005		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	10.4046	10.4046	2.0000e-004	1.9000e-004	10.4665
Total		**0.0371**	**0.3356**	**0.2689**	**2.0400e-003**		**0.0257**	**0.0257**		**0.0257**	**0.0257**	**0.0000**	**367.4821**	**367.4821**	**7.0500e-003**	**6.7300e-003**	**369.6659**

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	528596	2.8500e-003	0.0244	0.0104	1.6000e-004		1.9700e-003	1.9700e-003		1.9700e-003	1.9700e-003	0.0000	28.2079	28.2079	5.4000e-004	5.2000e-004	28.3755
Bank (with Drive-Through)	56109.2	3.0000e-004	2.7500e-003	2.3100e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	2.9942	2.9942	6.0000e-005	5.0000e-005	3.0120
Day-Care Center	87207	4.7000e-004	4.2700e-003	3.5900e-003	3.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	4.6537	4.6537	9.0000e-005	9.0000e-005	4.6814
Fast Food Restaurant with Drive Thru	1.57726e+006	8.5000e-003	0.0773	0.0650	4.6000e-004		5.8800e-003	5.8800e-003		5.8800e-003	5.8800e-003	0.0000	84.1687	84.1687	1.6100e-003	1.5400e-003	84.6689
Gasoline/Service Station	49331.9	2.7000e-004	2.4200e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6325	2.6325	5.0000e-005	5.0000e-005	2.6482
General Office Building	110628	6.0000e-004	5.4200e-003	4.5600e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.9035	5.9035	1.1000e-004	1.1000e-004	5.9386
High Turnover (Sit Down Restaurant)	998520	5.3800e-003	0.0490	0.0411	2.9000e-004		3.7200e-003	3.7200e-003		3.7200e-003	3.7200e-003	0.0000	53.2848	53.2848	1.0200e-003	9.8000e-004	53.6015
Hotel	1.58229e+006	8.5300e-003	0.0776	0.0652	4.7000e-004		5.8900e-003	5.8900e-003		5.8900e-003	5.8900e-003	0.0000	84.4373	84.4373	1.6200e-003	1.5500e-003	84.9390
Medical Office Building	612741	3.3000e-003	0.0300	0.0252	1.8000e-004		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	32.6982	32.6982	6.3000e-004	6.0000e-004	32.8925
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
Regional Shopping Center	147853	8.0000e-004	7.2500e-003	6.0900e-003	4.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	7.8900	7.8900	1.5000e-004	1.4000e-004	7.9369
Total		**0.0310**	**0.2803**	**0.2254**	**1.6900e-003**		**0.0214**	**0.0214**		**0.0214**	**0.0214**	**0.0000**	**306.8709**	**306.8709**	**5.8800e-003**	**5.6300e-003**	**308.6944**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	224521	33.4853	2.9500e-003	6.1000e-004	33.7413
Bank (with Drive-Through)	31399.2	4.6829	4.1000e-004	9.0000e-005	4.7187
Day-Care Center	33724.1	5.0297	4.4000e-004	9.0000e-005	5.0681
Fast Food Restaurant with Drive Thru	228805	34.1243	3.0100e-003	6.2000e-004	34.3851
Gasoline/Service Station	27606.6	4.1173	3.6000e-004	8.0000e-005	4.1488
General Office Building	109440	16.3220	1.4400e-003	3.0000e-004	16.4468
High Turnover (Sit Down Restaurant)	144850	21.6031	1.9100e-003	3.9000e-004	21.7682
Hotel	636026	94.8576	8.3700e-003	1.7300e-003	95.5826
Medical Office Building	606161	90.4035	7.9700e-003	1.6500e-003	91.0945
Parking Lot	319200	47.6059	4.2000e-003	8.7000e-004	47.9697
Regional Shopping Center	148509	22.1489	1.9500e-003	4.0000e-004	22.3181
Total		**374.3804**	**0.0330**	**6.8300e-003**	**377.2418**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	214522	31.9940	2.8200e-003	5.8000e-004	32.2385
Bank (with Drive-Through)	29305.9	4.3707	3.9000e-004	8.0000e-005	4.4041
Day-Care Center	30639.9	4.5697	4.0000e-004	8.0000e-005	4.6046
Fast Food Restaurant with Drive Thru	213285	31.8097	2.8100e-003	5.8000e-004	32.0528
Gasoline/Service Station	25766.2	3.8428	3.4000e-004	7.0000e-005	3.8722
General Office Building	100008	14.9153	1.3200e-003	2.7000e-004	15.0293
High Turnover (Sit Down Restaurant)	135025	20.1378	1.7800e-003	3.7000e-004	20.2917
Hotel	536777	80.0555	7.0600e-003	1.4600e-003	80.6674
Medical Office Building	553919	82.6122	7.2900e-003	1.5100e-003	83.2436
Parking Lot	319200	47.6059	4.2000e-003	8.7000e-004	47.9697
Regional Shopping Center	136811	20.4041	1.8000e-003	3.7000e-004	20.5601
Total		**342.3176**	**0.0302**	**6.2400e-003**	**344.9340**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2498	0.0222	0.3738	1.3000e-004		3.4700e-003	3.4700e-003		3.4700e-003	3.4700e-003	0.0000	21.3970	21.3970	1.0100e-003	3.8000e-004	21.5358
Unmitigated	1.2498	0.0222	0.3738	1.3000e-004		3.4700e-003	3.4700e-003		3.4700e-003	3.4700e-003	0.0000	21.3970	21.3970	1.0100e-003	3.8000e-004	21.5358

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	0.2040					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.1000e-003	0.0180	7.6400e-003	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	20.7940	20.7940	4.0000e-004	3.8000e-004	20.9175
Landscaping	0.0116	4.1900e-003	0.3662	2.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	0.6031	0.6031	6.1000e-004	0.0000	0.6183
Total	**1.2498**	**0.0222**	**0.3738**	**1.3000e-004**		**3.4600e-003**	**3.4600e-003**		**3.4600e-003**	**3.4600e-003**	**0.0000**	**21.3970**	**21.3970**	**1.0100e-003**	**3.8000e-004**	**21.5358**

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	0.2040					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.1000e-003	0.0180	7.6400e-003	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	20.7940	20.7940	4.0000e-004	3.8000e-004	20.9175
Landscaping	0.0116	4.1900e-003	0.3662	2.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	0.6031	0.6031	6.1000e-004	0.0000	0.6183
Total	**1.2498**	**0.0222**	**0.3738**	**1.3000e-004**		**3.4600e-003**	**3.4600e-003**		**3.4600e-003**	**3.4600e-003**	**0.0000**	**21.3970**	**21.3970**	**1.0100e-003**	**3.8000e-004**	**21.5358**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	28.3610	0.7389	0.0178	52.1354
Unmitigated	29.0938	0.7390	0.0178	52.8738

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	3.12739 / 1.97162	4.5452	0.1022	2.4700e-003	7.8370
Bank (with Drive-Through)	0.141058 / 0.0864546	0.2037	4.6100e-003	1.1000e-004	0.3522
Day-Care Center	0.20587 / 0.52938	0.5078	6.7500e-003	1.7000e-004	0.7261
Fast Food Restaurant with Drive Thru	2.39792 / 0.153058	2.7758	0.0783	1.8800e-003	5.2944
Gasoline/Service Station	0.159383 / 0.0976861	0.2302	5.2100e-003	1.3000e-004	0.3979
General Office Building	2.1328 / 1.3072	3.0802	0.0697	1.6800e-003	5.3250
High Turnover (Sit Down Restaurant)	1.51767 / 0.0968725	1.7568	0.0496	1.1900e-003	3.3509
Hotel	3.24695 / 0.360772	3.8387	0.1061	2.5500e-003	7.2497
Medical Office Building	8.34069 / 1.5887	10.2064	0.2725	6.5600e-003	18.9711
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.3496 / 0.827175	1.9491	0.0441	1.0700e-003	3.3696
Total		**29.0938**	**0.7390**	**0.0178**	**52.8738**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	3.12739 / 1.57729	4.3393	0.1022	2.4700e-003	7.6296
Bank (with Drive-Through)	0.141058 / 0.0691637	0.1947	4.6100e-003	1.1000e-004	0.3431
Day-Care Center	0.20587 / 0.423504	0.4525	6.7400e-003	1.7000e-004	0.6704
Fast Food Restaurant with Drive Thru	2.39792 / 0.122447	2.7598	0.0783	1.8800e-003	5.2783
Gasoline/Service Station	0.159383 / 0.0781489	0.2200	5.2100e-003	1.3000e-004	0.3877
General Office Building	2.1328 / 1.04576	2.9437	0.0697	1.6800e-003	5.1875
High Turnover (Sit Down Restaurant)	1.51767 / 0.077498	1.7467	0.0496	1.1900e-003	3.3407
Hotel	3.24695 / 0.288617	3.8011	0.1061	2.5500e-003	7.2118
Medical Office Building	8.34069 / 1.27096	10.0405	0.2724	6.5500e-003	18.8039
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.3496 / 0.66174	1.8627	0.0441	1.0600e-003	3.2826
Total		**28.3610**	**0.7389**	**0.0178**	**52.1354**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	153.2876	9.0590	0.0000	379.7636
Unmitigated	204.3835	12.0787	0.0000	506.3514

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	22.08	4.4820	0.2649	0.0000	11.1041
Bank (with Drive-Through)	3.32	0.6739	0.0398	0.0000	1.6696
Day-Care Center	6.24	1.2667	0.0749	0.0000	3.1381
Fast Food Restaurant with Drive Thru	91	18.4722	1.0917	0.0000	45.7640
Gasoline/Service Station	6.47	1.3134	0.0776	0.0000	3.2538
General Office Building	11.16	2.2654	0.1339	0.0000	5.6124
High Turnover (Sit Down Restaurant)	59.5	12.0780	0.7138	0.0000	29.9226
Hotel	70.08	14.2256	0.8407	0.0000	35.2433
Medical Office Building	717.88	145.7232	8.6120	0.0000	361.0229
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	19.13	3.8832	0.2295	0.0000	9.6205
Total		**204.3835**	**12.0787**	**0.0000**	**506.3514**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	16.56	3.3615	0.1987	0.0000	8.3281
Bank (with Drive-Through)	2.49	0.5055	0.0299	0.0000	1.2522
Day-Care Center	4.68	0.9500	0.0561	0.0000	2.3536
Fast Food Restaurant with Drive Thru	68.25	13.8541	0.8188	0.0000	34.3230
Gasoline/Service Station	4.8525	0.9850	0.0582	0.0000	2.4403
General Office Building	8.37	1.6990	0.1004	0.0000	4.2093
High Turnover (Sit Down Restaurant)	44.625	9.0585	0.5353	0.0000	22.4420
Hotel	52.56	10.6692	0.6305	0.0000	26.4325
Medical Office Building	538.41	109.2924	6.4590	0.0000	270.7672
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	14.3475	2.9124	0.1721	0.0000	7.2154
Total		**153.2876**	**9.0590**	**0.0000**	**379.7636**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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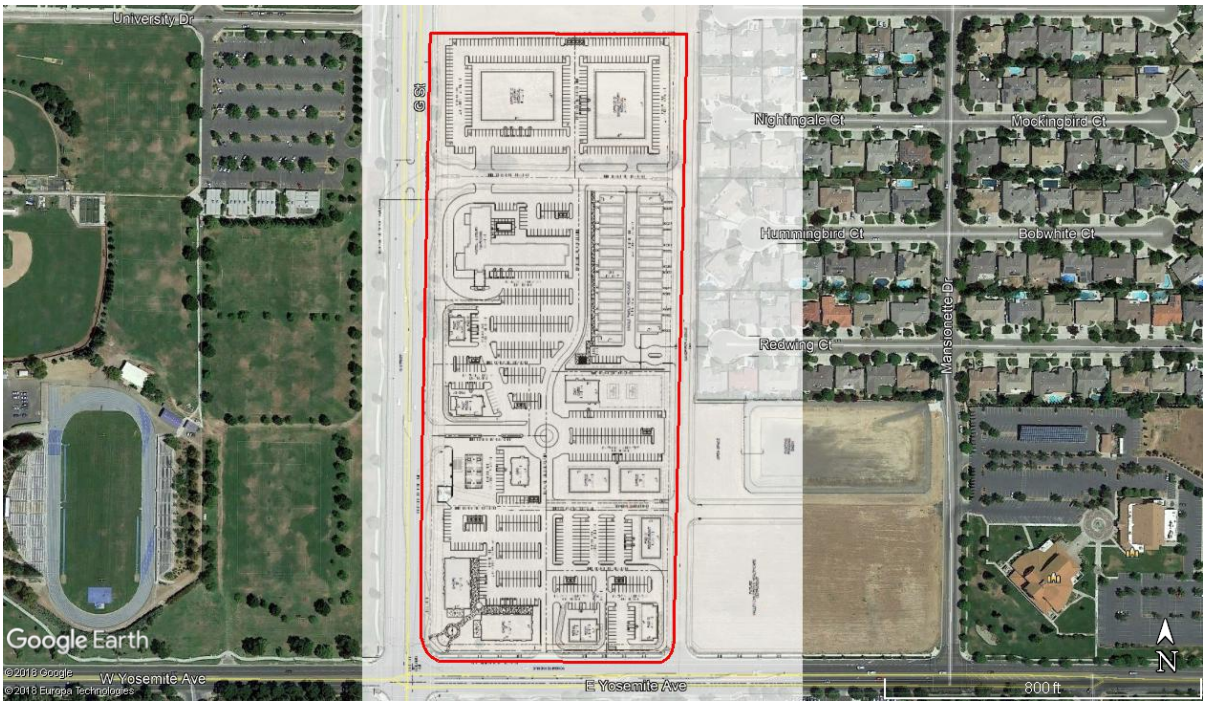
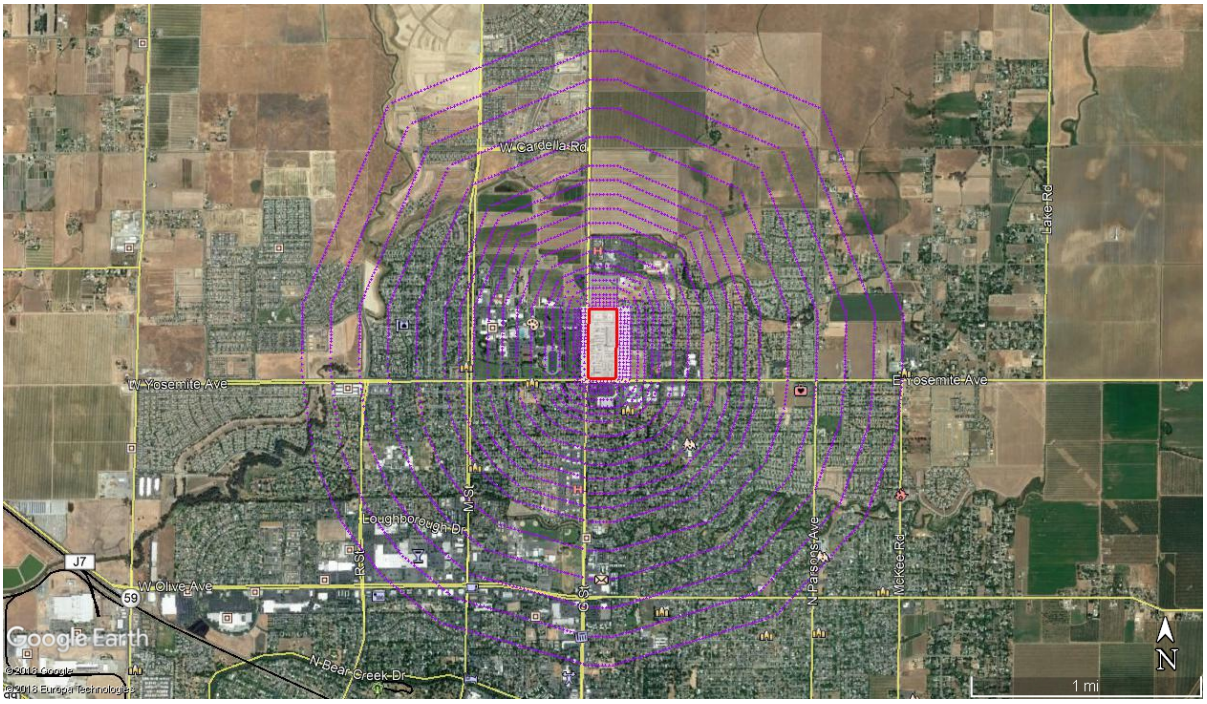
APPENDIX B

HRA MODEL OUTPUT

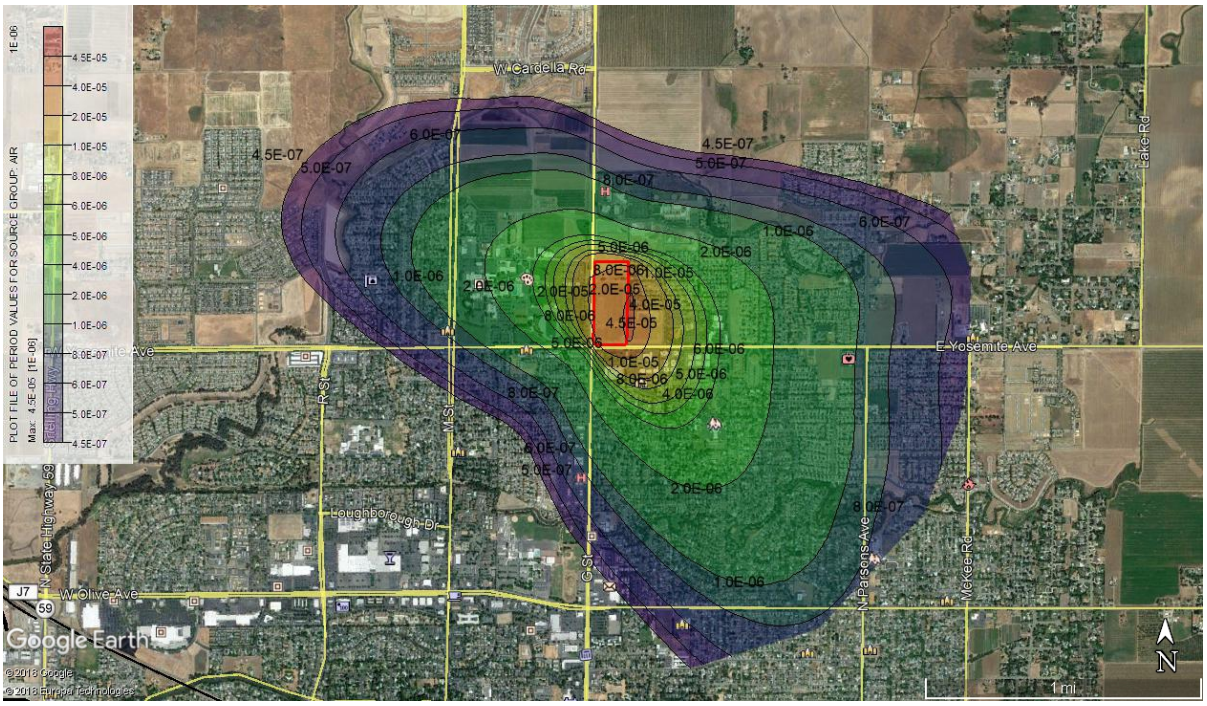
Project Site Plan



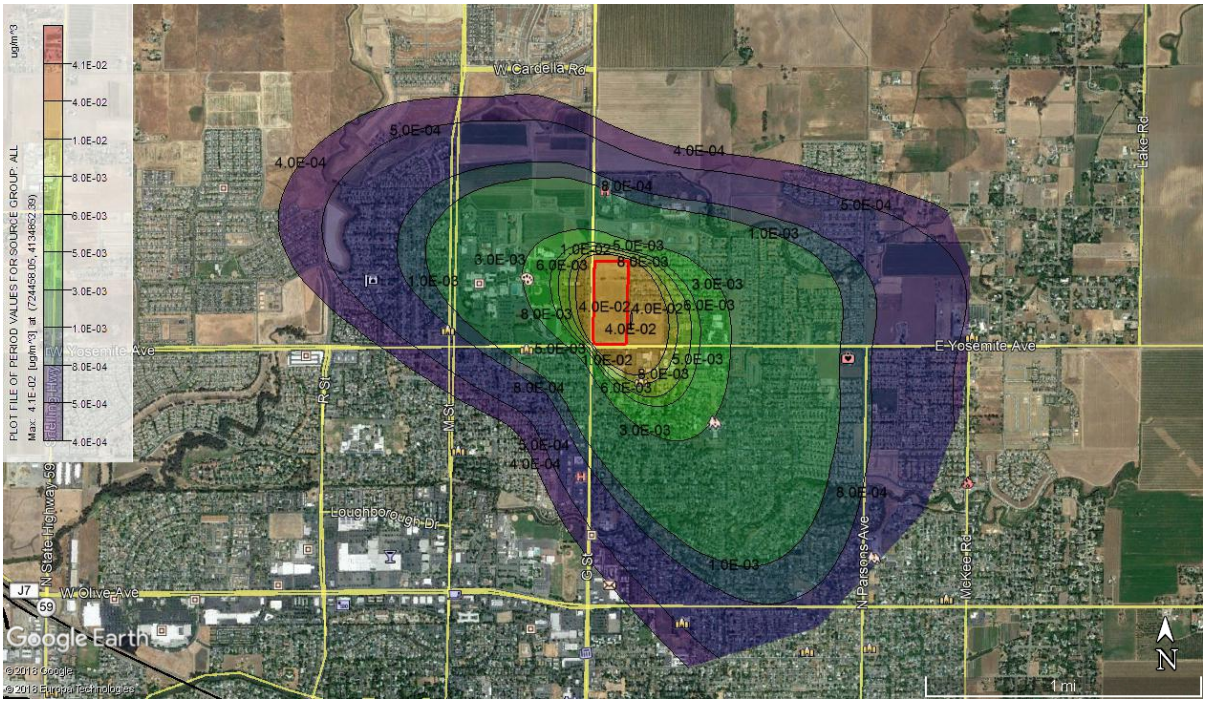
Sensitive Receptors



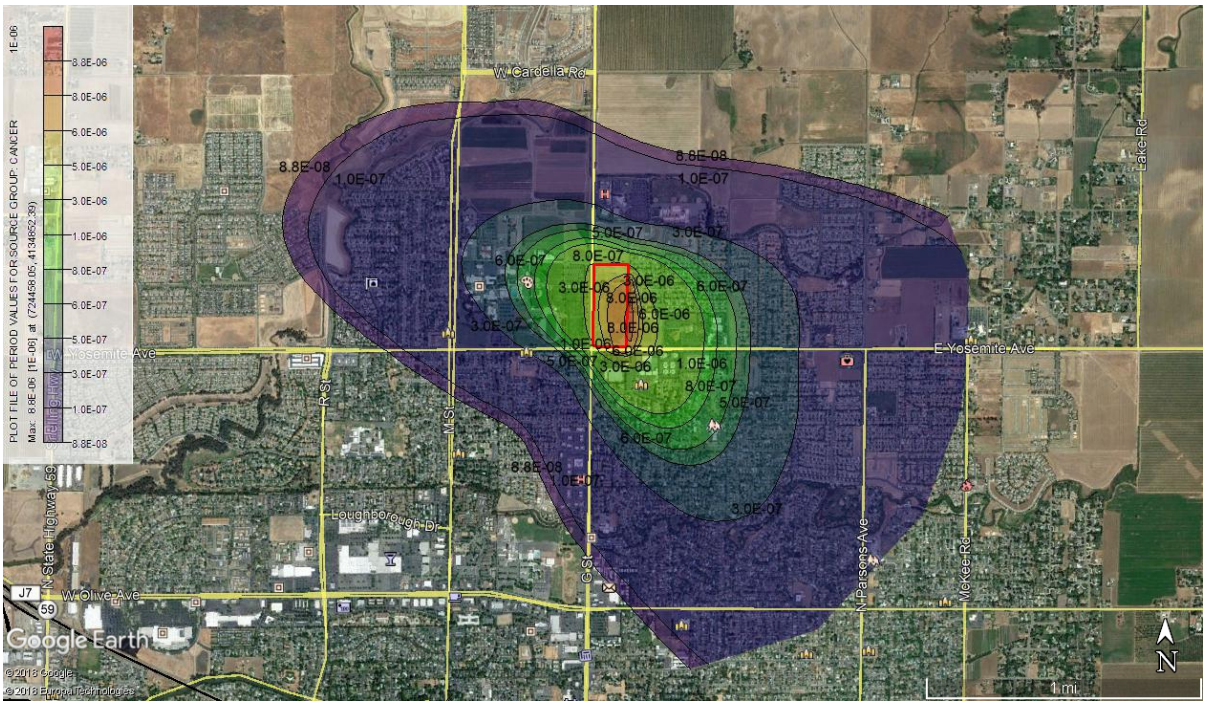
Unmitigated Cancer Risk



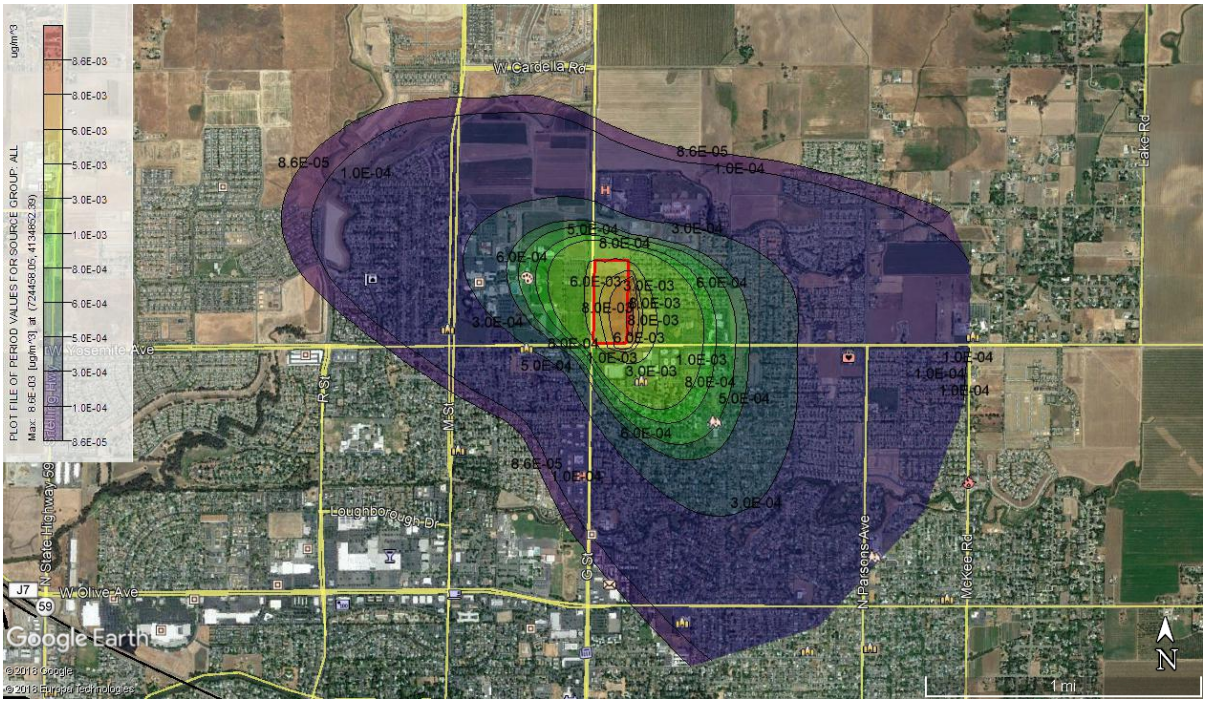
Unmitigated Chronic Inhalation Hazard Index



Mitigated Cancer Risk



Mitigated Chronic Inhalation Hazard Index



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