Carkel San Marcos Commercial

Technical Appendices

Appendix B

Air Quality Report

AIR QUALITY ASSESSMENT

Carkel San Marcos Commercial Project
City of San Marcos

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EXECUTIVE SUMMARY

This air quality impact study has been completed to determine air quality impacts associated with the development of the proposed coffee shop development on an existing undeveloped 0.55-acre commercial lot within the City of San Marcos.

During construction of the proposed Project, fugitive dust emissions are expected during grading, heavy equipment, and from construction workers commuting to and from the site however, these emissions would not exceed City thresholds and would not be considered an impact. The measures below have been designed and planned into the project by the applicant and would not be subject for removal. In other words, the measures below would be design features and would also be a requirement for the project.

- *Construction Design Feature 1: all heavy diesel construction equipment will be Tier 3 or better.*
- *Construction Design Feature 2: In accordance with Rule 67 of the California Air Resource Board, only Low VOC paints shall be utilized onsite.*
- *Best Management Practice 1: Comply with SDAPCD's fugitive dust rules and fugitive dust control measures which will be provided by the City of San Marcos.*

Additionally, emissions will be generated from both area and operational source which are sources which would be expected after the project is constructed. These sources are the result of Project generated vehicular traffic, landscaping maintenance equipment, consumer products, as well as annual maintenance and painting to name a few. Based on CalEEMod modeling for both operational and area sources, no impacts would be expected since SDAPCD significance thresholds would not be exceeded.

The project is in the San Marcos Creek Specific Plan and MU-1 allows residential and commercial retail with a Floor Area Ratio (FAR) of 1.9. The Project as proposed would have a FAR of 0.7. Given this, the project would be less intense than would otherwise be allowed under the General Plan and not conflict with the Regional Air Quality Strategy (RAQS) or the State's Air Quality State Implementation Plan (SIP). Since the City's General Plan is consistent with both the state and regional plans, no cumulative impacts are expected.

Finally, odor impacts from construction operations would be expected though would be considered short-term events and would therefore not be considered a significant impact. Odors from heating baked food items or coffees would not generate objectionable odors to a significant number of people. Given this the project would generate less than significant operational odor impacts.

1.0 INTRODUCTION

1.1 Purpose of this Study

The purpose of this Air Quality study is to determine potential air quality impacts (if any) that may be generated by construction, area or operational emissions from the proposed Project. Should impacts be determined, the intent of this study would be to recommend suitable mitigation measures to bring those impacts to a level that would be considered less than significant under the California Environmental Quality Act (CEQA).

1.2 Project Location

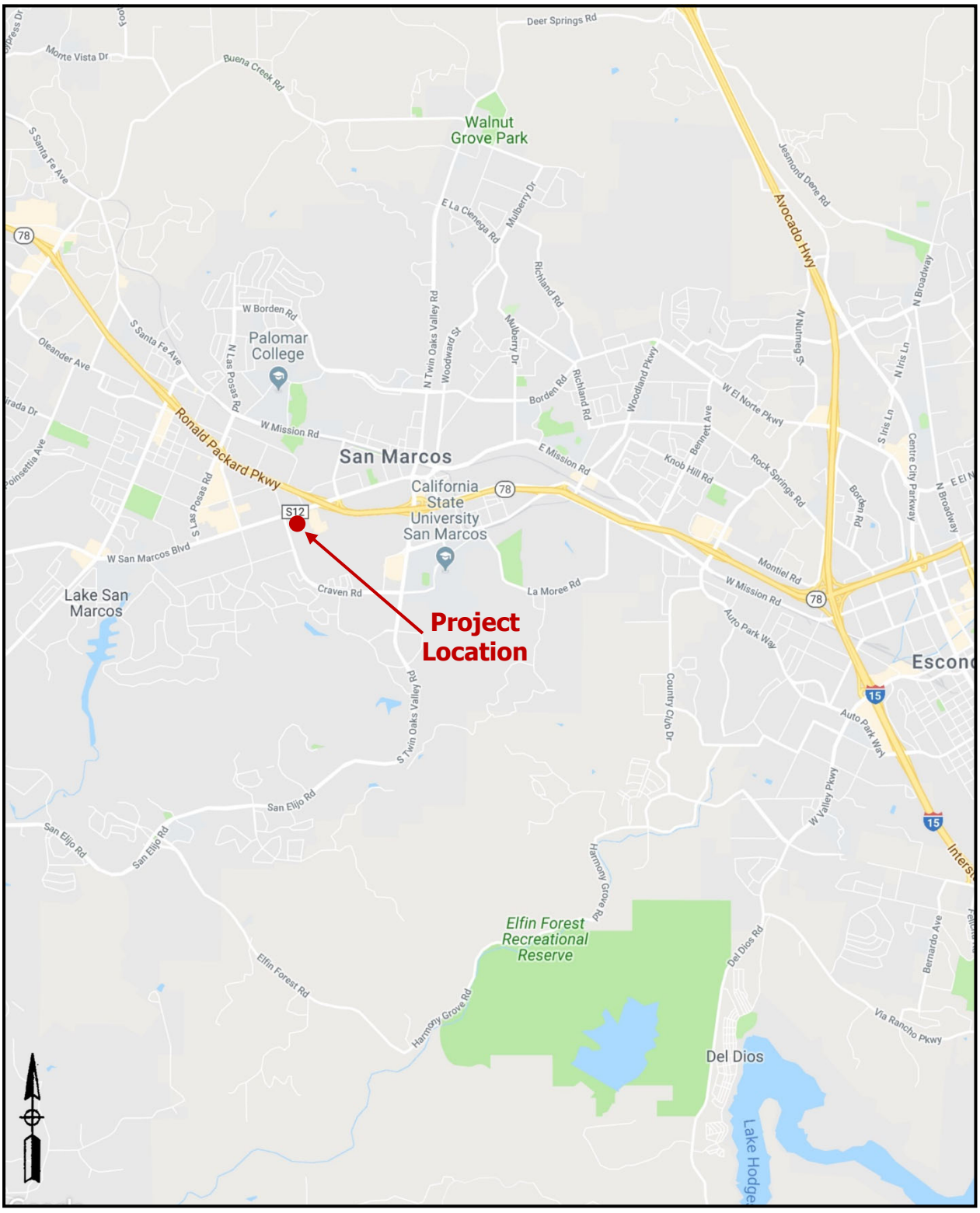
The 0.55-acre project site is located on the southeast corner of W. San Marcos Boulevard and Bent Avenue in the City of San Marcos in northern San Diego County. The project site is surrounded by commercial land uses which include a neighborhood commercial center to the west and a retail warehouse store to the north. Access to the project site would be via Bent Avenue and W. San Marcos Boulevard. A project vicinity map is shown in Figure 1-A.

1.3 Project Description

The project applicant is requesting approval of a Specific Plan Amendment, General Plan Amendment, Rezone, and Conditional Use Permit to construct a restaurant with a drive-thru. The project proposes to construct a 2,128-square foot (s.f.) Starbucks with drive thru. The Starbucks will have 1,797 s.f. of interior space and 331 s.f. of exterior seating. The project will install two electric vehicle (EV) charging station within the proposed parking area.

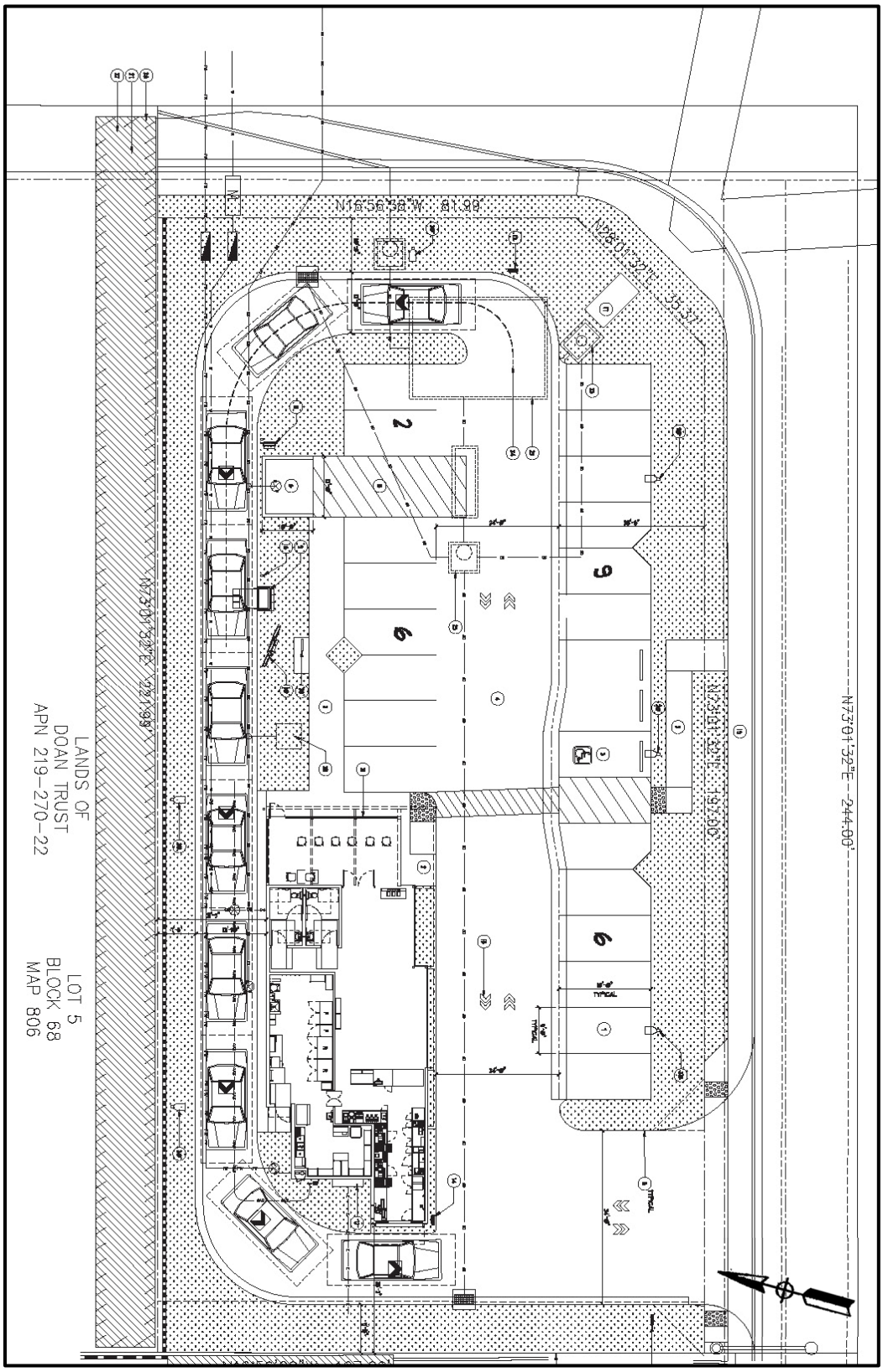
The proposed project would require roughly 500 cubic yards (CY) of soil import which will be sourced within 20 miles of the project site. All phases (i.e., grading, paving and construction) of the proposed Project are anticipated to start in 2021 and be completed roughly five months later with full operations in 2022. The project development plan is shown on Figure 1-B of this report.

Figure 1-A: Project Vicinity Map



Source: (Google, 2021)

Figure 1-B: Development Site Plan



Source: (Starbucks, 2021)

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Existing Setting

The Project site is located on the southeast corner of W San Marcos Boulevard and Bent Avenue within the City of San Marcos next a self-storage facility. The existing site is currently vacant. The project site is generally flat topography with elevations of roughly 550 feet above mean sea level. The existing site aerial map is shown in Figure 2-A below.

Figure 2-A: Existing Site Layout

Source: (Google, 2021)

2.2 Climate and Meteorology

Climate within the San Diego Air Basin (SDAB) area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing winds from the west heats up. Most of southern California is dominated by high-pressure systems for much of the year, which keeps San Diego mostly sunny and warm. Typically, during the winter months, the high-pressure systems drop to the south and brings cooler, moister weather from the north.

Meteorological trends within the City of San Marcos produce daytime highs typically ranging between 69ºF in the winter to approximately 85ºF in the summer with August usually being the hottest month. Median temperatures range from approximately 55ºF in the winter to approximately 74ºF in the summer. The average humidity is approximately 64% in the winter and about 74% in the summer (City-Data, 2021).

2.3 Regulatory Standards

2.3.1 Federal Standards and Definitions

The Federal Air Quality Standards were developed per the requirements of The Federal Clean Air Act, which is a federal law that was passed in 1970 and further amended in 1990. This law provides the basis for the national air pollution control effort. An important element of the act included the development of national ambient air quality standards (NAAQS) for major air pollutants.

The Clean Air Act established two types of air quality standards otherwise known as primary and secondary standards. ***Primary Standards*** set limits to protect public health which includes sensitive populations such as asthmatics, children and elderly. ***Secondary Standards*** set limits to protect public welfare and include protection against decreased visibility, damage to animals, crops, vegetation and buildings.

The Environmental Protection Agency's (EPA Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards for principal pollutants, which are called "criteria" pollutants. These pollutants are defined below:

1. ***Carbon Monoxide (CO):*** *is a colorless, odorless, and tasteless gas and is produced from the partial combustion of carbon-containing compounds, notably in internal-combustion engines. Carbon monoxide usually forms when there is a reduced availability of oxygen present during the combustion process. Exposure to CO near the levels of the ambient air*

quality standards can lead to fatigue, headaches, confusion, and dizziness. CO interferes with the blood's ability to carry oxygen.

2. ***Lead (Pb):*** *is a potent neurotoxin that accumulates in soft tissues and bone over time. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Because lead is only slowly excreted, exposures to small amounts of lead from a variety of sources can accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms can include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children.*
3. ***Nitrogen Dioxide (NO_2):*** *is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract and is one of the nitrogen oxides emitted from high-temperature combustion, such as those occurring in trucks, cars, power plants, home heaters, and gas stoves. In the presence of other air contaminants, NO_2 is usually visible as a reddish-brown air layer over urban areas. NO_2 along with other traffic-related pollutants is associated with respiratory symptoms, respiratory illness and respiratory impairment. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO_2 above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO_2 exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children.*
4. ***Particulate Matter (PM_{10} or $PM_{2.5}$):*** *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 in shape, size and chemical composition, and can be made up of multiple materials such as metal, soot, soil, and dust. PM_{10} particles are 10 microns (µm) or less and $PM_{2.5}$ particles are 2.5 (µm) or less. These particles can contribute significantly to regional haze and reduction of visibility in California. Exposure to PM levels exceeding current air quality standards increases the risk of allergies such as asthma and respiratory illness.*
5. ***Ozone (O_3)****: is a highly oxidative unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Exposure to ozone above ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung functioning. Ozone can also damage materials such as rubber, fabrics and plastics.*
6. ***Sulfur Dioxide (SO_2)****: is a gaseous compound of sulfur and oxygen and is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO_2 is also emitted from several industrial processes, such as petroleum refining and metal processing. Effects from SO_2 exposures at levels near the*

one-hour standard include bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Children, the elderly, and people with asthma, cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most susceptible to these symptoms. Continued exposure at elevated levels of SO_2 results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.

2.3.2 State Standards and Definitions

The State of California Air Resources Board (ARB) sets the laws and regulations for air quality at State level. The California Ambient Air Quality Standards (CAAQS) are either the same as or more restrictive than the NAAQS in that the State standards also restrict four additional contaminants. Table 2.1 on the following page identifies both the NAAQS and CAAQS. The additional contaminants as regulated by the CAAQS are defined below:

1. ***Visibility Reducing Particles****: Particles in the Air that obstruct the visibility.*
2. ***Sulfates****: are salts of Sulfuric Acid. Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. They increase the acidity of the atmosphere and form acid rain.*
3. ***Hydrogen Sulfide (H_2S)****: is a colorless, toxic and flammable gas with a recognizable smell of rotten eggs or flatulence. H_2S occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. Usually, H_2S is formed from bacterial breakdown of organic matter. Exposure to low concentrations of hydrogen sulfide may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Brief exposures to high concentrations of hydrogen sulfide (greater than 500 ppm) can cause a loss of consciousness and possibly death.*
4. ***Vinyl Chloride****: also known as chloroethene and is a toxic, carcinogenic, colorless gas with a sweet odor. It is an industrial chemical mainly used to produce its polymer, polyvinyl chloride (PVC).*

Table 2.1: Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	**Average Time**	**California Standards[1]**		**Federal Standards[2]**		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m3)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m3)		0.070 ppm (137 µg/m3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m3	Gravimetric or Beta Attenuation	150 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m3		-		
Fine Particulate Matter (PM2.5)[9]	24 Hour	No Separate State Standard		35 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m3	Gravimetric or Beta Attenuation	12.0 µg/m3	15 µg/m3	
Carbon Monoxide (CO)	8 hours	9.0 ppm (10mg/m3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m3)	-	Non-Dispersive Infrared Photometry
	1 hour	20 ppm (23 mg/m3)		35 ppm (40 mg/m3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m3)		-	-	-
Nitrogen Dioxide (NO_2)[10]	Annual Arithmetic Mean	0.030 ppm (57 µg/m3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m3)[8]	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m3)		0.100 ppm[8] (188/ µg/m3)	-	
Sulfur Dioxide (SO_2)[11]	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.030 ppm[10] (for Certain Areas)	-	Ultraviolet Flourescence; Spectrophotometry (Pararoosaniline Method)[9]
	24 Hour	0.04 ppm (105 µg/m3)		0.14 ppm[10] (for Certain Areas) (See Footnote 9)	-	
	3 Hour	-		-	0.5 ppm (1300 µg/m3)	
	1 Hour	0.25 ppm (655 µg/m3)		75 ppb (196 µg/m3)	-	
Lead[12,13]	30 Day Average	1.5 µg/m3	Atomic Absorption	-		-
	Calendar Quarter	-		1.5 µg/m3	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	-		0.15 µg/m3		
Visibility Reducing Particles	8 Hour	See footnote 14				
Sulfates	24 Hour	25 µg/m3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m3)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, 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.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, 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 the U.S. EPA for further clarification and current national policies.
3. 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.
4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3. The existing national 24- hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3, as was the annual secondary standard of 15 µg/m3. The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. 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.
11. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: (California Air Resources Board, 5/4/2016)

2.3.3 Regional Standards

The State of California has 35 specific air districts, which are each responsible for ensuring that the criteria pollutants are below the NAAQS and CAAQS. Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as "non-attainment areas" for that pollutant. Currently, there are 15 non-attainment areas for the federal ozone standard and two non-attainment areas for the $PM_{2.5}$ standard and many areas are in non-attainment for PM_{10} as well. California therefore created the California State Implementation Plan (SIP), which is designed to provide control measures needed to attain ambient air quality standards.

The San Diego Air Pollution Control District (SDAPCD) is the government agency which regulates sources of air pollution within the county. Therefore, the SDAPCD developed a RAQS to provide control measures to try to achieve attainment status for state ozone standards with control measures focused on Volatile Organic Compounds (VOCs) and oxides of nitrogen (NO_X). Currently, San Diego is in "non-attainment" status for federal and state O_3 and state PM_{10} and $PM_{2.5.}$ An attainment plan is available for O_3. The RAQS was adopted in 1992 and has been updated as recently as 2016 which was the latest update incorporating minor changes to the prior 2009 update.

The 2016 update mostly summarizes how the 2009 update has lowered NO_X and VOCs emissions which reduces ozone and clarifies and enhances emission reductions by introducing for discussion three new VOC and four new NO_X reduction measures. NO_X and VOCs are precursors to the formation of ozone in the atmosphere. The criteria pollutant standards are generally attained when each monitor within the region has had no exceedances during the previous three calendar years. A complete listing of the current attainment status for criteria pollutants with respect to both federal and state nonattainment status by pollutants for County is shown in Table 2.2 on the following page (SDAPCD, 2019).

The RAQS is largely based on population predictions by the San Diego Association of Governments (SANDAG). Projects that produce less growth than predicted by SANDAG would generally conform to the RAQS. Projects that create more growth than projected by SANDAG may create a significant impact if the Project produces unmitigable air quality emissions or if the Project produces cumulative impacts.

Table 2.2: San Diego County Air Basin Attainment Status by Pollutant

Criteria Pollutant	Federal Designation	State Designation
Ozone (8-Hour)	Nonattainment	Nonattainment
Ozone (1-Hour)	Attainment *	Nonattainment
Carbon Monoxide	Attainment	Attainment
PM10	Unclassifiable **	Nonattainment
PM2.5	Attainment	Nonattainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility	No Federal Standard	Unclassified

** The federal 1-hour standard of 12 pphm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans.*
*** At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.*
(SDAPCD, 2019)

2.4 California Environmental Quality Act (CEQA) Significance Thresholds

The California Environmental Quality Act has provided a checklist to identify the significance of air quality impacts. These guidelines are found in Appendix G of the CEQA guidelines and are as follows:

AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:

A: Conflict with or obstruct implementation of the San Diego Regional Air Quality Strategy (RAQS) or applicable portions of the State Implementation Plan (SIP)?

B: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable Federal or State ambient air quality standard (PM10, PM2.5 or exceed quantitative thresholds for O3 precursors, oxides of nitrogen [NOX] and Volatile Organic Compounds [VOCs])?

C: Expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, or day-care centers) to substantial pollutant concentrations?

D: Result in other emission (such as those leading to odors) adversely affecting a substantial number of people?

2.5 SDAPCD Rule 20.2 – Air Quality Impact Assessment Screening Thresholds

The SDAPCD has established thresholds in Rule 20.2 for new or modified stationary sources. These screening criteria can be used to demonstrate that a project's total emissions would not result in a significant impact as defined by CEQA. Also, since SDAPCD does not have AQI threshold for Volatile Organic Compounds (VOCs), it is acceptable to use the Coachella Valley VOC threshold from South Coast Air Quality Management District. Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the project's total air quality impacts are below the state and federal ambient air quality standards. These screening thresholds for construction and daily operations are shown in Table 2.3 below.

Table 2.3: Screening Level Thresholds for Criteria Pollutants

Pollutant	Total Emissions (Pounds per Day)
Construction Emissions	
Respirable Particulate Matter (PM_{10} and $PM_{2.5}$)	100 and 55
Nitrogen Oxide (NO_x)	250
Sulfur Oxide (SO_x)	250
Carbon Monoxide (CO)	550
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75
Operational Emissions	
Respirable Particulate Matter (PM_{10} and $PM_{2.5}$)	100 and 55
Nitrogen Oxide (NO_x)	250
Sulfur Oxide (SO_x)	250
Carbon Monoxide (CO)	550
Lead and Lead Compounds	3.2
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75

Non-Criteria pollutants such as Hazardous Air Pollutants (HAPs) or Toxic Air Contaminants (TACs) are also regulated by the SDAPCD. Rule 1200 (Toxic Air Contaminants - New Source Review) adopted on June 12, 1996, requires evaluation of potential health risks for any new, relocated, or modified emission unit which may increase emissions of one or more toxic air contaminants. The rule requires that projects that propose to increase cancer risk to between 1 and 10 in one million need to implement toxics best available control technology (T-BACT) or impose the most effective emission limitation, emission control device or control technique to reduce the cancer risk. At no time shall the project increase the cancer risk to over 10 in one million. At no time shall the project increase the cancer risk to over 10 in one million or

a health hazard index (chronic and acute) greater than one. Projects creating cancer risks less than one in one million are not required to implement T-BACT technology.

The U.S. Environmental Protection Agency (U.S. EPA) uses the term Volatile Organic Compounds (VOC) and the California Air Resources Board's (CARB's) Emission Inventory Branch (EIB) uses the term Reactive Organic Gases (ROG) to essentially define the same thing. There are minor deviations between compounds that define each term however for purposes of this study we will assume they are essentially the same due to the fact SCAQMD interchanges these words and because CalEEMod directly calculates ROG in place of VOC.

2.6 Local Air Quality

Criteria pollutants are measured continuously throughout the San Diego Air Basin. This data is used to track ambient air quality patterns throughout the County. As mentioned earlier, this data is also used to determine attainment status when compared to the NAAQS and CAAQS. The SDAPCD is responsible for monitoring and reporting monitoring data. The District operates 10 monitoring sites, which collect data on criteria pollutants. The proposed development project is closest to the Escondido Monitoring station which is located 6.3 miles from the Project site. Table 2.4 on the following page identifies the criteria pollutants monitored at the aforementioned station.

Four additional sites collect meteorological data which is used by the District to assist with pollutant forecasting, data analysis and characterization of pollutant transport. SDAPCD published the five-year air quality summary for all of the monitoring stations (SDAPCD, 2020).

Table 2.4: Three-Year Ambient Air Quality Summary near the Project Site

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2014	2015	2016
O_3 (ppm)	Escondido-E Valley Parkway	1 Hour	0.09 ppm	-	0.10	0.08	-
		8 Hour	0.070 ppm	0.075 ppm	0.08	0.07	-
PM_{10} (µg/m3)		24 Hour	50 µg/m3	150 µg/m3	43	30	-
		Annual Arithmetic Mean	20 µg/m3	-	21.6	19.4	-
$PM_{2.5}$ (µg/m3)		24 Hour	-	35 µg/m3	30.4	29.4	-
		Annual Arithmetic Mean	12 µg/m3	15 µg/m3	9.5	8.6	-
NO_2 (ppm)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.011	0.010	-
		1 Hour	0.18 ppm	-	0.063	0.048	-
CO (ppm)		8 Hour	9 ppm	9 ppm	3.1	2.0	-
		1 Hour	35 ppm	20 ppm	3.8	3.1	-

- All ambient emissions reported are assumed to be taken by the district in compliance with both the NAAQS and CAAQS.
- Methodologies for those measurements are discussed in Table 2.1 of this report.
- 2016 Data has been temporarily suspended as of August 2015.

3.0 METHODOLOGY

3.1 Construction Emissions Calculations

Air Quality impacts related to construction and daily operations were calculated using the latest CalEEMod air quality model, which was developed by ENVIRON International Corporation for South Coast Air Quality Management District (SCAQMD). The construction module in CalEEMod is used to calculate the emissions associated with the construction of the project and uses methodologies presented in the US EPA AP-42 document with emphasis on Chapter 11.9. The CalEEMod input/output model is shown in ***Attachment A*** to this report.

The AERSCREEN dispersion model was used to determine the concentration for air pollutants at any location near the pollutant generator. Additionally, the model will predict the maximum exposure distance and concentrations. The AERSCREEN input/output file for the proposed Project is shown in ***Attachment B*** at the end of this report. The worst-case exhaust emissions generated from the Project from construction equipment was utilized and calculated within the CalEEMod model.

Once the dispersed concentrations of diesel particulates are estimated in the surrounding air, they are used to evaluate estimated exposure to people. Exposure is evaluated by calculating the dose in milligrams per kilogram body weight per day (mg/kg/d). For residential exposure, the breathing rates are determined for specific age groups, so inhalation dose (Dose-air) is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. The following algorithms calculate this dose for exposure through the inhalation pathways. The worst case cancer risk dose calculation is defined in Equation 1 (OEHHA, 2015):

Equation 1 $$Dose_{air} = C_{air} * (BR/BW) * A * EF * (1x10^{-6})$$

$Dose_{air}$	=	Dose through inhalation (mg/kg/d)
C_{air}	=	Concentration in air (µg/m^3) Annual average DPM concentration in µg/m^3 - AERSCREEN predicts a 1-hr concentration and is corrected to an annual average by multiplying the 1-hr average by 0.08 (US EPA, 1992)
BR/BW	=	Daily breathing rate normalized to body weight (L/kg BW-day). See Table I.2 for the daily breathing rate for each age range.
A	=	Inhalation absorption factor (assumed to be 1)
EF	=	Exposure frequency (unitless, days/365 days)
1x10-6	=	Milligrams to micrograms conversion (10^{-3} mg/ µg), cubic meters to liters conversion (10^{-3} m^3/l)

Once the dose is determined then you must calculate the cancer risk. The average daily inhalation dose (mg/kg-day) multiplied by the cancer potency factor $(mg/kg\text{-}day)^{-1}$ will give the inhalation cancer risk (unitless), which is an expression of the chemical's cancer risk during

a 70-year lifespan of exposure. For example, an inhalation cancer risk of 5 x 10^{-6} is the same as stating that an individual has an estimated probability of developing cancer from their exposure of 5 chances per million people exposed.

Cancer risk is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor, the frequency of time spent at home and the exposure duration divided by averaging time, to yield the excess cancer risk. As described below, the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk for any given location. Specific factors as modeled are shown within the project models attached to this report. The worst case cancer risk calculation is defined in Equation 2 below (OEHHA, 2015):

Equation 2

$$RISK_{inh\text{-}res} = DOSE_{air} \times CPF \times ASF \times ED/AT \times FAH$$

$RISK_{inh\text{-}res}$	=	Residential inhalation cancer risk
$DOSE_{air}$	=	Daily inhalation dose (mg/kg-day)
CPF	=	Inhalation cancer potency factor ($mg/kg\text{-}day^{-1}$)
ASF	=	Age sensitivity factor for a specified age group (unitless)
ED	=	Exposure duration (in years) for a specified age group
AT	=	Averaging time for lifetime cancer risk (years)
FAH	=	Fraction of time spent at home (unitless)

OEHHA recommends that an exposure duration (residency time) of 30 years be used to estimate individual cancer risk for the Maximally Exposed Individual Resident (MEIR). OEHHA also recommends that the 30-year exposure duration be used as the basis for public notification and risk reduction audits and plans.

Exposure durations of 9-years and 70-years are also recommended to be evaluated for the MEIR to show the range of cancer risk based on residency periods. If a facility is notifying the public regarding cancer risk, the 9-and 70-year cancer risk estimates are useful for people who have resided in their current residence for periods shorter and longer than 30 years.

Non-Cancer risks or risks defined as chronic or acute are also known with respect to DPM and are determined by the hazard index. To calculate hazard index, DPM concentration is divided by its Reference Exposure Levels (REL). Where the total equals or exceeds one, a health hazard is presumed to exist. RELs are published by the Office of Environmental Health Hazard Assessment (OEHHA, 2014). Diesel Exhaust has a REL of 5 $\mu g/m^3$ and targets the respiratory system.

3.2 Construction Assumptions

The project would break ground late 2021 and be completed with construction roughly five months later and be completed in 2022. During the grading process, the project will require the import of roughly 500 CY of fill material. Also, as a design feature, the project's construction contractor will utilize Tier 3 or better rated diesel construction equipment to minimize diesel particulates from construction equipment. Finally, the project would also incorporate best management practices with respect to SDAPCD's fugitive dust rules and fugitive dust control measures during construction of the project. The Construction dates along with equipment required for the work is shown in Table 3.1 below. Finally, the following construction design features were included within the CalEEMod analysis:

- *Construction Design Feature 1: all heavy diesel construction equipment will be Tier 3 or better.*
- *Construction Design Feature 2: In accordance with Rule 67 of the California Air Resource Board, only Low VOC paints shall be utilized onsite.*
- *Best Management Practice 1: Comply with SDAPCD's fugitive dust rules and fugitive dust control measures which will be provided by the City of San Marcos.*

Table 3.1: Expected Construction Equipment

Equipment Identification	Proposed Start	Proposed Completion	Quantity
Grading	09/01/2021	09/03/2021	
Rubber Tired Dozers			1
Skid Steer Loaders			1
Paving	09/04/2021	09/10/2021	
Pavers			1
Rollers			1
Tractors/Loaders/Backhoes			1
Building Construction	09/11/2021	01/28/2022	
Cranes			1
Forklifts			1
Architectural Coating	01/23/2022	01/28/2022	
Air Compressors			1
This equipment list is based upon equipment inventory within CALEEMOD 2016.3.2.			

3.3 Operational Emissions

Once construction is completed the proposed project would generate emissions from daily operations which would include sources such as Area, Energy, Mobile, Waste and Water uses, which are also calculated within CalEEMod. Area Sources include consumer products,

landscaping and architectural coatings as part of regular maintenance. Energy sources would be from uses such as onsite natural gas use. The Operational model results are provided in ***Attachment A*** at the end of this report.

The Project traffic engineer estimated that the project would generate 1,746 daily trips (Linscott Law & Greenspan, 2021) of which 50 percent would be classified as passby trips. These traffic numbers were utilized within the CalEEMod analysis. The model also estimates emission predictions for ROG, NOx, CO, SO_2, PM_{10} and $PM_{2.5}$ for area source assumptions. Additionally, it was assumed that an average of 10% of the structural surface area will be re-painted each year.

Finally, CalEEMod includes landscaping and consumer product assumptions which would apply to this project. Consumer product emissions are generated by a wide range of product categories, including air fresheners, automotive products, household cleaners, and personal care products.

As noted in the project description, the project will install two (2) EV charging stations. These charging station would reduce mobile emissions though were not analyzed within this air quality assessment.

3.4 Micro Scale Operational Emissions

Air pollutant emissions related to project traffic have the potential to create new air quality violations or worsen existing localized air quality violations with respect to carbon monoxide (CO). These increased carbon monoxide "Hot Spots" are determined through the utilization of the ITS Transportation Project-Level Carbon Monoxide Protocol (University of California, Davis for California Department of Transportation, 1997).

In the event the proposed project generated traffic adds vehicular trips to either an intersection that operates at a Level of Service (LOS) E or F or any intersection where the project trips degrade the intersection level of service from LOS D or better to LOS E or F, and when peak-hour trips at the intersection exceed 3,000, the project should quantify CO levels.

Based on review of the project traffic study, the proposed project would add vehicular trips to the intersection of *W. San Marcos Blvd/Bent Ave.* which would have a LOS of F in the long-term year 2035 per Section 10 of the traffic study. Thus, would require a CO "Hotspot" analysis, which is provided in Section 4.5 below.

For purposes of this analysis, the CAAQS would be considered the most stringent significance threshold with CO limits of 9 parts per million (PPM) for the eight-hour standard and 20 PPM CO for the one-hour standard. Modeling was completed using the CALINE4 air quality model

and was updated to include the highest 8-hour air quality data as collected at the Escondido monitoring site which was 2.0 PPM in 2015 and the one-hour ambient data which was 3.1 PPM in the same year. It should be noted that the Carbon Monoxide Persistence factor is 0.7 for carbon monoxide; dividing the 8-hour CO concentrations by the persistence factor would yield the one-hour emission level (U.S. EPA, 1992).

3.5 Odor Impacts (Onsite)

The proposed project would be required to be compliant with California Health and Safety Code Section 41700 (California, 1975) and District Rule 51 (SDAPCD, 1976) which states that no person can discharge air contaminants that cause injury, nuisance or annoyance to any considerable number of persons or the public, or that endanger the comfort, health or safety of such persons.

4.0 FINDINGS

4.1 Construction Findings

Grading onsite is expected to begin in 2021. Based on site topography, the project would need to import roughly 500 CY of material. After grading, the project would begin paving and construction. Construction of the facility would be expected in roughly five months. These dates and import operations along with the following design features were included within the CalEEMod analysis:

- *Construction Design Feature 1: all heavy diesel construction equipment will be classified as Tier 3 or better.*
- *Construction Design Feature 2: In accordance with Rule 67 of the California Air Resource Board, only Low VOC paints shall be utilized onsite.*
- *Best Management Practice 1: Comply with SDAPCD's fugitive dust rules and fugitive dust control measures which will be provided by the City of San Marcos.*

Table 4.1 shows the expected construction emissions. Based on the cumulative totals, Air Quality impacts would not be expected.

Table 4.1: Expected Construction Emissions Summary

Year	ROG	NO_x	CO	SO_2	PM_{10} (Dust)	PM_{10} (Exhaust)	PM_{10} (Total)	$PM_{2.5}$ (Dust)	$PM_{2.5}$ (Exhaust)	$PM_{2.5}$ (Total)
2021	0.25	5.58	7.12	0.02	1.08	0.04	1.10	0.50	0.04	0.53
2022	4.11	3.37	4.26	0.01	0.01	0.03	0.04	0.00	0.03	0.03
Significance Threshold (lb/day)	**75**	**250**	**550**	**250**	**-**	**-**	**100**	**-**	**-**	**55**
SDAPCD Impact?	**No**	**No**	**No**	**No**	-	-	**No**	-	-	**No**

4.2 Health Risk

Based upon the air quality modeling and assuming Tier 3 equipment, worst-case onsite PM_{10} from onsite construction exhaust would cumulatively produce 0.0009 tons over the construction duration (147-days) or an average of $6.33x10^{-5}$ grams/second.

Utilizing the AERSCREEN dispersion model, we find that the peak maximum 1-hr concentration is 0.4838 µg/m^3 during the worst-case construction period. Converting the peak 1-hr

concentration to an annual concentration reduces the concentration to 0.039 µg/m^3. Therefore, utilizing the risk equation identified above in Section 3.1, the inhalation cancer risk is 3.09 at the point of maximum exposure 33 meters from the project centroid which is less than 10 in one million people exposed. The nearest sensitive use is a preschool located approximately a quarter mile west of the site and the exposure will be less than 10 in one million. The calculations for a Tier 3 or better equipped construction equipment scenario are shown in ***Attachment C*** to this report.

4.3 Odor Impact Findings

Potential onsite odor generators would include short-term construction odors from activities such as paving and possibly painting. Given this, short-term construction odors would generate less than significant impacts.

Once operational, the proposed project may generate odors from baking bread or cooking food. In order for this to be a significant impact, the odors would generally need to be defined as objectionable by a significant number of people. Based on the odors which may be produced by Starbucks, less than significant odor impacts from operations would be expected.

4.4 Operational Findings

The Project traffic engineer estimated that there will be 1,746 daily trips (Linscott Law & Greenspan, 2021) and would have a 50 percent pass trip rate. The CALEEMOD 2016.3.2 Model was run for both the winter and summer scenarios and assumed average winter and summer temperatures and assumed a 5.54-mile trip distance. The expected daily pollutant generation can be calculated utilizing the product of the average daily miles traveled and the expected emissions inventory calculated by CALEEMOD 2016.3.2 utilizing emissions from EMFAC2014 and can be seen in Table 4.2 on the following page. Based upon these calculations, the proposed project would not generate operational air quality impacts.

Table 4.2: Daily Pollutant Generation

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Summer Scenario						
Area Source Emission Estimates Mitigated (Lb/Day)	0.051	0.000	0.000	0.000	0.000	0.000
Energy Emission Estimates Mitigated (Lb/Day)	0.011	0.100	0.084	0.001	0.008	0.008
Mobile Emission Estimates Mitigated (Lb/Day)	1.988	6.808	13.201	0.036	2.658	0.732
Total (Lb/Day)	**2.050**	**6.908**	**13.285**	**0.036**	**2.666**	**0.739**
Screening Level Thresholds	75	250	550	250	100	55
Significant?	No	No	No	No	No	No
Winter Scenario						
Area Source Emission Estimates (Lb/Day)	0.051	0.000	0.000	0.000	0.000	0.000
Energy Emission Estimates (Lb/Day)	0.011	0.100	0.084	0.001	0.008	0.008
Mobile Emission Estimates (Lb/Day)	1.919	6.822	14.352	0.034	2.659	0.732
Total (Lb/Day)	**1.981**	**6.922**	**14.436**	**0.034**	**2.667**	**0.740**
Screening Level Thresholds	75	250	550	250	100	55
Significant?	No	No	No	No	No	No
Daily pollutant generation assumes trip distances within CalEEMod						

4.5 Micro-Scale Operational Findings

The Project traffic study reported that the proposed Project would maintain classification of LOS of E or worse directly at the intersection of *W. San Marcos Blvd/Bent Ave.* and is expected to operate with over 3,000 vehicles during the AM and PM peak-hours. Table 4.3 shows the number of peak hour vehicles using this intersection during the AM and PM peak hours. Utilizing CALINE4 CO emissions were found to be less than the CAAQS.

Table 4.3: Intersections LOS E or Worse and Delay

Intersection	Scenario	AM/PM	Number of peak-hour Vehicles
W. San Marcos Blvd/Bent Ave.	Cumulative plus Project	AM	4,842
		PM	5,947

The CALINE4 model was set up to show a typical intersection with a North, East, South and West segment extending a typical 50-meters in every direction. Peak-Hour segment volumes were taken from the peak-hour turning movements within the project traffic study (Linscott Law & Greenspan, 2021) for the intersection analyzed above. Receptors were assumed to be roughly 25-feet to each roadway which represents a worst-case environment. The EMFAC2014 model was run to determine the emission factors for 2035 or approximately when the cumulative traffic impacts would be expected. Additionally, the CALINE4 dispersion model was run for the worst-case intersection exceeding the CAAQS thresholds identified above in Table 2.1. It should be noted that the traffic impacts would be mitigated by the project and cumulative projects through fair share contributions. The mitigation would include widening the roads and providing dedicated left, thru and right turn lanes at the intersection of W. San Marcos Blvd and Bent Ave.

Table 4.4 identifies both the 1-hour emission concentration predictions and the 8-hour average after utilizing the carbon dioxide persistence factor of 0.7. Based on model output results, no CO impacts are expected for this intersection. Based on this calculation, since all other remaining intersections have lower traffic volumes, we can conclude that all other remaining intersections would also comply with the CAAQS. The EMFAC 2014 emission factors and the CALINE output are shown in ***Attachments D and -E*** to this report.

Table 4.4: Expected Carbon Monoxide Hot Spot Concentration Levels

Intersection	Existing plus Cumulative plus Project (Worst Case)		
	Vehicles Per Hour	Predicted Concentration PPM	
		1 HR	8HR
W. San Marcos Blvd/Bent Ave. AM	4,842	3.3	2.31
W. San Marcos Blvd/Bent Ave. PM	5,947	3.3	2.31
CAAQS - Significant Thresholds		20	9
Significant Impact?		**No**	**No**
Traffic Volumes obtained from Project Traffic Study (Linscott Law & Greenspan, 2021)			

4.6 Cumulative Impacts

The proposed project seeks a SPA and rezone from MU-1 to C and CUP for the construction and operation of a coffee shop with a drive thru. The project would generate less than significant construction and operational direct impacts.

The proposed construction operations are expected to occur over five months and it was found that worst case emissions would occur roughly 33 meters from the project centroid.

Nearby construction projects would have the potential to increase construction emissions locally if the construction projects are working simultaneously and if the point of maximum exposure contours overlap. The proposed project is small (0.55 acres) and grading operations would occur 3 days or so. Given this, combined with the fact that the emission contours are only 33 meters from the project site, cumulative construction impacts would not be expected.

Based on this project description, the Project would require a SPA and rezone from MU-1 to C. The project is in the San Marcos Creek Specific Plan and MU-1 allows residential and commercial retail with a Floor Area Ratio (FAR) of 1.9. The Project as proposed would have a FAR of 0.7. Given this, the project would be less intense than would otherwise be allowed under the General Plan and not conflict with the Regional Air Quality Strategy (RAQS) or the State's Air Quality State Implementation Plan (SIP). Since the City's General Plan is consistent with both the state and regional plans, no cumulative impacts are expected.

4.7 Conclusion of Findings

During construction of the proposed Project, fugitive dust emissions will be expected during grading and equipment usage however, these emissions would not exceed City thresholds and would not be considered an impact. The project has been designed and planned by incorporating design elements and best management practices which are a condition of approval to the project as shown below:

- *Construction Design Feature 1: all heavy diesel construction equipment will be classified as Tier 3 or better.*
- *Construction Design Feature 2: In accordance with Rule 67 of the California Air Resource Board, only Low VOC paints shall be utilized onsite (100 g/l or less).*
- *Best Management Practice 1: Comply with SDAPCD's fugitive dust rules and fugitive dust control measures which will be provided by the City of San Marcos.*

Additionally, emissions will be generated from both area and operational sources by the proposed Project which are the result of Project generated traffic, landscaping maintenance equipment, consumer products, and annual maintenance and painting to name a few. Impacts are not expected during operations.

As stated above, the proposed Project is in the San Marcos Creek Specific Plan and MU-1 allows residential and commercial retail with a Floor Area Ratio (FAR) of 1.9. The Project as proposed would have a FAR of 0.7.and has been designed with a lower FAR and a less intense use than would otherwise be allowed within the existing MU-1 zoned site. Based on this, the project would be consistent with the RAQS and would comply with the states air quality SIP. Given this, no cumulative impacts are expected.

5.0 REFERENCES

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ATTACHMENT A

CalEEMod

SM and Bent Starbucks

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	2.13	1000sqft	0.05	2,130.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - .55 acre site

Construction Phase - cs

Off-road Equipment -

Off-road Equipment - cs

Off-road Equipment - ce

Off-road Equipment -

Off-road Equipment -

Grading -

Architectural Coating - rule 67 paint

Vehicle Trips - per TS

Area Coating - Rule 67 paint

Energy Use -

Construction Off-road Equipment Mitigation - Tier 3

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblGrading	MaterialImported	0.00	500.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblVehicleTrips	CC_TL	7.30	5.54
tblVehicleTrips	CNW_TL	7.30	5.54
tblVehicleTrips	CW_TL	9.50	5.54

tblVehicleTrips	ST_TR	722.03	820.38
tblVehicleTrips	SU_TR	542.72	820.38
tblVehicleTrips	WD_TR	496.12	820.38

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.5728	6.3221	6.3770	0.0156	1.0792	0.3109	1.1895	0.5029	0.2861	0.6048	0.0000	1,675.5676	1,675.5676	0.2877	0.0000	1,680.6973
2022	4.4285	4.2938	3.6497	7.0800e-003	8.2100e-003	0.2211	0.2293	2.1800e-003	0.2099	0.2121	0.0000	679.7320	679.7320	0.1448	0.0000	683.3523
Maximum	**4.4285**	**6.3221**	**6.3770**	**0.0156**	**1.0792**	**0.3109**	**1.1895**	**0.5029**	**0.2861**	**0.6048**	**0.0000**	**1,675.5676**	**1,675.5676**	**0.2877**	**0.0000**	**1,680.6973**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.2515	5.5750	7.1150	0.0156	1.0792	0.0441	1.1043	0.5029	0.0440	0.5274	0.0000	1,675.5676	1,675.5676	0.2877	0.0000	1,680.6973
2022	4.1109	3.3747	4.2642	7.0800e-003	8.2100e-003	0.0289	0.0371	2.1800e-003	0.0289	0.0311	0.0000	679.7320	679.7320	0.1448	0.0000	683.3523
Maximum	**4.1109**	**5.5750**	**7.1150**	**0.0156**	**1.0792**	**0.0441**	**1.1043**	**0.5029**	**0.0440**	**0.5274**	**0.0000**	**1,675.5676**	**1,675.5676**	**0.2877**	**0.0000**	**1,680.6973**

	ROG	NOx	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	**12.78**	**15.70**	**-13.49**	**0.00**	**0.00**	**86.28**	**19.55**	**0.00**	**85.29**	**31.63**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0510	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.7000e-004	4.7000e-004	0.0000		5.0000e-004
Energy	0.0110	0.0998	0.0838	6.0000e-004		7.5800e-003	7.5800e-003		7.5800e-003	7.5800e-003		119.7194	119.7194	2.2900e-003	2.1900e-003	120.4308
Mobile	1.9880	6.8079	13.2008	0.0355	2.6265	0.0318	2.6583	0.7020	0.0296	0.7316		3,617.2792	3,617.2792	0.2377		3,623.2205
Total	**2.0500**	**6.9077**	**13.2849**	**0.0361**	**2.6265**	**0.0394**	**2.6659**	**0.7020**	**0.0372**	**0.7392**		**3,736.9991**	**3,736.9991**	**0.2399**	**2.1900e-003**	**3,743.6518**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0510	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.7000e-004	4.7000e-004	0.0000		5.0000e-004
Energy	0.0110	0.0998	0.0838	6.0000e-004		7.5800e-003	7.5800e-003		7.5800e-003	7.5800e-003		119.7194	119.7194	2.2900e-003	2.1900e-003	120.4308
Mobile	1.9880	6.8079	13.2008	0.0355	2.6265	0.0318	2.6583	0.7020	0.0296	0.7316		3,617.2792	3,617.2792	0.2377		3,623.2205
Total	**2.0500**	**6.9077**	**13.2849**	**0.0361**	**2.6265**	**0.0394**	**2.6659**	**0.7020**	**0.0372**	**0.7392**		**3,736.9991**	**3,736.9991**	**0.2399**	**2.1900e-003**	**3,743.6518**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	9/1/2021	9/3/2021	5	3	
2	Paving	Paving	9/4/2021	9/10/2021	5	5	
3	Building Construction	Building Construction	9/11/2021	1/28/2022	5	100	
4	Architectural Coating	Architectural Coating	1/23/2022	1/28/2022	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,195; Non-Residential Outdoor: 1,065; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Skid Steer Loaders	1	6.00	65	0.37
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
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
Grading	2	5.00	0.00	49.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	2	1.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	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 Grading - 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	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.1874	2.1241	1.5472	2.6200e-003		0.0972	0.0972		0.0894	0.0894		253.5678	253.5678	0.0820		255.6180
Total	**0.1874**	**2.1241**	**1.5472**	**2.6200e-003**	**0.7528**	**0.0972**	**0.8499**	**0.4138**	**0.0894**	**0.5032**		**253.5678**	**253.5678**	**0.0820**		**255.6180**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1212	4.1868	1.0243	0.0126	0.2854	0.0128	0.2982	0.0782	0.0122	0.0904		1,381.2778	1,381.2778	0.1220		1,384.3282
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0173	0.0112	0.1326	4.1000e-004	0.0411	2.8000e-004	0.0414	0.0109	2.6000e-004	0.0112		40.7220	40.7220	1.1600e-003		40.7511
Total	**0.1385**	**4.1980**	**1.1569**	**0.0130**	**0.3265**	**0.0131**	**0.3395**	**0.0891**	**0.0125**	**0.1016**		**1,421.9998**	**1,421.9998**	**0.1232**		**1,425.0793**

3.2 Grading - 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	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.0643	1.3770	1.7434	2.6200e-003		0.0120	0.0120		0.0120	0.0120	0.0000	253.5678	253.5678	0.0820		255.6180
Total	**0.0643**	**1.3770**	**1.7434**	**2.6200e-003**	**0.7528**	**0.0120**	**0.7648**	**0.4138**	**0.0120**	**0.4258**	**0.0000**	**253.5678**	**253.5678**	**0.0820**		**255.6180**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1212	4.1868	1.0243	0.0126	0.2854	0.0128	0.2982	0.0782	0.0122	0.0904		1,381.2778	1,381.2778	0.1220		1,384.3282
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0173	0.0112	0.1326	4.1000e-004	0.0411	2.8000e-004	0.0414	0.0109	2.6000e-004	0.0112		40.7220	40.7220	1.1600e-003		40.7511
Total	**0.1385**	**4.1980**	**1.1569**	**0.0130**	**0.3265**	**0.0131**	**0.3395**	**0.0891**	**0.0125**	**0.1016**		**1,421.9998**	**1,421.9998**	**0.1232**		**1,425.0793**

3.3 Paving - 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	lb/day										lb/day					
Off-Road	0.5451	5.6132	6.1648	9.1300e-003		0.3105	0.3105		0.2856	0.2856		883.7936	883.7936	0.2858		890.9395
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5451**	**5.6132**	**6.1648**	**9.1300e-003**		**0.3105**	**0.3105**		**0.2856**	**0.2856**		**883.7936**	**883.7936**	**0.2858**		**890.9395**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0277	0.0180	0.2122	6.5000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		65.1553	65.1553	1.8600e-003		65.2018
Total	**0.0277**	**0.0180**	**0.2122**	**6.5000e-004**	**0.0657**	**4.5000e-004**	**0.0662**	**0.0174**	**4.2000e-004**	**0.0179**		**65.1553**	**65.1553**	**1.8600e-003**		**65.2018**

3.3 Paving - 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	lb/day										lb/day					
Off-Road	0.2239	4.7579	6.9028	9.1300e-003		0.0436	0.0436		0.0436	0.0436	0.0000	883.7936	883.7936	0.2858		890.9395
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2239**	**4.7579**	**6.9028**	**9.1300e-003**		**0.0436**	**0.0436**		**0.0436**	**0.0436**	**0.0000**	**883.7936**	**883.7936**	**0.2858**		**890.9395**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0277	0.0180	0.2122	6.5000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		65.1553	65.1553	1.8600e-003		65.2018
Total	**0.0277**	**0.0180**	**0.2122**	**6.5000e-004**	**0.0657**	**4.5000e-004**	**0.0662**	**0.0174**	**4.2000e-004**	**0.0179**		**65.1553**	**65.1553**	**1.8600e-003**		**65.2018**

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	lb/day										lb/day					
Off-Road	0.3035	3.3090	1.8673	4.0300e-003		0.1612	0.1612		0.1483	0.1483		390.3925	390.3925	0.1263		393.5490
Total	**0.3035**	**3.3090**	**1.8673**	**4.0300e-003**		**0.1612**	**0.1612**		**0.1483**	**0.1483**		**390.3925**	**390.3925**	**0.1263**		**393.5490**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.4600e-003	2.2500e-003	0.0265	8.0000e-005	8.2100e-003	6.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		8.1444	8.1444	2.3000e-004		8.1502
Total	**3.4600e-003**	**2.2500e-003**	**0.0265**	**8.0000e-005**	**8.2100e-003**	**6.0000e-005**	**8.2700e-003**	**2.1800e-003**	**5.0000e-005**	**2.2300e-003**		**8.1444**	**8.1444**	**2.3000e-004**		**8.1502**

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	lb/day										lb/day					
Off-Road	0.0991	2.0157	2.4071	4.0300e-003		0.0146	0.0146		0.0146	0.0146	0.0000	390.3925	390.3925	0.1263		393.5490
Total	**0.0991**	**2.0157**	**2.4071**	**4.0300e-003**		**0.0146**	**0.0146**		**0.0146**	**0.0146**	**0.0000**	**390.3925**	**390.3925**	**0.1263**		**393.5490**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.4600e-003	2.2500e-003	0.0265	8.0000e-005	8.2100e-003	6.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		8.1444	8.1444	2.3000e-004		8.1502
Total	**3.4600e-003**	**2.2500e-003**	**0.0265**	**8.0000e-005**	**8.2100e-003**	**6.0000e-005**	**8.2700e-003**	**2.1800e-003**	**5.0000e-005**	**2.2300e-003**		**8.1444**	**8.1444**	**2.3000e-004**		**8.1502**

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	lb/day										lb/day					
Off-Road	0.2717	2.8833	1.8115	4.0300e-003		0.1393	0.1393		0.1281	0.1281		390.4383	390.4383	0.1263		393.5952
Total	**0.2717**	**2.8833**	**1.8115**	**4.0300e-003**		**0.1393**	**0.1393**		**0.1281**	**0.1281**		**390.4383**	**390.4383**	**0.1263**		**393.5952**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.2700e-003	2.0500e-003	0.0247	8.0000e-005	8.2100e-003	6.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		7.8456	7.8456	2.1000e-004		7.8509
Total	**3.2700e-003**	**2.0500e-003**	**0.0247**	**8.0000e-005**	**8.2100e-003**	**6.0000e-005**	**8.2700e-003**	**2.1800e-003**	**5.0000e-005**	**2.2300e-003**		**7.8456**	**7.8456**	**2.1000e-004**		**7.8509**

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	lb/day										lb/day					
Off-Road	0.0991	2.0157	2.4071	4.0300e-003		0.0146	0.0146		0.0146	0.0146	0.0000	390.4383	390.4383	0.1263		393.5952
Total	**0.0991**	**2.0157**	**2.4071**	**4.0300e-003**		**0.0146**	**0.0146**		**0.0146**	**0.0146**	**0.0000**	**390.4383**	**390.4383**	**0.1263**		**393.5952**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.2700e-003	2.0500e-003	0.0247	8.0000e-005	8.2100e-003	6.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		7.8456	7.8456	2.1000e-004		7.8509
Total	**3.2700e-003**	**2.0500e-003**	**0.0247**	**8.0000e-005**	**8.2100e-003**	**6.0000e-005**	**8.2700e-003**	**2.1800e-003**	**5.0000e-005**	**2.2300e-003**		**7.8456**	**7.8456**	**2.1000e-004**		**7.8509**

3.5 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	lb/day										lb/day					
Archit. Coating	3.9490					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**4.1536**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.5 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	lb/day										lb/day					
Archit. Coating	3.9490					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0143	0.0143		0.0143	0.0143	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**4.0085**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0143**	**0.0143**		**0.0143**	**0.0143**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.9880	6.8079	13.2008	0.0355	2.6265	0.0318	2.6583	0.7020	0.0296	0.7316		3,617.2792	3,617.2792	0.2377		3,623.2205
Unmitigated	1.9880	6.8079	13.2008	0.0355	2.6265	0.0318	2.6583	0.7020	0.0296	0.7316		3,617.2792	3,617.2792	0.2377		3,623.2205

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	1,747.41	1,747.41	1747.41	1,238,689	1,238,689
Total	1,747.41	1,747.41	1,747.41	1,238,689	1,238,689

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
Fast Food Restaurant with Drive Thru	5.54	5.54	5.54	2.20	78.80	19.00	29	21	50

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0110	0.0998	0.0838	6.0000e-004		7.5800e-003	7.5800e-003		7.5800e-003	7.5800e-003		119.7194	119.7194	2.2900e-003	2.1900e-003	120.4308
NaturalGas Unmitigated	0.0110	0.0998	0.0838	6.0000e-004		7.5800e-003	7.5800e-003		7.5800e-003	7.5800e-003		119.7194	119.7194	2.2900e-003	2.1900e-003	120.4308

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	1017.61	0.0110	0.0998	0.0838	6.0000e-004		7.5800e-003	7.5800e-003		7.5800e-003	7.5800e-003		119.7194	119.7194	2.2900e-003	2.1900e-003	120.4308
Total		**0.0110**	**0.0998**	**0.0838**	**6.0000e-004**		**7.5800e-003**	**7.5800e-003**		**7.5800e-003**	**7.5800e-003**		**119.7194**	**119.7194**	**2.2900e-003**	**2.1900e-003**	**120.4308**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	1.01761	0.0110	0.0998	0.0838	6.0000e-004		7.5800e-003	7.5800e-003		7.5800e-003	7.5800e-003		119.7194	119.7194	2.2900e-003	2.1900e-003	120.4308
Total		**0.0110**	**0.0998**	**0.0838**	**6.0000e-004**		**7.5800e-003**	**7.5800e-003**		**7.5800e-003**	**7.5800e-003**		**119.7194**	**119.7194**	**2.2900e-003**	**2.1900e-003**	**120.4308**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0510	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.7000e-004	4.7000e-004	0.0000		5.0000e-004
Unmitigated	0.0510	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.7000e-004	4.7000e-004	0.0000		5.0000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.4100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0456					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.7000e-004	4.7000e-004	0.0000		5.0000e-004
Total	**0.0510**	**0.0000**	**2.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**4.7000e-004**	**4.7000e-004**	**0.0000**		**5.0000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.4100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0456					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.7000e-004	4.7000e-004	0.0000		5.0000e-004
Total	**0.0510**	**0.0000**	**2.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**4.7000e-004**	**4.7000e-004**	**0.0000**		**5.0000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 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

SM and Bent Starbucks

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	2.13	1000sqft	0.05	2,130.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - .55 acre site

Construction Phase - cs

Off-road Equipment -

Off-road Equipment - cs

Off-road Equipment - ce

Off-road Equipment -

Off-road Equipment -

Grading -

Architectural Coating - rule 67 paint

Vehicle Trips - per TS

Area Coating - Rule 67 paint

Energy Use -

Construction Off-road Equipment Mitigation - Tier 3

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	2.00	3.00
tblGrading	MaterialImported	0.00	500.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblVehicleTrips	CC_TL	7.30	5.54
tblVehicleTrips	CNW_TL	7.30	5.54
tblVehicleTrips	CW_TL	9.50	5.54

tblVehicleTrips	ST_TR	722.03	820.38
tblVehicleTrips	SU_TR	542.72	820.38
tblVehicleTrips	WD_TR	496.12	820.38

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.5765	6.3596	6.3642	0.0154	1.0792	0.3109	1.1898	0.5029	0.2861	0.6051	0.0000	1,649.2083	1,649.2083	0.2876	0.0000	1,654.4365
2022	4.4290	4.2941	3.6482	7.0700e-003	8.2100e-003	0.2211	0.2293	2.1800e-003	0.2099	0.2121	0.0000	679.2516	679.2516	0.1448	0.0000	682.8716
Maximum	**4.4290**	**6.3596**	**6.3642**	**0.0154**	**1.0792**	**0.3109**	**1.1898**	**0.5029**	**0.2861**	**0.6051**	**0.0000**	**1,649.2083**	**1,649.2083**	**0.2876**	**0.0000**	**1,654.4365**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.2553	5.6125	7.1023	0.0154	1.0792	0.0441	1.1046	0.5029	0.0440	0.5277	0.0000	1,649.2083	1,649.2083	0.2876	0.0000	1,654.4365
2022	4.1113	3.3750	4.2627	7.0700e-003	8.2100e-003	0.0289	0.0371	2.1800e-003	0.0289	0.0311	0.0000	679.2516	679.2516	0.1448	0.0000	682.8716
Maximum	**4.1113**	**5.6125**	**7.1023**	**0.0154**	**1.0792**	**0.0441**	**1.1046**	**0.5029**	**0.0440**	**0.5277**	**0.0000**	**1,649.2083**	**1,649.2083**	**0.2876**	**0.0000**	**1,654.4365**

	ROG	NOx	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	**12.76**	**15.64**	**-13.51**	**0.00**	**0.00**	**86.28**	**19.54**	**0.00**	**85.29**	**31.62**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0510	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.7000e-004	4.7000e-004	0.0000		5.0000e-004
Energy	0.0110	0.0998	0.0838	6.0000e-004		7.5800e-003	7.5800e-003		7.5800e-003	7.5800e-003		119.7194	119.7194	2.2900e-003	2.1900e-003	120.4308
Mobile	1.9187	6.8224	14.3524	0.0335	2.6265	0.0325	2.6589	0.7020	0.0303	0.7322		3,412.2402	3,412.2402	0.2509		3,418.5119
Total	**1.9807**	**6.9222**	**14.4364**	**0.0341**	**2.6265**	**0.0401**	**2.6665**	**0.7020**	**0.0379**	**0.7398**		**3,531.9601**	**3,531.9601**	**0.2532**	**2.1900e-003**	**3,538.9432**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0510	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.7000e-004	4.7000e-004	0.0000		5.0000e-004
Energy	0.0110	0.0998	0.0838	6.0000e-004		7.5800e-003	7.5800e-003		7.5800e-003	7.5800e-003		119.7194	119.7194	2.2900e-003	2.1900e-003	120.4308
Mobile	1.9187	6.8224	14.3524	0.0335	2.6265	0.0325	2.6589	0.7020	0.0303	0.7322		3,412.2402	3,412.2402	0.2509		3,418.5119
Total	**1.9807**	**6.9222**	**14.4364**	**0.0341**	**2.6265**	**0.0401**	**2.6665**	**0.7020**	**0.0379**	**0.7398**		**3,531.9601**	**3,531.9601**	**0.2532**	**2.1900e-003**	**3,538.9432**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	9/1/2021	9/3/2021	5	3	
2	Paving	Paving	9/4/2021	9/10/2021	5	5	
3	Building Construction	Building Construction	9/11/2021	1/28/2022	5	100	
4	Architectural Coating	Architectural Coating	1/23/2022	1/28/2022	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,195; Non-Residential Outdoor: 1,065; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Skid Steer Loaders	1	6.00	65	0.37
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
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
Grading	2	5.00	0.00	49.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	2	1.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	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 Grading - 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	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.1874	2.1241	1.5472	2.6200e-003		0.0972	0.0972		0.0894	0.0894		253.5678	253.5678	0.0820		255.6180
Total	**0.1874**	**2.1241**	**1.5472**	**2.6200e-003**	**0.7528**	**0.0972**	**0.8499**	**0.4138**	**0.0894**	**0.5032**		**253.5678**	**253.5678**	**0.0820**		**255.6180**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1246	4.2229	1.0887	0.0124	0.2854	0.0131	0.2985	0.0782	0.0125	0.0907		1,357.4131	1,357.4131	0.1260		1,360.5637
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0196	0.0126	0.1247	3.8000e-004	0.0411	2.8000e-004	0.0414	0.0109	2.6000e-004	0.0112		38.2274	38.2274	1.1000e-003		38.2548
Total	**0.1442**	**4.2355**	**1.2134**	**0.0128**	**0.3265**	**0.0133**	**0.3398**	**0.0891**	**0.0127**	**0.1019**		**1,395.6405**	**1,395.6405**	**0.1271**		**1,398.8185**

3.2 Grading - 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	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.0643	1.3770	1.7434	2.6200e-003		0.0120	0.0120		0.0120	0.0120	0.0000	253.5678	253.5678	0.0820		255.6180
Total	**0.0643**	**1.3770**	**1.7434**	**2.6200e-003**	**0.7528**	**0.0120**	**0.7648**	**0.4138**	**0.0120**	**0.4258**	**0.0000**	**253.5678**	**253.5678**	**0.0820**		**255.6180**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1246	4.2229	1.0887	0.0124	0.2854	0.0131	0.2985	0.0782	0.0125	0.0907		1,357.4131	1,357.4131	0.1260		1,360.5637
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0196	0.0126	0.1247	3.8000e-004	0.0411	2.8000e-004	0.0414	0.0109	2.6000e-004	0.0112		38.2274	38.2274	1.1000e-003		38.2548
Total	**0.1442**	**4.2355**	**1.2134**	**0.0128**	**0.3265**	**0.0133**	**0.3398**	**0.0891**	**0.0127**	**0.1019**		**1,395.6405**	**1,395.6405**	**0.1271**		**1,398.8185**

3.3 Paving - 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	lb/day										lb/day					
Off-Road	0.5451	5.6132	6.1648	9.1300e-003		0.3105	0.3105		0.2856	0.2856		883.7936	883.7936	0.2858		890.9395
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5451**	**5.6132**	**6.1648**	**9.1300e-003**		**0.3105**	**0.3105**		**0.2856**	**0.2856**		**883.7936**	**883.7936**	**0.2858**		**890.9395**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0314	0.0202	0.1995	6.1000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		61.1638	61.1638	1.7600e-003		61.2077
Total	**0.0314**	**0.0202**	**0.1995**	**6.1000e-004**	**0.0657**	**4.5000e-004**	**0.0662**	**0.0174**	**4.2000e-004**	**0.0179**		**61.1638**	**61.1638**	**1.7600e-003**		**61.2077**

3.3 Paving - 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	lb/day										lb/day					
Off-Road	0.2239	4.7579	6.9028	9.1300e-003		0.0436	0.0436		0.0436	0.0436	0.0000	883.7936	883.7936	0.2858		890.9395
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2239**	**4.7579**	**6.9028**	**9.1300e-003**		**0.0436**	**0.0436**		**0.0436**	**0.0436**	**0.0000**	**883.7936**	**883.7936**	**0.2858**		**890.9395**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0314	0.0202	0.1995	6.1000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		61.1638	61.1638	1.7600e-003		61.2077
Total	**0.0314**	**0.0202**	**0.1995**	**6.1000e-004**	**0.0657**	**4.5000e-004**	**0.0662**	**0.0174**	**4.2000e-004**	**0.0179**		**61.1638**	**61.1638**	**1.7600e-003**		**61.2077**

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	lb/day										lb/day					
Off-Road	0.3035	3.3090	1.8673	4.0300e-003		0.1612	0.1612		0.1483	0.1483		390.3925	390.3925	0.1263		393.5490
Total	**0.3035**	**3.3090**	**1.8673**	**4.0300e-003**		**0.1612**	**0.1612**		**0.1483**	**0.1483**		**390.3925**	**390.3925**	**0.1263**		**393.5490**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.9200e-003	2.5200e-003	0.0249	8.0000e-005	8.2100e-003	6.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		7.6455	7.6455	2.2000e-004		7.6510
Total	**3.9200e-003**	**2.5200e-003**	**0.0249**	**8.0000e-005**	**8.2100e-003**	**6.0000e-005**	**8.2700e-003**	**2.1800e-003**	**5.0000e-005**	**2.2300e-003**		**7.6455**	**7.6455**	**2.2000e-004**		**7.6510**

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	lb/day										lb/day					
Off-Road	0.0991	2.0157	2.4071	4.0300e-003		0.0146	0.0146		0.0146	0.0146	0.0000	390.3925	390.3925	0.1263		393.5490
Total	**0.0991**	**2.0157**	**2.4071**	**4.0300e-003**		**0.0146**	**0.0146**		**0.0146**	**0.0146**	**0.0000**	**390.3925**	**390.3925**	**0.1263**		**393.5490**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.9200e-003	2.5200e-003	0.0249	8.0000e-005	8.2100e-003	6.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		7.6455	7.6455	2.2000e-004		7.6510
Total	**3.9200e-003**	**2.5200e-003**	**0.0249**	**8.0000e-005**	**8.2100e-003**	**6.0000e-005**	**8.2700e-003**	**2.1800e-003**	**5.0000e-005**	**2.2300e-003**		**7.6455**	**7.6455**	**2.2000e-004**		**7.6510**

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	lb/day										lb/day					
Off-Road	0.2717	2.8833	1.8115	4.0300e-003		0.1393	0.1393		0.1281	0.1281		390.4383	390.4383	0.1263		393.5952
Total	**0.2717**	**2.8833**	**1.8115**	**4.0300e-003**		**0.1393**	**0.1393**		**0.1281**	**0.1281**		**390.4383**	**390.4383**	**0.1263**		**393.5952**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.7200e-003	2.3000e-003	0.0231	7.0000e-005	8.2100e-003	6.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		7.3653	7.3653	2.0000e-004		7.3703
Total	**3.7200e-003**	**2.3000e-003**	**0.0231**	**7.0000e-005**	**8.2100e-003**	**6.0000e-005**	**8.2700e-003**	**2.1800e-003**	**5.0000e-005**	**2.2300e-003**		**7.3653**	**7.3653**	**2.0000e-004**		**7.3703**

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	lb/day										lb/day					
Off-Road	0.0991	2.0157	2.4071	4.0300e-003		0.0146	0.0146		0.0146	0.0146	0.0000	390.4383	390.4383	0.1263		393.5952
Total	**0.0991**	**2.0157**	**2.4071**	**4.0300e-003**		**0.0146**	**0.0146**		**0.0146**	**0.0146**	**0.0000**	**390.4383**	**390.4383**	**0.1263**		**393.5952**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.7200e-003	2.3000e-003	0.0231	7.0000e-005	8.2100e-003	6.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		7.3653	7.3653	2.0000e-004		7.3703
Total	**3.7200e-003**	**2.3000e-003**	**0.0231**	**7.0000e-005**	**8.2100e-003**	**6.0000e-005**	**8.2700e-003**	**2.1800e-003**	**5.0000e-005**	**2.2300e-003**		**7.3653**	**7.3653**	**2.0000e-004**		**7.3703**

3.5 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	lb/day										lb/day					
Archit. Coating	3.9490					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**4.1536**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.5 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	lb/day										lb/day					
Archit. Coating	3.9490					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0143	0.0143		0.0143	0.0143	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**4.0085**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0143**	**0.0143**		**0.0143**	**0.0143**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.9187	6.8224	14.3524	0.0335	2.6265	0.0325	2.6589	0.7020	0.0303	0.7322		3,412.2402	3,412.2402	0.2509		3,418.5119
Unmitigated	1.9187	6.8224	14.3524	0.0335	2.6265	0.0325	2.6589	0.7020	0.0303	0.7322		3,412.2402	3,412.2402	0.2509		3,418.5119

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	1,747.41	1,747.41	1747.41	1,238,689	1,238,689
Total	1,747.41	1,747.41	1,747.41	1,238,689	1,238,689

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
Fast Food Restaurant with Drive Thru	5.54	5.54	5.54	2.20	78.80	19.00	29	21	50

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0110	0.0998	0.0838	6.0000e-004		7.5800e-003	7.5800e-003		7.5800e-003	7.5800e-003		119.7194	119.7194	2.2900e-003	2.1900e-003	120.4308
NaturalGas Unmitigated	0.0110	0.0998	0.0838	6.0000e-004		7.5800e-003	7.5800e-003		7.5800e-003	7.5800e-003		119.7194	119.7194	2.2900e-003	2.1900e-003	120.4308

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	1017.61	0.0110	0.0998	0.0838	6.0000e-004		7.5800e-003	7.5800e-003		7.5800e-003	7.5800e-003		119.7194	119.7194	2.2900e-003	2.1900e-003	120.4308
Total		**0.0110**	**0.0998**	**0.0838**	**6.0000e-004**		**7.5800e-003**	**7.5800e-003**		**7.5800e-003**	**7.5800e-003**		**119.7194**	**119.7194**	**2.2900e-003**	**2.1900e-003**	**120.4308**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	1.01761	0.0110	0.0998	0.0838	6.0000e-004		7.5800e-003	7.5800e-003		7.5800e-003	7.5800e-003		119.7194	119.7194	2.2900e-003	2.1900e-003	120.4308
Total		**0.0110**	**0.0998**	**0.0838**	**6.0000e-004**		**7.5800e-003**	**7.5800e-003**		**7.5800e-003**	**7.5800e-003**		**119.7194**	**119.7194**	**2.2900e-003**	**2.1900e-003**	**120.4308**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0510	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.7000e-004	4.7000e-004	0.0000		5.0000e-004
Unmitigated	0.0510	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.7000e-004	4.7000e-004	0.0000		5.0000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.4100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0456					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.7000e-004	4.7000e-004	0.0000		5.0000e-004
Total	**0.0510**	**0.0000**	**2.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**4.7000e-004**	**4.7000e-004**	**0.0000**		**5.0000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.4100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0456					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	2.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.7000e-004	4.7000e-004	0.0000		5.0000e-004
Total	**0.0510**	**0.0000**	**2.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**4.7000e-004**	**4.7000e-004**	**0.0000**		**5.0000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 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

SM and Bent Starbucks

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	2.13	1000sqft	0.05	2,130.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - .55 acre site

Construction Phase - cs

Off-road Equipment -

Off-road Equipment - cs

Off-road Equipment - ce

Off-road Equipment -

Off-road Equipment -

Grading -

Architectural Coating - rule 67 paint

Vehicle Trips - per TS

Area Coating - Rule 67 paint

Energy Use -

Construction Off-road Equipment Mitigation - Tier 3

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	2.00	3.00
tblGrading	MaterialImported	0.00	500.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblVehicleTrips	CC_TL	7.30	5.54
tblVehicleTrips	CNW_TL	7.30	5.54
tblVehicleTrips	CW_TL	9.50	5.54

tblVehicleTrips	ST_TR	722.03	820.38
tblVehicleTrips	SU_TR	542.72	820.38
tblVehicleTrips	WD_TR	496.12	820.38

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					
2021	0.0142	0.1562	0.0957	2.1000e-004	2.0900e-003	7.3900e-003	9.4800e-003	8.8000e-004	6.8000e-003	7.6800e-003	0.0000	18.8546	18.8546	5.5200e-003	0.0000	18.9927
2022	0.0131	0.0324	0.0229	5.0000e-005	8.0000e-005	1.6000e-003	1.6800e-003	2.0000e-005	1.4900e-003	1.5100e-003	0.0000	4.2478	4.2478	1.1900e-003	0.0000	4.2775
Maximum	**0.0142**	**0.1562**	**0.0957**	**2.1000e-004**	**2.0900e-003**	**7.3900e-003**	**9.4800e-003**	**8.8000e-004**	**6.8000e-003**	**7.6800e-003**	**0.0000**	**18.8546**	**18.8546**	**5.5200e-003**	**0.0000**	**18.9927**

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					
2021	5.0400e-003	0.1012	0.1194	2.1000e-004	2.0900e-003	7.3000e-004	2.8200e-003	8.8000e-004	7.3000e-004	1.6100e-003	0.0000	18.8546	18.8546	5.5200e-003	0.0000	18.9927
2022	0.0111	0.0236	0.0289	5.0000e-005	8.0000e-005	1.8000e-004	2.6000e-004	2.0000e-005	1.8000e-004	2.0000e-004	0.0000	4.2478	4.2478	1.1900e-003	0.0000	4.2775
Maximum	**0.0111**	**0.1012**	**0.1194**	**2.1000e-004**	**2.0900e-003**	**7.3000e-004**	**2.8200e-003**	**8.8000e-004**	**7.3000e-004**	**1.6100e-003**	**0.0000**	**18.8546**	**18.8546**	**5.5200e-003**	**0.0000**	**18.9927**

	ROG	NOx	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	**41.13**	**33.85**	**-25.07**	**0.00**	**0.00**	**89.88**	**72.40**	**0.00**	**89.02**	**80.30**	**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	9-1-2021	11-30-2021	0.1273	0.0801
2	12-1-2021	2-28-2022	0.0836	0.0562
		Highest	0.1273	0.0801

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	9.3100e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005
Energy	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	46.7601	46.7601	1.4600e-003	5.9000e-004	46.9718
Mobile	0.3370	1.2521	2.5167	6.1800e-003	0.4668	5.8300e-003	0.4726	0.1250	5.4400e-003	0.1304	0.0000	572.3209	572.3209	0.0402	0.0000	573.3256
Waste						0.0000	0.0000		0.0000	0.0000	4.9814	0.0000	4.9814	0.2944	0.0000	12.3412
Water						0.0000	0.0000		0.0000	0.0000	0.2051	2.9011	3.1062	0.0212	5.2000e-004	3.7912
Total	**0.3483**	**1.2704**	**2.5320**	**6.2900e-003**	**0.4668**	**7.2100e-003**	**0.4740**	**0.1250**	**6.8200e-003**	**0.1318**	**5.1865**	**621.9821**	**627.1686**	**0.3572**	**1.1100e-003**	**636.4299**

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	9.3100e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005
Energy	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	46.7601	46.7601	1.4600e-003	5.9000e-004	46.9718
Mobile	0.3370	1.2521	2.5167	6.1800e-003	0.4668	5.8300e-003	0.4726	0.1250	5.4400e-003	0.1304	0.0000	572.3209	572.3209	0.0402	0.0000	573.3256
Waste						0.0000	0.0000		0.0000	0.0000	4.9814	0.0000	4.9814	0.2944	0.0000	12.3412
Water						0.0000	0.0000		0.0000	0.0000	0.2051	2.9011	3.1062	0.0212	5.2000e-004	3.7912
Total	**0.3483**	**1.2704**	**2.5320**	**6.2900e-003**	**0.4668**	**7.2100e-003**	**0.4740**	**0.1250**	**6.8200e-003**	**0.1318**	**5.1865**	**621.9821**	**627.1686**	**0.3572**	**1.1100e-003**	**636.4299**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	9/1/2021	9/3/2021	5	3	
2	Paving	Paving	9/4/2021	9/10/2021	5	5	
3	Building Construction	Building Construction	9/11/2021	1/28/2022	5	100	
4	Architectural Coating	Architectural Coating	1/23/2022	1/28/2022	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,195; Non-Residential Outdoor: 1,065; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Skid Steer Loaders	1	6.00	65	0.37
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
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
Grading	2	5.00	0.00	49.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	2	1.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	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 Grading - 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					
Fugitive Dust					1.1300e-003	0.0000	1.1300e-003	6.2000e-004	0.0000	6.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8000e-004	3.1900e-003	2.3200e-003	0.0000		1.5000e-004	1.5000e-004		1.3000e-004	1.3000e-004	0.0000	0.3451	0.3451	1.1000e-004	0.0000	0.3478
Total	**2.8000e-004**	**3.1900e-003**	**2.3200e-003**	**0.0000**	**1.1300e-003**	**1.5000e-004**	**1.2800e-003**	**6.2000e-004**	**1.3000e-004**	**7.5000e-004**	**0.0000**	**0.3451**	**0.3451**	**1.1000e-004**	**0.0000**	**0.3478**

3.2 Grading - 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	1.8000e-004	6.4000e-003	1.5800e-003	2.0000e-005	4.2000e-004	2.0000e-005	4.4000e-004	1.2000e-004	2.0000e-005	1.3000e-004	0.0000	1.8660	1.8660	1.7000e-004	0.0000	1.8702
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	1.9000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0525	0.0525	0.0000	0.0000	0.0526
Total	**2.1000e-004**	**6.4200e-003**	**1.7700e-003**	**2.0000e-005**	**4.8000e-004**	**2.0000e-005**	**5.0000e-004**	**1.4000e-004**	**2.0000e-005**	**1.5000e-004**	**0.0000**	**1.9185**	**1.9185**	**1.7000e-004**	**0.0000**	**1.9228**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1300e-003	0.0000	1.1300e-003	6.2000e-004	0.0000	6.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0000e-004	2.0700e-003	2.6200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.3451	0.3451	1.1000e-004	0.0000	0.3478
Total	**1.0000e-004**	**2.0700e-003**	**2.6200e-003**	**0.0000**	**1.1300e-003**	**2.0000e-005**	**1.1500e-003**	**6.2000e-004**	**2.0000e-005**	**6.4000e-004**	**0.0000**	**0.3451**	**0.3451**	**1.1000e-004**	**0.0000**	**0.3478**

3.2 Grading - 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	1.8000e-004	6.4000e-003	1.5800e-003	2.0000e-005	4.2000e-004	2.0000e-005	4.4000e-004	1.2000e-004	2.0000e-005	1.3000e-004	0.0000	1.8660	1.8660	1.7000e-004	0.0000	1.8702
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	1.9000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0525	0.0525	0.0000	0.0000	0.0526
Total	**2.1000e-004**	**6.4200e-003**	**1.7700e-003**	**2.0000e-005**	**4.8000e-004**	**2.0000e-005**	**5.0000e-004**	**1.4000e-004**	**2.0000e-005**	**1.5000e-004**	**0.0000**	**1.9185**	**1.9185**	**1.7000e-004**	**0.0000**	**1.9228**

3.3 Paving - 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	1.3600e-003	0.0140	0.0154	2.0000e-005		7.8000e-004	7.8000e-004		7.1000e-004	7.1000e-004	0.0000	2.0044	2.0044	6.5000e-004	0.0000	2.0206
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.3600e-003**	**0.0140**	**0.0154**	**2.0000e-005**		**7.8000e-004**	**7.8000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**2.0044**	**2.0044**	**6.5000e-004**	**0.0000**	**2.0206**

3.3 Paving - 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	0.0000	0.0000	0.0000	0.0000	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	7.0000e-005	5.0000e-005	5.0000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1401	0.1401	0.0000	0.0000	0.1402
Total	**7.0000e-005**	**5.0000e-005**	**5.0000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1401**	**0.1401**	**0.0000**	**0.0000**	**0.1402**

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	5.6000e-004	0.0119	0.0173	2.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	2.0044	2.0044	6.5000e-004	0.0000	2.0206
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.6000e-004**	**0.0119**	**0.0173**	**2.0000e-005**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**2.0044**	**2.0044**	**6.5000e-004**	**0.0000**	**2.0206**

3.3 Paving - 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	0.0000	0.0000	0.0000	0.0000	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	7.0000e-005	5.0000e-005	5.0000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1401	0.1401	0.0000	0.0000	0.1402
Total	**7.0000e-005**	**5.0000e-005**	**5.0000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1401**	**0.1401**	**0.0000**	**0.0000**	**0.1402**

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	0.0121	0.1324	0.0747	1.6000e-004		6.4500e-003	6.4500e-003		5.9300e-003	5.9300e-003	0.0000	14.1663	14.1663	4.5800e-003	0.0000	14.2809
Total	**0.0121**	**0.1324**	**0.0747**	**1.6000e-004**		**6.4500e-003**	**6.4500e-003**		**5.9300e-003**	**5.9300e-003**	**0.0000**	**14.1663**	**14.1663**	**4.5800e-003**	**0.0000**	**14.2809**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.0000e-004	1.0000e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2802	0.2802	1.0000e-005	0.0000	0.2804
Total	**1.4000e-004**	**1.0000e-004**	**1.0000e-003**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2802**	**0.2802**	**1.0000e-005**	**0.0000**	**0.2804**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.9700e-003	0.0806	0.0963	1.6000e-004		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	14.1663	14.1663	4.5800e-003	0.0000	14.2809
Total	**3.9700e-003**	**0.0806**	**0.0963**	**1.6000e-004**		**5.8000e-004**	**5.8000e-004**		**5.8000e-004**	**5.8000e-004**	**0.0000**	**14.1663**	**14.1663**	**4.5800e-003**	**0.0000**	**14.2809**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.0000e-004	1.0000e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2802	0.2802	1.0000e-005	0.0000	0.2804
Total	**1.4000e-004**	**1.0000e-004**	**1.0000e-003**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2802**	**0.2802**	**1.0000e-005**	**0.0000**	**0.2804**

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	2.7200e-003	0.0288	0.0181	4.0000e-005		1.3900e-003	1.3900e-003		1.2800e-003	1.2800e-003	0.0000	3.5420	3.5420	1.1500e-003	0.0000	3.5706
Total	**2.7200e-003**	**0.0288**	**0.0181**	**4.0000e-005**		**1.3900e-003**	**1.3900e-003**		**1.2800e-003**	**1.2800e-003**	**0.0000**	**3.5420**	**3.5420**	**1.1500e-003**	**0.0000**	**3.5706**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.3000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0675	0.0675	0.0000	0.0000	0.0675
Total	**3.0000e-005**	**2.0000e-005**	**2.3000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0675**	**0.0675**	**0.0000**	**0.0000**	**0.0675**

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	9.9000e-004	0.0202	0.0241	4.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	3.5420	3.5420	1.1500e-003	0.0000	3.5706
Total	**9.9000e-004**	**0.0202**	**0.0241**	**4.0000e-005**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**	**0.0000**	**3.5420**	**3.5420**	**1.1500e-003**	**0.0000**	**3.5706**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.3000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0675	0.0675	0.0000	0.0000	0.0675
Total	**3.0000e-005**	**2.0000e-005**	**2.3000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0675**	**0.0675**	**0.0000**	**0.0000**	**0.0675**

3.5 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	9.8700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1000e-004	3.5200e-003	4.5300e-003	1.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	**0.0104**	**3.5200e-003**	**4.5300e-003**	**1.0000e-005**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6394**

3.5 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	9.8700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-004	3.3900e-003	4.5800e-003	1.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	**0.0100**	**3.3900e-003**	**4.5800e-003**	**1.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6394**

3.5 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3370	1.2521	2.5167	6.1800e-003	0.4668	5.8300e-003	0.4726	0.1250	5.4400e-003	0.1304	0.0000	572.3209	572.3209	0.0402	0.0000	573.3256
Unmitigated	0.3370	1.2521	2.5167	6.1800e-003	0.4668	5.8300e-003	0.4726	0.1250	5.4400e-003	0.1304	0.0000	572.3209	572.3209	0.0402	0.0000	573.3256

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	1,747.41	1,747.41	1747.41	1,238,689	1,238,689
Total	1,747.41	1,747.41	1,747.41	1,238,689	1,238,689

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
Fast Food Restaurant with Drive	5.54	5.54	5.54	2.20	78.80	19.00	29	21	50

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	26.9392	26.9392	1.0800e-003	2.2000e-004	27.0331
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	26.9392	26.9392	1.0800e-003	2.2000e-004	27.0331
NaturalGas Mitigated	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	19.8209	19.8209	3.8000e-004	3.6000e-004	19.9387
NaturalGas Unmitigated	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	19.8209	19.8209	3.8000e-004	3.6000e-004	19.9387

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					
Fast Food Restaurant with Drive Thru	371429	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	19.8209	19.8209	3.8000e-004	3.6000e-004	19.9387
Total		**2.0000e-003**	**0.0182**	**0.0153**	**1.1000e-004**		**1.3800e-003**	**1.3800e-003**		**1.3800e-003**	**1.3800e-003**	**0.0000**	**19.8209**	**19.8209**	**3.8000e-004**	**3.6000e-004**	**19.9387**

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					
Fast Food Restaurant with Drive Thru	371429	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	19.8209	19.8209	3.8000e-004	3.6000e-004	19.9387
Total		**2.0000e-003**	**0.0182**	**0.0153**	**1.1000e-004**		**1.3800e-003**	**1.3800e-003**		**1.3800e-003**	**1.3800e-003**	**0.0000**	**19.8209**	**19.8209**	**3.8000e-004**	**3.6000e-004**	**19.9387**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant with Drive Thru	82431	26.9392	1.0800e-003	2.2000e-004	27.0331
Total		**26.9392**	**1.0800e-003**	**2.2000e-004**	**27.0331**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant with Drive Thru	82431	26.9392	1.0800e-003	2.2000e-004	27.0331
Total		**26.9392**	**1.0800e-003**	**2.2000e-004**	**27.0331**

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	9.3100e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005
Unmitigated	9.3100e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005

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	9.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	8.3200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005
Total	**9.3100e-003**	**0.0000**	**2.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0000**	**4.0000e-005**

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	9.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	8.3200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005
Total	**9.3100e-003**	**0.0000**	**2.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0000**	**4.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.1062	0.0212	5.2000e-004	3.7912
Unmitigated	3.1062	0.0212	5.2000e-004	3.7912

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant with Drive Thru	0.646527 / 0.0412677	3.1062	0.0212	5.2000e-004	3.7912
Total		**3.1062**	**0.0212**	**5.2000e-004**	**3.7912**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant with Drive Thru	0.646527 / 0.0412677	3.1062	0.0212	5.2000e-004	3.7912
Total		**3.1062**	**0.0212**	**5.2000e-004**	**3.7912**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.9814	0.2944	0.0000	12.3412
Unmitigated	4.9814	0.2944	0.0000	12.3412

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive Thru	24.54	4.9814	0.2944	0.0000	12.3412
Total		**4.9814**	**0.2944**	**0.0000**	**12.3412**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive Thru	24.54	4.9814	0.2944	0.0000	12.3412
Total		**4.9814**	**0.2944**	**0.0000**	**12.3412**

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

ATTACHMENT B

AERSCREEN for PM_{10} Exhaust

AERSCREEN 11126 / AERMOD 1206 02/18/21
17:07:09

TITLE: SM & BENT STARBUCKS

********** AREA PARAMETERS **********

SOURCE EMISSION RATE: 0.633E-04 g/s 0.502E-03 lb/hr

AREA EMISSION RATE: 0.284E-07 g/(s-m2) 0.226E-06 lb/(hr-m2)
AREA HEIGHT: 3.00 meters 9.84 feet
AREA SOURCE LONG SIDE: 47.18 meters 154.78 feet
AREA SOURCE SHORT SIDE: 47.18 meters 154.78 feet
INITIAL VERTICAL DIMENSION: 1.00 meters 3.28 feet
RURAL OR URBAN: URBAN
POPULATION: 70000

FLAGPOLE RECEPTOR HEIGHT: 1.50 meters 4.92 feet

INITIAL PROBE DISTANCE = 5000. meters 16404. feet

********** BUILDING DOWNWASH PARAMETERS **********

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

********** FLOW SECTOR ANALYSIS **********
25 meter receptor spacing: 1. meters - 5000. meters

MAXIMUM IMPACT RECEPTOR

Zo SECTOR	SURFACE ROUGHNESS	1-HR CONC (ug/m3)	RADIAL (deg)	DIST (m)	TEMPORAL PERIOD
1*	1.000	0.4459	45	25.0	WIN

* = worst case diagonal

********** MAKEMET METEOROLOGY PARAMETERS **********

MIN/MAX TEMPERATURE: 250.0 / 310.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban
DOMINANT CLIMATE TYPE: Average Moisture
DOMINANT SEASON: Winter

ALBEDO: 0.35
BOWEN RATIO: 1.50

ROUGHNESS LENGTH: 1.000 (meters)

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR	MO	DY	JDY	HR
10	01	28	28	01

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS
-0.92	0.043	-9.000	0.020	-999.	21.	8.5	1.000	1.50	0.35	0.50

HT	REF TA	HT
10.0	310.0	2.0

METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT

YR	MO	DY	JDY	HR
10	01	28	28	01

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS
-0.92	0.043	-9.000	0.020	-999.	21.	8.5	1.000	1.50	0.35	0.50

HT	REF TA	HT
10.0	310.0	2.0

********** AERSCREEN AUTOMATED DISTANCES **********
OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
1.00	0.2977	2524.99	0.1964E-02
25.00	0.4459	2550.00	0.1945E-02
50.01	0.3142	2575.00	0.1928E-02
75.00	0.1873	2600.00	0.1911E-02
100.00	0.1306	2625.00	0.1894E-02
125.00	0.9844E-01	2650.00	0.1878E-02
150.01	0.7787E-01	2675.00	0.1862E-02
174.99	0.6376E-01	2700.00	0.1846E-02
200.00	0.5352E-01	2725.00	0.1831E-02
225.00	0.4584E-01	2750.00	0.1817E-02
250.00	0.3985E-01	2775.00	0.1803E-02
274.99	0.3512E-01	2800.00	0.1789E-02
300.00	0.3125E-01	2825.00	0.1775E-02
325.00	0.2808E-01	2850.00	0.1762E-02
350.01	0.2543E-01	2875.00	0.1749E-02
375.00	0.2317E-01	2900.00	0.1736E-02
400.00	0.2125E-01	2925.00	0.1723E-02
425.00	0.1958E-01	2950.00	0.1711E-02
450.00	0.1812E-01	2975.00	0.1699E-02
475.01	0.1685E-01	3000.00	0.1688E-02
500.00	0.1572E-01	3025.00	0.1676E-02
525.00	0.1471E-01	3050.00	0.1665E-02
550.00	0.1381E-01	3075.00	0.1654E-02

575.00	0.1300E-01	3100.00	0.1643E-02
600.00	0.1227E-01	3125.00	0.1633E-02
625.00	0.1161E-01	3150.00	0.1623E-02
650.00	0.1101E-01	3175.00	0.1612E-02
675.00	0.1046E-01	3200.00	0.1602E-02
699.99	0.9953E-02	3225.00	0.1593E-02
725.00	0.9491E-02	3250.00	0.1583E-02
750.00	0.9064E-02	3275.00	0.1574E-02
775.00	0.8667E-02	3300.00	0.1564E-02
800.00	0.8300E-02	3325.00	0.1555E-02
825.00	0.8039E-02	3350.00	0.1546E-02
850.00	0.7716E-02	3375.00	0.1538E-02
875.00	0.7414E-02	3400.00	0.1529E-02
900.00	0.7133E-02	3425.00	0.1520E-02
925.00	0.6870E-02	3450.00	0.1512E-02
950.00	0.6623E-02	3475.00	0.1504E-02
975.00	0.6391E-02	3500.00	0.1496E-02
1000.00	0.6173E-02	3525.00	0.1488E-02
1025.00	0.5967E-02	3550.00	0.1480E-02
1050.00	0.5774E-02	3575.00	0.1472E-02
1075.00	0.5591E-02	3600.00	0.1465E-02
1100.00	0.5418E-02	3625.00	0.1457E-02
1125.00	0.5254E-02	3650.00	0.1450E-02
1149.99	0.5099E-02	3675.00	0.1442E-02
1175.00	0.4951E-02	3700.00	0.1435E-02
1200.00	0.4811E-02	3725.00	0.1428E-02
1224.99	0.4679E-02	3750.00	0.1421E-02
1249.99	0.4552E-02	3775.00	0.1414E-02
1275.00	0.4432E-02	3800.00	0.1407E-02
1300.00	0.4317E-02	3825.00	0.1401E-02
1325.00	0.4208E-02	3850.00	0.1394E-02
1349.99	0.4104E-02	3875.00	0.1387E-02
1375.00	0.4004E-02	3900.00	0.1381E-02
1400.00	0.3909E-02	3925.00	0.1375E-02
1425.00	0.3818E-02	3950.00	0.1368E-02
1449.99	0.3731E-02	3975.00	0.1362E-02
1475.00	0.3648E-02	4000.00	0.1356E-02
1500.00	0.3569E-02	4025.00	0.1350E-02
1525.00	0.3493E-02	4050.00	0.1344E-02
1550.00	0.3420E-02	4075.00	0.1338E-02
1574.99	0.3350E-02	4100.00	0.1332E-02
1600.00	0.3283E-02	4125.00	0.1326E-02
1625.00	0.3218E-02	4150.00	0.1321E-02
1650.00	0.3156E-02	4175.00	0.1315E-02
1675.00	0.3097E-02	4200.00	0.1309E-02
1700.00	0.3040E-02	4225.00	0.1304E-02
1725.00	0.2985E-02	4250.00	0.1298E-02
1750.00	0.2933E-02	4275.00	0.1293E-02
1774.99	0.2882E-02	4300.00	0.1288E-02
1800.00	0.2833E-02	4325.00	0.1282E-02
1824.99	0.2786E-02	4350.00	0.1277E-02
1850.00	0.2741E-02	4375.00	0.1272E-02
1875.00	0.2698E-02	4400.00	0.1267E-02
1900.00	0.2656E-02	4425.00	0.1262E-02
1925.00	0.2615E-02	4450.00	0.1257E-02
1950.00	0.2576E-02	4475.00	0.1252E-02
1975.00	0.2539E-02	4500.00	0.1247E-02
1999.99	0.2503E-02	4525.00	0.1242E-02
2025.00	0.2468E-02	4550.00	0.1237E-02
2050.00	0.2434E-02	4575.00	0.1232E-02
2075.00	0.2401E-02	4600.00	0.1227E-02
2100.00	0.2370E-02	4625.00	0.1223E-02
2124.99	0.2339E-02	4650.00	0.1218E-02
2150.00	0.2310E-02	4675.00	0.1213E-02
2175.00	0.2281E-02	4700.00	0.1209E-02
2199.99	0.2254E-02	4725.00	0.1204E-02
2225.00	0.2227E-02	4750.00	0.1200E-02
2250.00	0.2201E-02	4775.00	0.1196E-02
2275.00	0.2176E-02	4800.00	0.1191E-02

2300.00	0.2152E-02	4825.00	0.1187E-02
2325.00	0.2129E-02	4850.00	0.1182E-02
2350.00	0.2106E-02	4875.00	0.1178E-02
2375.00	0.2084E-02	4900.00	0.1174E-02
2399.99	0.2062E-02	4925.00	0.1170E-02
2424.99	0.2041E-02	4950.00	0.1166E-02
2450.00	0.2021E-02	4975.00	0.1161E-02
2475.00	0.2001E-02	5000.00	0.1157E-02
2500.00	0.1982E-02		

********** AERSCREEN MAXIMUM IMPACT SUMMARY **********

3-hour, 8-hour, and 24-hour scaled
concentrations are equal to the 1-hour concentration as referenced in
SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY
IMPACT OF STATIONARY SOURCES, REVISED (Section 4.5.4)
Report number EPA-454/R-92-019
http://www.epa.gov/scram001/guidance_permit.htm
under Screening Guidance

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	0.4838	0.4838	0.4838	0.4838	N/A
DISTANCE FROM SOURCE		32.99 meters			
IMPACT AT THE AMBIENT BOUNDARY	0.2977	0.2977	0.2977	0.2977	N/A
DISTANCE FROM SOURCE		1.00 meters			

ATTACHMENT C

Cancer Risk Calculations

Air Quality Health Risk Calculations (Worst-Case)
SM and Bent Starbucks - Tier 3

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	**0.0009**
	Construction Start	**9/1/2021**
	Construction Complete	**1/28/2022**
	Days	**149**
	Construction Emission per day (lb/day)	**0.012080537**
	Annual Duration (Days)	**365**
	Annualized Emission Rate (Grams/Second)	**6.33389E-05**
	Project Site Size (Acres)	**0.55**
	Project Site Size (meters^2)	**2225.771032**
input to SCREEN3	Length of Smalles Side (meters)	**47.17807788**
From SCREEN3	Concentration 1-HR (Ug/M^3)	**0.4838**
	Concentration Annual (Ug/M^3)	**0.038704**

	Days	Days to years
Duration	149	0.408219178

Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From F15	0.038704	0.038704	0.038704	0.038704	0.038704	0.038704
Breathing Rate per agegroup BR/BW (Page 5-25)	361	1090	861	745	335	290
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96
10^-6 Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00001341	0.00004050	0.00003199	0.00002768	0.00001245	0.00001078
Construction Days	149	0.408219178				
potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor	10	10	3	3	1	1
ED	0.25	0.408219178	0.408219178	0.408219178	0.408219178	0.408219178
AT	70	70	70	70	70	70
FAH	0.85	0.85	0.72	0.72	0.73	0.73
Risk for Each Age Group	4.47907E-07	2.20831E-06	4.43274E-07	3.83553E-07	5.82885E-08	5.04587E-08
Risk per million Exposed	0.447907016	2.208312633	0.443273772	0.3835528	0.058288489	0.050458692

Cancer Risk Per Million 9-years	3.10
Cancer Risk Per Million 30-years	3.10
Cancer Risk Per Million 70-years	3.09

ATTACHMENT D

EMFAC 2014 Emissions

EMFAC2014 (v1.0.7) Emission Rates
Region Type: Air Basin
Region: San Diego
Calendar Year: 2035
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, g/mile for RUNEX, PMBW and PMTW

Region	CalYr	VehClass	MdlYr	Speed	Fuel	VMT	% of Total VMT	CO_RUNEX	CO Contribution based on % of Total
San Diego	2035	All Other Buses	Aggregated	30	DSL	2827.106362	0.000325291	0.309386638	0.000100641
San Diego	2035	LDA	Aggregated	30	GAS	5053518.4	0.581465339	0.540594037	0.314336695
San Diego	2035	LDA	Aggregated	30	DSL	69424.20934	0.007988053	0.168379084	0.001345021
San Diego	2035	LDT1	Aggregated	30	GAS	352718.3257	0.040584295	0.516490214	0.020961391
San Diego	2035	LDT1	Aggregated	30	DSL	195.6679985	2.25139E-05	0.200176589	4.50675E-06
San Diego	2035	LDT2	Aggregated	30	GAS	1709777.95	0.196729592	0.484730676	0.095360868
San Diego	2035	LDT2	Aggregated	30	DSL	3749.739415	0.000431451	0.165241877	7.12937E-05
San Diego	2035	LHD1	Aggregated	30	GAS	45778.76501	0.005267373	0.262930812	0.001384955
San Diego	2035	LHD1	Aggregated	30	DSL	88691.80066	0.01020501	0.292072402	0.002980602
San Diego	2035	LHD2	Aggregated	30	GAS	18825.24715	0.002166061	0.144683188	0.000313393
San Diego	2035	LHD2	Aggregated	30	DSL	43675.14049	0.005025327	0.223203659	0.001121671
San Diego	2035	MCY	Aggregated	30	GAS	53736.25908	0.006182974	17.27860436	0.106833159
San Diego	2035	MDV	Aggregated	30	GAS	912584.1883	0.105003293	0.594794403	0.062455371
San Diego	2035	MDV	Aggregated	30	DSL	25398.87836	0.002922433	0.18856775	0.000551077
San Diego	2035	MH	Aggregated	30	GAS	3677.66836	0.000423158	0.416096676	0.000176075
San Diego	2035	MH	Aggregated	30	DSL	1041.080031	0.000119788	0.212849306	2.54968E-05
San Diego	2035	Motor Coach	Aggregated	30	DSL	2203.793767	0.000253572	0.664313413	0.000168451
San Diego	2035	OBUS	Aggregated	30	GAS	7279.326217	0.00083757	0.269713418	0.000225904
San Diego	2035	SBUS	Aggregated	30	GAS	4865.98709	0.000559888	0.223007351	0.000124859
San Diego	2035	SBUS	Aggregated	30	DSL	8383.493853	0.000964617	0.276655176	0.000266866
San Diego	2035	T6 Ag	Aggregated	30	DSL	281.9108141	3.24371E-05	0.341253998	1.10693E-05
San Diego	2035	T6 CAIRP heavy	Aggregated	30	DSL	191.8790972	2.20779E-05	0.266745964	5.88919E-06
San Diego	2035	T6 CAIRP small	Aggregated	30	DSL	589.0214713	6.77737E-05	0.252478893	1.71114E-05
San Diego	2035	T6 instate construction heavy	Aggregated	30	DSL	3226.61379	0.000371259	0.30422936	0.000112948
San Diego	2035	T6 instate construction small	Aggregated	30	DSL	8667.944864	0.000997347	0.27801774	0.00027728
San Diego	2035	T6 instate heavy	Aggregated	30	DSL	26334.51387	0.003030088	0.296310977	0.000897848
San Diego	2035	T6 instate small	Aggregated	30	DSL	66332.68181	0.007632337	0.277200156	0.002115685
San Diego	2035	T6 OOS heavy	Aggregated	30	DSL	109.9395116	1.26498E-05	0.266954621	3.37692E-06
San Diego	2035	T6 OOS small	Aggregated	30	DSL	337.4871667	3.88318E-05	0.252478893	9.8042E-06
San Diego	2035	T6 Public	Aggregated	30	DSL	2937.606652	0.000338005	0.226675203	7.66174E-05
San Diego	2035	T6 utility	Aggregated	30	DSL	418.2189198	4.81209E-05	0.208717978	1.00437E-05
San Diego	2035	T6TS	Aggregated	30	GAS	13246.53221	0.001524166	0.278318872	0.000424204
San Diego	2035	T7 Ag	Aggregated	30	DSL	188.7698014	2.17201E-05	0.896966941	1.94822E-05
San Diego	2035	T7 CAIRP	Aggregated	30	DSL	26422.44619	0.003040206	0.747968328	0.002273978
San Diego	2035	T7 CAIRP construction	Aggregated	30	DSL	2060.466026	0.00023708	0.765407757	0.000181463
San Diego	2035	T7 NNOOS	Aggregated	30	DSL	32763.86616	0.003769859	0.654146538	0.00246604
San Diego	2035	T7 NOOS	Aggregated	30	DSL	10436.85846	0.00120088	0.74842012	0.000898763
San Diego	2035	T7 other port	Aggregated	30	DSL	7612.61035	0.000875918	0.815710225	0.000714495
San Diego	2035	T7 POLA	Aggregated	30	DSL	4617.657532	0.000531315	0.818952583	0.000435121
San Diego	2035	T7 Public	Aggregated	30	DSL	1992.442071	0.000229253	0.529125066	0.000121304
San Diego	2035	T7 Single	Aggregated	30	DSL	13223.62804	0.00152153	0.635820604	0.00096742
San Diego	2035	T7 single construction	Aggregated	30	DSL	5330.154508	0.000613296	0.633512836	0.000388531
San Diego	2035	T7 SWCV	Aggregated	30	DSL	7739.411143	0.000890508	9.311998822	0.008292411
San Diego	2035	T7 tractor	Aggregated	30	DSL	40072.19501	0.004610766	0.77592018	0.003577587
San Diego	2035	T7 tractor construction	Aggregated	30	DSL	3974.024137	0.000457257	0.797775516	0.000364789
San Diego	2035	T7 utility	Aggregated	30	DSL	193.3965398	2.22525E-05	0.484287189	1.07766E-05
San Diego	2035	T7IS	Aggregated	30	GAS	1963.673576	0.000225943	35.12376587	0.007935976
San Diego	2035	UBUS	Aggregated	30	GAS	658.5506926	7.57738E-05	0.605407092	4.5874E-05
San Diego	2035	UBUS	Aggregated	30	DSL	727.8763366	8.37505E-05	3.464478589	0.000290152

	VMT	Weighted Average (g/mile)
Total	8691005.404	0.641754335

ATTACHMENT E

CALINE Model Output

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SM and Bent - AM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 0.5 M/S Z0= 100. CM ALT= 300. (M)
BRG= WORST CASE VD= 0.0 CM/S
CLAS= 7 (G) VS= 0.0 CM/S
MIXH= 1000. M AMB= 3.1 PPM
SIGTH= 5. DEGREES TEMP= 10.0 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. west section	-150	0	0	0	AG	1944	0.6	0.0	10.1
B. east section	-150	0	0	0	AG	1965	0.6	0.0	10.1
C. south sectio	0	-150	0	0	AG	669	0.6	0.0	10.1
D. north sectio	0	150	0	0	AG	264	0.6	0.0	10.1

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	15	15	1.8
2. Recpt 2	-15	15	1.8
3. Recpt 3	-15	-15	1.8
4. Recpt 4	15	-15	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D
1. Recpt 1	259.	3.3	0.1	0.1	0.0	0.0
2. Recpt 2	257.	3.3	0.1	0.1	0.0	0.0
3. Recpt 3	283.	3.3	0.1	0.1	0.0	0.0
4. Recpt 4	281.	3.3	0.1	0.1	0.0	0.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SM and Bent - PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 0.5 M/S Z0= 100. CM ALT= 300. (M)
BRG= WORST CASE VD= 0.0 CM/S
CLAS= 7 (G) VS= 0.0 CM/S
MIXH= 1000. M AMB= 3.1 PPM
SIGTH= 5. DEGREES TEMP= 10.0 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. west section	-150	0	0	0	AG	2025	0.6	0.0	10.1
B. east section	-150	0	0	0	AG	1995	0.6	0.0	10.1
C. south sectio	0	-150	0	0	AG	1298	0.6	0.0	10.1
D. north sectio	0	150	0	0	AG	629	0.6	0.0	10.1

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	15	15	1.8
2. Recpt 2	-15	15	1.8
3. Recpt 3	-15	-15	1.8
4. Recpt 4	15	-15	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D
1. Recpt 1	259.	3.3	0.1	0.1	0.0	0.0
2. Recpt 2	169.	3.3	0.1	0.1	0.1	0.0
3. Recpt 3	283.	3.3	0.1	0.1	0.0	0.0
4. Recpt 4	281.	3.3	0.1	0.1	0.0	0.0