

Air Quality & Greenhouse Gas Emissions Assessment 120 East Grand Avenue Project

City of South San Francisco, California

Prepared For:



Prepared By:



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

55 Hanover Lane
Chico, CA 95926

November 2022

TABLE OF CONTENTS

1	INTRODUCTION.....	1
2	AIR QUALITY.....	5
2.1.3	Toxic Air Contaminants.....	9
2.1.4	Ambient Air Quality.....	10
2.1.5	Sensitive Receptors	11
2.2	Regulatory Framework.....	12
2.2.1	Federal.....	12
2.2.2	State	12
2.2.3	Local	14
2.3	Air Quality Emissions Impact Assessment.....	19
2.3.1	Threshold of Significance.....	19
2.3.2	Methodology	21
2.3.3	Impact Analysis.....	22
3	GREENHOUSE GAS EMISSIONS.....	34
3.1	Greenhouse Gas Setting.....	34
3.1.1	Sources of Greenhouse Gas Emissions.....	35
3.2	Regulatory Framework.....	36
3.2.1	State	36
3.2.2	Local	37
3.3	Greenhouse Gas Emissions Impact Assessment.....	38
3.3.1	Thresholds of Significance.....	38
3.3.3	Impact Analysis.....	40

LIST OF TABLES

Table 1-1. Project Characteristics	2
Table 2-1. Summary of Criteria Air Pollutants Sources and Effects	7
Table 2-2. Summary of Ambient Air Quality Data	10
Table 2-3. Attainment Status of Criteria Pollutants in the San Mateo County Portion of the SFBAAB	11
Table 2-4. BAAQMD Basic and Additional Construction Mitigation Measures	16
Table 2-5. BAAQMD Significance Thresholds	20
Table 2-6. Mitigated Construction-Related Criteria Air Pollutant Emissions	23
Table 2-7. Operational Criteria Air Pollutant Emissions	23
Table 2-8. Maximum Cancer Risk Summary	30
Table 2-9. Maximum Non-Carcinogenic Health Risk Summary	23
Table 3-1. Summary of Greenhouse Gases	35
Table 3-2. Construction Related Greenhouse Gas Emissions	40
Table 3-3. Operational-Related Greenhouse Gas Emissions	42

LIST OF ATTACHMENTS

Attachment A – CalEEMod Output File for Air Quality Emissions

Attachment B – Health Risk Analysis Output Files

Attachment C – CalEEMod Output File for Greenhouse Gas Emissions

LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ASF	Age sensitivity factor
AT	Averaging time
BAAQMD	Bay Area Air Quality Management District
BR	Beathing Rate
BW	Body Weight
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CPF	Cancer potency factor
CH ₄	Methane
City	South San Francisco
CO	Carbon monoxide
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalents
DPM	Diesel particulate matter
DEIR	Draft Environmental Impact Report
ED	Exposure duration
EF	Exposure factor
EO	Executive Order
ETC	East Transit Core
FAH	Fraction of time at home
GHG	Greenhouse gas emissions
GLC	Ground level concentration
HRA	Health Risk Assessment
hp	Horsepower
IPCC	Intergovernmental Panel on Climate Change
µg/m ³	Micrograms per cubic meter
lbs	Pounds
L/kg	Liter per kilogram
MEIR	Maximumly Exposed Individual Resident
MEIW	Maximumly Exposed Individual Worker
N ₂ O	Nitrous oxide
NAAQS	National Ambient Air Quality Standards
NO ₂	Nitrogen dioxide
NO _x	Nitrous oxides
OEHHA	Office of Environmental Health Hazard Assessment
O ₃	Ozone
parts per million	ppm
PM ₁₀	Coarse particulate matter

PM _{2.5}	Fine particulate matter
PMI	Point of Maximum Impact
ppb	Parts per billion
Project	120 East Grand Avenue Project
REL	Reference Exposure Level
ROG	Reactive organic gases
R&D	Research and Development
SB	Senate Bill
SF	Square Feet
SFBAAB	San Francisco Bay Area Air Basin
SIP	State Implementation Plan
SO ₂	Sulfur dioxide
TACs	Toxic air contaminants
TO/RD	Transit Oriented/Research and Development
tpy	Tons per year
USEPA	U.S. Environment Protection Agency
VMT	Vehicle Miles Traveled

1 INTRODUCTION

This report documents the results of an Air Quality, Health Risk, and Greenhouse Gas (GHG) Emissions Assessment completed for the 120 East Grand Avenue Project (Project), which includes the construction of three, multi-storied research and development (R&D) buildings and one 8-story parking structure on a 4.63-acre site in the City of South San Francisco (City). This assessment was prepared using methodologies and assumptions recommended in the rules and regulations of the Bay Area Air Quality Management District (BAAQMD). Regional and local existing conditions are presented, along with pertinent emissions standards and regulations. The purpose of this assessment is to estimate criteria air pollutants, health risk and GHG emissions attributable to the Project and to determine the level of impact the Project would have on the environment. Significance levels set forth by BAAQMD are utilized to compare modeled Project emissions and determine significance.

1.1 Project Location and Description

The Project Site, located in the City of South San Francisco, is a 4.64-acre property, consisting of six individual parcels, located south of East Grand Avenue and spanning land on both sides of Sylvester Road (see Figure 1-1, *Project Location*). Specifically, the Project Site consists of the following parcels: 120 E. Grand Avenue (APN 015- 031-170), 130 East Grand Avenue (APN 015-031-180), 129 Sylvester Road (APN 015-031-060), 145 Sylvester Road (APN 015-031-070), 160 Sylvester Road (APN 015-031-140), and 180 Sylvester Road (APN 015-031-150). Under existing conditions, the Project Site accommodates six warehouse buildings of one to two stories in height and asphalt-paved surface parking and industrial yard areas. These existing features are proposed for demolition.

The Site is generally bound by industrial uses. However, to the north of the Project Site is an existing motel recently approved for demolition in order to accommodate the approved construction of a 17-story R&D building, similar to the R&D buildings proposed as part of the Proposed Project. The site is proximately located to the South San Francisco Caltrain station. The new Caltrain bicycle and pedestrian underpass enhances the Site's connectivity to the Downtown businesses and restaurants on Grand Avenue. Vehicular access is provided via East Grand Avenue and Sylvester Road.

Table 1-1 provides a detailed summary of the various Project characteristics. Also see Figure 1-2, *Project Site Plan*.

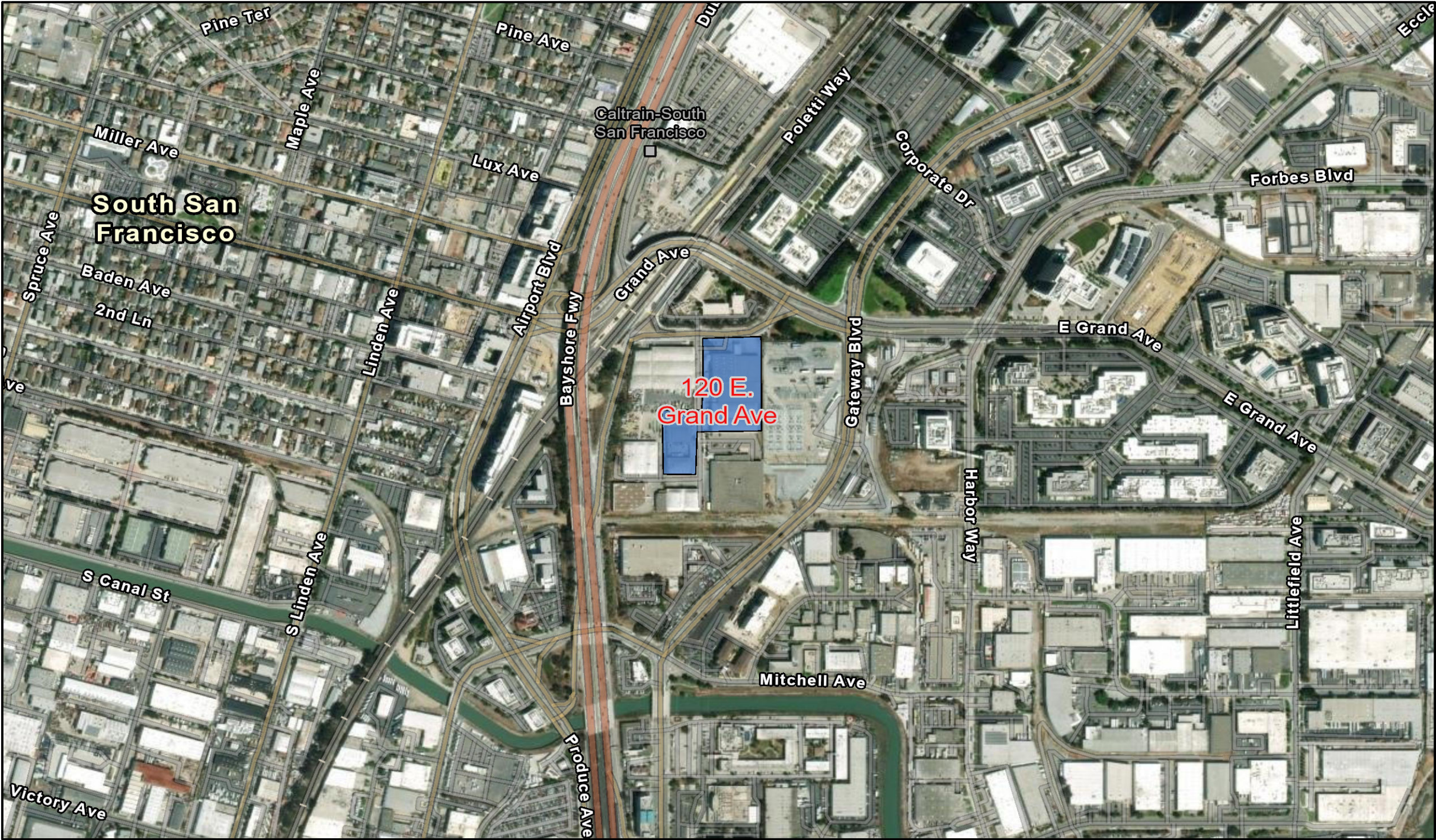
Table 1-1. Project Characteristics	
Buildings	Anticipated Use Types and Area
01	11-Story Building spanning 325,925 square feet at 160 – 180 Sylvester Road • Ground Level: Lobby, Service Yard, and Three Heavy-Duty Truck Loading Docks • 2nd Level: Lobby • 3rd – 11th Levels: Research Labs and Offices
02	5-Story Building spanning 149,260 square feet at 120 -130 E. Grand Avenue • Ground Level: Active Function Uses along E. Grand Avenue and Sylvester Road, Service Yard, and Two Heavy-Duty Truck Loading Docks • 2nd – 5th Levels: Research Labs and Offices
03	3-Story Building spanning 26,250 square feet at 129 & 145 Sylvester Road • Ground Level: Amenities/Retail Uses and Access to Parking Structure. • 2nd – 3rd Levels: Research Labs and Offices
Parking Structure	8-Story Parking Structure spanning 240,000 square feet at 129 & 145 Sylvester Road • Ground Level: 2,000 square feet of Amenities/Retail Uses • 756 Parking Spaces

The Project is located in the Eastern Neighborhood, as defined by the City of South San Francisco's Downtown Station Area Specific Plan (2015) and is classified within the Transit Oriented/Research & development (TO/RD) Zoning District by the City of South San Francisco Zoning Code and East Transit Core (ETC) by the City of South San Francisco Draft Zoning Code Update. The Project proposal is consistent with the use and building design typology referenced in the South San Francisco Downtown Station Area Specific Plan and the allowable land uses identified by the TO/RD and ETC zoning classification.

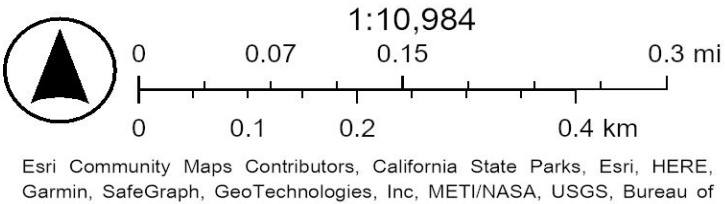
A Transportation Demand Management (TDM) Plan has been prepared for the Proposed Project. The Proposed Project would implement TDM measures to address solo car trips and associated parking demand, traffic congestion and GHG emissions. As part of the TDM, 76 short-term and 38 long-term bike racks would be provided onsite. Bicycle and pedestrian improvements along Sylvester Road would also be provided, in collaboration with the neighboring developments. These improvements include sidewalks, landscaping, drop-off zones, and additional traffic-calming features.

Construction of the Project is anticipated to commence in April of 2023 and last approximately two years. Construction activities associated with the Proposed Project would include demolition of the existing six warehouse buildings on the Project Site, totaling 93,250 square feet of building space. Site preparation, grading, building construction, paving and architectural coating would follow the demolition phase. Approximately 14,025 cubic yards of dirt would be removed from the Project Site.

Project Location - 120 E Grand ave

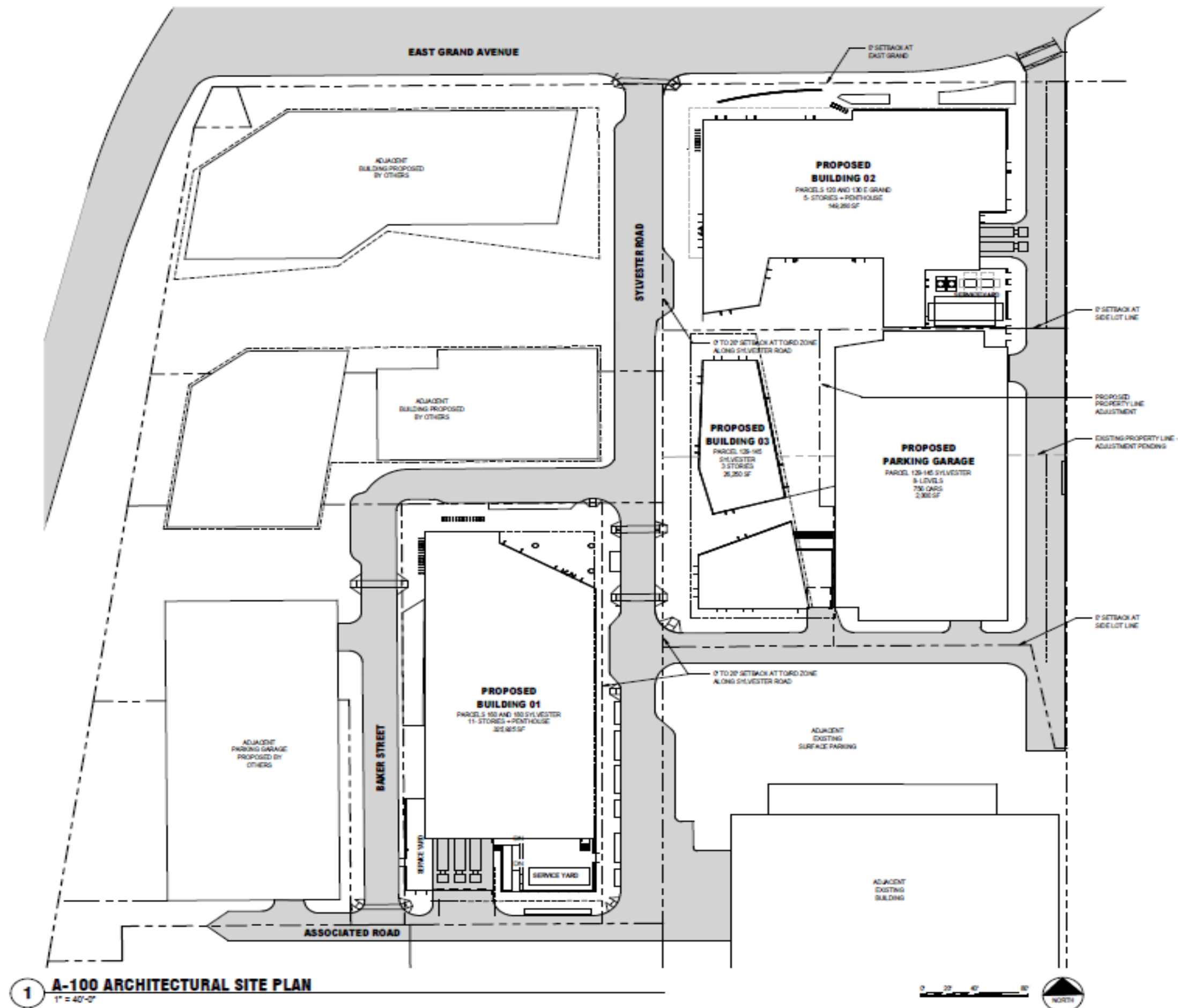


9/9/2022



Location: W:\Projects\2022-039.02 120 E. Grand Avenue (South San Francisco)\Figures

Figure 1-1. Project Locations Map



2 AIR QUALITY

2.1 Environmental Setting

Air quality in a region is determined by its topography, meteorology, and existing air pollutant sources. These factors are discussed below, along with the current regulatory structure that applies to the San Francisco Bay Area Air Basin (SFBAAB), which encompasses the Project Site, pursuant to the regulatory authority of the BAAQMD.

Ambient air quality is commonly characterized by climate conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The air basin is subject to a combination of topographical and climatic factors that reduce the potential for high levels of regional and local air pollutants. The following section describes the pertinent characteristics of the air basin and provides an overview of the physical conditions affecting pollutant dispersion in the Project Area.

2.1.1 San Francisco Bay Air Basin

The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. The Project Site is located in the City of South San Francisco, located in San Mateo County, which is located in the SFBAAB. The SFBAAB is approximately 5,600 square miles in area and consists of nine counties that surround the San Francisco Bay, including all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties; the southwestern portion of Solano County; and the southern portion of Sonoma County.

The topography of the SFBAAB is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys and bays. This complex terrain, especially the higher elevations, distorts the normal wind flow patterns in the SFBAAB. The greatest distortions occur when low-level inversions are present and the air beneath the inversion flows independently of air above the inversion, a condition that is common in the summertime (BAAQMD 2017).

The air flowing in from the coast to the Central Valley, called the sea breeze, begins developing at or near ground level along the coast in late morning or early afternoon. As the day progresses, the sea breeze layer deepens and increases in velocity while spreading inland. The depth of the sea breeze depends in large part upon the height and strength of the inversion. If the inversion is low and strong, and hence stable, the flow of the sea breeze will be inhibited and stagnant conditions are likely to result (BAAQMD 2017).

Summertime temperatures in the SFBAAB are determined by the effect of differential heating between land and water surfaces. Because land tends to heat up and cool off more quickly than water, a large-scale gradient (differential) in temperature is often created between the coast and the Central Valley, and small-scale local gradients are often produced along the shorelines of the ocean and bays (BAAQMD 2017).

During the summer, winds flowing from the northwest are drawn inland through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately south of Mount Tamalpais, the northwesterly winds accelerate considerably and come more directly from the west as they stream

through the Golden Gate. This channeling of wind through the Golden Gate produces a jet that sweeps eastward and splits off to the northwest toward Richmond and to the southwest toward San Jose when it meets the East Bay hills. Wind speeds may be strong locally in areas where air is channeled through a narrow opening, such as the Carquinez Strait, the Golden Gate, or the San Bruno Gap.

An inversion is a layer of warmer air over a layer of cooler air. Inversions affect air quality conditions significantly because they influence the mixing depth, i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground. The highest air pollutant concentrations in the SFBAAB generally occur during inversions. The areas having the highest air pollution potential tend to be those that experience the highest temperatures in the summer and the lowest temperatures in the winter. The coastal areas are exposed to the prevailing marine air, creating cooler temperatures in the summer, warmer temperatures in winter, and stratus clouds all year. The inland valleys are sheltered from the marine air and experience hotter summers and colder winters. Thus, the topography of the inland valleys creates conditions conducive to high air pollution potential.

2.1.2 Criteria Air Pollutants

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health with a determined margin of safety. Ozone (O_3), coarse particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) are considered to be local pollutants because they tend to accumulate in the air locally. PM is also considered a local pollutant. Health effects commonly associated with criteria pollutants are summarized in Table 2-1.

Table 2-1. Summary of Criteria Air Pollutants Sources and Effects

Pollutant	Major Manmade Sources	Human Health and Welfare Effects
CO	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, effecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
NO ₂	A reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities and industrial sources.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Causes brown discoloration of the atmosphere.
O ₃	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (N ₂ O) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
PM _{2.5} & PM ₁₀	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
SO ₂	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, effecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.

Source: California Air Pollution Control Offices Association (CAPCOA 2013)

2.1.2.1 Carbon Monoxide

CO, in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. CO combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. High CO concentrations can cause headaches, aggravate cardiovascular disease and impair central nervous system functions. CO concentrations can vary greatly over comparatively short distances. Relatively high concentrations of CO are typically found near crowded intersections and along heavy roadways with slow moving traffic. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within relatively short distances (i.e., up to 600 feet or 185 meters) of the source. Overall CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973.

2.1.2.2 Nitrogen Oxides

Nitrogen gas comprises about 80 percent of the air and is naturally occurring. At high temperatures and under certain conditions, nitrogen can combine with oxygen to form several different gaseous compounds collectively called nitric oxides (NO_x). Motor vehicle emissions are the main source of NO_x in urban areas. NO_x is very toxic to animals and humans because of its ability to form nitric acid with water in the eyes, lungs, mucus membrane, and skin. In animals, long-term exposure to NO_x increases

susceptibility to respiratory infections, and lowering resistance to such diseases as pneumonia and influenza. Laboratory studies show that susceptible humans, such as asthmatics, who are exposed to high concentrations can suffer from lung irritation or possible lung damage. Precursors of NO_x, such as NO and NO₂, attribute to the formation of O₃ and PM_{2.5}. Epidemiological studies have also shown associations between NO₂ concentrations and daily mortality from respiratory and cardiovascular causes and with hospital admissions for respiratory conditions.

2.1.2.3 Ozone

Ozone (O₃) is a secondary pollutant, meaning it is not directly emitted. It is formed when volatile organic compounds (VOCs) also known as reactive organic gases (ROG) and NO_x undergo photochemical reactions that occur only in the presence of sunlight. The primary source of ROG emissions is unburned hydrocarbons in motor vehicle and other internal combustion engine exhaust. Sunlight and hot weather cause ground-level O₃ to form. Ground-level O₃ is the primary constituent of smog. Because O₃ formation occurs over extended periods of time, both O₃ and its precursors are transported by wind and high O₃ concentrations can occur in areas well away from sources of its constituent pollutants.

People with lung disease, children, older adults, and people who are active can be affected when O₃ levels exceed ambient air quality standards. Numerous scientific studies have linked ground-level O₃ exposure to a variety of problems including lung irritation, difficult breathing, permanent lung damage to those with repeated exposure, and respiratory illnesses.

2.1.2.4 Sulfur Dioxide

SO₂ is a colorless gas with a pungent odor, however sulfur dioxide can react with other particulates in the atmosphere to form particulates which contribute to the haze effect. SO₂ standards have been developed by the EPA to regulate all sulfur oxides, however SO₂ is by far the most abundant sulfur oxide in the atmosphere. Currently, SO₂ is primarily a result of the burning of fossil fuels for power generation and other industrial sources. Modern regulations on diesel fuel have greatly reduced the amount of SO₂ in the atmosphere and there are currently no areas in California that have levels of SO₂ that are not acceptable by state or federal standards.

2.1.2.5 Particulate Matter

Particulate matter includes both aerosols and solid particulates of a wide range of sizes and composition. Of concern are those particles smaller than or equal to 10 microns in diameter size (PM₁₀) and small than or equal to 2.5 microns in diameter (PM_{2.5}). Smaller particulates are of greater concern because they can penetrate deeper into the lungs than larger particles. PM₁₀ is generally emitted directly as a result of mechanical processes that crush or grind larger particles or form the resuspension of dust, typically through construction activities and vehicular travel. PM₁₀ generally settles out of the atmosphere rapidly and is not readily transported over large distances. PM_{2.5} is directly emitted in combustion exhaust and is formed in atmospheric reactions between various gaseous pollutants, including NO_x, sulfur oxides (SO_x) and VOCs. PM_{2.5} can remain suspended in the atmosphere for days and/or weeks and can be transported long distances.

The principal health effects of airborne PM are on the respiratory system. Short-term exposure of high PM_{2.5} and PM₁₀ levels are associated with premature mortality and increased hospital admissions and emergency room visits. Long-term exposure is associated with premature mortality and chronic respiratory disease. According to the U.S. Environmental Protection Agency (USEPA), some people are much more sensitive than others to breathing PM₁₀ and PM_{2.5}. People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worse illnesses; people with bronchitis can expect aggravated symptoms; and children may experience decline in lung function due to breathing in PM₁₀ and PM_{2.5}. Other groups considered sensitive include smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive because many breathe through their mouths.

2.1.3 Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis. Carcinogenic TACs can also have noncarcinogenic health hazard levels.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Additionally, diesel engines emit a complex mixture of air pollutants composed of gaseous and solid material. The solid emissions in diesel exhaust are known as diesel particulate matter (DPM). In 1998, California identified DPM as a TAC based on its potential to cause cancer, premature death, and other health problems (e.g., asthma attacks and other respiratory symptoms). Those most vulnerable are children (whose lungs are still developing) and the elderly (who may have other serious health problems). Overall, diesel engine emissions are responsible for the majority of California's known cancer risk from outdoor air pollutants. Diesel engines also contribute to California's PM_{2.5} air quality problems. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

2.1.3.1 Diesel Exhaust

Most recently, CARB identified DPM as a TAC. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine (USEPA 2002). Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause

coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs; due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

2.1.4 Ambient Air Quality

Ambient air quality at the Project Site can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. CARB maintains more than 60 monitoring stations throughout California. O₃, PM₁₀ and PM_{2.5} are the pollutant species most potently affecting the Project region. The San Francisco-Arkansas Street air quality monitoring station, located at 10 Arkansas Street approximately 8 miles north of the Project Site, monitors ambient concentrations of O₃, PM_{2.5} and PM₁₀. Ambient emission concentrations will vary due to localized variations in emission sources and climate and should be considered “generally” representative of ambient concentrations in the Project Area.

Table 2-2 summarizes the published data concerning O₃, PM_{2.5} and PM₁₀ since 2019 for each year that the monitoring data is provided.

Table 2-2. Summary of Ambient Air Quality Data			
Pollutant Scenario	2019	2020	2021
O₃			
Max 1-hour concentration (ppm)	0.091	0.088	0.074
Max 8-hour concentration (ppm) (state/federal)	0.074 / 0.073	0.056 / 0.055	0.055 / 0.054
Number of days above 1-hour standard (state/federal)	0 / 0	0 / 0	0 / 0
Number of days above 8-hour standard (state/federal)	1 / 1	0 / 0	0 / 0
PM₁₀			
Max 24-hour concentration (µg/m ³) (state/federal)	42.0 / 42.1	105.0 / 102.3	33.0 / 32.2
Number of days above 24-hour standard (state/federal)	0 / 0	23 / 0	0 / 0
PM_{2.5}			
Max 24-hour concentration (µg/m ³) (state/federal)	25.4 / 25.4	147.3 / 147.3	22.4 / 22.4
Number of days above federal 24-hour standard	0	8	0

Source: CARB 2022

Notes: * = Insufficient data available

µg/m³ = micrograms per cubic meter; ppm = parts per million

(2) A bold value signifies that this category is above the applicable standard.

The USEPA and CARB designate air basins or portions of air basins and counties as being in “attainment” or “nonattainment” for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. Acceptable exceedances of the maximum value vary for the National Ambient Air Quality Standards (NAAQS) from 4th highest concentration for the 8-hour O₃ standard to 99th percentile to the SO₂ standard. The NAAQS for O₃, PM₁₀, and PM_{2.5} are based on statistical calculations over one- to three-year periods, depending on the pollutant. The California Ambient Air Quality Standards (CAAQS) are

not to be exceeded during a three-year period. The attainment status for the San Mateo County portion of the SFBAAB, which encompasses the Project Site, is included in Table 2-3.

Table 2-3. Attainment Status of Criteria Pollutants in the San Mateo County Portion of the SFBAAB		
Pollutant	State Designation	Federal Designation
O ₃	Nonattainment	Nonattainment
PM ₁₀	Nonattainment	Unclassified
PM _{2.5}	Nonattainment	Nonattainment
CO	Attainment	Unclassified/Attainment
NO ₂	Attainment	Unclassified/Attainment
SO ₂	Attainment	Unclassified/Attainment

Source: CARB 2019

The determination of whether an area meets the state and federal standards is based on air quality monitoring data. Some areas are unclassified, which means there is insufficient monitoring data for determining attainment or nonattainment. Unclassified areas are typically treated as being in attainment. Because the attainment/nonattainment designation is pollutant-specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the state and federal standards differ, an area could be classified as attainment for the federal standards of a pollutant and as nonattainment for the state standards of the same pollutant. The San Mateo County region is designated as a nonattainment area for the federal O₃ and PM_{2.5} standards and is also a nonattainment area for the state standards for O₃, PM₁₀, and PM_{2.5} (CARB 2019).

2.1.5 Sensitive Receptors

Sensitive receptors are defined as facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

The nearest sensitive land uses to the Project Site is an apartment building located approximately 0.17 mile west of the Project Site, across the 101 freeway and on Airport Boulevard.

2.2 Regulatory Framework

2.2.1 Federal

Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the USEPA to establish the NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants. On April 2, 2007, the Supreme Court found that carbon dioxide (CO₂) is an air pollutant covered by the CAA; however, no NAAQS have been established for CO₂.

These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those “sensitive receptors” most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The USEPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. Table 2-3 lists the federal attainment status of the San Mateo County portion of the SFBAAB for the criteria pollutants.

2.2.2 State

2.2.2.1 California Clean Air Act

The California Clean Air Act (CCAA) allows the state to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California’s State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

2.2.2.2 California State Implementation Plan

The federal CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and

control measures to attain the NAAQS by deadlines established by the CAA. The USEPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the USEPA for approval and publication in the Federal Register. The SFBAAB currently has four air quality plans in place, discussed below, which collectively constitute the SFBAAB SIP elements.

- **2001 Ozone Attainment Plan.** The 2001 Ozone Attainment Plan was developed for compliance with the NAAQS for the 1-hour O₃ standard. In June 2005, the USEPA revoked the standard for 1-hour O₃; however, the state standard for 1-hour O₃ remains. Therefore, BAAQMD continues to implement the strategies outlined in the 2001 Ozone Attainment Plan.
- **2005 Bay Area Ozone Strategy.** The 2005 Bay Area Ozone Strategy served as an update to the 2001 Ozone Attainment Plan and expanded on strategies to achieve compliance with the state 1-hour O₃ standard.
- **2010 Clean Air Plan.** The 2010 Clean Air Plan addresses various pollutants including O₃, PM, and air toxics, as well as GHG emissions within the SFBAAB. It serves to update the Bay Area 2005 Ozone Strategy in accordance with the requirements of the CCAA to implement all feasible measures, to reduce O₃, and to consider the impacts of O₃ control measures on particulate matter, air toxics, and greenhouse gas emissions in a single, integrated plan and review progress in improving air quality in recent years.
- **2017 Clean Air Plan.** In April 2017, BAAQMD adopted the 2017 Clean Air Plan, whose primary goals are to protect public health and to protect the climate. The 2017 Clean Air Plan updates the Bay Area 2010 Clean Air Plan and complies with state air quality planning requirements, as codified in the California Health and Safety Code (although the 2017 plan was delayed beyond the three-year update requirement of the code). State law requires the Clean Air Plan to include all feasible measures to reduce emissions of O₃ precursors and to reduce the transport of O₃ precursors to neighboring air basins. The 2017 Clean Air Plan contains 85 measures to address reduction of several pollutants: O₃ precursors, PM, air toxics, and GHGs. Other measures focus on a single type of pollutant: super GHGs such as methane and black carbon that consists of harmful fine particles that affect public health. These control strategies are grouped into the following categories:
 - a. Stationary Source Measures
 - b. Transportation Control Measures
 - c. Energy Control Measures
 - d. Building Control Measures
 - e. Agricultural Control Measures
 - f. Natural and Working Lands Control Measures

- g. Waste Management Control Measures
- h. Water Control Measures
- i. Super GHG Control Measures

2.2.2.3 Tanner Air Toxics Act & Air Toxics “Hot Spot” Information and Assessment Act

CARB’s Statewide comprehensive air toxics program was established in 1983 with Assembly Bill (AB) 1807, the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California’s program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure (ATCM) for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions.

CARB also administers the state’s mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588, the Air Toxics “Hot Spots” Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment (HRA) and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the “Hot Spots” Act was amended by Senate Bill (SB) 1731, which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

2.2.3 Local

2.2.3.1 Bay Area Air Quality Management District

The BAAQMD is designated by law to adopt and enforce regulations to achieve and maintain ambient air quality standards. The BAAQMD responsibilities include preparing plans for the attainment of ambient air quality standards, adopting and enforcing air pollution rules, issuing permits for and inspecting stationary air pollution sources, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing state and federal programs and regulations. The BAAQMD has also adopted various rules and regulations that are designed to reduce and control pollutant emissions from project’s construction and operational activities. The following provisions are applicable to the Proposed Project are summarized as follows:

- **Regulation 2, Rule 1, General Permit Requirements:** Includes criteria for issuance or denial of permits, exemptions, appeals against decisions of the Air Pollution Control Officer (APCO) and BAAQMD actions on applications.
- **Regulation 2, Rule 2, New Source Review:** Applies to new or modified sources and contains requirements for Best Available Control Technology and emission offsets. Rule 2 implements federal New Source Review and Prevention of Significant Deterioration requirements.

- **Regulation 6, Rule 1, General Requirements:** Limits the quantity of particulate matter in the atmosphere by controlling emission rates, concentration, visible emissions and opacity.
- **Regulation 6, Rule 6, Prohibition of Trackout:** Controls trackout of solid material onto public paved roads from three types of sites: large bulk material sites, large construction sites, and large disturbed area sites. Under this regulation, the owners and operators of a construction site are required to clean up trackout on public roadways within four hours of identification and at the conclusion of each workday. The rule also includes requirements regarding the emission of fugitive dust during cleanup of trackout, and requirements for monitoring and reporting trackout at regulated sites
- **Regulation 7, Odorous Substances:** Regulation 7 places general limitations on odorous substances and specific emission limitations on certain odorous compounds. A person (or facility) must meet all limitations of this regulation but meeting such limitations shall not exempt such person from any other requirements of BAAQMD, state, or national law. The limitations of this regulation shall not be applicable until BAAQMD receives odor complaints from ten or more complainants within a 90-day period, alleging that a person has caused odors perceived at or beyond the property line of such person and deemed to be objectionable by the complainants in the normal course of their work, travel, or residence. When the limits of this regulation become effective, as a result of citizen complaints described above, the limits shall remain effective until such time as no citizen complaints have been received by BAAQMD for one year. The limits of this Regulation shall become applicable again if BAAQMD receives odor complaints from five or more complainants within a 90-day period. BAAQMD staff investigate and track all odor complaints it receives and make attempts to visit the site and identify the source of the objectionable odor and assist the owner or facility in finding a way to reduce the odor.

BAAQMD Construction Mitigation Measures

The BAAQMD recommends quantifying a proposed project's construction-generated emissions by implementing the Basic Construction Mitigation Measures as mitigation for dust and exhaust construction impacts in California Environmental Quality Act (CEQA) compliance documentation. If additional construction measures are required to reduce construction-generated emissions, the Additional Construction Mitigation Measures should then be applied. Table 2-4 identifies the Basic and Additional Construction Mitigation Measures. In addition, all projects must implement any applicable air toxic control measures. For example, projects that have the potential to disturb asbestos (from soil or building materials) must comply with all the requirements of CARB's air toxic control measures for construction, grading, quarrying, and surface mining operations.

Table 2-4. BAAQMD Basic and Additional Construction Mitigation Measures

BAAQMD Basic Construction Mitigation Measures
All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
All vehicle speeds on unpaved roads shall be limited to 15 mph.
All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The air district's phone number shall also be visible to ensure compliance with applicable regulations.
BAAQMD Additional Construction Mitigation Measures
All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.
All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.
Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the number of disturbed surfaces at any one time.
All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
Site accesses to a distance of 100 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel.
Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.
Minimizing the idling time of diesel-powered construction equipment to 2 minutes.
The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NO _x reduction and 45 percent PM reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products,
Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).

Table 2-4. BAAQMD Basic and Additional Construction Mitigation Measures

Requiring that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NOx and PM.
Requiring all contractors use equipment that meets CARB's most recent certification standard for off-road heavy-duty diesel engines.

2.2.3.2 City of South San Francisco Downtown Station Area Specific Plan

The City of South San Francisco Downtown Station Area Specific Plan (2014) guides the City in its planning efforts to create a vibrant, transit-supportive, diverse Downtown, particularly the area surrounding the City's Caltrain commuter rail station. The Downtown Station Area Specific Plan (Specific Plan) crafts a vision for the Downtown core and identifies an implementation process to achieve City and community goals, including design standards and regulations for future development. The Project Site is located in an area identified in the Specific Plan as being intended for transit offices/ research & development core. The Specific Plan Draft Environmental Impact Report (DEIR) identifies various mitigation measures that all projects taking place in the Specific Plan Area must abide by. The following mitigation measure are applicable to the Proposed Project.

Mitigation Measure 4.2-1: Construction emissions for all future development under the Specific Plan shall be quantified prior to the start of construction. For projects where construction emissions are anticipated to exceed the most recent City-adopted thresholds, in addition to the BAAQMD Basic Construction Mitigation Measures, construction activities shall implement the BAAQMD Additional Construction Mitigation Measures to reduce construction emissions of criteria air pollutants to below significant criteria. Mitigation reduction shall be quantified prior to the start of construction to demonstrate that adequate measures have been identified to reduce project emissions. The Additional Construction Mitigation Measures include the following:

1. All exposed surfaces shall be watered at a frequency adequate to maintain minimal soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probes.
2. All excavating, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
3. Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have a maximum 50 percent air porosity.
4. Vegetative ground cover (e.g., fast-germinating native grass seeds) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
5. The simultaneous occurrence of excavation, grading and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
6. All trucks and equipment, including their tires, shall be washed off prior to leaving the site.

7. Site access to a distance of 100 feet from the paved road shall be treated with a 6-to-12-inch compacted layer of wood chips, mulch, or gravel.
8. Sandbags or other erosion control measure shall be installed to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.
9. Minimizing the idling time of diesel powered construction equipment to two minutes.
10. The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NO_x reduction and 45 percent PM reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retro fit technologies, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.
11. Use low-ROG coating beyond local requirements (i.e., Regulation 8, Rule 3: Architectural Coating).
12. All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technologies for emission reduction of NO_x and PM.
13. All contractors shall use equipment that meets CARB's most recent certification standards for off-road heavy-duty diesel engines.

Mitigation Measure 4.2-2: Prior to issuance of a building permit for future development projects under the Specific Plan, the applicant shall demonstrate implementation of recommended BAAQMD operational mitigation measures as necessary to reduce operational emissions of criteria air pollutants to below significance criteria. Operational emissions and mitigation reductions will be quantified prior to issuance of the building permit to demonstrate that adequate measure shave been identified to reduce project emissions. The recommended measures include, but are not limited to, any of the following:

1. Increase on-street parking fees.
2. Daily parking charge for employees.
3. Provide a parking "cash-out" incentive for employees who use alternative transportation to commute.
4. Provide subsidized or free transit passes to employees.
5. Encourage alternative compressed work schedules and telecommuting.
6. Provide a ridesharing program.

2.3 Air Quality Emissions Impact Assessment

2.3.1 *Threshold of Significance*

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to air quality if it would do any of the following:

- 1) Conflict with or obstruct implementation of any applicable air quality plan.
- 2) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- 3) Expose sensitive receptors to substantial pollutant concentrations.
- 4) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people).

To assist local jurisdictions in the evaluation of air quality impacts under CEQA, the BAAQMD has published a guidance document for the preparation of the air quality portions of environmental documents that include thresholds of significance to be used in evaluating land use proposals. Thresholds of significance are based on a source's projected impacts and are a basis from which to apply mitigation measures. BAAQMD's CEQA thresholds have also been used to determine air quality impacts in this analysis. If a project's individual emissions exceed its identified significance thresholds, the Project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulatively considerable.

The BAAQMD's established thresholds of significance for air quality for construction and operational activities of land use development projects are shown in Table 2-5.

Table 2-5. BAAQMD Significance Thresholds		
Construction Related		
Air Pollutant	Average Daily Emissions (pounds per day)	
ROG	54	
NO _x	54	
PM ₁₀ (exhaust)	82	
PM _{2.5} (exhaust)	54	
PM ₁₀ /PM _{2.5} (fugitive dust)	Best Management Practices	
Local CO	None	
Operational Related		
Air Pollutant	Average Daily Emissions (pounds per day)	Maximum Annual Emissions (tons per year)
ROG	54	10
NO _x	54	10
PM ₁₀ (exhaust)	82	15
PM _{2.5} (exhaust)	54	10
PM ₁₀ /PM _{2.5} (fugitive dust)	None	None
Local CO	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)	

Source: BAAQMD 2017

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulatively considerable.

In addition to the emission of criteria air pollutants, this Projects evaluates the health risk from construction and operations of the Proposed Project. Specifically, the potential exposure of nearby existing residents to DPM emissions from heavy-duty trucks, R&D vented lab emissions and emergency generator emissions.

The BAAQMD thresholds for what constitute an exposure of substantial air toxics are as follows.

- Cancer Risk: Emit carcinogenic or toxic contaminants that exceed the maximum individual cancer risk of 10 in one million.
- Non-Cancer Risk: Emit toxic contaminants that exceed the maximum hazard quotient of 1 in one

million.

Cancer risk is expressed in terms of expected incremental incidence per million population. The BAAQMD has established an incidence rate of 10 persons per million as the maximum acceptable incremental cancer risk due to TAC exposure. This threshold serves to determine whether or not a given project has a potentially significant development-specific and cumulative impact. The 10-in-one-million standard is a very health-protective significance threshold. A risk level of 10 in one million implies a likelihood that up to 10 persons out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of TACs over a specified duration of time. This risk would be an excess cancer that is in addition to any cancer risk borne by a person not exposed to these air toxics. To put this risk in perspective, the risk of dying from accidental drowning is 1,000 in a million, which is 100 times more than the BAAQMD's threshold of 10 in one million.

The BAAQMD has also established non-carcinogenic risk parameters for use in HRAs. Noncarcinogenic risks are quantified by calculating a "hazard index," expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). An REL is a concentration at, or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. Within this analysis, non-carcinogenic exposures of less than 1.0 are considered less than significant.

2.3.2 Methodology

Air quality impacts were assessed in accordance with methodologies recommended by the BAAQMD. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2020.4.0. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were calculated using CalEEMod model defaults for San Mateo County and information provided by the Project proponent such as Project construction equipment and duration of construction activities. Operational air pollutant emissions were calculated based on specific Project Site plans.

For the purposes of this analysis, projected emissions associated with proposed operations are compared to the existing baseline, which includes six warehouse buildings of one to two stories in height.

Additionally, DPM concentrations and associated dispersion generated from both construction off-road equipment and construction haul trucks during construction, as well as heavy-duty trucks for Project operations, operational emissions from R&D lab vents (assumed to be located on the roof) and emergency generators, were modeled using the HARP2 modeling program provided by CARB, with regulatory default settings, to perform the dispersion and health risk modeling for this analysis. HARP2 implements the latest regulatory guidance to develop inputs to the U.S. EPA AERMOD dispersion model for dispersion and as the inputs for calculations for the various health risk levels. AERMOD is a steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. The resultant concentration values at vicinity sensitive receptors were then used to

calculate chronic and carcinogenic health risk using the standardized equations contained in the Office of Environment Health Hazard Assessment (OEHHA) Guidance Manual for Preparation of Health Risk Assessments (2015).

2.3.3 Impact Analysis

2.3.3.1 Project Construction-Generated Criteria Air Quality Emissions

Emissions associated with Project construction would be temporary and short-term but have the potential to represent a significant air quality impact. Three basic sources of short-term emissions will be generated through construction of the Proposed Project: operation of the construction vehicles (i.e., tractors, forklifts, pavers), the creation of fugitive dust during clearing and grading, and the use of asphalt or other oil-based substances during paving and coating activities. Construction activities such as excavation and grading operations, construction vehicle traffic, and wind blowing over exposed soils would generate exhaust emissions and fugitive PM emissions that affect local air quality at various times during construction. Effects would be variable depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust control efforts. The dry climate of the area during the summer months creates a high potential for dust generation.

Construction-generated emissions associated the Proposed Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See Attachment A for more information regarding the construction assumptions, including construction equipment and duration, used in this analysis.

Predicted maximum daily construction-generated emissions for the Proposed Project are summarized in Table 2-6. Construction-generated emissions are short-term and of temporary duration, lasting only if construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the BAAQMD's thresholds of significance.

Table 2-6. Construction-Related Criteria Air Pollutant Emissions

Construction Year	Pollutant (average pounds per day)					
	ROG	NO_x	PM₁₀ (exhaust)	PM_{2.5} (exhaust)	PM₁₀ (fugitive dust)	PM_{2.5} (fugitive dust)
Construction First Year	1.56	10.81	0.18	0.18	1.64	0.38
Construction Second Year	1.66	11.71	0.16	0.15	2.22	0.63
Construction Third Year	30.72	9.23	0.18	0.18	2.25	0.64
<i>BAAQMD Potentially Significant Impact Threshold</i>	<i>54 pounds/day</i>	<i>54 pounds/day</i>	<i>82 pounds/day</i>	<i>54 pounds/day</i>	<i>Basic Construction Mitigation Measures</i>	<i>Basic Construction Mitigation Measures</i>
Exceed BAAQMD Threshold?	No	No	No	No	No	No

Source: CalEEMod version 2020.4.0 Refer to Attachment A for Model Data Outputs.

Notes: Average daily construction emissions taken from the annual CalEEMod output divided by the actual days of construction within each calendar year (199 days in the first year, 256 days in the second year, and 185 days in the third year). Emission calculations account for the movement and export of 14,025 cubic yards of soil as well as the demolition and export of 93,250 square feet of demolished building material.

All construction Projects South San Francisco are required to implement the BAAQMD's Basic Construction Mitigation Measures as a condition of project approval. Emissions estimates account for the quantifiable components of the BAAQMD's Basic Construction Mitigation Measures, specifically watering unpaved portions of the construction site twice daily, limiting off-road equipment to speeds of 15 mph, and removing dirt track-out on adjacent public roads with a wet power vacuum once daily.

Specific Project construction equipment and construction duration provided by the Project proponent. All Project construction equipment would be equipped with Tier 4-certified engines, per the Project proponent, consistent with Mitigation Measure 4.2-1 in the Downtown Station Area Specific Plan.

As shown in Table 2-6, emissions generated during Project construction would not exceed the BAAQMD's thresholds of significance during construction. Therefore, criteria pollutant emissions generated during Project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or State ambient air quality standard.

2.3.3.2 Project Operations Criteria Air Quality Emissions

Implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM₁₀, PM_{2.5}, CO, and SO₂ as well as O₃ precursors such as ROG and NO_x. As previously described, projected emissions associated with proposed operations are compared to the existing baseline, which includes the current operation of six warehouse buildings spanning 93,250 square feet. Predicted maximum daily operational-generated emissions of criteria air pollutants for the Proposed Project are summarized in Table 2-7 and compared to the operational significance thresholds promulgated by the BAAQMD.

Table 2-7. Operational Criteria Air Pollutant Emissions

Emission Source	Pollutant					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Proposed Project – Three Research and Development Buildings and Associated Features						
<i>Summer Emissions (Pounds per Day)</i>						
Proposed Project	22.99	9.97	75.71	0.16	16.16	4.55
<i>Winter Emissions (Pounds per Day)</i>						
Proposed Project	22.16	11.06	86.46	0.15	16.16	4.55
<i>Annual Emissions (Tons per Year)</i>						
Proposed Project	3.6	1.6	11.1	0.0	2.1	0.6
Existing Conditions – 93,250 Square Feet of Warehouse Building Space						
<i>Summer Emissions (Pounds per Day)</i>						
Existing Baseline	2.68	2.59	4.34	0.01	1.04	0.29
<i>Winter Emissions (Pounds per Day)</i>						
Existing Baseline	2.67	2.77	4.65	0.01	1.04	0.29
<i>Annual Emissions (Tons per Year)</i>						
Existing Baseline	0.5	0.5	0.8	0.0	0.2	0.1
Difference						
<i>Summer Emissions (Pounds per Day)</i>						
Difference	+20.31	+7.38	+71.37	+0.15	+15.12	+4.26
<i>BAAQMD Daily Significance Threshold</i>	<i>54 pounds/day</i>	<i>54 pounds/day</i>	<i>None</i>	<i>None</i>	<i>82 pounds/day</i>	<i>54 pounds/day</i>
Exceed BAAQMD Daily Threshold?	No	No	No	No	No	No
<i>Winter Emissions (Pounds per Day)</i>						
Difference	+19.49	+8.29	+81.81	+0.14	+15.12	+7.98
<i>BAAQMD Daily Significance Threshold</i>	<i>54 pounds/day</i>	<i>54 pounds/day</i>	<i>None</i>	<i>None</i>	<i>82 pounds/day</i>	<i>54 pounds/day</i>
Exceed BAAQMD Daily Threshold?	No	No	No	No	No	No
<i>Annual Emissions (Tons per Year)</i>						
Difference	+3.1	+1.1	+10.3	+0.0	+1.9	+0.5
<i>BAAQMD Annual Significance Threshold</i>	<i>10 tons/year</i>	<i>10 tons/year</i>	<i>None</i>	<i>None</i>	<i>15 tons/year</i>	<i>10 tons/year</i>
Exceed BAAQMD Daily Threshold?	No	No	No	No	No	No

Source: CalEEMod version 2020.4.0. Refer to Attachment A for Model Data Outputs.

Notes: Operational emissions for the Proposed Project accounts for the testing for four 2,000 horsepower Tier 4 generators five days per year.

As shown in Table 2-7, the Project's emissions would not exceed any BAAQMD thresholds for any criteria air pollutants during operations.

2.3.3.3 Project Consistency with Air Quality Planning

As part of its enforcement responsibilities, the USEPA requires each state with nonattainment areas to prepare and submit a SIP that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously described, the BAAQMD is the agency responsible for enforcing many federal and state air quality requirements and for establishing air quality rules and regulations. The BAAQMD attains and maintains air quality conditions in San Mateo County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The most recently adopted air quality plan is the BAAQMD's 2017 Clean Air Plan, the primary goals of which are to protect public health and the climate. The 2017 Clean Air Plan includes a wide range of control measures and actions to reduce combustion-related activities, decrease combustion of fossil fuels, improve energy efficiency, and reduce emissions of potent greenhouse gases. Several measures address the reduction of multiple pollutants such as O₃ precursors, PM, air toxics, and GHG emissions.

Determination of whether a project supports the goals in the 2017 Clean Air Plan is achieved by a comparison of project-estimated emissions with BAAQMD thresholds of significance. If project emissions would not exceed the thresholds of significance after the application of all feasible mitigation measures, the project is consistent with the goals of the 2017 Clean Air Plan. As shown in Table 2-7 and Table 2-8, emissions generated during Project construction and operations would not exceed the BAAQMD's significance thresholds. Therefore, the Project would not conflict with or obstruct reduction measures presented in the 2017 Clean Air Plan.

Additionally, the Project Site can be identified for its "location efficiency". Location efficiency describes the location of the Project Site relative to the type of urban landscape its proposed to fit within, such as an 'urban area', 'compact infill', or 'suburban center'. In general, compared to the statewide average, a project could realize vehicle miles traveled (VMT) reductions up to 65 percent in an urban area, up to 30 percent in a compact infill area, or up to 10 percent in a suburban center (CAPCOA 2021), and thus reductions in air pollutant emissions, a primary goal of the 2017 Clean Air Plan. The Project Site represents an urban/compact infill location within the central portion of South San Francisco. The Project Site is served by existing public transportation. Additionally, the Project is in proximity to surrounding nonresidential land uses. The increases in land use diversity and mix of uses in the Project Area would reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation, which would result in corresponding reductions in transportation-related emissions, a primary goal of the 2017 Clean Air Plan.

2.3.3.4 Exposure of Sensitive Receptors to Toxic Air Contaminants

As previously described, sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over age 65, children under age 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive land uses to the Project Site is an apartment building located approximately 0.17 mile west of the Project Site, across the 101 freeway and on Airport Boulevard.

Health Risk Assessment

A HRA was performed to determine the health risk associated with construction and operations of the Proposed Project. The HRA analyzed cancer and chronic non-cancer risk calculated for 70-year, 30-year, 25-year and 9-year exposure scenarios for operational emissions and 3-years for construction emissions. Per OEHHA guidance, the 25-year scenario was used to model the health risk for workers at business locations and the 70-, 30-, and 9-year scenarios were used for residents in residential areas. In addition, the maximum annual PM_{2.5} concentration was modeled for comparison with BAAQMD thresholds.

Construction Emission Sources

All onsite and offsite diesel truck traffic related emissions were generated using EMFAC2021 for construction beginning in the year 2023 and conservatively utilized throughout the proposed period of construction. Construction off-road equipment for onsite activities was modeled as fifteen-line volume sources placed along the perimeter of the Project Site totaling 0.40 mile. Construction on-road equipment for offsite activities was modeled as eighteen-line volume sources traversing East Grand Avenue, onto Grand Avenue and to the nearest Highway 101 freeway entrance totaling 0.48 mile. Annual off-road PM₁₀ exhaust emissions generated using the CalEEMod model were used to represent emissions from onsite off-road diesel equipment used throughout construction. The annual emissions for all phases and years of construction were used to conservatively estimate annual construction emissions for the estimated Project construction duration of two years. PM_{2.5} emissions were modeled as total on and offsite PM_{2.5} emissions during the highest emission year as calculated by EMFAC2021. Detailed calculations for construction emissions can be found in Attachment A and B of this document.

Operational Emission Sources

Project related onsite roadway sources were entered into AERMOD as ten-line volume sources placed from the proposed loading docks located at Building 01 and Building 02 to the Project Site exit totaling 0.27 mile. This path of travel was assumed based off Project Site plans. Operational offsite roadway sources were entered into AERMOD as eighteen-line volume sources traversing East Grand Avenue, onto Grand Avenue and to the nearest Highway 101 freeway entrance totaling 0.48 mile. Roadway sources all have a width of 3.7 meters using standard line sizing and an estimated one lane. Daily truck trips were estimated from Project Site plans assuming seven truck trips per hour over a ten-hour day, conservatively totaling 70 daily truck trips. This estimate is consistent with the default number of heavy-duty truck trips

identified in CalEEMod. Emissions associated with the proposed loading docks were modeled as area source emissions with a length and width conservatively estimated from the Project Site plan. Emissions from the R&D lab were modeled as a point source located on top of each of the proposed buildings with a release height of 110 feet for Building 01, 50 feet for Building 02, and 30 feet for Building 03. A chemical profile from a similar project (University of California at San Francisco 2011) and conservatively scaled to the total square footage of the maximum lab area (87,000 square feet). Emergency generator emissions were calculated using a standard load factor and a generator rating and 100 hours per year per BAAQMD guidance (BAAQMD 2019). Detailed calculations for operational emissions can be found in Attachment B of this document.

Dispersion Modeling

The air dispersion modeling for the HRA was performed using the USEPA AERMOD Version 21112 dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources. The alberhill30m.dem file found at CARB's website for HARP Digital Elevation Model Files was used for elevation data for all sources and receptors in the Project domain. All regulatory defaults were used for dispersion modeling as configured in the latest version of HARP2.

AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Pre-processed meteorological data files provided by BAAQMD using USEPA's AERMET program, designed to create AERMOD input files for the San Francisco International Airport monitoring station, were selected as being the most representative meteorology based on proximity. The unit emission rate of one gram per second was utilized in AERMOD to create plot files containing the dispersion factor (X/Q) for each source group. Emissions for each source group as described above were input into HARP2 to calculate the ground level concentrations (GLCs) related to Project operations. AERMOD summary files, calculations and figures can be found in Attachment B.

A uniform grid was placed over the Project Area with a spacing of 50 meters by 50 meters encompassing 0.6 mile and including 400 receptors. The grid was placed primarily over the residential area to the west of the Project Site to include all necessary sensitive receptors.

Risk during construction and operations was also modeled utilizing worker factors and residential factors to find the Maximumly Exposed Individual Resident (MEIR), Maximumly Exposed Individual Resident (MEIW) and maximumly exposed school child. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the OEHHA Guidance Manual (2015) as implemented in CARB's HARP2 program (CARB 2020). The risk associated with traffic emissions related to Project operations was assessed as risk associated with future Project operations.

Based on the OEHHA methodology, the residential inhalation cancer risk from the annual average TAC concentrations is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor (ASF), the frequency of time spent at home, and the exposure duration divided by averaging time, to yield the excess cancer risk. These factors are discussed in more detail below. Cancer risk must be separately calculated for specified age groups, because of age differences in sensitivity to carcinogens and age differences in intake rates (per kg body weight). Separate risk estimates

for these age groups provide a health-protective estimate of cancer risk by accounting for greater susceptibility in early life, including both age-related sensitivity and amount of exposure.

Exposure through inhalation (Dose-air) is a function the breathing rate, the exposure frequency, and the concentration of a substance in the air. For residential exposure, the breathing rates are determined for specific age groups, so Dose-air is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. To estimate cancer risk, the dose was estimated by applying the following formula to each ground-level concentration:

$$\text{Dose-air} = (C_{\text{air}} * \{BR/BW\} * A * EF * 10^{-6})$$

Where:

Dose-air = dose through inhalation (mg/kg/day)

C_{air} = air concentration ($\mu\text{g}/\text{m}^3$) from air dispersion model

$\{BR/BW\}$ = daily breathing rate normalized to body weight (L/kg body weight – day) (361 L/kg BW-day for 3rd Trimester, 1,090 L/kg BW-day for 0<2 years, 861 L/kg BW-day for 2<9 years, 745 L/kg BW-day for 2<16 years, 335 L/kg BW-day for 16<30 years, and 290 L/kg BW-day 16<70 years)

A = Inhalation absorption factor (unitless [1])

EF = exposure frequency (unitless), days/365 days (0.96 [approximately 350 days per year])

10^{-6} = conversion factor (micrograms to milligrams, liters to cubic meters)

OEHHA developed ASFs to take into account the increased sensitivity to carcinogens during early-in-life exposure. In the absence of chemical-specific data, OEHHA recommends a default ASF of 10 for the third trimester to age 2 years, an ASF of 3 for ages 2 through 15 years to account for potential increased sensitivity to carcinogens during childhood and an ASF of 1 for ages 16 through 70 years.

Fraction of time at home (FAH) during the day is used to adjust exposure duration and cancer risk from a specific facility's emissions, based on the assumption that exposure to the facility's emissions are not occurring away from home. OEHHA recommends the following FAH values: from the third trimester to age <2 years, 85 percent of time is spent at home; from age 2 through <16 years, 72 percent of time is spent at home; from age 16 years and greater, 73 percent of time is spent at home.

To estimate the cancer risk, the dose is multiplied by the cancer potency factor, the ASF, the exposure duration divided by averaging time, and the frequency of time spent at home (for residents only):

$$\text{Risk}_{\text{inh-res}} = (\text{Dose}_{\text{air}} * \text{CPH} * \text{ASF} * \text{ED/AT} * \text{FAH})$$

Where:

$\text{Risk}_{\text{inh-res}}$ = residential inhalation cancer risk (potential chances per million)

Dose _{air}	=	daily dose through inhalation (mg/kg-day)
CPF	=	inhalation cancer potency factor (mg/kg-day ⁻¹)
ASF	=	age sensitivity factor for a specified age group (unitless)
ED	=	exposure duration (in years) for a specified age group (0.25 years for 3 rd trimester, 2 years for 0<2, 7 years for 2<9, 14 years for 2<16, 14 years for 16<30, 54 years for 16-70)
AT	=	averaging time of lifetime cancer risk (years)
FAH	=	fraction of time spent at home (unitless)

Non-cancer chronic impacts are calculated by dividing the annual average concentration by the Reference Exposure Level (REL) for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The following equation was used to determine the non-cancer risk:

$$\text{Hazard Quotient} = \text{Ci}/\text{RELi}$$

Where:

Ci	=	Concentration in the air of substance i (annual average concentration in µg/m ³)
RELi	=	Chronic noncancer Reference Exposure Level for substance i (µg/m ³)

Cancer Risk

Operational cancer risk calculations for existing residential receptors are based on 70-, 30-, and 9-year exposure periods and worker receptors are based on a 25-year exposure period for operations with a 3-year exposure period used for construction. The calculated cancer risk accounts for 350 days per year of exposure to residential receptors. While the average American spends 87 percent of their life indoors (USEPA 2001), neither the pollutant dispersion modeling nor the health risk calculations account for the reduced exposure structures provide. Instead, health risk calculations account for the equivalent exposure of continual outdoor living making it a conservative analysis. The calculated carcinogenic risk at Project vicinity receptors is depicted in Table 2-8.

Table 2-8. Maximum Cancer Risk Summary	
Maximum Exposure Scenario	Total Maximum Risk
Project Operations	
70-Year Exposure Resident	1.00
30-Year Exposure Resident	0.85
9-Year Exposure Resident	0.59
25-Year Exposure Worker	2.38
Project Construction	
3-Year Exposure Resident	0.51
3-Year Exposure Worker	0.04
<i>Significance Threshold</i>	<i>10</i>
Exceed Threshold?	No

Source: ECORP Consulting 2022. See Attachment B.

As shown, impacts related to cancer risk for all modeled scenarios would be below the 10 in one million threshold for both operations and construction. These calculations do not account for any pollutant-reducing remedial components inherent to the Project or the Project site.

The Maximumly Exposed Individual Resident (MEIR) for construction and operational emissions is an apartment building located off Airport Boulevard approximately 0.19 miles west of the Project Site. The Maximumly Exposed Individual Worker (MEIW) for construction are the industrial parcels immediately surrounding the Project Site to the east, south and west. The MEIW for operations is located directly to the east of the Project Site, adjacent to the eastern Project Site boundary and Gateway Boulevard.

The offsite Point of Maximum Impact (PMI) is the parcel located east of the Project Site. All of the above listed points were found to be the same for operation and construction scenarios and are presented in Appendix B of this document.

Non-Carcinogenic Hazards

In addition to cancer risk, the significance thresholds for TAC exposure requires an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to

protect sensitive individuals within the population. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts.

An acute or chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the acute or chronic exposure by the REL. The highest maximum chronic hazard indexes for residents and workers at the Proposed Project Site as a result of DPM from mobile sources and emergency generators and the R&D lab emission exposure is shown in Table 2-9. No acute risk was analyzed for construction or operations as DPM from the truck trips and generators as well as the TACs associated with R&D lab emissions have no identified acute risk.

Table 2-9. Maximum Non-Carcinogenic Health Risk Summary				
Exposure Scenario	Chronic Hazard Values			Maximum PM_{2.5} Annual Concentration (µg/m³)
	Maximum Residential Hazard	Maximum Worker Hazard	Maximum Sensitive Receptor Hazard	
Operation	0.0007	0.0280	0.0007	0.138
Construction	0.0003	0.0011	0.0003	0.006
<i>Significance Threshold</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>0.3</i>
Exceed Threshold?	No	No	No	No

Source: ECORP Consulting 2022. See Attachment B.

As shown in Table 2-9, impacts related to non-cancer risk (chronic hazard index) as a result of the Project site would not surpass significance thresholds.

2.3.3.5 Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO

concentration in the SFBAAB is designated as in attainment. Detailed modeling of Project-specific CO “hot spots” is not necessary and thus this potential impact is addressed qualitatively.

A CO “hot spot” would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. The BAAQMD concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.

According to Institute of Transportation Engineers’ 10th Edition Trip Generation Manual (2017), which is the source documentation for trip generation contained in the CalEEMod model, the Project would result in approximately 5,801 trips per weekday, 1,117 trips each Saturday, and 636 trips each Sunday. Thus, the Proposed Project would not generate traffic volumes at any intersection of more than 44,000 vehicles per day and there is no likelihood of the Project traffic exceeding CO values.

2.3.3.6 Odors

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person’s reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word “strong” to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

During construction, the Proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short-term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources.

Additionally, odors would be localized and generally confined to the construction area. Therefore, construction odors would not adversely affect a substantial number of people.

Land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Proposed Project does not include any uses as being associated with odors.

However, as previously described, the ability to detect odors varies considerably among the population and is inherently subjective in nature. For instance, the Project proposes three R&D buildings, which each have the potential to be a source of odors that may affect certain people. The specific types of laboratories proposed are currently unknown. However, the Project would be subject to the BAAQMD Regulation 7. Regulation 7, Odorous Substances, places general limitations on odorous substances and specific emission limitations on certain odorous compounds. Thus, the Project would not be a significant source of operational odors.

3 GREENHOUSE GAS EMISSIONS

3.1 Greenhouse Gas Setting

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead trapped, resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors together (Intergovernmental Panel on Climate Change [IPCC] 2014).

Table 3-1 describes the primary GHGs attributed to global climate change, including their physical properties, primary sources, and contributions to the greenhouse effect.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH₄ traps over 25 times more heat per molecule than CO₂, and N₂O absorbs 298 times more heat per molecule than CO₂ (IPCC 2014). Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO₂e), which weight each gas by its global warming potential. Expressing GHG emissions in CO₂e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Of the total annual human-caused CO₂

emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remains stored in the atmosphere (IPCC 2013).

Table 3-1. Summary of Greenhouse Gases	
Greenhouse Gas	Description
CO ₂	Carbon dioxide is a colorless, odorless gas. CO ₂ is emitted in a number of ways, both naturally and through human activities. The largest source of CO ₂ emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO ₂ emissions. The atmospheric lifetime of CO ₂ is variable because it is so readily exchanged in the atmosphere. ¹
CH ₄	Methane is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH ₄ to the atmosphere. Natural sources of CH ₄ include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH ₄ is about 12 years. ²
N ₂ O	Nitrous oxide is a clear, colorless gas with a slightly sweet odor. Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources of N ₂ O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N ₂ O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N ₂ O is approximately 120 years. ³

Sources: (1) USEPA 2016a; (2) USEPA 2016b; (3) USEPA 2016c

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; it is sufficient to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

3.1.1 Sources of Greenhouse Gas Emissions

In 2021, CARB released the 2021 edition of the California GHG inventory covering calendar year 2019 emissions. In 2019, California emitted 418.2 million gross metric tons of CO₂e including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2019, accounting for approximately 40 percent of total GHG emissions in the State. When emissions from extracting, refining and moving transportation fuels in California are included, transportation is responsible for over 50 percent of statewide emissions in 2019. Continuing the downward trend from 2018, transportation emissions decreased 3.5 million metric tons of CO₂e in 2019, only being outpaced by electricity, which reduced emissions by 4.3 million metric tons of CO₂e in 2019. Emissions from the electricity sector account for 14 percent of the inventory and have shown a substantial

decrease in 2019 due to increases in renewables. California's industrial sector accounts for the second largest source of the State's GHG emissions in 2019, accounting for 21 percent (CARB 2021).

3.2 Regulatory Framework

3.2.1 State

3.2.1.1 Executive Order S-3-05

Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

3.2.1.2 Assembly Bill 32 Climate Change Scoping Plan and Updates

In 2006, the California legislature passed Assembly Bill (AB) 32 (Health and Safety Code § 38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 required CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions). Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which outlined measures to meet the 2020 GHG reduction goals. California exceeded the target of reducing GHG emissions to 1990 levels by the year 2017.

The Scoping Plan is required by AB 32 to be updated at least every five years. The latest update, the 2017 Scoping Plan Update, addresses the 2030 target established by Senate Bill (SB) 32 as discussed below and establishes a proposed framework of action for California to meet a 40 percent reduction in GHG emissions by 2030 compared to 1990 levels. The key programs that the Scoping Plan Update builds on include increasing the use of renewable energy in the State, the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and reduction of methane emissions from agricultural and other wastes.

3.2.1.3 Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include § 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030.

3.2.1.4 Senate Bill X1-2 of 2011, Senate Bill 350 of 2015, and Senate Bill 100 of 2018

In 2018, SB 100 was signed codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewables Portfolio Standard.

3.2.1.5 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings

The Building and Efficiency Standards (Energy Standards) were first adopted and put into effect in 1978 and have been updated periodically in the intervening years. These standards are a unique California asset that have placed the State on the forefront of energy efficiency, sustainability, energy independence and climate change issues. The 2019 Building Energy Efficiency Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The 2019 standards are a major step toward meeting Zero Net Energy. The most significant efficiency improvement to the residential Standards includes the introduction of photovoltaic into the perspective package, improvements for attics, walls, water heating and lighting. Buildings permitted on or after January 1, 2020, must comply with the 2019 Standards.

In 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CalGreen Building Standard (CalGreen) and establishes voluntary and mandatory standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality. Like Part 6 of Title 24, the CalGreen standards are periodically updated, with increasing energy savings and efficiencies associated with each code update. CalGreen contains voluntary "Tier 1" and "Tier 2" standards that are not mandatory statewide but could be required by a City or County. These are 'reach' standards that can be adopted by local jurisdictions and may be incorporated as mandatory standards in future code cycles

3.2.2 Local

3.2.2.1 Bay Area Air Quality Management District

To provide guidance to local lead agencies on determining significance for GHG emissions in CEQA documents, BAAQMD CEQA Guidelines include guidance on assessing GHGs and climate change impacts as required under CEQA Section 15183.5(b). On April 20, 2022, the Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans (2022) was adopted. This document presents a project-level operational threshold of significance for GHG emissions based on compliance with a Qualified GHG Reduction Strategy or adherence to a suite of BAAQMD performance standards for land uses projects directly related to building design, transportation and consistency with the CEQA Guidelines Section 15183.5(b).

3.2.2.2 City of South San Francisco GHG-Reduction Program

City of South San Francisco Draft Climate Action Plan

The City of South San Francisco recently adopted an updated Climate Action Plan (CAP) to align with new State regulations and targets related to climate change. The updated CAP set an emissions target with a horizon year of 2040 while also setting a long-term goal of carbon neutrality by 2045, consistent with State targets. The 2022 CAP outlines how the City of South San Francisco will create new policies, programs, and services that will support the community in taking strong action to reduce GHG emissions. The City has set bold targets and developed strategies for reducing GHG emissions while increasing the City's resilience to climate change impacts. The CAP identifies 62 actions to achieve the GHG reduction targets and has reduction targets of 40 percent below 1990 levels by 2030 (SB 32), 80 percent reduction by 2040 and carbon net neutrality by 2045.

3.3 Greenhouse Gas Emissions Impact Assessment

3.3.1 Thresholds of Significance

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to greenhouse gas emissions if it would:

- 1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment or
- 2) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

The Appendix G thresholds for GHG's do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA. With respect to GHG emissions, the CEQA Guidelines § 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or other performance-based standards." (14 California Code of Regulations [CCR] 15064.4(b)). A lead agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change." (14 CCR 15064.4(c)). Section 15064.4(b) provides that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment:

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

In addition, Section 15064.7(c) of the CEQA Guidelines specifies that “[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence” (14 CCR 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA’s requirements for cumulative impact analysis (see CEQA Guidelines § 15130(f)). As a note, the CEQA Guidelines were amended in response to SB 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

Per CEQA Guidelines § 15064(h)(3), a project’s incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a “water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions.” Put another way, CEQA Guidelines § 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

The local air quality agency regulating the SFBAAB, including the Project Site, is the BAAQMD, the regional air pollution control officer for the basin. As previously stated, the BAAQMD recently approved the Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans (2022) in April of 2022. The Air District developed these thresholds of significance based on typical residential and commercial land use projects. As such, these thresholds may not be appropriate for other types of projects that do not fit into the mold of a typical residential or commercial project. A lead agency does not necessarily need to use a threshold of significance if the analysis and justifications that were used to develop the threshold do not reflect the particular circumstances of the project under review. Accordingly, a lead agency should not use these thresholds if it is faced with a unique or unusual project for which the analyses supporting the thresholds as described in this report do not squarely apply. In such cases, the lead agency should develop an alternative approach that would be more appropriate for the particular project before it, considering all of the facts and circumstances of the project on a case-by-case basis. In addition, per the BAAQMD Justification Report, a jurisdiction can use a qualified climate action plan to evaluate individual land use projects under CEQA. This gives the local

jurisdiction the flexibility to tailor requirements for land use projects in its community to the specific circumstances of that community rather than use the Air District's general thresholds for land use projects described above. For this analysis, the Project will be analyzed for consistency with the recently adopted 2022 CAP, consist with the recommendations of the BAAQMD Justification Report.

3.3.2 Methodology

Operations of the Proposed Project are compared for consistency with the overall Citywide GHG-reduction program encapsulated in the Draft 2022 CAP. Emissions were modeled using CalEEMod, version 2020.4.0. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. Project construction generated GHG emissions were calculated using CalEEMod model defaults for San Mateo County and information provided by the Project proponent such as the construction equipment and duration. Operational GHG emissions were calculated based on specific Project Site plans.

3.3.3 Impact Analysis

Construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the Project Site, and off-road construction equipment (e.g., dozers, loaders, excavators). Table 3-2 illustrates the specific construction generated GHG emissions that would result from construction of the Project. Once construction is complete, the generation of these GHG emissions would cease.

Table 3-2. Construction Related Greenhouse Gas Emissions	
Description	CO₂e Emissions (Metric Tons/Year)
Construction First Year	1,110
Construction Second Year	1,449
Construction Third Year	1,079
Total Construction Emissions	3,638

Sources: CalEEMod version 2020.4.0. Refer to Attachment C for Model Data Outputs

As shown in Table 3-2, Project construction would result in the generation of a maximum of approximately 3,638 metric tons of CO₂e over the course of construction. Once construction is complete, the generation of these GHG emissions would cease. Furthermore, GHG emissions generated by the construction sector have been declining in recent years. For instance, construction equipment engine efficiency has continued to improve year after year. The first federal standards (Tier 1) for new off-road diesel engines were adopted in 1994 for engines over 50 horsepower (hp) and were phased in from 1996 to 2000. In 1996, a Statement of Principles pertaining to off-road diesel engines was signed between the USEPA, CARB, and engine makers (including Caterpillar, Cummins, Deere, Detroit Diesel, Deutz, Isuzu, Komatsu, Kubota, Mitsubishi, Navistar, New Holland, Wis-Con, and Yanmar). On August 27, 1998, the USEPA signed the final rule reflecting the provisions of the Statement of Principles. The 1998 regulation introduced Tier 1 standards for equipment under 50 hp and increasingly more stringent Tier 2 and Tier 3

standards for all equipment with phase-in schedules from 2000 to 2008. As a result, all off-road, diesel-fueled construction equipment manufactured in 2006 or later has been manufactured to Tier 3 standards. Tier 3 engine standards reduce precursor and subset GHG emissions such as nitrogen oxide by as much as 60 percent. On May 11, 2004, the USEPA signed the final rule introducing Tier 4 emission standards, which were phased in over the period of 2008-2015. The Tier 4 standards require that emissions of nitrogen oxide be further reduced by about 90 percent. All off-road, diesel-fueled construction equipment manufactured in 2015 or later will be manufactured to Tier 4 standards.

In addition, the California Energy Commission recently released the 2019 Building Energy Efficiency Standards contained in the California Code of Regulations, Title 24, Part 6 (also known as the California Energy Code). Both the 2016 and 2019 updates to the Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions, and alterations to existing buildings. For instance, effective January 1, 2017, owners/builders of construction projects have been required to divert (recycle) 65 percent of construction waste materials generated during the project construction phase. This requirement greatly reduces the generation of GHG emissions by reducing decomposition at landfills, which is a source of CH₄, and reducing demand for natural resources.

Long-term operational GHG emissions attributable to the Project are identified in Table 3-3.

Table 3-3. Operational-Related Greenhouse Gas Emissions	
Description	CO₂e Emissions (Metric Tons/Year)
Proposed Project - Three Research and Development Buildings and Associated Features	
Area Source Emissions	6
Energy Emissions	660
Mobile Source Emissions	1,754
Waste Emissions	21
Water Emissions	335
Proposed Project Operations Total	2,776
Existing Conditions – 93,250 Square Feet of Warehouse Building Space	
Area Source Emissions	0
Energy Emissions	8
Mobile Source Emissions	294
Waste Emissions	44
Water Emissions	29
Existing Operations Total	375
Difference	
Difference	+2,401

Sources: CalEEMod 2020.0.4.0

Notes: Emission projections are predominantly based on CalEEMod model Defaults for San Mateo County. Area source emissions account for the testing for four 2,000 horsepower Tier 4 generators five days per year.

As shown in Table 3-3 Project operations would result in the increased generation of 2,401 metric tons of CO₂e per year beyond existing conditions.

3.3.3.1 Generation of Greenhouse Gas Emissions Resulting in Conflicts with any Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

City of South San Francisco Climate Action Plan

The CAP identifies 62 actions to achieve Citywide GHG reduction. The reduction measures that are currently applicable to the Project based on information provided by the Project proponent and Project Site plans are presented below:

- **BNC 1.1 Improve the energy efficiency of new construction:** Provide a combination of financial and development process incentives (e.g., expedited permitting, floor area ratio increases, etc.) to encourage new development to exceed Title 24 energy efficiency standard.
- **BNC 2.1 Adopt an all-electric reach code for nonresidential new construction:** Implement residential all-electric reach code and adopt all-electric reach code for nonresidential new

construction. Exempt occupancies must install electric building systems (e.g., space and water heating equipment) where feasible. Until the adoption of the nonresidential all-electric reach code, require any new nonresidential conditioned space of 5,000 square feet or more, or the conversion of unconditioned space 5,000 square feet or more to comply with CALGreen Tier 2 energy efficiency requirements to exceed mandatory energy efficiency requirements by 20 percent or more. For additions to existing development of 5,000 square feet or more, CALGreen Tier 2 shall be calculated as part of the Title 24 compliance process. Existing building space already permitted shall not be subject to CALGreen Tier 2 requirements.

- **TL 1.2 Electric Vehicle Chargers at Municipal Facilities:** Seek opportunities to install additional electric vehicle chargers at suitable public facilities, including Downtown parking structures and community and regional parks.
- **TL 2.2 Transportation Demand Management Program:** Implement, monitor, and enforce compliance with the City's Transportation Demand Management Ordinance.
- **TL 2.4 Parking Demand Management Strategy:** Incorporate maximum parking requirements for new residential and office/R&D projects.
- **TL 2.5 Development along Transit Corridors:** For all new land use and transportation projects, adhere to the City's vehicle miles traveled Analysis Guidelines and qualitatively assess the project's effect on multimodal access. Use the development review process to identify opportunities to enhance bicycle, pedestrian, and transit connectivity.
- **TL 2.8 Improve Transit Station Access:** Leverage public-private partnerships to increase transit ridership and improve transit station access by incorporating first/last mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations.
- **WW 1.1 Landscaping Water Requirements:** Achieve greater water use reductions by requiring all landscapes obtain a landscape permit, decreasing the size threshold to capture all landscape renovations, adding prescriptive irrigation plant lists, or water budget requirements.
- **WW 1.4 Landscaping Plant List:** Develop a plant list, landscaping palette for efficiency and habitat/wildlife for new development and landscape retrofits.
- **WW 2.1 Indoor Water Efficiency Standards:** Require high-efficiency fixtures in all new construction and major renovations, comparable to CALGreen Tier 1 or 2 standards.
- **CL 1.1 Minimum LEED certification or equivalent for new buildings:** Require all new municipal buildings and facilities to meet a minimum LEED silver standards as outlined by the US Green Building Council or equivalent green building rating system. Require feasibility studies for zero net energy use, on-site renewable energy generation, and on-site batteries.

All development in the City, including the Project, is required to adhere to all applicable City-adopted policy provisions supporting its GHG-reduction program, including those contained in the 2022 CAP. The Project applicant must complete a Developmental Review Checklist to confirm consistency with the CAP measures to the satisfaction of City staff. The City ensures all provisions of the CAP are incorporated into projects and their permits through development review and applications of conditions of approval as applicable. All of the applicable and feasible provisions of the City GHG-reduction program as promulgated by its CAP documents will be incorporated into the Proposed Project.

4 REFERENCES

- BAAQMD (Bay Area Air Quality Management District). 2022. Draft Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans.
- _____. 2019. Calculating Potential to Emit for Emergency Backup Power Generators
- _____. 2017. Bay Area Air Quality Management District CEQA Air Quality Guidelines.
- CAPCOA. 2021. California Emissions Estimator Model (CalEEMod), version 2020.0.4.0.
- _____. 2013. Health Effects. <http://www.capcoa.org/health-effects/>.
- CARB. 2022. Air Quality Data Statistics. <http://www.arb.ca.gov/adam/index.html>.
- _____. 2021. California Greenhouse Gas Emission Inventory 2021 Edition.
<https://ww2.arb.ca.gov/ghg-inventory-data>
- _____. 2020. HARP Air Dispersion Modeling and Risk Tool.
- _____. 2019. State and Federal Area Designation Maps. <http://www.arb.ca.gov/desig/adm/adm.htm>.
- _____. 2008. Climate Change Scoping Plan Appendices (Appendix F).
- Institute of Transportation Engineers. 2017. 10th Edition Trip Generation Manual.
- IPCC. 2014. Climate Change 2014 Synthesis Report: Approved Summary for Policymakers.
<http://www.ipcc.ch/>.
- _____. 2013. Carbon and Other Biogeochemical Cycles. In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf.
- OEHHA. 2015. Guidance Manual for Preparation of Health Risk Assessments.
- South San Francisco. City of. 2022. City of South San Francisco Climate Action Plan.
- _____. 2022. Zoning Code Update Public Review Draft.
- University of California at San Francisco. 2011. San Francisco Mission Bay Site Genentech Hall Fume Hood Risk Screen.
- USEPA. 2018a. Status of SIP Required Elements for California Designated Areas.
- _____. 2018b. Nonattainment Areas for Criteria Pollutants.
- _____. 2016a. Climate Change – Greenhouse Gas Emissions: Carbon Dioxide.
<http://www.epa.gov/climatechange/emissions/co2.html>.
- _____. 2016b. Methane. <https://www3.epa.gov/climatechange/ghgemissions/gases/ch4.html>.

- _____. 2016c. Nitrous Oxide. <https://www3.epa.gov/climatechange/ghgemissions/gases/n2o.html>.
- _____. 2011. Air and Water Quality Impacts of Brownfields Redevelopment.
<https://www.epa.gov/sites/default/files/2015-09/documents/bfenviroimpacts042811.pdf>.
- _____. 2002. Health Assessment Document for Diesel Engine Exhaust.
<https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockkey=300055PV.TXT>.
- _____. 2001. National Human Activity Pattern Survey.

ATTACHMENT A

CalEEMod Output Files – Criteria Air Pollutants

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**120 E. Grand Avenue - Proposed Project**

San Mateo County, Summer

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	499.44	1000sqft	1.85	499,435.00	0
Enclosed Parking with Elevator	756.00	Space	0.72	238,000.00	0
Other Non-Asphalt Surfaces	1.08	Acre	1.08	47,044.80	0
Other Non-Asphalt Surfaces	0.75	Acre	0.75	32,670.00	0
Other Non-Asphalt Surfaces	0.23	Acre	0.23	10,018.80	0
Strip Mall	4.00	1000sqft	0.00	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2025
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land uses = 499,435 sf of R&D building space, 4,000 sf of Retail space, 756-space Parking Structure, 1.08 acre of Service Yards, 0.75 acre of Internal Circulation, & 0.23 acre of Landscaping.

Construction Phase - Construction duration per Project Construction Contractor

Off-road Equipment - Ibid

Off-road Equipment - Ibid

Off-road Equipment - Equipment per Project Construction Contractor

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - Ibid

Off-road Equipment - Ibid

Off-road Equipment - Ibid

Demolition -

Grading -

Architectural Coating - Parking Area sf reduced to reflect that landscaped areas and service yards will not be painted/stripped.

Construction Off-road Equipment Mitigation - Project equipment is Tier 4 Engine Certified per Project Construction Contractor. BAAQMD Basic Mitigation Measures applied.

Mobile Land Use Mitigation - Project employees estimated from US Green Building Council "Building Area per Employee by Business Type."

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	19,664.00	14,280.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	40
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	80.00
tblConstructionPhase	NumDays	230.00	512.00
tblConstructionPhase	NumDays	20.00	80.00
tblConstructionPhase	NumDays	8.00	80.00
tblConstructionPhase	NumDays	18.00	80.00
tblConstructionPhase	NumDays	5.00	80.00
tblGrading	MaterialExported	0.00	7,012.50
tblGrading	MaterialExported	0.00	7,012.50
tblLandUse	LandUseSquareFeet	499,440.00	499,435.00
tblLandUse	LandUseSquareFeet	302,400.00	238,000.00
tblLandUse	LotAcreage	11.47	1.85
tblLandUse	LotAcreage	6.80	0.72
tblLandUse	LotAcreage	0.09	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

2.0 Emissions Summary

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
2023	7.6007	74.7003	86.2960	0.1940	4.0618	2.8966	6.9584	0.9160	2.7055	3.4039	0.0000	19,006.19 42	19,006.19 42	4.9192	0.5136	19,231.79 84
2024	3.9940	37.7690	45.8941	0.1203	3.3755	1.3149	4.6904	0.9160	1.2308	2.1468	0.0000	12,087.54 71	12,087.54 71	2.1550	0.5030	12,291.31 95
2025	71.8609	44.8889	61.9935	0.1521	4.0328	1.5763	5.6090	1.0904	1.4748	2.5652	0.0000	15,147.81 18	15,147.81 18	2.9304	0.5023	15,370.75 60
Maximum	71.8609	74.7003	86.2960	0.1940	4.0618	2.8966	6.9584	1.0904	2.7055	3.4039	0.0000	19,006.19 42	19,006.19 42	4.9192	0.5136	19,231.79 84

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					
2023	2.3508	16.0346	106.4949	0.1940	2.2590	0.2971	2.4165	0.6420	0.2956	0.7971	0.0000	19,006.19 42	19,006.19 42	4.9192	0.5136	19,231.79 84
2024	1.6314	11.1937	53.2378	0.1203	2.2591	0.1571	2.4162	0.6420	0.1548	0.7968	0.0000	12,087.54 71	12,087.54 71	2.1550	0.5030	12,291.31 95
2025	69.1368	15.6861	72.0599	0.1521	2.6879	0.2498	2.9377	0.7603	0.2473	1.0076	0.0000	15,147.81 18	15,147.81 18	2.9304	0.5023	15,370.75 60
Maximum	69.1368	16.0346	106.4949	0.1940	2.6879	0.2971	2.9377	0.7603	0.2956	1.0076	0.0000	19,006.19 42	19,006.19 42	4.9192	0.5136	19,231.79 84

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	12.39	72.73	-19.37	0.00	37.18	87.84	54.97	30.05	87.11	67.95	0.00	0.00	0.00	0.00	0.00	0.00

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	12.3773	1.1600e-003	0.1285	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2761	0.2761	7.2000e-004		0.2940
Energy	0.3631	3.3009	2.7728	0.0198		0.2509	0.2509		0.2509	0.2509		3,961.1146	3,961.1146	0.0759	0.0726	3,984.6535
Mobile	13.1335	10.4414	116.6350	0.2639	30.1986	0.1650	30.3636	8.0388	0.1532	8.1919		26,816.4343	26,816.4343	1.6056	1.0567	27,171.4615
Total	25.8739	13.7435	119.5362	0.2837	30.1986	0.4163	30.6149	8.0388	0.4045	8.4433		30,777.8250	30,777.8250	1.6823	1.1293	31,156.4090

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	12.3773	1.1600e-003	0.1285	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2761	0.2761	7.2000e-004		0.2940
Energy	0.3631	3.3009	2.7728	0.0198		0.2509	0.2509		0.2509	0.2509		3,961.1146	3,961.1146	0.0759	0.0726	3,984.6535
Mobile	10.2536	6.6684	72.8132	0.1415	15.8161	0.0966	15.9128	4.2102	0.0896	4.2998		14,379.7818	14,379.7818	1.0964	0.6814	14,610.2467
Total	22.9939	9.9705	75.7144	0.1613	15.8161	0.3480	16.1641	4.2102	0.3410	4.5512		18,341.1725	18,341.1725	1.1730	0.7540	18,595.1942

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	11.13	27.45	36.66	43.13	47.63	16.42	47.20	47.63	15.71	46.10	0.00	40.41	40.41	30.27	33.23	40.32

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2023	7/21/2023	5	80	
2	Site Preparation	Site Preparation	5/15/2023	9/1/2023	5	80	
3	Grading	Grading	5/30/2023	9/18/2023	5	80	
4	Building Construction	Building Construction	9/19/2023	9/3/2025	5	512	
5	Paving	Paving	5/30/2025	9/18/2025	5	80	
6	Architectural Coating	Architectural Coating	5/30/2025	9/18/2025	5	80	

Acres of Grading (Site Preparation Phase): 40**Acres of Grading (Grading Phase): 80****Acres of Paving: 2.78****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 755,153; Non-Residential Outdoor: 251,718; Striped Parking Area: 14,280 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crushing/Proc. Equipment	1	8.00	85	0.78
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Demolition	Rubber Tired Loaders	1	8.00	203	0.36

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Demolition	Signal Boards	2	8.00	6	0.82
Demolition	Skid Steer Loaders	1	8.00	65	0.37
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Bore/Drill Rigs	2	8.00	221	0.50
Site Preparation	Concrete/Industrial Saws	1	8.00	81	0.73
Site Preparation	Excavators	2	8.00	158	0.38
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rollers	1	8.00	80	0.38
Site Preparation	Rough Terrain Forklifts	2	8.00	100	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Loaders	1	8.00	203	0.36
Site Preparation	Signal Boards	2	8.00	6	0.82
Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Excavators	3	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rollers	1	8.00	80	0.38
Grading	Rough Terrain Forklifts	2	8.00	100	0.40
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Loaders	2	8.00	203	0.36
Grading	Signal Boards	2	8.00	6	0.82
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Concrete/Industrial Saws	2	8.00	81	0.73
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Excavators	3	8.00	158	0.38
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Graders	1	8.00	187	0.41

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Rollers	1	8.00	80	0.38
Building Construction	Rough Terrain Forklifts	3	8.00	100	0.40
Building Construction	Rubber Tired Loaders	1	8.00	203	0.36
Building Construction	Signal Boards	2	8.00	6	0.82
Building Construction	Skid Steer Loaders	1	8.00	65	0.37
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	6.00	132	0.36
Paving	Rollers	1	6.00	80	0.38
Paving	Signal Boards	2	8.00	6	0.82
Paving	Skid Steer Loaders	2	8.00	65	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Architectural Coating	Surfacing Equipment	1	8.00	263	0.30

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	10	25.00	0.00	424.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	15	38.00	0.00	877.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	15	38.00	0.00	877.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	18	299.00	136.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	60.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2023**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					1.1474	0.0000	1.1474	0.1737	0.0000	0.1737			0.0000			0.0000
Off-Road	1.9516	15.9881	23.4857	0.0416		0.7319	0.7319		0.6982	0.6982		3,963.763 7	3,963.763 7	0.9227		3,986.830 1
Total	1.9516	15.9881	23.4857	0.0416	1.1474	0.7319	1.8793	0.1737	0.6982	0.8720		3,963.763 7	3,963.763 7	0.9227		3,986.830 1

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Demolition - 2023****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	0.0126	0.8039	0.2721	3.4100e-003	0.0923	5.4400e-003	0.0977	0.0253	5.2000e-003	0.0305		397.9745	397.9745	0.0399	0.0641	418.0788
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
Worker	0.0544	0.0310	0.5049	1.6800e-003	0.2054	9.5000e-004	0.2063	0.0545	8.7000e-004	0.0554		170.0265	170.0265	3.8300e-003	3.7200e-003	171.2317
Total	0.0670	0.8350	0.7770	5.0900e-003	0.2977	6.3900e-003	0.3041	0.0797	6.0700e-003	0.0858		568.0010	568.0010	0.0438	0.0678	589.3104

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					0.5163	0.0000	0.5163	0.0782	0.0000	0.0782			0.0000			0.0000
Off-Road	0.4896	3.0631	26.6863	0.0416		0.0619	0.0619		0.0619	0.0619	0.0000	3,963.7637	3,963.7637	0.9227		3,986.8301
Total	0.4896	3.0631	26.6863	0.0416	0.5163	0.0619	0.5782	0.0782	0.0619	0.1401	0.0000	3,963.7637	3,963.7637	0.9227		3,986.8301

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Demolition - 2023****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	0.0126	0.8039	0.2721	3.4100e-003	0.0643	5.4400e-003	0.0697	0.0184	5.2000e-003	0.0236		397.9745	397.9745	0.0399	0.0641	418.0788
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
Worker	0.0544	0.0310	0.5049	1.6800e-003	0.1340	9.5000e-004	0.1349	0.0370	8.7000e-004	0.0378		170.0265	170.0265	3.8300e-003	3.7200e-003	171.2317
Total	0.0670	0.8350	0.7770	5.0900e-003	0.1983	6.3900e-003	0.2046	0.0553	6.0700e-003	0.0614		568.0010	568.0010	0.0438	0.0678	589.3104

3.3 Site Preparation - 2023**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					0.5402	0.0000	0.5402	0.0588	0.0000	0.0588			0.0000			0.0000
Off-Road	2.6431	26.1321	30.3179	0.0676		1.0389	1.0389		0.9683	0.9683		6,494.0807	6,494.0807	1.9162		6,541.9851
Total	2.6431	26.1321	30.3179	0.0676	0.5402	1.0389	1.5791	0.0588	0.9683	1.0271		6,494.0807	6,494.0807	1.9162		6,541.9851

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Site Preparation - 2023****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	0.0260	1.6629	0.5628	7.0400e-003	0.1909	0.0113	0.2022	0.0523	0.0108	0.0630		823.1690	823.1690	0.0826	0.1326	864.7526
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
Worker	0.0827	0.0472	0.7674	2.5600e-003	0.3122	1.4400e-003	0.3136	0.0828	1.3300e-003	0.0841		258.4402	258.4402	5.8200e-003	5.6600e-003	260.2721
Total	0.1087	1.7100	1.3302	9.6000e-003	0.5031	0.0127	0.5158	0.1351	0.0121	0.1472		1,081.6093	1,081.6093	0.0884	0.1383	1,125.0247

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					0.2431	0.0000	0.2431	0.0264	0.0000	0.0264			0.0000			0.0000
Off-Road	0.8257	4.5195	39.5382	0.0676		0.1067	0.1067		0.1067	0.1067	0.0000	6,494.0806	6,494.0806	1.9162		6,541.9851
Total	0.8257	4.5195	39.5382	0.0676	0.2431	0.1067	0.3498	0.0264	0.1067	0.1331	0.0000	6,494.0806	6,494.0806	1.9162		6,541.9851

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Site Preparation - 2023****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	0.0260	1.6629	0.5628	7.0400e-003	0.1329	0.0113	0.1442	0.0380	0.0108	0.0488		823.1690	823.1690	0.0826	0.1326	864.7526
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
Worker	0.0827	0.0472	0.7674	2.5600e-003	0.2036	1.4400e-003	0.2051	0.0562	1.3300e-003	0.0575		258.4402	258.4402	5.8200e-003	5.6600e-003	260.2721
Total	0.1087	1.7100	1.3302	9.6000e-003	0.3366	0.0127	0.3493	0.0942	0.0121	0.1063		1,081.6093	1,081.6093	0.0884	0.1383	1,125.0247

3.4 Grading - 2023**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					1.0704	0.0000	1.0704	0.1160	0.0000	0.1160			0.0000			0.0000
Off-Road	2.7217	28.3251	29.0550	0.0605		1.0940	1.0940		1.0087	1.0087		5,817.1304	5,817.1304	1.8597		5,863.6234
Total	2.7217	28.3251	29.0550	0.0605	1.0704	1.0940	2.1644	0.1160	1.0087	1.1247		5,817.1304	5,817.1304	1.8597		5,863.6234

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Grading - 2023****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	0.0260	1.6629	0.5628	7.0400e-003	0.1909	0.0113	0.2022	0.0523	0.0108	0.0630		823.1690	823.1690	0.0826	0.1326	864.7526
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
Worker	0.0827	0.0472	0.7674	2.5600e-003	0.3122	1.4400e-003	0.3136	0.0828	1.3300e-003	0.0841		258.4402	258.4402	5.8200e-003	5.6600e-003	260.2721
Total	0.1087	1.7100	1.3302	9.6000e-003	0.5031	0.0127	0.5158	0.1351	0.0121	0.1472		1,081.6093	1,081.6093	0.0884	0.1383	1,125.0247

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					0.4817	0.0000	0.4817	0.0522	0.0000	0.0522			0.0000			0.0000
Off-Road	0.7512	4.1970	36.8330	0.0605		0.0968	0.0968		0.0968	0.0968	0.0000	5,817.1304	5,817.1304	1.8597		5,863.6234
Total	0.7512	4.1970	36.8330	0.0605	0.4817	0.0968	0.5785	0.0522	0.0968	0.1490	0.0000	5,817.1304	5,817.1304	1.8597		5,863.6234

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Grading - 2023****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	0.0260	1.6629	0.5628	7.0400e-003	0.1329	0.0113	0.1442	0.0380	0.0108	0.0488		823.1690	823.1690	0.0826	0.1326	864.7526
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
Worker	0.0827	0.0472	0.7674	2.5600e-003	0.2036	1.4400e-003	0.2051	0.0562	1.3300e-003	0.0575		258.4402	258.4402	5.8200e-003	5.6600e-003	260.2721
Total	0.1087	1.7100	1.3302	9.6000e-003	0.3366	0.0127	0.3493	0.0942	0.0121	0.1063		1,081.6093	1,081.6093	0.0884	0.1383	1,125.0247

3.5 Building Construction - 2023**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4181	33.8785	38.1070	0.0729		1.4158	1.4158		1.3253	1.3253		6,992.3885	6,992.3885	1.9149		7,040.2600
Total	3.4181	33.8785	38.1070	0.0729		1.4158	1.4158		1.3253	1.3253		6,992.3885	6,992.3885	1.9149		7,040.2600

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2023****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	0.0000
Vendor	0.1463	6.1901	2.2655	0.0285	0.9192	0.0329	0.9520	0.2645	0.0314	0.2959		3,184.400 5	3,184.400 5	0.1960	0.4691	3,329.091 3
Worker	0.6506	0.3710	6.0384	0.0201	2.4562	0.0114	2.4676	0.6515	0.0105	0.6620		2,033.516 6	2,033.516 6	0.0458	0.0445	2,047.930 5
Total	0.7969	6.5611	8.3039	0.0486	3.3754	0.0442	3.4196	0.9160	0.0419	0.9579		5,217.917 1	5,217.917 1	0.2418	0.5136	5,377.021 8

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	0.8748	4.7325	45.3133	0.0729		0.1133	0.1133		0.1133	0.1133	0.0000	6,992.388 5	6,992.388 5	1.9149		7,040.260 0
Total	0.8748	4.7325	45.3133	0.0729		0.1133	0.1133		0.1133	0.1133	0.0000	6,992.388 5	6,992.388 5	1.9149		7,040.260 0

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2023****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	0.0000
Vendor	0.1463	6.1901	2.2655	0.0285	0.6567	0.0329	0.6895	0.2000	0.0314	0.2315		3,184.400 5	3,184.400 5	0.1960	0.4691	3,329.091 3
Worker	0.6506	0.3710	6.0384	0.0201	1.6023	0.0114	1.6137	0.4419	0.0105	0.4524		2,033.516 6	2,033.516 6	0.0458	0.0445	2,047.930 5
Total	0.7969	6.5611	8.3039	0.0486	2.2590	0.0442	2.3032	0.6420	0.0419	0.6838		5,217.917 1	5,217.917 1	0.2418	0.5136	5,377.021 8

3.5 Building Construction - 2024**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2374	31.3078	37.9696	0.0729		1.2711	1.2711		1.1893	1.1893		6,992.700 3	6,992.700 3	1.9129		7,040.522 3
Total	3.2374	31.3078	37.9696	0.0729		1.2711	1.2711		1.1893	1.1893		6,992.700 3	6,992.700 3	1.9129		7,040.522 3

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2024****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	0.0000
Vendor	0.1416	6.1285	2.2580	0.0279	0.9193	0.0330	0.9523	0.2645	0.0316	0.2961		3,127.754 9	3,127.754 9	0.2007	0.4614	3,270.266 7
Worker	0.6151	0.3328	5.6665	0.0195	2.4562	0.0108	2.4670	0.6515	9.9500e-003	0.6615		1,967.091 9	1,967.091 9	0.0415	0.0416	1,980.530 5
Total	0.7566	6.4613	7.9245	0.0474	3.3755	0.0438	3.4193	0.9160	0.0415	0.9576		5,094.846 8	5,094.846 8	0.2422	0.5030	5,250.797 2

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	0.8748	4.7325	45.3133	0.0729		0.1133	0.1133		0.1133	0.1133	0.0000	6,992.700 3	6,992.700 3	1.9129		7,040.522 3
Total	0.8748	4.7325	45.3133	0.0729		0.1133	0.1133		0.1133	0.1133	0.0000	6,992.700 3	6,992.700 3	1.9129		7,040.522 3

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2024****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	0.0000
Vendor	0.1416	6.1285	2.2580	0.0279	0.6568	0.0330	0.6898	0.2001	0.0316	0.2317		3,127.754 9	3,127.754 9	0.2007	0.4614	3,270.266 7
Worker	0.6151	0.3328	5.6665	0.0195	1.6023	0.0108	1.6132	0.4419	9.9500e-003	0.4519		1,967.091 9	1,967.091 9	0.0415	0.0416	1,980.530 5
Total	0.7566	6.4613	7.9245	0.0474	2.2591	0.0438	2.3029	0.6420	0.0415	0.6835		5,094.846 8	5,094.846 8	0.2422	0.5030	5,250.797 2

3.5 Building Construction - 2025**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.0117	28.2062	37.7588	0.0729		1.1021	1.1021		1.0310	1.0310		6,993.066 7	6,993.066 7	1.9088		7,040.787 3
Total	3.0117	28.2062	37.7588	0.0729		1.1021	1.1021		1.0310	1.0310		6,993.066 7	6,993.066 7	1.9088		7,040.787 3

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2025****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	0.0000
Vendor	0.1377	6.0569	2.2577	0.0273	0.9194	0.0330	0.9524	0.2646	0.0316	0.2961		3,066.209 1	3,066.209 1	0.2048	0.4527	3,206.234 3
Worker	0.5854	0.3014	5.3337	0.0188	2.4562	0.0103	2.4665	0.6515	9.5100e-003	0.6610		1,901.097 2	1,901.097 2	0.0377	0.0391	1,913.698 0
Total	0.7231	6.3583	7.5914	0.0461	3.3756	0.0433	3.4189	0.9161	0.0411	0.9571		4,967.306 2	4,967.306 2	0.2425	0.4918	5,119.932 3

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	0.8748	4.7325	45.3133	0.0729		0.1133	0.1133		0.1133	0.1133	0.0000	6,993.066 7	6,993.066 7	1.9088		7,040.787 3
Total	0.8748	4.7325	45.3133	0.0729		0.1133	0.1133		0.1133	0.1133	0.0000	6,993.066 7	6,993.066 7	1.9088		7,040.787 3

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2025****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	0.0000
Vendor	0.1377	6.0569	2.2577	0.0273	0.6569	0.0330	0.6899	0.2001	0.0316	0.2317		3,066.209 1	3,066.209 1	0.2048	0.4527	3,206.234 3
Worker	0.5854	0.3014	5.3337	0.0188	1.6023	0.0103	1.6127	0.4419	9.5100e-003	0.4514		1,901.097 2	1,901.097 2	0.0377	0.0391	1,913.698 0
Total	0.7231	6.3583	7.5914	0.0461	2.2592	0.0433	2.3025	0.6420	0.0411	0.6831		4,967.306 2	4,967.306 2	0.2425	0.4918	5,119.932 3

3.6 Paving - 2025**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	0.7521	7.2520	11.7808	0.0184		0.3056	0.3056		0.2834	0.2834		1,742.910 6	1,742.910 6	0.5420		1,756.461 5
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7521	7.2520	11.7808	0.0184		0.3056	0.3056		0.2834	0.2834		1,742.910 6	1,742.910 6	0.5420		1,756.461 5

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Paving - 2025****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	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
Worker	0.0392	0.0202	0.3568	1.2600e-003	0.1643	6.9000e-004	0.1650	0.0436	6.4000e-004	0.0442		127.1637	127.1637	2.5200e-003	2.6200e-003	128.0066
Total	0.0392	0.0202	0.3568	1.2600e-003	0.1643	6.9000e-004	0.1650	0.0436	6.4000e-004	0.0442		127.1637	127.1637	2.5200e-003	2.6200e-003	128.0066

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	0.2594	3.0074	12.8576	0.0184		0.0278	0.0278		0.0278	0.0278	0.0000	1,742.9106	1,742.9106	0.5420		1,756.4615
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.2594	3.0074	12.8576	0.0184		0.0278	0.0278		0.0278	0.0278	0.0000	1,742.9106	1,742.9106	0.5420		1,756.4615

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Paving - 2025****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	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
Worker	0.0392	0.0202	0.3568	1.2600e-003	0.1072	6.9000e-004	0.1079	0.0296	6.4000e-004	0.0302		127.1637	127.1637	2.5200e-003	2.6200e-003	128.0066
Total	0.0392	0.0202	0.3568	1.2600e-003	0.1072	6.9000e-004	0.1079	0.0296	6.4000e-004	0.0302		127.1637	127.1637	2.5200e-003	2.6200e-003	128.0066

3.7 Architectural Coating - 2025**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	66.8686					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3488	2.9918	3.4353	9.7300e-003		0.1225	0.1225		0.1168	0.1168		935.8736	935.8736	0.2270		941.5487
Total	67.2174	2.9918	3.4353	9.7300e-003		0.1225	0.1225		0.1168	0.1168		935.8736	935.8736	0.2270		941.5487

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.7 Architectural Coating - 2025****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	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
Worker	0.1175	0.0605	1.0703	3.7700e-003	0.4929	2.0700e-003	0.4950	0.1307	1.9100e-003	0.1326		381.4911	381.4911	7.5600e-003	7.8500e-003	384.0197
Total	0.1175	0.0605	1.0703	3.7700e-003	0.4929	2.0700e-003	0.4950	0.1307	1.9100e-003	0.1326		381.4911	381.4911	7.5600e-003	7.8500e-003	384.0197

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	66.8686					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2544	1.5073	4.8706	9.7300e-003		0.0626	0.0626		0.0626	0.0626	0.0000	935.8736	935.8736	0.2270		941.5487
Total	67.1229	1.5073	4.8706	9.7300e-003		0.0626	0.0626		0.0626	0.0626	0.0000	935.8736	935.8736	0.2270		941.5487

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.7 Architectural Coating - 2025****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	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
Worker	0.1175	0.0605	1.0703	3.7700e-003	0.3215	2.0700e-003	0.3236	0.0887	1.9100e-003	0.0906		381.4911	381.4911	7.5600e-003	7.8500e-003	384.0197
Total	0.1175	0.0605	1.0703	3.7700e-003	0.3215	2.0700e-003	0.3236	0.0887	1.9100e-003	0.0906		381.4911	381.4911	7.5600e-003	7.8500e-003	384.0197

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Increase Density

Increase Diversity

Increase Transit Accessibility

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive 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	10.2536	6.6684	72.8132	0.1415	15.8161	0.0966	15.9128	4.2102	0.0896	4.2998		14,379.78 18	14,379.78 18	1.0964	0.6814	14,610.24 67
Unmitigated	13.1335	10.4414	116.6350	0.2639	30.1986	0.1650	30.3636	8.0388	0.1532	8.1919		26,816.43 43	26,816.43 43	1.6056	1.0567	27,171.46 15

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Research & Development	5,623.69	948.94	554.38	10,605,646	5,554,574
Strip Mall	177.28	168.16	81.72	249,987	130,928
Total	5,800.97	1,117.10	636.10	10,855,633	5,685,502

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
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657
Other Non-Asphalt Surfaces	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657
Research & Development	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657
Strip Mall	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657

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	0.3631	3.3009	2.7728	0.0198		0.2509	0.2509		0.2509	0.2509		3,961.1146	3,961.1146	0.0759	0.0726	3,984.6535
NaturalGas Unmitigated	0.3631	3.3009	2.7728	0.0198		0.2509	0.2509		0.2509	0.2509		3,961.1146	3,961.1146	0.0759	0.0726	3,984.6535

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	33619.5	0.3626	3.2960	2.7687	0.0198		0.2505	0.2505		0.2505	0.2505		3,955.2354	3,955.2354	0.0758	0.0725	3,978.7394
Strip Mall	49.9726	5.4000e-004	4.9000e-003	4.1200e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		5.8791	5.8791	1.1000e-004	1.1000e-004	5.9141
Total		0.3631	3.3009	2.7728	0.0198		0.2509	0.2509		0.2509	0.2509		3,961.1146	3,961.1146	0.0759	0.0726	3,984.6535

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	33.6195	0.3626	3.2960	2.7687	0.0198		0.2505	0.2505		0.2505	0.2505		3,955.2354	3,955.2354	0.0758	0.0725	3,978.7394
Strip Mall	0.0499726	5.4000e-004	4.9000e-003	4.1200e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		5.8791	5.8791	1.1000e-004	1.1000e-004	5.9141
Total		0.3631	3.3009	2.7728	0.0198		0.2509	0.2509		0.2509	0.2509		3,961.1146	3,961.1146	0.0759	0.0726	3,984.6535

6.0 Area Detail**6.1 Mitigation Measures Area**

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive 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	12.3773	1.1600e-003	0.1285	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2761	0.2761	7.2000e-004		0.2940
Unmitigated	12.3773	1.1600e-003	0.1285	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2761	0.2761	7.2000e-004		0.2940

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	1.4759					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.8896					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0118	1.1600e-003	0.1285	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2761	0.2761	7.2000e-004		0.2940
Total	12.3773	1.1600e-003	0.1285	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2761	0.2761	7.2000e-004		0.2940

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	1.4759					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.8896					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0118	1.1600e-003	0.1285	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2761	0.2761	7.2000e-004		0.2940
Total	12.3773	1.1600e-003	0.1285	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2761	0.2761	7.2000e-004		0.2940

7.0 Water Detail**7.1 Mitigation Measures Water**

120 E. Grand Avenue - Proposed Project - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**120 E. Grand Avenue - Proposed Project**

San Mateo County, Winter

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	499.44	1000sqft	1.85	499,435.00	0
Enclosed Parking with Elevator	756.00	Space	0.72	238,000.00	0
Other Non-Asphalt Surfaces	1.08	Acre	1.08	47,044.80	0
Other Non-Asphalt Surfaces	0.75	Acre	0.75	32,670.00	0
Other Non-Asphalt Surfaces	0.23	Acre	0.23	10,018.80	0
Strip Mall	4.00	1000sqft	0.00	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2025
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land uses = 499,435 sf of R&D building space, 4,000 sf of Retail space, 756-space Parking Structure, 1.08 acre of Service Yards, 0.75 acre of Internal Circulation, & 0.23 acre of Landscaping.

Construction Phase - Construction duration per Project Construction Contractor

Off-road Equipment - Ibid

Off-road Equipment - Ibid

Off-road Equipment - Equipment per Project Construction Contractor

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - Ibid

Off-road Equipment - Ibid

Off-road Equipment - Ibid

Demolition -

Grading -

Architectural Coating - Parking Area sf reduced to reflect that landscaped areas and service yards will not be painted/stripped.

Construction Off-road Equipment Mitigation - Project equipment is Tier 4 Engine Certified per Project Construction Contractor. BAAQMD Basic Mitigation Measures applied.

Mobile Land Use Mitigation - Project employees estimated from US Green Building Council "Building Area per Employee by Business Type."

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	19,664.00	14,280.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	40
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	80.00
tblConstructionPhase	NumDays	230.00	512.00
tblConstructionPhase	NumDays	20.00	80.00
tblConstructionPhase	NumDays	8.00	80.00
tblConstructionPhase	NumDays	18.00	80.00
tblConstructionPhase	NumDays	5.00	80.00
tblGrading	MaterialExported	0.00	7,012.50
tblGrading	MaterialExported	0.00	7,012.50
tblLandUse	LandUseSquareFeet	499,440.00	499,435.00
tblLandUse	LandUseSquareFeet	302,400.00	238,000.00
tblLandUse	LotAcreage	11.47	1.85
tblLandUse	LotAcreage	6.80	0.72
tblLandUse	LotAcreage	0.09	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

2.0 Emissions Summary

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
2023	7.6181	74.9531	86.2977	0.1936	4.0618	2.8967	6.9585	0.9160	2.7056	3.4039	0.0000	18,969.27 63	18,969.27 63	4.9211	0.5211	19,195.64 88
2024	4.0519	38.1725	45.9608	0.1192	3.3755	1.3151	4.6906	0.9160	1.2310	2.1470	0.0000	11,982.15 84	11,982.15 84	2.1604	0.5100	12,188.14 33
2025	71.9355	45.3016	62.0704	0.1509	4.0328	1.5764	5.6092	1.0904	1.4750	2.5654	0.0000	15,018.82 46	15,018.82 46	2.9367	0.5105	15,244.35 25
Maximum	71.9355	74.9531	86.2977	0.1936	4.0618	2.8967	6.9585	1.0904	2.7056	3.4039	0.0000	18,969.27 63	18,969.27 63	4.9211	0.5211	19,195.64 88

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					
2023	2.3682	16.2874	106.4967	0.1936	2.2590	0.2972	2.4167	0.6420	0.2957	0.7973	0.0000	18,969.27 63	18,969.27 63	4.9211	0.5211	19,195.64 88
2024	1.6893	11.5972	53.3046	0.1192	2.2591	0.1573	2.4164	0.6420	0.1550	0.7970	0.0000	11,982.15 84	11,982.15 84	2.1604	0.5100	12,188.14 33
2025	69.2115	16.0988	72.1369	0.1509	2.6879	0.2500	2.9379	0.7603	0.2475	1.0078	0.0000	15,018.82 46	15,018.82 46	2.9367	0.5105	15,244.35 25
Maximum	69.2115	16.2874	106.4967	0.1936	2.6879	0.2972	2.9379	0.7603	0.2957	1.0078	0.0000	18,969.27 63	18,969.27 63	4.9211	0.5211	19,195.64 88

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	12.36	72.24	-19.35	0.00	37.18	87.83	54.97	30.05	87.10	67.94	0.00	0.00	0.00	0.00	0.00	0.00

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	12.3773	1.1600e-003	0.1285	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2761	0.2761	7.2000e-004		0.2940
Energy	0.3631	3.3009	2.7728	0.0198		0.2509	0.2509		0.2509	0.2509		3,961.1146	3,961.1146	0.0759	0.0726	3,984.6535
Mobile	12.4599	12.1258	127.5045	0.2528	30.1986	0.1650	30.3636	8.0388	0.1532	8.1920		25,697.6366	25,697.6366	1.7865	1.1599	26,087.9375
Total	25.2003	15.4279	130.4057	0.2726	30.1986	0.4164	30.6150	8.0388	0.4046	8.4433		29,659.0273	29,659.0273	1.8632	1.2325	30,072.8850

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	12.3773	1.1600e-003	0.1285	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2761	0.2761	7.2000e-004		0.2940
Energy	0.3631	3.3009	2.7728	0.0198		0.2509	0.2509		0.2509	0.2509		3,961.1146	3,961.1146	0.0759	0.0726	3,984.6535
Mobile	9.4287	7.7591	83.5615	0.1358	15.8161	0.0967	15.9128	4.2102	0.0897	4.2999		13,803.3414	13,803.3414	1.2653	0.7534	14,059.4956
Total	22.1691	11.0611	86.4628	0.1556	15.8161	0.3480	16.1641	4.2102	0.3410	4.5512		17,764.7320	17,764.7320	1.3420	0.8261	18,044.4431

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	12.03	28.30	33.70	42.92	47.63	16.42	47.20	47.63	15.71	46.10	0.00	40.10	40.10	27.97	32.98	40.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2023	7/21/2023	5	80	
2	Site Preparation	Site Preparation	5/15/2023	9/1/2023	5	80	
3	Grading	Grading	5/30/2023	9/18/2023	5	80	
4	Building Construction	Building Construction	9/19/2023	9/3/2025	5	512	
5	Paving	Paving	5/30/2025	9/18/2025	5	80	
6	Architectural Coating	Architectural Coating	5/30/2025	9/18/2025	5	80	

Acres of Grading (Site Preparation Phase): 40**Acres of Grading (Grading Phase): 80****Acres of Paving: 2.78****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 755,153; Non-Residential Outdoor: 251,718; Striped Parking Area: 14,280 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crushing/Proc. Equipment	1	8.00	85	0.78
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Demolition	Rubber Tired Loaders	1	8.00	203	0.36

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Demolition	Signal Boards	2	8.00	6	0.82
Demolition	Skid Steer Loaders	1	8.00	65	0.37
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Bore/Drill Rigs	2	8.00	221	0.50
Site Preparation	Concrete/Industrial Saws	1	8.00	81	0.73
Site Preparation	Excavators	2	8.00	158	0.38
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rollers	1	8.00	80	0.38
Site Preparation	Rough Terrain Forklifts	2	8.00	100	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Loaders	1	8.00	203	0.36
Site Preparation	Signal Boards	2	8.00	6	0.82
Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Excavators	3	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rollers	1	8.00	80	0.38
Grading	Rough Terrain Forklifts	2	8.00	100	0.40
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Loaders	2	8.00	203	0.36
Grading	Signal Boards	2	8.00	6	0.82
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Concrete/Industrial Saws	2	8.00	81	0.73
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Excavators	3	8.00	158	0.38
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Graders	1	8.00	187	0.41

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Rollers	1	8.00	80	0.38
Building Construction	Rough Terrain Forklifts	3	8.00	100	0.40
Building Construction	Rubber Tired Loaders	1	8.00	203	0.36
Building Construction	Signal Boards	2	8.00	6	0.82
Building Construction	Skid Steer Loaders	1	8.00	65	0.37
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	6.00	132	0.36
Paving	Rollers	1	6.00	80	0.38
Paving	Signal Boards	2	8.00	6	0.82
Paving	Skid Steer Loaders	2	8.00	65	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Architectural Coating	Surfacing Equipment	1	8.00	263	0.30

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	10	25.00	0.00	424.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	15	38.00	0.00	877.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	15	38.00	0.00	877.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	18	299.00	136.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	60.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2023**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					1.1474	0.0000	1.1474	0.1737	0.0000	0.1737			0.0000			0.0000
Off-Road	1.9516	15.9881	23.4857	0.0416		0.7319	0.7319		0.6982	0.6982		3,963.763 7	3,963.763 7	0.9227		3,986.830 1
Total	1.9516	15.9881	23.4857	0.0416	1.1474	0.7319	1.8793	0.1737	0.6982	0.8720		3,963.763 7	3,963.763 7	0.9227		3,986.830 1

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Demolition - 2023****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	0.0121	0.8475	0.2735	3.4100e-003	0.0923	5.4600e-003	0.0978	0.0253	5.2200e-003	0.0305		398.0925	398.0925	0.0399	0.0642	418.2060
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
Worker	0.0593	0.0382	0.5036	1.5900e-003	0.2054	9.5000e-004	0.2063	0.0545	8.7000e-004	0.0554		160.7383	160.7383	4.3500e-003	4.2800e-003	162.1220
Total	0.0714	0.8857	0.7770	5.0000e-003	0.2977	6.4100e-003	0.3041	0.0797	6.0900e-003	0.0858		558.8309	558.8309	0.0443	0.0684	580.3280

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					0.5163	0.0000	0.5163	0.0782	0.0000	0.0782			0.0000			0.0000
Off-Road	0.4896	3.0631	26.6863	0.0416		0.0619	0.0619		0.0619	0.0619	0.0000	3,963.7637	3,963.7637	0.9227		3,986.8301
Total	0.4896	3.0631	26.6863	0.0416	0.5163	0.0619	0.5782	0.0782	0.0619	0.1401	0.0000	3,963.7637	3,963.7637	0.9227		3,986.8301

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Demolition - 2023****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	0.0121	0.8475	0.2735	3.4100e-003	0.0643	5.4600e-003	0.0697	0.0184	5.2200e-003	0.0236		398.0925	398.0925	0.0399	0.0642	418.2060
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
Worker	0.0593	0.0382	0.5036	1.5900e-003	0.1340	9.5000e-004	0.1349	0.0370	8.7000e-004	0.0378		160.7383	160.7383	4.3500e-003	4.2800e-003	162.1220
Total	0.0714	0.8857	0.7770	5.0000e-003	0.1983	6.4100e-003	0.2046	0.0553	6.0900e-003	0.0614		558.8309	558.8309	0.0443	0.0684	580.3280

3.3 Site Preparation - 2023**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					0.5402	0.0000	0.5402	0.0588	0.0000	0.0588			0.0000			0.0000
Off-Road	2.6431	26.1321	30.3179	0.0676		1.0389	1.0389		0.9683	0.9683		6,494.0807	6,494.0807	1.9162		6,541.9851
Total	2.6431	26.1321	30.3179	0.0676	0.5402	1.0389	1.5791	0.0588	0.9683	1.0271		6,494.0807	6,494.0807	1.9162		6,541.9851

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Site Preparation - 2023****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	0.0250	1.7530	0.5657	7.0500e-003	0.1909	0.0113	0.2022	0.0523	0.0108	0.0631		823.4131	823.4131	0.0825	0.1327	865.0157
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
Worker	0.0902	0.0580	0.7654	2.4200e-003	0.3122	1.4400e-003	0.3136	0.0828	1.3300e-003	0.0841		244.3223	244.3223	6.6200e-003	6.5000e-003	246.4255
Total	0.1152	1.8111	1.3311	9.4700e-003	0.5031	0.0127	0.5158	0.1351	0.0121	0.1472		1,067.7354	1,067.7354	0.0892	0.1392	1,111.4411

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					0.2431	0.0000	0.2431	0.0264	0.0000	0.0264			0.0000			0.0000
Off-Road	0.8257	4.5195	39.5382	0.0676		0.1067	0.1067		0.1067	0.1067	0.0000	6,494.0806	6,494.0806	1.9162		6,541.9851
Total	0.8257	4.5195	39.5382	0.0676	0.2431	0.1067	0.3498	0.0264	0.1067	0.1331	0.0000	6,494.0806	6,494.0806	1.9162		6,541.9851

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Site Preparation - 2023****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	0.0250	1.7530	0.5657	7.0500e-003	0.1329	0.0113	0.1442	0.0380	0.0108	0.0488		823.4131	823.4131	0.0825	0.1327	865.0157
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
Worker	0.0902	0.0580	0.7654	2.4200e-003	0.2036	1.4400e-003	0.2051	0.0562	1.3300e-003	0.0575		244.3223	244.3223	6.6200e-003	6.5000e-003	246.4255
Total	0.1152	1.8111	1.3311	9.4700e-003	0.3366	0.0127	0.3493	0.0942	0.0121	0.1063		1,067.7354	1,067.7354	0.0892	0.1392	1,111.4411

3.4 Grading - 2023**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					1.0704	0.0000	1.0704	0.1160	0.0000	0.1160			0.0000			0.0000
Off-Road	2.7217	28.3251	29.0550	0.0605		1.0940	1.0940		1.0087	1.0087		5,817.1304	5,817.1304	1.8597		5,863.6234
Total	2.7217	28.3251	29.0550	0.0605	1.0704	1.0940	2.1644	0.1160	1.0087	1.1247		5,817.1304	5,817.1304	1.8597		5,863.6234

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Grading - 2023****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	0.0250	1.7530	0.5657	7.0500e-003	0.1909	0.0113	0.2022	0.0523	0.0108	0.0631		823.4131	823.4131	0.0825	0.1327	865.0157
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
Worker	0.0902	0.0580	0.7654	2.4200e-003	0.3122	1.4400e-003	0.3136	0.0828	1.3300e-003	0.0841		244.3223	244.3223	6.6200e-003	6.5000e-003	246.4255
Total	0.1152	1.8111	1.3311	9.4700e-003	0.5031	0.0127	0.5158	0.1351	0.0121	0.1472		1,067.7354	1,067.7354	0.0892	0.1392	1,111.4411

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					0.4817	0.0000	0.4817	0.0522	0.0000	0.0522			0.0000			0.0000
Off-Road	0.7512	4.1970	36.8330	0.0605		0.0968	0.0968		0.0968	0.0968	0.0000	5,817.1304	5,817.1304	1.8597		5,863.6234
Total	0.7512	4.1970	36.8330	0.0605	0.4817	0.0968	0.5785	0.0522	0.0968	0.1490	0.0000	5,817.1304	5,817.1304	1.8597		5,863.6234

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Grading - 2023****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	0.0250	1.7530	0.5657	7.0500e-003	0.1329	0.0113	0.1442	0.0380	0.0108	0.0488		823.4131	823.4131	0.0825	0.1327	865.0157
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
Worker	0.0902	0.0580	0.7654	2.4200e-003	0.2036	1.4400e-003	0.2051	0.0562	1.3300e-003	0.0575		244.3223	244.3223	6.6200e-003	6.5000e-003	246.4255
Total	0.1152	1.8111	1.3311	9.4700e-003	0.3366	0.0127	0.3493	0.0942	0.0121	0.1063		1,067.7354	1,067.7354	0.0892	0.1392	1,111.4411

3.5 Building Construction - 2023**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4181	33.8785	38.1070	0.0729		1.4158	1.4158		1.3253	1.3253		6,992.3885	6,992.3885	1.9149		7,040.2600
Total	3.4181	33.8785	38.1070	0.0729		1.4158	1.4158		1.3253	1.3253		6,992.3885	6,992.3885	1.9149		7,040.2600

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2023****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	0.0000
Vendor	0.1443	6.5183	2.3340	0.0285	0.9192	0.0331	0.9523	0.2645	0.0316	0.2961		3,185.938 4	3,185.938 4	0.1956	0.4699	3,330.857 1
Worker	0.7096	0.4567	6.0225	0.0190	2.4562	0.0114	2.4676	0.6515	0.0105	0.6620		1,922.430 4	1,922.430 4	0.0521	0.0512	1,938.979 3
Total	0.8540	6.9750	8.3565	0.0475	3.3754	0.0444	3.4198	0.9160	0.0421	0.9581		5,108.368 9	5,108.368 9	0.2477	0.5211	5,269.836 3

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	0.8748	4.7325	45.3133	0.0729		0.1133	0.1133		0.1133	0.1133	0.0000	6,992.388 5	6,992.388 5	1.9149		7,040.260 0
Total	0.8748	4.7325	45.3133	0.0729		0.1133	0.1133		0.1133	0.1133	0.0000	6,992.388 5	6,992.388 5	1.9149		7,040.260 0

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2023****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	0.0000
Vendor	0.1443	6.5183	2.3340	0.0285	0.6567	0.0331	0.6897	0.2000	0.0316	0.2317		3,185.938 4	3,185.938 4	0.1956	0.4699	3,330.857 1
Worker	0.7096	0.4567	6.0225	0.0190	1.6023	0.0114	1.6137	0.4419	0.0105	0.4524		1,922.430 4	1,922.430 4	0.0521	0.0512	1,938.979 3
Total	0.8540	6.9750	8.3565	0.0475	2.2590	0.0444	2.3034	0.6420	0.0421	0.6841		5,108.368 9	5,108.368 9	0.2477	0.5211	5,269.836 3

3.5 Building Construction - 2024**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2374	31.3078	37.9696	0.0729		1.2711	1.2711		1.1893	1.1893		6,992.700 3	6,992.700 3	1.9129		7,040.522 3
Total	3.2374	31.3078	37.9696	0.0729		1.2711	1.2711		1.1893	1.1893		6,992.700 3	6,992.700 3	1.9129		7,040.522 3

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2024****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	0.0000
Vendor	0.1392	6.4552	2.3252	0.0279	0.9193	0.0332	0.9525	0.2645	0.0318	0.2963		3,129.524 3	3,129.524 3	0.2003	0.4622	3,272.260 9
Worker	0.6753	0.4095	5.6660	0.0184	2.4562	0.0108	2.4670	0.6515	9.9500e-003	0.6615		1,859.933 8	1,859.933 8	0.0473	0.0478	1,875.360 1
Total	0.8145	6.8647	7.9913	0.0463	3.3755	0.0440	3.4195	0.9160	0.0417	0.9578		4,989.458 1	4,989.458 1	0.2475	0.5100	5,147.621 0

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	0.8748	4.7325	45.3133	0.0729		0.1133	0.1133		0.1133	0.1133	0.0000	6,992.700 3	6,992.700 3	1.9129		7,040.522 3
Total	0.8748	4.7325	45.3133	0.0729		0.1133	0.1133		0.1133	0.1133	0.0000	6,992.700 3	6,992.700 3	1.9129		7,040.522 3

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2024****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	0.0000
Vendor	0.1392	6.4552	2.3252	0.0279	0.6568	0.0332	0.6900	0.2001	0.0318	0.2319		3,129.524 3	3,129.524 3	0.2003	0.4622	3,272.260 9
Worker	0.6753	0.4095	5.6660	0.0184	1.6023	0.0108	1.6132	0.4419	9.9500e-003	0.4519		1,859.933 8	1,859.933 8	0.0473	0.0478	1,875.360 1
Total	0.8145	6.8647	7.9913	0.0463	2.2591	0.0440	2.3032	0.6420	0.0417	0.6837		4,989.458 1	4,989.458 1	0.2475	0.5100	5,147.621 0

3.5 Building Construction - 2025**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.0117	28.2062	37.7588	0.0729		1.1021	1.1021		1.0310	1.0310		6,993.066 7	6,993.066 7	1.9088		7,040.787 3
Total	3.0117	28.2062	37.7588	0.0729		1.1021	1.1021		1.0310	1.0310		6,993.066 7	6,993.066 7	1.9088		7,040.787 3

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2025****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	0.0000
Vendor	0.1350	6.3815	2.3236	0.0273	0.9194	0.0332	0.9526	0.2646	0.0318	0.2963		3,068.174 5	3,068.174 5	0.2044	0.4535	3,208.423 6
Worker	0.6464	0.3709	5.3424	0.0178	2.4562	0.0103	2.4665	0.6515	9.5100e-003	0.6610		1,797.786 2	1,797.786 2	0.0430	0.0449	1,812.248 8
Total	0.7814	6.7524	7.6661	0.0451	3.3756	0.0435	3.4191	0.9161	0.0413	0.9573		4,865.960 7	4,865.960 7	0.2474	0.4984	5,020.672 4

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	0.8748	4.7325	45.3133	0.0729		0.1133	0.1133		0.1133	0.1133	0.0000	6,993.066 7	6,993.066 7	1.9088		7,040.787 3
Total	0.8748	4.7325	45.3133	0.0729		0.1133	0.1133		0.1133	0.1133	0.0000	6,993.066 7	6,993.066 7	1.9088		7,040.787 3

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2025****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	0.0000
Vendor	0.1350	6.3815	2.3236	0.0273	0.6569	0.0332	0.6901	0.2001	0.0318	0.2319		3,068.174 5	3,068.174 5	0.2044	0.4535	3,208.423 6
Worker	0.6464	0.3709	5.3424	0.0178	1.6023	0.0103	1.6127	0.4419	9.5100e-003	0.4514		1,797.786 2	1,797.786 2	0.0430	0.0449	1,812.248 8
Total	0.7814	6.7524	7.6661	0.0451	2.2592	0.0435	2.3027	0.6420	0.0413	0.6833		4,865.960 7	4,865.960 7	0.2474	0.4984	5,020.672 4

3.6 Paving - 2025**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	0.7521	7.2520	11.7808	0.0184		0.3056	0.3056		0.2834	0.2834		1,742.910 6	1,742.910 6	0.5420		1,756.461 5
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7521	7.2520	11.7808	0.0184		0.3056	0.3056		0.2834	0.2834		1,742.910 6	1,742.910 6	0.5420		1,756.461 5

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Paving - 2025****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	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
Worker	0.0432	0.0248	0.3574	1.1900e-003	0.1643	6.9000e-004	0.1650	0.0436	6.4000e-004	0.0442		120.2533	120.2533	2.8800e-003	3.0100e-003	121.2207
Total	0.0432	0.0248	0.3574	1.1900e-003	0.1643	6.9000e-004	0.1650	0.0436	6.4000e-004	0.0442		120.2533	120.2533	2.8800e-003	3.0100e-003	121.2207

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	0.2594	3.0074	12.8576	0.0184		0.0278	0.0278		0.0278	0.0278	0.0000	1,742.9106	1,742.9106	0.5420		1,756.4615
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.2594	3.0074	12.8576	0.0184		0.0278	0.0278		0.0278	0.0278	0.0000	1,742.9106	1,742.9106	0.5420		1,756.4615

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Paving - 2025****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	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
Worker	0.0432	0.0248	0.3574	1.1900e-003	0.1072	6.9000e-004	0.1079	0.0296	6.4000e-004	0.0302		120.2533	120.2533	2.8800e-003	3.0100e-003	121.2207
Total	0.0432	0.0248	0.3574	1.1900e-003	0.1072	6.9000e-004	0.1079	0.0296	6.4000e-004	0.0302		120.2533	120.2533	2.8800e-003	3.0100e-003	121.2207

3.7 Architectural Coating - 2025**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	66.8686					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3488	2.9918	3.4353	9.7300e-003		0.1225	0.1225		0.1168	0.1168		935.8736	935.8736	0.2270		941.5487
Total	67.2174	2.9918	3.4353	9.7300e-003		0.1225	0.1225		0.1168	0.1168		935.8736	935.8736	0.2270		941.5487

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.7 Architectural Coating - 2025****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	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
Worker	0.1297	0.0744	1.0721	3.5700e-003	0.4929	2.0700e-003	0.4950	0.1307	1.9100e-003	0.1326		360.7598	360.7598	8.6300e-003	9.0200e-003	363.6620
Total	0.1297	0.0744	1.0721	3.5700e-003	0.4929	2.0700e-003	0.4950	0.1307	1.9100e-003	0.1326		360.7598	360.7598	8.6300e-003	9.0200e-003	363.6620

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	66.8686					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2544	1.5073	4.8706	9.7300e-003		0.0626	0.0626		0.0626	0.0626	0.0000	935.8736	935.8736	0.2270		941.5487
Total	67.1229	1.5073	4.8706	9.7300e-003		0.0626	0.0626		0.0626	0.0626	0.0000	935.8736	935.8736	0.2270		941.5487

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.7 Architectural Coating - 2025****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	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
Worker	0.1297	0.0744	1.0721	3.5700e-003	0.3215	2.0700e-003	0.3236	0.0887	1.9100e-003	0.0906		360.7598	360.7598	8.6300e-003	9.0200e-003	363.6620
Total	0.1297	0.0744	1.0721	3.5700e-003	0.3215	2.0700e-003	0.3236	0.0887	1.9100e-003	0.0906		360.7598	360.7598	8.6300e-003	9.0200e-003	363.6620

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Increase Density

Increase Diversity

Increase Transit Accessibility

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive 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	9.4287	7.7591	83.5615	0.1358	15.8161	0.0967	15.9128	4.2102	0.0897	4.2999		13,803.34 14	13,803.34 14	1.2653	0.7534	14,059.49 56
Unmitigated	12.4599	12.1258	127.5045	0.2528	30.1986	0.1650	30.3636	8.0388	0.1532	8.1920		25,697.63 66	25,697.63 66	1.7865	1.1599	26,087.93 75

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Research & Development	5,623.69	948.94	554.38	10,605,646	5,554,574
Strip Mall	177.28	168.16	81.72	249,987	130,928
Total	5,800.97	1,117.10	636.10	10,855,633	5,685,502

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
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657
Other Non-Asphalt Surfaces	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657
Research & Development	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657
Strip Mall	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657

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	0.3631	3.3009	2.7728	0.0198		0.2509	0.2509		0.2509	0.2509		3,961.1146	3,961.1146	0.0759	0.0726	3,984.6535
NaturalGas Unmitigated	0.3631	3.3009	2.7728	0.0198		0.2509	0.2509		0.2509	0.2509		3,961.1146	3,961.1146	0.0759	0.0726	3,984.6535

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	33619.5	0.3626	3.2960	2.7687	0.0198		0.2505	0.2505		0.2505	0.2505		3,955.2354	3,955.2354	0.0758	0.0725	3,978.7394
Strip Mall	49.9726	5.4000e-004	4.9000e-003	4.1200e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		5.8791	5.8791	1.1000e-004	1.1000e-004	5.9141
Total		0.3631	3.3009	2.7728	0.0198		0.2509	0.2509		0.2509	0.2509		3,961.1146	3,961.1146	0.0759	0.0726	3,984.6535

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	33.6195	0.3626	3.2960	2.7687	0.0198		0.2505	0.2505		0.2505	0.2505		3,955.2354	3,955.2354	0.0758	0.0725	3,978.7394
Strip Mall	0.0499726	5.4000e-004	4.9000e-003	4.1200e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		5.8791	5.8791	1.1000e-004	1.1000e-004	5.9141
Total		0.3631	3.3009	2.7728	0.0198		0.2509	0.2509		0.2509	0.2509		3,961.1146	3,961.1146	0.0759	0.0726	3,984.6535

6.0 Area Detail**6.1 Mitigation Measures Area**

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive 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	12.3773	1.1600e-003	0.1285	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2761	0.2761	7.2000e-004		0.2940
Unmitigated	12.3773	1.1600e-003	0.1285	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2761	0.2761	7.2000e-004		0.2940

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	1.4759					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.8896					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0118	1.1600e-003	0.1285	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2761	0.2761	7.2000e-004		0.2940
Total	12.3773	1.1600e-003	0.1285	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2761	0.2761	7.2000e-004		0.2940

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	1.4759					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.8896					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0118	1.1600e-003	0.1285	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2761	0.2761	7.2000e-004		0.2940
Total	12.3773	1.1600e-003	0.1285	1.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.2761	0.2761	7.2000e-004		0.2940

7.0 Water Detail**7.1 Mitigation Measures Water**

120 E. Grand Avenue - Proposed Project - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**120 E. Grand Avenue - Proposed Project****San Mateo County, Annual****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	499.44	1000sqft	1.85	499,435.00	0
Enclosed Parking with Elevator	756.00	Space	0.72	238,000.00	0
Other Non-Asphalt Surfaces	1.08	Acre	1.08	47,044.80	0
Other Non-Asphalt Surfaces	0.75	Acre	0.75	32,670.00	0
Other Non-Asphalt Surfaces	0.23	Acre	0.23	10,018.80	0
Strip Mall	4.00	1000sqft	0.00	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2025
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land uses = 499,435 sf of R&D building space, 4,000 sf of Retail space, 756-space Parking Structure, 1.08 acre of Service Yards, 0.75 acre of Internal Circulation, & 0.23 acre of Landscaping.

Construction Phase - Construction duration per Project Construction Contractor

Off-road Equipment - Ibid

Off-road Equipment - Ibid

Off-road Equipment - Equipment per Project Construction Contractor

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - Ibid

Off-road Equipment - Ibid

Off-road Equipment - Ibid

Demolition -

Grading -

Architectural Coating - Parking Area sf reduced to reflect that landscaped areas and service yards will not be painted/stripped.

Construction Off-road Equipment Mitigation - Project equipment is Tier 4 Engine Certified per Project Construction Contractor. BAAQMD Basic Mitigation Measures applied.

Mobile Land Use Mitigation - Project employees estimated from US Green Building Council "Building Area per Employee by Business Type."

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	19,664.00	14,280.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	40
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	80.00
tblConstructionPhase	NumDays	230.00	512.00
tblConstructionPhase	NumDays	20.00	80.00
tblConstructionPhase	NumDays	8.00	80.00
tblConstructionPhase	NumDays	18.00	80.00
tblConstructionPhase	NumDays	5.00	80.00
tblGrading	MaterialExported	0.00	7,012.50
tblGrading	MaterialExported	0.00	7,012.50
tblLandUse	LandUseSquareFeet	499,440.00	499,435.00
tblLandUse	LandUseSquareFeet	302,400.00	238,000.00
tblLandUse	LotAcreage	11.47	1.85
tblLandUse	LotAcreage	6.80	0.72
tblLandUse	LotAcreage	0.09	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

2.0 Emissions Summary

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
2023	0.4596	4.5007	5.1581	0.0122	0.2803	0.1699	0.4502	0.0601	0.1588	0.2189	0.0000	1,094.750 6	1,094.750 6	0.2510	0.0299	1,109.946 8
2024	0.5225	4.9813	5.9877	0.0156	0.4247	0.1723	0.5969	0.1157	0.1613	0.2769	0.0000	1,424.542 6	1,424.542 6	0.2565	0.0603	1,448.911 9
2025	3.0533	3.4771	4.6396	0.0117	0.3105	0.1180	0.4285	0.0844	0.1105	0.1949	0.0000	1,061.804 9	1,061.804 9	0.2003	0.0400	1,078.726 1
Maximum	3.0533	4.9813	5.9877	0.0156	0.4247	0.1723	0.5969	0.1157	0.1613	0.2769	0.0000	1,424.542 6	1,424.542 6	0.2565	0.0603	1,448.911 9

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					
2023	0.1555	1.0757	6.2326	0.0122	0.1639	0.0177	0.1816	0.0387	0.0176	0.0563	0.0000	1,094.749 6	1,094.749 6	0.2510	0.0299	1,109.945 8
2024	0.2130	1.5000	6.9497	0.0156	0.2854	0.0206	0.3060	0.0815	0.0203	0.1018	0.0000	1,424.541 6	1,424.541 6	0.2565	0.0603	1,448.910 9
2025	2.8418	1.1823	5.4049	0.0117	0.2082	0.0175	0.2258	0.0593	0.0173	0.0766	0.0000	1,061.804 1	1,061.804 1	0.2003	0.0400	1,078.725 3
Maximum	2.8418	1.5000	6.9497	0.0156	0.2854	0.0206	0.3060	0.0815	0.0203	0.1018	0.0000	1,424.541 6	1,424.541 6	0.2565	0.0603	1,448.910 9

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	20.45	71.00	-17.75	0.00	35.25	87.87	51.66	30.99	87.19	66.01	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)
3	3-19-2023	6-18-2023	1.1488	0.2636
4	6-19-2023	9-18-2023	2.1214	0.4667
5	9-19-2023	12-18-2023	1.4646	0.4347
6	12-19-2023	3-18-2024	1.3858	0.4325
7	3-19-2024	6-18-2024	1.3744	0.4235
8	6-19-2024	9-18-2024	1.3722	0.4214
9	9-19-2024	12-18-2024	1.3703	0.4298
10	12-19-2024	3-18-2025	1.2617	0.4231
11	3-19-2025	6-18-2025	1.8209	0.9343
12	6-19-2025	9-18-2025	3.6309	2.7191
		Highest	3.6309	2.7191

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	2.2578	1.0000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0225	0.0225	6.0000e-005	0.0000	0.0240
Energy	0.0663	0.6024	0.5060	3.6100e-003		0.0458	0.0458		0.0458	0.0458	0.0000	655.8069	655.8069	0.0126	0.0120	659.7041
Mobile	1.6912	1.5778	16.4932	0.0348	3.9807	0.0227	4.0034	1.0632	0.0211	1.0843	0.0000	3,208.715 2	3,208.715 2	0.2128	0.1396	3,255.623 4
Waste						0.0000	0.0000		0.0000	0.0000	8.5561	0.0000	8.5561	0.5057	0.0000	21.1973
Water						0.0000	0.0000		0.0000	0.0000	78.0026	0.0000	78.0026	8.0116	0.1892	334.6659
Total	4.0152	2.1804	17.0108	0.0384	3.9807	0.0685	4.0492	1.0632	0.0669	1.1301	86.5586	3,864.544 7	3,951.103 3	8.7427	0.3408	4,271.214 7

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	2.2578	1.0000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0225	0.0225	6.0000e-005	0.0000	0.0240
Energy	0.0663	0.6024	0.5060	3.6100e-003		0.0458	0.0458		0.0458	0.0458	0.0000	655.8069	655.8069	0.0126	0.0120	659.7041
Mobile	1.2849	1.0089	10.6580	0.0187	2.0849	0.0133	2.0981	0.5569	0.0123	0.5692	0.0000	1,723.0604	1,723.0604	0.1488	0.0905	1,753.7461
Waste						0.0000	0.0000		0.0000	0.0000	8.5561	0.0000	8.5561	0.5057	0.0000	21.1973
Water						0.0000	0.0000		0.0000	0.0000	78.0026	0.0000	78.0026	8.0116	0.1892	334.6659
Total	3.6090	1.6115	11.1756	0.0223	2.0849	0.0591	2.1440	0.5569	0.0581	0.6150	86.5586	2,378.8899	2,465.4485	8.6787	0.2917	2,769.3374

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	10.12	26.09	34.30	41.95	47.63	13.71	47.05	47.63	13.06	45.58	0.00	38.44	37.60	0.73	14.40	35.16

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2023	7/21/2023	5	80	
2	Site Preparation	Site Preparation	5/15/2023	9/1/2023	5	80	
3	Grading	Grading	5/30/2023	9/18/2023	5	80	

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Building Construction	Building Construction	9/19/2023	9/3/2025	5	512
5	Paving	Paving	5/30/2025	9/18/2025	5	80
6	Architectural Coating	Architectural Coating	5/30/2025	9/18/2025	5	80

Acres of Grading (Site Preparation Phase): 40**Acres of Grading (Grading Phase): 80****Acres of Paving: 2.78****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 755,153; Non-Residential Outdoor: 251,718; Striped Parking Area: 14,280 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crushing/Proc. Equipment	1	8.00	85	0.78
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Demolition	Rubber Tired Loaders	1	8.00	203	0.36
Demolition	Signal Boards	2	8.00	6	0.82
Demolition	Skid Steer Loaders	1	8.00	65	0.37
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Bore/Drill Rigs	2	8.00	221	0.50
Site Preparation	Concrete/Industrial Saws	1	8.00	81	0.73
Site Preparation	Excavators	2	8.00	158	0.38
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rollers	1	8.00	80	0.38
Site Preparation	Rough Terrain Forklifts	2	8.00	100	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Loaders	1	8.00	203	0.36
Site Preparation	Signal Boards	2	8.00	6	0.82

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Excavators	3	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rollers	1	8.00	80	0.38
Grading	Rough Terrain Forklifts	2	8.00	100	0.40
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Loaders	2	8.00	203	0.36
Grading	Signal Boards	2	8.00	6	0.82
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Concrete/Industrial Saws	2	8.00	81	0.73
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Excavators	3	8.00	158	0.38
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Graders	1	8.00	187	0.41
Building Construction	Rollers	1	8.00	80	0.38
Building Construction	Rough Terrain Forklifts	3	8.00	100	0.40
Building Construction	Rubber Tired Loaders	1	8.00	203	0.36
Building Construction	Signal Boards	2	8.00	6	0.82
Building Construction	Skid Steer Loaders	1	8.00	65	0.37
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	6.00	132	0.36
Paving	Rollers	1	6.00	80	0.38
Paving	Signal Boards	2	8.00	6	0.82

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paving	Skid Steer Loaders	2	8.00	65	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Architectural Coating	Surfacing Equipment	1	8.00	263	0.30

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	10	25.00	0.00	424.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	15	38.00	0.00	877.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	15	38.00	0.00	877.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	18	299.00	136.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	60.00	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

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Demolition - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0459	0.0000	0.0459	6.9500e-003	0.0000	6.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0781	0.6395	0.9394	1.6600e-003		0.0293	0.0293		0.0279	0.0279	0.0000	143.8346	143.8346	0.0335	0.0000	144.6717
Total	0.0781	0.6395	0.9394	1.6600e-003	0.0459	0.0293	0.0752	6.9500e-003	0.0279	0.0349	0.0000	143.8346	143.8346	0.0335	0.0000	144.6717

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	4.9000e-004	0.0333	0.0109	1.4000e-004	3.5600e-003	2.2000e-004	3.7800e-003	9.8000e-004	2.1000e-004	1.1900e-003	0.0000	14.4432	14.4432	1.4500e-003	2.3300e-003	15.1730
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1500e-003	1.4100e-003	0.0194	6.0000e-005	7.8700e-003	4.0000e-005	7.9100e-003	2.0900e-003	3.0000e-005	2.1300e-003	0.0000	5.8511	5.8511	1.5000e-004	1.5000e-004	5.8986
Total	2.6400e-003	0.0347	0.0303	2.0000e-004	0.0114	2.6000e-004	0.0117	3.0700e-003	2.4000e-004	3.3200e-003	0.0000	20.2943	20.2943	1.6000e-003	2.4800e-003	21.0715

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Demolition - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0207	0.0000	0.0207	3.1300e-003	0.0000	3.1300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0196	0.1225	1.0675	1.6600e-003		2.4800e-003	2.4800e-003		2.4800e-003	2.4800e-003	0.0000	143.8345	143.8345	0.0335	0.0000	144.6715
Total	0.0196	0.1225	1.0675	1.6600e-003	0.0207	2.4800e-003	0.0231	3.1300e-003	2.4800e-003	5.6100e-003	0.0000	143.8345	143.8345	0.0335	0.0000	144.6715

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	4.9000e-004	0.0333	0.0109	1.4000e-004	2.4900e-003	2.2000e-004	2.7100e-003	7.2000e-004	2.1000e-004	9.2000e-004	0.0000	14.4432	14.4432	1.4500e-003	2.3300e-003	15.1730
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1500e-003	1.4100e-003	0.0194	6.0000e-005	5.1500e-003	4.0000e-005	5.1900e-003	1.4300e-003	3.0000e-005	1.4600e-003	0.0000	5.8511	5.8511	1.5000e-004	1.5000e-004	5.8986
Total	2.6400e-003	0.0347	0.0303	2.0000e-004	7.6400e-003	2.6000e-004	7.9000e-003	2.1500e-003	2.4000e-004	2.3800e-003	0.0000	20.2943	20.2943	1.6000e-003	2.4800e-003	21.0715

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Site Preparation - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0216	0.0000	0.0216	2.3500e-003	0.0000	2.3500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1057	1.0453	1.2127	2.7000e-003		0.0416	0.0416		0.0387	0.0387	0.0000	235.6532	235.6532	0.0695	0.0000	237.3916
Total	0.1057	1.0453	1.2127	2.7000e-003	0.0216	0.0416	0.0632	2.3500e-003	0.0387	0.0411	0.0000	235.6532	235.6532	0.0695	0.0000	237.3916

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	1.0200e-003	0.0689	0.0225	2.8000e-004	7.3600e-003	4.5000e-004	7.8100e-003	2.0200e-003	4.3000e-004	2.4500e-003	0.0000	29.8743	29.8743	3.0000e-003	4.8100e-003	31.3837
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	3.2700e-003	2.1400e-003	0.0295	1.0000e-004	0.0120	6.0000e-005	0.0120	3.1800e-003	5.0000e-005	3.2400e-003	0.0000	8.8936	8.8936	2.3000e-004	2.2000e-004	8.9658
Total	4.2900e-003	0.0711	0.0520	3.8000e-004	0.0193	5.1000e-004	0.0198	5.2000e-003	4.8000e-004	5.6900e-003	0.0000	38.7679	38.7679	3.2300e-003	5.0300e-003	40.3495

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Site Preparation - 2023****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					9.7200e-003	0.0000	9.7200e-003	1.0600e-003	0.0000	1.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0330	0.1808	1.5815	2.7000e-003		4.2700e-003	4.2700e-003		4.2700e-003	4.2700e-003	0.0000	235.6530	235.6530	0.0695	0.0000	237.3913
Total	0.0330	0.1808	1.5815	2.7000e-003	9.7200e-003	4.2700e-003	0.0140	1.0600e-003	4.2700e-003	5.3300e-003	0.0000	235.6530	235.6530	0.0695	0.0000	237.3913

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	1.0200e-003	0.0689	0.0225	2.8000e-004	5.1500e-003	4.5000e-004	5.6000e-003	1.4800e-003	4.3000e-004	1.9100e-003	0.0000	29.8743	29.8743	3.0000e-003	4.8100e-003	31.3837
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	3.2700e-003	2.1400e-003	0.0295	1.0000e-004	7.8300e-003	6.0000e-005	7.8900e-003	2.1700e-003	5.0000e-005	2.2200e-003	0.0000	8.8936	8.8936	2.3000e-004	2.2000e-004	8.9658
Total	4.2900e-003	0.0711	0.0520	3.8000e-004	0.0130	5.1000e-004	0.0135	3.6500e-003	4.8000e-004	4.1300e-003	0.0000	38.7679	38.7679	3.2300e-003	5.0300e-003	40.3495

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Grading - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0428	0.0000	0.0428	4.6400e-003	0.0000	4.6400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1089	1.1330	1.1622	2.4200e-003		0.0438	0.0438		0.0404	0.0404	0.0000	211.0885	211.0885	0.0675	0.0000	212.7756
Total	0.1089	1.1330	1.1622	2.4200e-003	0.0428	0.0438	0.0866	4.6400e-003	0.0404	0.0450	0.0000	211.0885	211.0885	0.0675	0.0000	212.7756

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	1.0200e-003	0.0689	0.0225	2.8000e-004	7.3600e-003	4.5000e-004	7.8100e-003	2.0200e-003	4.3000e-004	2.4500e-003	0.0000	29.8743	29.8743	3.0000e-003	4.8100e-003	31.3837
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	3.2700e-003	2.1400e-003	0.0295	1.0000e-004	0.0120	6.0000e-005	0.0120	3.1800e-003	5.0000e-005	3.2400e-003	0.0000	8.8936	8.8936	2.3000e-004	2.2000e-004	8.9658
Total	4.2900e-003	0.0711	0.0520	3.8000e-004	0.0193	5.1000e-004	0.0198	5.2000e-003	4.8000e-004	5.6900e-003	0.0000	38.7679	38.7679	3.2300e-003	5.0300e-003	40.3495

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Grading - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0193	0.0000	0.0193	2.0900e-003	0.0000	2.0900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0301	0.1679	1.4733	2.4200e-003		3.8700e-003	3.8700e-003		3.8700e-003	3.8700e-003	0.0000	211.0882	211.0882	0.0675	0.0000	212.7753
Total	0.0301	0.1679	1.4733	2.4200e-003	0.0193	3.8700e-003	0.0231	2.0900e-003	3.8700e-003	5.9600e-003	0.0000	211.0882	211.0882	0.0675	0.0000	212.7753

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	1.0200e-003	0.0689	0.0225	2.8000e-004	5.1500e-003	4.5000e-004	5.6000e-003	1.4800e-003	4.3000e-004	1.9100e-003	0.0000	29.8743	29.8743	3.0000e-003	4.8100e-003	31.3837
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	3.2700e-003	2.1400e-003	0.0295	1.0000e-004	7.8300e-003	6.0000e-005	7.8900e-003	2.1700e-003	5.0000e-005	2.2200e-003	0.0000	8.8936	8.8936	2.3000e-004	2.2000e-004	8.9658
Total	4.2900e-003	0.0711	0.0520	3.8000e-004	0.0130	5.1000e-004	0.0135	3.6500e-003	4.8000e-004	4.1300e-003	0.0000	38.7679	38.7679	3.2300e-003	5.0300e-003	40.3495

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2023****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	0.1265	1.2535	1.4100	2.7000e-003		0.0524	0.0524		0.0490	0.0490	0.0000	234.7054	234.7054	0.0643	0.0000	236.3122
Total	0.1265	1.2535	1.4100	2.7000e-003		0.0524	0.0524		0.0490	0.0490	0.0000	234.7054	234.7054	0.0643	0.0000	236.3122

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.3600e-003	0.2369	0.0850	1.0500e-003	0.0329	1.2200e-003	0.0341	9.5000e-003	1.1700e-003	0.0107	0.0000	106.9085	106.9085	6.5700e-003	0.0158	111.7696
Worker	0.0238	0.0156	0.2145	7.1000e-004	0.0871	4.2000e-004	0.0875	0.0232	3.9000e-004	0.0236	0.0000	64.7302	64.7302	1.6500e-003	1.6300e-003	65.2557
Total	0.0292	0.2525	0.2995	1.7600e-003	0.1199	1.6400e-003	0.1216	0.0327	1.5600e-003	0.0342	0.0000	171.6387	171.6387	8.2200e-003	0.0174	177.0253

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0324	0.1751	1.6766	2.7000e-003		4.1900e-003	4.1900e-003		4.1900e-003	4.1900e-003	0.0000	234.7051	234.7051	0.0643	0.0000	236.3119
Total	0.0324	0.1751	1.6766	2.7000e-003		4.1900e-003	4.1900e-003		4.1900e-003	4.1900e-003	0.0000	234.7051	234.7051	0.0643	0.0000	236.3119

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.3600e-003	0.2369	0.0850	1.0500e-003	0.0236	1.2200e-003	0.0248	7.2300e-003	1.1700e-003	8.4000e-003	0.0000	106.9085	106.9085	6.5700e-003	0.0158	111.7696
Worker	0.0238	0.0156	0.2145	7.1000e-004	0.0570	4.2000e-004	0.0574	0.0158	3.9000e-004	0.0162	0.0000	64.7302	64.7302	1.6500e-003	1.6300e-003	65.2557
Total	0.0292	0.2525	0.2995	1.7600e-003	0.0806	1.6400e-003	0.0823	0.0230	1.5600e-003	0.0246	0.0000	171.6387	171.6387	8.2200e-003	0.0174	177.0253

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2024****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	0.4241	4.1013	4.9740	9.5500e-003		0.1665	0.1665		0.1558	0.1558	0.0000	831.0209	831.0209	0.2273	0.0000	836.7041
Total	0.4241	4.1013	4.9740	9.5500e-003		0.1665	0.1665		0.1558	0.1558	0.0000	831.0209	831.0209	0.2273	0.0000	836.7041

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	0.0183	0.8306	0.2998	3.6600e-003	0.1163	4.3400e-003	0.1206	0.0336	4.1500e-003	0.0378	0.0000	371.7936	371.7936	0.0238	0.0549	388.7450
Worker	0.0800	0.0494	0.7139	2.4200e-003	0.3084	1.4200e-003	0.3098	0.0821	1.3000e-003	0.0834	0.0000	221.7281	221.7281	5.3000e-003	5.3800e-003	223.4627
Total	0.0984	0.8800	1.0137	6.0800e-003	0.4247	5.7600e-003	0.4304	0.1157	5.4500e-003	0.1212	0.0000	593.5217	593.5217	0.0291	0.0603	612.2078

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2024****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1146	0.6200	5.9360	9.5500e-003		0.0148	0.0148		0.0148	0.0148	0.0000	831.0199	831.0199	0.2273	0.0000	836.7031
Total	0.1146	0.6200	5.9360	9.5500e-003		0.0148	0.0148		0.0148	0.0148	0.0000	831.0199	831.0199	0.2273	0.0000	836.7031

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	0.0183	0.8306	0.2998	3.6600e-003	0.0836	4.3400e-003	0.0879	0.0256	4.1500e-003	0.0298	0.0000	371.7936	371.7936	0.0238	0.0549	388.7450
Worker	0.0800	0.0494	0.7139	2.4200e-003	0.2019	1.4200e-003	0.2033	0.0559	1.3000e-003	0.0572	0.0000	221.7281	221.7281	5.3000e-003	5.3800e-003	223.4627
Total	0.0984	0.8800	1.0137	6.0800e-003	0.2854	5.7600e-003	0.2912	0.0815	5.4500e-003	0.0870	0.0000	593.5217	593.5217	0.0291	0.0603	612.2078

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2025****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	0.2650	2.4821	3.3228	6.4100e-003		0.0970	0.0970		0.0907	0.0907	0.0000	558.2723	558.2723	0.1524	0.0000	562.0819
Total	0.2650	2.4821	3.3228	6.4100e-003		0.0970	0.0970		0.0907	0.0907	0.0000	558.2723	558.2723	0.1524	0.0000	562.0819

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	0.0120	0.5515	0.2013	2.4000e-003	0.0781	2.9100e-003	0.0811	0.0226	2.7800e-003	0.0254	0.0000	244.8477	244.8477	0.0163	0.0362	256.0362
Worker	0.0513	0.0301	0.4519	1.5700e-003	0.2071	9.1000e-004	0.2081	0.0551	8.4000e-004	0.0560	0.0000	143.9696	143.9696	3.2400e-003	3.3900e-003	145.0621
Total	0.0633	0.5816	0.6532	3.9700e-003	0.2853	3.8200e-003	0.2891	0.0777	3.6200e-003	0.0814	0.0000	388.8173	388.8173	0.0196	0.0396	401.0983

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2025****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0770	0.4165	3.9876	6.4100e-003		9.9700e-003	9.9700e-003		9.9700e-003	9.9700e-003	0.0000	558.2716	558.2716	0.1524	0.0000	562.0813
Total	0.0770	0.4165	3.9876	6.4100e-003		9.9700e-003	9.9700e-003		9.9700e-003	9.9700e-003	0.0000	558.2716	558.2716	0.1524	0.0000	562.0813

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	0.0120	0.5515	0.2013	2.4000e-003	0.0561	2.9100e-003	0.0591	0.0172	2.7800e-003	0.0200	0.0000	244.8477	244.8477	0.0163	0.0362	256.0362
Worker	0.0513	0.0301	0.4519	1.5700e-003	0.1356	9.1000e-004	0.1365	0.0376	8.4000e-004	0.0384	0.0000	143.9696	143.9696	3.2400e-003	3.3900e-003	145.0621
Total	0.0633	0.5816	0.6532	3.9700e-003	0.1917	3.8200e-003	0.1956	0.0548	3.6200e-003	0.0584	0.0000	388.8173	388.8173	0.0196	0.0396	401.0983

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Paving - 2025****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	0.0301	0.2901	0.4712	7.4000e-004		0.0122	0.0122		0.0113	0.0113	0.0000	63.2457	63.2457	0.0197	0.0000	63.7374
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0301	0.2901	0.4712	7.4000e-004		0.0122	0.0122		0.0113	0.0113	0.0000	63.2457	63.2457	0.0197	0.0000	63.7374

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	1.5600e-003	9.1000e-004	0.0137	5.0000e-005	6.3000e-003	3.0000e-005	6.3300e-003	1.6800e-003	3.0000e-005	1.7000e-003	0.0000	4.3773	4.3773	1.0000e-004	1.0000e-004	4.4105
Total	1.5600e-003	9.1000e-004	0.0137	5.0000e-005	6.3000e-003	3.0000e-005	6.3300e-003	1.6800e-003	3.0000e-005	1.7000e-003	0.0000	4.3773	4.3773	1.0000e-004	1.0000e-004	4.4105

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Paving - 2025****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0104	0.1203	0.5143	7.4000e-004		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	63.2456	63.2456	0.0197	0.0000	63.7373
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0104	0.1203	0.5143	7.4000e-004		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	63.2456	63.2456	0.0197	0.0000	63.7373

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	1.5600e-003	9.1000e-004	0.0137	5.0000e-005	4.1200e-003	3.0000e-005	4.1500e-003	1.1400e-003	3.0000e-005	1.1700e-003	0.0000	4.3773	4.3773	1.0000e-004	1.0000e-004	4.4105
Total	1.5600e-003	9.1000e-004	0.0137	5.0000e-005	4.1200e-003	3.0000e-005	4.1500e-003	1.1400e-003	3.0000e-005	1.1700e-003	0.0000	4.3773	4.3773	1.0000e-004	1.0000e-004	4.4105

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.7 Architectural Coating - 2025****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.6747					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0140	0.1197	0.1374	3.9000e-004		4.9000e-003	4.9000e-003		4.6700e-003	4.6700e-003	0.0000	33.9604	33.9604	8.2400e-003	0.0000	34.1664
Total	2.6887	0.1197	0.1374	3.9000e-004		4.9000e-003	4.9000e-003		4.6700e-003	4.6700e-003	0.0000	33.9604	33.9604	8.2400e-003	0.0000	34.1664

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6800e-003	2.7400e-003	0.0412	1.4000e-004	0.0189	8.0000e-005	0.0190	5.0300e-003	8.0000e-005	5.1000e-003	0.0000	13.1319	13.1319	3.0000e-004	3.1000e-004	13.2316
Total	4.6800e-003	2.7400e-003	0.0412	1.4000e-004	0.0189	8.0000e-005	0.0190	5.0300e-003	8.0000e-005	5.1000e-003	0.0000	13.1319	13.1319	3.0000e-004	3.1000e-004	13.2316

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.7 Architectural Coating - 2025****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.6747					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.0603	0.1948	3.9000e-004		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003	0.0000	33.9604	33.9604	8.2400e-003	0.0000	34.1663
Total	2.6849	0.0603	0.1948	3.9000e-004		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003	0.0000	33.9604	33.9604	8.2400e-003	0.0000	34.1663

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6800e-003	2.7400e-003	0.0412	1.4000e-004	0.0124	8.0000e-005	0.0125	3.4300e-003	8.0000e-005	3.5000e-003	0.0000	13.1319	13.1319	3.0000e-004	3.1000e-004	13.2316
Total	4.6800e-003	2.7400e-003	0.0412	1.4000e-004	0.0124	8.0000e-005	0.0125	3.4300e-003	8.0000e-005	3.5000e-003	0.0000	13.1319	13.1319	3.0000e-004	3.1000e-004	13.2316

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

Increase Density

Increase Diversity

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2849	1.0089	10.6580	0.0187	2.0849	0.0133	2.0981	0.5569	0.0123	0.5692	0.0000	1,723.060 4	1,723.060 4	0.1488	0.0905	1,753.746 1
Unmitigated	1.6912	1.5778	16.4932	0.0348	3.9807	0.0227	4.0034	1.0632	0.0211	1.0843	0.0000	3,208.715 2	3,208.715 2	0.2128	0.1396	3,255.623 4

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Research & Development	5,623.69	948.94	554.38	10,605,646	5,554,574
Strip Mall	177.28	168.16	81.72	249,987	130,928
Total	5,800.97	1,117.10	636.10	10,855,633	5,685,502

4.3 Trip Type Information

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657
Other Non-Asphalt Surfaces	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657
Research & Development	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657
Strip Mall	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0663	0.6024	0.5060	3.6100e-003		0.0458	0.0458		0.0458	0.0458	0.0000	655.8069	655.8069	0.0126	0.0120	659.7041
NaturalGas Unmitigated	0.0663	0.6024	0.5060	3.6100e-003		0.0458	0.0458		0.0458	0.0458	0.0000	655.8069	655.8069	0.0126	0.0120	659.7041

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	1.22711e+007	0.0662	0.6015	0.5053	3.6100e-003		0.0457	0.0457		0.0457	0.0457	0.0000	654.8336	654.8336	0.0126	0.0120	658.7249
Strip Mall	18240	1.0000e-004	8.9000e-004	7.5000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.9734	0.9734	2.0000e-005	2.0000e-005	0.9791
Total		0.0663	0.6024	0.5060	3.6200e-003		0.0458	0.0458		0.0458	0.0458	0.0000	655.8070	655.8070	0.0126	0.0120	659.7041

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	1.22711e+007	0.0662	0.6015	0.5053	3.6100e-003		0.0457	0.0457		0.0457	0.0457	0.0000	654.8336	654.8336	0.0126	0.0120	658.7249
Strip Mall	18240	1.0000e-004	8.9000e-004	7.5000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.9734	0.9734	2.0000e-005	2.0000e-005	0.9791
Total		0.0663	0.6024	0.5060	3.6200e-003		0.0458	0.0458		0.0458	0.0458	0.0000	655.8070	655.8070	0.0126	0.0120	659.7041

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.29472e+006	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Research & Development	3.7108e+006	0.0000	0.0000	0.0000	0.0000
Strip Mall	40960	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.29472e+006	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Research & Development	3.7108e+006	0.0000	0.0000	0.0000	0.0000
Strip Mall	40960	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.2578	1.0000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0225	0.0225	6.0000e-005	0.0000	0.0240
Unmitigated	2.2578	1.0000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0225	0.0225	6.0000e-005	0.0000	0.0240

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2694					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.9874					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0600e-003	1.0000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0225	0.0225	6.0000e-005	0.0000	0.0240
Total	2.2578	1.0000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0225	0.0225	6.0000e-005	0.0000	0.0240

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2694					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.9874					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0600e-003	1.0000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0225	0.0225	6.0000e-005	0.0000	0.0240
Total	2.2578	1.0000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0225	0.0225	6.0000e-005	0.0000	0.0240

7.0 Water Detail**7.1 Mitigation Measures Water**

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	78.0026	8.0116	0.1892	334.6659
Unmitigated	78.0026	8.0116	0.1892	334.6659

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	245.572 / 0	77.9086	8.0020	0.1889	334.2626
Strip Mall	0.29629 / 0.181597	0.0940	9.6500e-003	2.3000e-004	0.4033
Total		78.0026	8.0116	0.1892	334.6659

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	245.572 / 0	77.9086	8.0020	0.1889	334.2626
Strip Mall	0.29629 / 0.181597	0.0940	9.6500e-003	2.3000e-004	0.4033
Total		78.0026	8.0116	0.1892	334.6659

8.0 Waste Detail

8.1 Mitigation Measures Waste

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.5561	0.5057	0.0000	21.1973
Unmitigated	8.5561	0.5057	0.0000	21.1973

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Research & Development	37.95	7.7035	0.4553	0.0000	19.0851
Strip Mall	4.2	0.8526	0.0504	0.0000	2.1122
Total		8.5561	0.5056	0.0000	21.1973

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.2 Waste by Land Use****Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Other Non- Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Research & Development	37.95	7.7035	0.4553	0.0000	19.0851
Strip Mall	4.2	0.8526	0.0504	0.0000	2.1122
Total		8.5561	0.5056	0.0000	21.1973

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

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number
----------------	--------

11.0 Vegetation

Emergency Generator Testing - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**Emergency Generator Testing
San Mateo County, Summer****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	0.10	1000sqft	0.00	100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2025
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Model run done for emissions of emergency generator testing

Construction Phase - Model run done for emissions of emergency generator testing

Off-road Equipment - Model run done for emissions of emergency generator testing

Architectural Coating - Model run done for emissions of emergency generator testing

Consumer Products - Model run done for the testing of emergency generators

Area Coating - Model run done for emissions of emergency generator testing

Construction Off-road Equipment Mitigation - Tier 4 per BAAQMD

Area Mitigation - Model run done for emissions of emergency generator testing

Emergency Generator Testing - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	0.00
tblArchitecturalCoating	EF_Parking	150.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	0.00
tblAreaCoating	Area_Parking	6	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	0.00	5.00
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblOffRoadEquipment	HorsePower	84.00	2,982.00

2.0 Emissions Summary

Emergency Generator Testing - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2025	0.7575	12.3121	4.4134	0.0219	0.0000	0.2058	0.2058	0.0000	0.2058	0.2058	0.0000	2,488.244 3	2,488.244 3	0.0657	0.0000	2,489.886 2
Maximum	0.7575	12.3121	4.4134	0.0219	0.0000	0.2058	0.2058	0.0000	0.2058	0.2058	0.0000	2,488.244 3	2,488.244 3	0.0657	0.0000	2,489.886 2

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					
2025	0.0000	0.0000	0.0000	0.0219	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2,488.244 3	2,488.244 3	0.0657	0.0000	2,489.886 2
Maximum	0.0000	0.0000	0.0000	0.0219	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2,488.244 3	2,488.244 3	0.0657	0.0000	2,489.886 2

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	100.00	100.00	100.00	0.00	0.00	100.00	100.00	0.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00

Emergency Generator Testing - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

Emergency Generator Testing - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Emergency Generator Testing	Architectural Coating	1/1/2025	1/7/2025	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: 0; Non-Residential Outdoor: 0; Striped Parking Area: 6 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Emergency Generator Testing	Generator Sets	3	0.30	2982	0.74

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
Emergency Generator Testing	3	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

Emergency Generator Testing - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Emergency Generator Testing - 2025

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7575	12.3121	4.4134	0.0219		0.2058	0.2058		0.2058	0.2058		2,488.244 3	2,488.244 3	0.0657		2,489.886 2
Total	0.7575	12.3121	4.4134	0.0219		0.2058	0.2058		0.2058	0.2058		2,488.244 3	2,488.244 3	0.0657		2,489.886 2

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	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
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
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

Emergency Generator Testing - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Emergency Generator Testing - 2025

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0219		0.0000	0.0000		0.0000	0.0000	0.0000	2,488.244 3	2,488.244 3	0.0657		2,489.886 2
Total	0.0000	0.0000	0.0000	0.0219		0.0000	0.0000		0.0000	0.0000	0.0000	2,488.244 3	2,488.244 3	0.0657		2,489.886 2

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	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
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
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

Emergency Generator Testing - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657

Emergency Generator Testing - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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

Emergency Generator Testing - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005

Emergency Generator Testing - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005

Emergency Generator Testing - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

Emergency Generator Testing - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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

Emergency Generator Testing - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**Emergency Generator Testing****San Mateo County, Winter****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	0.10	1000sqft	0.00	100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2025
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Model run done for emissions of emergency generator testing

Construction Phase - Model run done for emissions of emergency generator testing

Off-road Equipment - Model run done for emissions of emergency generator testing

Architectural Coating - Model run done for emissions of emergency generator testing

Consumer Products - Model run done for the testing of emergency generators

Area Coating - Model run done for emissions of emergency generator testing

Construction Off-road Equipment Mitigation - Tier 4 per BAAQMD

Area Mitigation - Model run done for emissions of emergency generator testing

Emergency Generator Testing - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	0.00
tblArchitecturalCoating	EF_Parking	150.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	0.00
tblAreaCoating	Area_Parking	6	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	0.00	5.00
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblOffRoadEquipment	HorsePower	84.00	2,982.00

2.0 Emissions Summary

Emergency Generator Testing - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2025	0.7575	12.3121	4.4134	0.0219	0.0000	0.2058	0.2058	0.0000	0.2058	0.2058	0.0000	2,488.244 3	2,488.244 3	0.0657	0.0000	2,489.886 2
Maximum	0.7575	12.3121	4.4134	0.0219	0.0000	0.2058	0.2058	0.0000	0.2058	0.2058	0.0000	2,488.244 3	2,488.244 3	0.0657	0.0000	2,489.886 2

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					
2025	0.0000	0.0000	0.0000	0.0219	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2,488.244 3	2,488.244 3	0.0657	0.0000	2,489.886 2
Maximum	0.0000	0.0000	0.0000	0.0219	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2,488.244 3	2,488.244 3	0.0657	0.0000	2,489.886 2

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	100.00	100.00	100.00	0.00	0.00	100.00	100.00	0.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00

Emergency Generator Testing - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

Emergency Generator Testing - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Emergency Generator Testing	Architectural Coating	1/1/2025	1/7/2025	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: 0; Non-Residential Outdoor: 0; Striped Parking Area: 6 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Emergency Generator Testing	Generator Sets	3	0.30	2982	0.74

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
Emergency Generator Testing	3	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

Emergency Generator Testing - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Emergency Generator Testing - 2025

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7575	12.3121	4.4134	0.0219		0.2058	0.2058		0.2058	0.2058		2,488.244 3	2,488.244 3	0.0657		2,489.886 2
Total	0.7575	12.3121	4.4134	0.0219		0.2058	0.2058		0.2058	0.2058		2,488.244 3	2,488.244 3	0.0657		2,489.886 2

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	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
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
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

Emergency Generator Testing - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Emergency Generator Testing - 2025

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0219		0.0000	0.0000		0.0000	0.0000	0.0000	2,488.244 3	2,488.244 3	0.0657		2,489.886 2
Total	0.0000	0.0000	0.0000	0.0219		0.0000	0.0000		0.0000	0.0000	0.0000	2,488.244 3	2,488.244 3	0.0657		2,489.886 2

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	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
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
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

Emergency Generator Testing - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657

Emergency Generator Testing - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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

Emergency Generator Testing - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005

Emergency Generator Testing - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005

Emergency Generator Testing - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

Emergency Generator Testing - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**Emergency Generator Testing****San Mateo County, Annual****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	0.10	1000sqft	0.00	100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2025
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Model run done for emissions of emergency generator testing

Construction Phase - Model run done for emissions of emergency generator testing

Off-road Equipment - Model run done for emissions of emergency generator testing

Architectural Coating - Model run done for emissions of emergency generator testing

Consumer Products - Model run done for the testing of emergency generators

Area Coating - Model run done for emissions of emergency generator testing

Construction Off-road Equipment Mitigation - Tier 4 per BAAQMD

Area Mitigation - Model run done for emissions of emergency generator testing

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	0.00
tblArchitecturalCoating	EF_Parking	150.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	0.00
tblAreaCoating	Area_Parking	6	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	0.00	5.00
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblOffRoadEquipment	HorsePower	84.00	2,982.00

2.0 Emissions Summary

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
2025	1.8900e-003	0.0308	0.0110	5.0000e-005	0.0000	5.1000e-004	5.1000e-004	0.0000	5.1000e-004	5.1000e-004	0.0000	5.6432	5.6432	1.5000e-004	0.0000	5.6470
Maximum	1.8900e-003	0.0308	0.0110	5.0000e-005	0.0000	5.1000e-004	5.1000e-004	0.0000	5.1000e-004	5.1000e-004	0.0000	5.6432	5.6432	1.5000e-004	0.0000	5.6470

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					
2025	0.0000	0.0000	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.6432	5.6432	1.5000e-004	0.0000	5.6470
Maximum	0.0000	0.0000	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.6432	5.6432	1.5000e-004	0.0000	5.6470

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	100.00	100.00	100.00	0.00	0.00	100.00	100.00	0.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational Unmitigated Operational

[illegible]

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

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

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Emergency Generator Testing	Architectural Coating	1/1/2025	1/7/2025	5	5	

Acres of Grading (Site Preparation Phase): 0

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 6 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Emergency Generator Testing	Generator Sets	3	0.30	2982	0.74

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
Emergency Generator Testing	3	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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction On-Site

[illegible]

Unmitigated Construction Off-Site

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Emergency Generator Testing - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	5.0000e-005		0.0000	0.0000		0.0000	0.0000	0.0000	5.6432	5.6432	1.5000e-004	0.0000	5.6470
Total	0.0000	0.0000	0.0000	5.0000e-005		0.0000	0.0000		0.0000	0.0000	0.0000	5.6432	5.6432	1.5000e-004	0.0000	5.6470

Mitigated Construction Off-Site

[illegible]

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

[illegible]

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated

[illegible]

Mitigated

[illegible]

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

[illegible]

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Mitigated**

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

7.0 Water Detail**7.1 Mitigation Measures Water**

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

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

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

120 E. Grand Avenue - Existing Conditions - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

120 E. Grand Avenue - Existing Conditions
San Mateo County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	93.25	1000sqft	4.63	93,250.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2024
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - Site - 4.63 acres
- Construction Phase - No construction this model
- Energy Use -
- Fleet Mix - Fleet mix adjusted to account for 20% heavy-duty trucks at this warehouse use

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	0.00
tblConstructionPhase	PhaseEndDate	11/10/2023	10/17/2023
tblFleetMix	HHD	2.1250e-003	0.20
tblFleetMix	LDA	0.47	0.28
tblLandUse	LotAcreage	2.14	4.63

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0711	0.0000	0.0000	0.0711	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	0.0711	0.0000	0.0000	0.0711	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction

[illegible][illegible]

120 E. Grand Avenue - Existing Conditions - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

120 E. Grand Avenue - Existing Conditions - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	2.2629	9.0000e-005	9.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0204	0.0204	5.0000e-005		0.0217
Energy	4.5200e-003	0.0411	0.0345	2.5000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003		49.2925	49.2925	9.4000e-004	9.0000e-004	49.5854
Mobile	0.4212	2.5580	4.3026	0.0159	1.0240	0.0180	1.0420	0.2744	0.0171	0.2916		1,749.5929	1,749.5929	0.1487	0.1900	1,809.9337
Total	2.6886	2.5992	4.3466	0.0162	1.0240	0.0212	1.0452	0.2744	0.0203	0.2947		1,798.9059	1,798.9059	0.1497	0.1909	1,859.5409

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	2.2629	9.0000e-005	9.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0204	0.0204	5.0000e-005		0.0217
Energy	4.5200e-003	0.0411	0.0345	2.5000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003		49.2925	49.2925	9.4000e-004	9.0000e-004	49.5854
Mobile	0.4212	2.5580	4.3026	0.0159	1.0240	0.0180	1.0420	0.2744	0.0171	0.2916		1,749.5929	1,749.5929	0.1487	0.1900	1,809.9337
Total	2.6886	2.5992	4.3466	0.0162	1.0240	0.0212	1.0452	0.2744	0.0203	0.2947		1,798.9059	1,798.9059	0.1497	0.1909	1,859.5409

120 E. Grand Avenue - Existing Conditions - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	10/18/2023	10/17/2023	5	0	

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: 139,875; Non-Residential Outdoor: 46,625; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction On-Site

[illegible]

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

[illegible]

120 E. Grand Avenue - Existing Conditions - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4212	2.5580	4.3026	0.0159	1.0240	0.0180	1.0420	0.2744	0.0171	0.2916		1,749.5929	1,749.5929	0.1487	0.1900	1,809.9337
Unmitigated	0.4212	2.5580	4.3026	0.0159	1.0240	0.0180	1.0420	0.2744	0.0171	0.2916		1,749.5929	1,749.5929	0.1487	0.1900	1,809.9337

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	162.26	162.26	162.26	473,705	473,705
Total	162.26	162.26	162.26	473,705	473,705

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
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.275819	0.072335	0.232457	0.144246	0.025248	0.006233	0.010124	0.200000	0.001469	0.000591	0.028445	0.000434	0.002601

120 E. Grand Avenue - Existing Conditions - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.0 Energy Detail**

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.5200e-003	0.0411	0.0345	2.5000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003		49.2925	49.2925	9.4000e-004	9.0000e-004	49.5854
NaturalGas Unmitigated	4.5200e-003	0.0411	0.0345	2.5000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003		49.2925	49.2925	9.4000e-004	9.0000e-004	49.5854

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					
Unrefrigerated Warehouse-No Rail	418.986	4.5200e-003	0.0411	0.0345	2.5000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003		49.2925	49.2925	9.4000e-004	9.0000e-004	49.5854
Total		4.5200e-003	0.0411	0.0345	2.5000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003		49.2925	49.2925	9.4000e-004	9.0000e-004	49.5854

120 E. Grand Avenue - Existing Conditions - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	0.418986	4.5200e-003	0.0411	0.0345	2.5000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003		49.2925	49.2925	9.4000e-004	9.0000e-004	49.5854
Total		4.5200e-003	0.0411	0.0345	2.5000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003		49.2925	49.2925	9.4000e-004	9.0000e-004	49.5854

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	2.2629	9.0000e-005	9.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0204	0.0204	5.0000e-005		0.0217
Unmitigated	2.2629	9.0000e-005	9.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0204	0.0204	5.0000e-005		0.0217

120 E. Grand Avenue - Existing Conditions - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2664					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.8000e-004	9.0000e-005	9.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0204	0.0204	5.0000e-005		0.0217
Total	2.2629	9.0000e-005	9.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0204	0.0204	5.0000e-005		0.0217

120 E. Grand Avenue - Existing Conditions - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2664					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.8000e-004	9.0000e-005	9.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0204	0.0204	5.0000e-005		0.0217
Total	2.2629	9.0000e-005	9.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0204	0.0204	5.0000e-005		0.0217

7.0 Water Detail**7.1 Mitigation Measures Water**

120 E. Grand Avenue - Existing Conditions - San Mateo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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

120 E. Grand Avenue - Existing Conditions - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

120 E. Grand Avenue - Existing Conditions
San Mateo County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	93.25	1000sqft	4.63	93,250.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2024
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - Site - 4.63 acres
- Construction Phase - No construction this model
- Energy Use -
- Fleet Mix - Fleet mix adjusted to account for 20% heavy-duty trucks at this warehouse use

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	0.00
tblConstructionPhase	PhaseEndDate	11/10/2023	10/17/2023
tblFleetMix	HHD	2.1250e-003	0.20
tblFleetMix	LDA	0.47	0.28
tblLandUse	LotAcreage	2.14	4.63

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0711	0.0000	0.0000	0.0711	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	0.0711	0.0000	0.0000	0.0711	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0711	0.0000	0.0000	0.0711	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	0.0711	0.0000	0.0000	0.0711	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

[illegible]

120 E. Grand Avenue - Existing Conditions - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

120 E. Grand Avenue - Existing Conditions - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	2.2629	9.0000e-005	9.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0204	0.0204	5.0000e-005		0.0217
Energy	4.5200e-003	0.0411	0.0345	2.5000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003		49.2925	49.2925	9.4000e-004	9.0000e-004	49.5854
Mobile	0.4037	2.7295	4.6079	0.0156	1.0240	0.0181	1.0421	0.2744	0.0172	0.2917		1,720.436 2	1,720.436 2	0.1533	0.1931	1,781.798 6
Total	2.6711	2.7707	4.6519	0.0159	1.0240	0.0213	1.0452	0.2744	0.0204	0.2948		1,769.749 1	1,769.749 1	0.1543	0.1940	1,831.405 8

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	2.2629	9.0000e-005	9.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0204	0.0204	5.0000e-005		0.0217
Energy	4.5200e-003	0.0411	0.0345	2.5000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003		49.2925	49.2925	9.4000e-004	9.0000e-004	49.5854
Mobile	0.4037	2.7295	4.6079	0.0156	1.0240	0.0181	1.0421	0.2744	0.0172	0.2917		1,720.436 2	1,720.436 2	0.1533	0.1931	1,781.798 6
Total	2.6711	2.7707	4.6519	0.0159	1.0240	0.0213	1.0452	0.2744	0.0204	0.2948		1,769.749 1	1,769.749 1	0.1543	0.1940	1,831.405 8

120 E. Grand Avenue - Existing Conditions - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	10/18/2023	10/17/2023	5	0	

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: 139,875; Non-Residential Outdoor: 46,625; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction On-Site

[illegible]

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

[illegible]

120 E. Grand Avenue - Existing Conditions - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4037	2.7295	4.6079	0.0156	1.0240	0.0181	1.0421	0.2744	0.0172	0.2917		1,720.436 2	1,720.436 2	0.1533	0.1931	1,781.798 6
Unmitigated	0.4037	2.7295	4.6079	0.0156	1.0240	0.0181	1.0421	0.2744	0.0172	0.2917		1,720.436 2	1,720.436 2	0.1533	0.1931	1,781.798 6

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	162.26	162.26	162.26	473,705	473,705
Total	162.26	162.26	162.26	473,705	473,705

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
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.275819	0.072335	0.232457	0.144246	0.025248	0.006233	0.010124	0.200000	0.001469	0.000591	0.028445	0.000434	0.002601

120 E. Grand Avenue - Existing Conditions - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.0 Energy Detail**

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.5200e-003	0.0411	0.0345	2.5000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003		49.2925	49.2925	9.4000e-004	9.0000e-004	49.5854
NaturalGas Unmitigated	4.5200e-003	0.0411	0.0345	2.5000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003		49.2925	49.2925	9.4000e-004	9.0000e-004	49.5854

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					
Unrefrigerated Warehouse-No Rail	418.986	4.5200e-003	0.0411	0.0345	2.5000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003		49.2925	49.2925	9.4000e-004	9.0000e-004	49.5854
Total		4.5200e-003	0.0411	0.0345	2.5000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003		49.2925	49.2925	9.4000e-004	9.0000e-004	49.5854

120 E. Grand Avenue - Existing Conditions - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	0.418986	4.5200e-003	0.0411	0.0345	2.5000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003		49.2925	49.2925	9.4000e-004	9.0000e-004	49.5854
Total		4.5200e-003	0.0411	0.0345	2.5000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003		49.2925	49.2925	9.4000e-004	9.0000e-004	49.5854

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	2.2629	9.0000e-005	9.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0204	0.0204	5.0000e-005		0.0217
Unmitigated	2.2629	9.0000e-005	9.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0204	0.0204	5.0000e-005		0.0217

120 E. Grand Avenue - Existing Conditions - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2664					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.8000e-004	9.0000e-005	9.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0204	0.0204	5.0000e-005		0.0217
Total	2.2629	9.0000e-005	9.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0204	0.0204	5.0000e-005		0.0217

120 E. Grand Avenue - Existing Conditions - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2664					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.8000e-004	9.0000e-005	9.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0204	0.0204	5.0000e-005		0.0217
Total	2.2629	9.0000e-005	9.5100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0204	0.0204	5.0000e-005		0.0217

7.0 Water Detail**7.1 Mitigation Measures Water**

120 E. Grand Avenue - Existing Conditions - San Mateo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

120 E. Grand Avenue - Existing Conditions
San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	93.25	1000sqft	4.63	93,250.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2024
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - Site - 4.63 acres
- Construction Phase - No construction this model
- Energy Use -
- Fleet Mix - Fleet mix adjusted to account for 20% heavy-duty trucks at this warehouse use

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	0.00
tblConstructionPhase	PhaseEndDate	11/10/2023	10/17/2023
tblFleetMix	HHD	2.1250e-003	0.20
tblFleetMix	LDA	0.47	0.28
tblLandUse	LotAcreage	2.14	4.63

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

[illegible]

Mitigated Construction

[illegible][illegible]

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4129	1.0000e-005	8.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6700e-003	1.6700e-003	0.0000	0.0000	1.7700e-003
Energy	8.2000e-004	7.5000e-003	6.3000e-003	4.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1609	8.1609	1.6000e-004	1.5000e-004	8.2094
Mobile	0.0727	0.4847	0.7981	2.8400e-003	0.1789	3.2900e-003	0.1821	0.0481	3.1200e-003	0.0512	0.0000	283.8687	283.8687	0.0250	0.0316	293.9198
Waste						0.0000	0.0000		0.0000	0.0000	17.7942	0.0000	17.7942	1.0516	0.0000	44.0844
Water						0.0000	0.0000		0.0000	0.0000	6.8413	0.0000	6.8413	0.7027	0.0166	29.3522
Total	0.4864	0.4922	0.8053	2.8800e-003	0.1789	3.8600e-003	0.1827	0.0481	3.6900e-003	0.0518	24.6355	292.0313	316.6667	1.7794	0.0484	375.5675

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**2.2 Overall Operational****Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4129	1.0000e-005	8.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6700e-003	1.6700e-003	0.0000	0.0000	1.7700e-003
Energy	8.2000e-004	7.5000e-003	6.3000e-003	4.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1609	8.1609	1.6000e-004	1.5000e-004	8.2094
Mobile	0.0727	0.4847	0.7981	2.8400e-003	0.1789	3.2900e-003	0.1821	0.0481	3.1200e-003	0.0512	0.0000	283.8687	283.8687	0.0250	0.0316	293.9198
Waste						0.0000	0.0000		0.0000	0.0000	17.7942	0.0000	17.7942	1.0516	0.0000	44.0844
Water						0.0000	0.0000		0.0000	0.0000	6.8413	0.0000	6.8413	0.7027	0.0166	29.3522
Total	0.4864	0.4922	0.8053	2.8800e-003	0.1789	3.8600e-003	0.1827	0.0481	3.6900e-003	0.0518	24.6355	292.0313	316.6667	1.7794	0.0484	375.5675

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

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	10/18/2023	10/17/2023	5	0	

Acres of Grading (Site Preparation Phase): 0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Paving: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2023

Unmitigated Construction On-Site

[illegible]

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

[illegible]

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

[illegible]

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0727	0.4847	0.7981	2.8400e-003	0.1789	3.2900e-003	0.1821	0.0481	3.1200e-003	0.0512	0.0000	283.8687	283.8687	0.0250	0.0316	293.9198
Unmitigated	0.0727	0.4847	0.7981	2.8400e-003	0.1789	3.2900e-003	0.1821	0.0481	3.1200e-003	0.0512	0.0000	283.8687	283.8687	0.0250	0.0316	293.9198

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	162.26	162.26	162.26	473,705	473,705
Total	162.26	162.26	162.26	473,705	473,705

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
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.275819	0.072335	0.232457	0.144246	0.025248	0.006233	0.010124	0.200000	0.001469	0.000591	0.028445	0.000434	0.002601

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.0 Energy Detail**

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	8.2000e-004	7.5000e-003	6.3000e-003	4.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1609	8.1609	1.6000e-004	1.5000e-004	8.2094
NaturalGas Unmitigated	8.2000e-004	7.5000e-003	6.3000e-003	4.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1609	8.1609	1.6000e-004	1.5000e-004	8.2094

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
Unrefrigerated Warehouse-No Rail	152930	8.2000e-004	7.5000e-003	6.3000e-003	4.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1609	8.1609	1.6000e-004	1.5000e-004	8.2094
Total		8.2000e-004	7.5000e-003	6.3000e-003	4.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1609	8.1609	1.6000e-004	1.5000e-004	8.2094

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					
Unrefrigerated Warehouse-No Rail	152930	8.2000e-004	7.5000e-003	6.3000e-003	4.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1609	8.1609	1.6000e-004	1.5000e-004	8.2094
Total		8.2000e-004	7.5000e-003	6.3000e-003	4.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1609	8.1609	1.6000e-004	1.5000e-004	8.2094

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	408435	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	408435	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.4129	1.0000e-005	8.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6700e-003	1.6700e-003	0.0000	0.0000	1.7700e-003
Unmitigated	0.4129	1.0000e-005	8.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6700e-003	1.6700e-003	0.0000	0.0000	1.7700e-003

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0486					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3642					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	8.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6700e-003	1.6700e-003	0.0000	0.0000	1.7700e-003
Total	0.4129	1.0000e-005	8.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6700e-003	1.6700e-003	0.0000	0.0000	1.7700e-003

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0486					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3642					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	8.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6700e-003	1.6700e-003	0.0000	0.0000	1.7700e-003
Total	0.4129	1.0000e-005	8.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6700e-003	1.6700e-003	0.0000	0.0000	1.7700e-003

7.0 Water Detail**7.1 Mitigation Measures Water**

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	6.8413	0.7027	0.0166	29.3522
Unmitigated	6.8413	0.7027	0.0166	29.3522

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	21.5641 / 0	6.8413	0.7027	0.0166	29.3522
Total		6.8413	0.7027	0.0166	29.3522

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	21.5641 / 0	6.8413	0.7027	0.0166	29.3522
Total		6.8413	0.7027	0.0166	29.3522

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	17.7942	1.0516	0.0000	44.0844
Unmitigated	17.7942	1.0516	0.0000	44.0844

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	87.66	17.7942	1.0516	0.0000	44.0844
Total		17.7942	1.0516	0.0000	44.0844

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	87.66	17.7942	1.0516	0.0000	44.0844
Total		17.7942	1.0516	0.0000	44.0844

9.0 Operational Offroad

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

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

Health Risk Analysis Output Files

Source Pathway - Source Inputs

AERMOD

Line Volume Sources

Source Type: LINE VOLUME

Source: SLINE3 (Offsite Truck)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.15	1.00000		552496.11	4167639.82	4.98	0.00
			552554.67	4167640.96	4.75	0.00
			552577.86	4167646.29	4.97	0.00
			552599.53	4167660.36	5.48	0.00
			552630.33	4167709.78	6.43	0.00
			552499.54	4167785.45	5.18	0.00
			552456.95	4167789.63	5.23	0.00
			552416.65	4167774.80	5.17	0.00
			552329.20	4167673.28	6.29	0.00
			552292.70	4167664.92	5.21	0.00
			552280.53	4167679.37	5.24	0.00
			552279.01	4167690.01	5.75	0.00
			552289.66	4167699.90	5.71	0.00
			552301.82	4167704.46	5.98	0.00
			552325.40	4167701.80	6.18	0.00
			552340.23	4167705.22	6.49	0.00
			552350.87	4167720.05	6.37	0.00
			552360.43	4167805.54	7.03	0.00

Source Pathway - Source Inputs

AERMOD

Source Type: LINE VOLUME

Source: SLINE4 (Onsite Truck)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.15	1.00000		552496.08	4167628.95	4.88	0.00
			552497.23	4167527.53	4.91	0.00
			552440.80	4167526.39	5.28	0.00
			552441.56	4167404.76	4.50	0.00
			552492.65	4167404.38	3.75	0.00
			552493.03	4167469.20	3.76	0.00
			552591.02	4167469.58	4.10	0.00
			552588.35	4167627.42	4.74	0.00

Source Pathway - Source Inputs

AERMOD

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE3	L0000011	552507.19	4167640.04	4.98	0.00	0.05556	22.15		20.60	2.37
	L0000012	552551.48	4167640.90	4.74	0.00	0.05556	22.15		20.60	2.37
	L0000013	552592.38	4167655.72	5.35	0.00	0.05556	22.15		20.60	2.37
	L0000014	552618.45	4167690.72	6.50	0.00	0.05556	22.15		20.60	2.37
	L0000015	552611.42	4167720.72	8.08	0.00	0.05556	22.15		20.60	2.37
	L0000016	552573.08	4167742.90	10.95	0.00	0.05556	22.15		20.60	2.37
	L0000017	552534.73	4167765.09	5.76	0.00	0.05556	22.15		20.60	2.37
	L0000018	552495.92	4167785.80	4.88	0.00	0.05556	22.15		20.60	2.37
	L0000019	552452.12	4167787.85	5.13	0.00	0.05556	22.15		20.60	2.37
	L0000020	552412.40	4167769.87	5.17	0.00	0.05556	22.15		20.60	2.37
	L0000021	552383.49	4167736.31	13.08	0.00	0.05556	22.15		20.60	2.37
	L0000022	552354.58	4167702.74	8.62	0.00	0.05556	22.15		20.60	2.37
	L0000023	552323.92	4167672.07	6.11	0.00	0.05556	22.15		20.60	2.37
	L0000024	552284.80	4167674.30	5.21	0.00	0.05556	22.15		20.60	2.37
	L0000025	552301.27	4167704.25	5.84	0.00	0.05556	22.15		20.60	2.37
	L0000026	552343.00	4167709.09	6.10	0.00	0.05556	22.15		20.60	2.37
	L0000027	552354.30	4167750.67	6.27	0.00	0.05556	22.15		20.60	2.37
	L0000028	552359.22	4167794.69	6.95	0.00	0.05556	22.15		20.60	2.37
Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0000029	552496.21	4167617.88	5.13	0.00	0.06667	22.15		20.60	2.37
	L0000030	552496.71	4167573.58	5.07	0.00	0.06667	22.15		20.60	2.37
	L0000031	552497.21	4167529.28	4.98	0.00	0.06667	22.15		20.60	2.37
	L0000032	552454.69	4167526.67	5.31	0.00	0.06667	22.15		20.60	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0000033	552440.99	4167495.98	4.35	0.00	0.06667	22.15		20.60	2.37
	L0000034	552441.27	4167451.68	4.26	0.00	0.06667	22.15		20.60	2.37
	L0000035	552441.55	4167407.38	4.65	0.00	0.06667	22.15		20.60	2.37
	L0000036	552483.24	4167404.45	3.81	0.00	0.06667	22.15		20.60	2.37
	L0000037	552492.86	4167439.27	3.36	0.00	0.06667	22.15		20.60	2.37
	L0000038	552507.40	4167469.25	3.96	0.00	0.06667	22.15		20.60	2.37
	L0000039	552551.70	4167469.42	4.11	0.00	0.06667	22.15		20.60	2.37
	L0000040	552590.94	4167474.56	4.07	0.00	0.06667	22.15		20.60	2.37
	L0000041	552590.19	4167518.85	4.51	0.00	0.06667	22.15		20.60	2.37
	L0000042	552589.44	4167563.15	4.86	0.00	0.06667	22.15		20.60	2.37
	L0000043	552588.69	4167607.44	4.67	0.00	0.06667	22.15		20.60	2.37

Source Pathway

AERMOD

Building Downwash Information

Option not in use

Emission Rate Units for Output

For Concentration

Unit Factor: 1E6
Emission Unit Label: GRAMS/SEC
Concentration Unit Label: MICROGRAMS/M**3

Source Groups

Source Group ID: SLINE4	List of Sources in Group (Source Range or Single Sources)
	SLINE4
Source Group ID: SLINE3	List of Sources in Group (Source Range or Single Sources)
	SLINE3
Source Group ID: ALL	List of Sources in Group (Source Range or Single Sources)
	All Sources Included

Receptor Pathway

AERMOD

Receptor Networks

Note: Terrain Elevations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Uniform Cartesian Grid

Receptor Network ID	Grid Origin X Coordinate [m]	Grid Origin Y Coordinate [m]	No. of X-Axis Receptors	No. of Y-Axis Receptors	Spacing for X-Axis [m]	Spacing for Y-Axis [m]
UCART1	552068.68	4167106.66	20	20	50.00	50.00

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	552138.38	4167496.49		7.20	
2	552138.38	4167482.80		6.99	
3	552133.43	4167510.18		7.13	
4	552231.92	4167905.62		8.06	

Plant Boundary Receptors

Meteorology Pathway

AERMOD

Met Input Data

Surface Met Data

Filename: ..\..\E Grand Ave\SFIAP_met\724940.SFC
Format Type: Default AERMET format

Profile Met Data

Filename: ..\..\E Grand Ave\SFIAP_met\724940.PFL
Format Type: Default AERMET format

Wind Speed



Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 9.14 [m]

Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface		2009			SAN FRANCISCO/INT'L ARPT
Upper Air		2009			OAKLAND/WSO AP

Data Period

Data Period to Process

Start Date: 1/1/2009 Start Hour: 1 End Date: 1/2/2014 End Hour: 24

Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

Source Pathway - Source Inputs

AERMOD

Point Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Gas Exit Temp. [K]	Gas Exit Velocity [m/s]	Stack Inside Diameter [m]
POINT	STCK1	552543.68 Vent-Building 2	4167581.66	5.74	15.24	1.00000	291.00	5.00	1.00
POINT	STCK2	552461.96 Vent-Building 1	4167466.12	4.18	33.53	1.00000	291.00	5.00	1.00
POINT	STCK3	552515.55 Vent-Building 3	4167495.00	4.13	9.14	1.00000	291.00	5.00	1.00
POINT	STCK4	552480.47 Generator- Building 1	4167413.78	3.93	1.37	1.00000	291.00	5.00	1.00
POINT	STCK5	552524.36 Generator- Building 3	4167480.45	4.13	1.37	1.00000	291.00	5.00	1.00
POINT	STCK6	552561.69 Generator- Building 2	4167559.06	5.83	1.37	1.00000	291.00	5.00	1.00

Area Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/ (s-m^2)]	Length of X Side [m]	Length of Y Side [m]	Orientation Angle from North [deg]	Initial Vertical Dim. [m]
AREA	AREA1	552574.12 LD-Building 2	4167560.11	5.78	3.68	1.00000	4.66	14.29	0.00	
AREA	AREA2	552445.02 LD- Building 1	4167409.32	4.60	3.68	1.00000	19.64	4.59	0.00	

Source Pathway - Source Inputs

AERMOD

Line Volume Sources

Source Type: LINE VOLUME

Source: SLINE1 (Onsite Truck)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.15	1.00000		552579.01	4167565.82	5.84	0.00
			552590.92	4167565.82	4.91	0.00
			552590.72	4167613.05	4.75	0.00
			552496.85	4167611.26	5.16	0.00
			552497.64	4167620.59	5.06	0.00
			552496.45	4167636.87	4.99	0.00

Source Type: LINE VOLUME

Source: SLINE2 (Onsite Truck)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.15	1.00000		552455.62	4167409.08	4.20	0.00
			552456.00	4167399.96	4.17	0.00
			552456.00	4167397.68	4.23	0.00
			552496.30	4167399.20	3.70	0.00
			552497.06	4167611.73	5.16	0.00

Source Pathway - Source Inputs

AERMOD

Source Type: LINE VOLUME

Source: SLINE3 (Offsite Truck)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.15	1.00000		552496.11	4167639.82	4.98	0.00
			552554.67	4167640.96	4.75	0.00
			552577.86	4167646.29	4.97	0.00
			552599.53	4167660.36	5.48	0.00
			552630.33	4167709.78	6.43	0.00
			552499.54	4167785.45	5.18	0.00
			552456.95	4167789.63	5.23	0.00
			552416.65	4167774.80	5.17	0.00
			552329.20	4167673.28	6.29	0.00
			552292.70	4167664.92	5.21	0.00
			552280.53	4167679.37	5.24	0.00
			552279.01	4167690.01	5.75	0.00
			552289.66	4167699.90	5.71	0.00
			552301.82	4167704.46	5.98	0.00
			552325.40	4167701.80	6.18	0.00
			552340.23	4167705.22	6.49	0.00
			552350.87	4167720.05	6.37	0.00
			552360.43	4167805.54	7.03	0.00

Source Pathway - Source Inputs

AERMOD

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE1	L0000001	552590.09	4167565.82	5.02	0.00	0.25000	22.15		20.60	2.37
	L0000002	552590.74	4167609.28	4.71	0.00	0.25000	22.15		20.60	2.37
	L0000003	552550.20	4167612.28	5.22	0.00	0.25000	22.15		20.60	2.37
	L0000004	552505.90	4167611.44	5.05	0.00	0.25000	22.15		20.60	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE2	L0000005	552456.00	4167398.02	4.20	0.00	0.16667	22.15		20.60	2.37
	L0000006	552496.32	4167402.83	3.76	0.00	0.16667	22.15		20.60	2.37
	L0000007	552496.47	4167447.13	3.44	0.00	0.16667	22.15		20.60	2.37
	L0000008	552496.63	4167491.43	4.34	0.00	0.16667	22.15		20.60	2.37
	L0000009	552496.79	4167535.73	5.08	0.00	0.16667	22.15		20.60	2.37
	L0000010	552496.95	4167580.03	5.06	0.00	0.16667	22.15		20.60	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE3	L0000011	552507.19	4167640.04	4.98	0.00	0.05556	22.15		20.60	2.37
	L0000012	552551.48	4167640.90	4.74	0.00	0.05556	22.15		20.60	2.37
	L0000013	552592.38	4167655.72	5.35	0.00	0.05556	22.15		20.60	2.37
	L0000014	552618.45	4167690.72	6.50	0.00	0.05556	22.15		20.60	2.37
	L0000015	552611.42	4167720.72	8.08	0.00	0.05556	22.15		20.60	2.37
	L0000016	552573.08	4167742.90	10.95	0.00	0.05556	22.15		20.60	2.37
	L0000017	552534.73	4167765.09	5.76	0.00	0.05556	22.15		20.60	2.37
	L0000018	552495.92	4167785.80	4.88	0.00	0.05556	22.15		20.60	2.37
	L0000019	552452.12	4167787.85	5.13	0.00	0.05556	22.15		20.60	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE3	L0000020	552412.40	4167769.87	5.17	0.00	0.05556	22.15		20.60	2.37
	L0000021	552383.49	4167736.31	13.08	0.00	0.05556	22.15		20.60	2.37
	L0000022	552354.58	4167702.74	8.62	0.00	0.05556	22.15		20.60	2.37
	L0000023	552323.92	4167672.07	6.11	0.00	0.05556	22.15		20.60	2.37
	L0000024	552284.80	4167674.30	5.21	0.00	0.05556	22.15		20.60	2.37
	L0000025	552301.27	4167704.25	5.84	0.00	0.05556	22.15		20.60	2.37
	L0000026	552343.00	4167709.09	6.10	0.00	0.05556	22.15		20.60	2.37
	L0000027	552354.30	4167750.67	6.27	0.00	0.05556	22.15		20.60	2.37
	L0000028	552359.22	4167794.69	6.95	0.00	0.05556	22.15		20.60	2.37

Source Pathway

AERMOD

Building Downwash Information

Source ID: STCK1						
Heights [m] (10 to 360 deg)						
10-60 deg	15.24	33.52	33.52	33.52	33.52	33.52
70-120 deg	15.24	15.24	15.24	15.24	15.24	15.24
130-180 deg	15.24	15.24	15.24	15.24	15.24	15.24
190-240 deg	15.24	15.24	15.24	15.24	15.24	15.24
250-300 deg	15.24	15.24	15.24	15.24	15.24	15.24
310-360 deg	15.24	15.24	15.24	15.24	15.24	15.24
Widths [m] (10 to 360 deg)						
10-60 deg	79.41	71.12	85.12	96.54	105.03	110.33
70-120 deg	75.67	73.45	75.56	87.30	96.57	103.05
130-180 deg	106.39	106.50	103.37	97.11	87.89	76.00
190-240 deg	79.41	81.29	80.70	78.65	80.08	79.08
250-300 deg	75.67	73.45	75.56	87.30	96.57	103.05
310-360 deg	106.39	106.50	103.37	97.11	87.89	76.00
Lengths [m] (10 to 360 deg)						
10-60 deg	87.30	112.27	110.33	105.03	96.54	85.12
70-120 deg	97.11	87.89	76.00	79.41	81.29	80.70
130-180 deg	78.65	80.08	79.08	75.67	73.45	75.56
190-240 deg	87.30	96.57	103.05	106.39	106.50	103.37
250-300 deg	97.11	87.89	76.00	79.41	81.29	80.70
310-360 deg	78.65	80.08	79.08	75.67	73.45	75.56
Along Flow [m] (10 to 360 deg)						
10-60 deg	-55.36	-191.11	-194.39	-191.76	-183.30	-169.27
70-120 deg	-48.55	-41.58	-33.35	-36.63	-39.25	-40.67
130-180 deg	-40.85	-39.79	-37.53	-34.12	-29.68	-25.23
190-240 deg	-31.94	-37.87	-42.79	-46.40	-48.60	-49.33
250-300 deg	-48.55	-46.31	-42.65	-42.78	-42.04	-40.03
310-360 deg	-37.80	-40.29	-41.55	-41.56	-43.77	-50.33
Across Flow [m] (10 to 360 deg)						
10-60 deg	-3.07	36.27	12.28	-12.09	-36.08	-58.98
70-120 deg	-3.72	-7.05	-12.55	-11.71	-10.41	-8.74
130-180 deg	-6.80	-4.65	-2.36	0.00	2.36	4.65
190-240 deg	3.07	1.40	-0.32	-1.52	0.25	2.01
250-300 deg	3.72	7.05	12.55	11.71	10.41	8.74
310-360 deg	6.80	4.65	2.36	0.00	-2.36	-4.65

Source ID: STCK2						
Heights [m] (10 to 360 deg)						
10-60 deg	33.52	33.52	33.52	33.52	33.52	33.52

Source Pathway

AERMOD

70-120 deg	33.52	33.52	33.52	33.52	33.52	33.52
130-180 deg	33.52	33.52	33.52	33.52	33.52	33.52
190-240 deg	33.52	33.52	33.52	33.52	33.52	33.52
250-300 deg	33.52	33.52	33.52	33.52	33.52	33.52
310-360 deg	33.52	33.52	33.52	33.52	33.52	33.52
Widths [m] (10 to 360 deg)						
10-60 deg	54.95	71.12	85.12	96.54	105.03	110.33
70-120 deg	112.27	110.80	105.97	110.80	112.27	110.33
130-180 deg	105.03	96.54	85.12	71.12	54.95	37.11
190-240 deg	54.95	71.12	85.12	96.54	105.03	110.33
250-300 deg	112.27	110.80	105.97	110.80	112.27	110.33
310-360 deg	105.03	96.54	85.12	71.12	54.95	37.11
Lengths [m] (10 to 360 deg)						
10-60 deg	110.80	112.27	110.33	105.03	96.54	85.12
70-120 deg	71.12	54.95	37.11	54.95	71.12	85.12
130-180 deg	96.54	105.03	110.33	112.27	110.80	105.97
190-240 deg	110.80	112.27	110.33	105.03	96.54	85.12
250-300 deg	71.12	54.95	37.11	54.95	71.12	85.12
310-360 deg	96.54	105.03	110.33	112.27	110.80	105.97
Along Flow [m] (10 to 360 deg)						
10-60 deg	-54.06	-54.59	-53.47	-50.72	-46.43	-40.73
70-120 deg	-33.79	-25.83	-17.08	-26.21	-34.55	-41.84
130-180 deg	-47.85	-52.41	-55.38	-56.67	-56.23	-54.09
190-240 deg	-56.75	-57.68	-56.86	-54.31	-50.11	-44.39
250-300 deg	-37.32	-29.12	-20.03	-28.73	-36.57	-43.29
310-360 deg	-48.69	-52.62	-54.94	-55.60	-54.57	-51.88
Across Flow [m] (10 to 360 deg)						
10-60 deg	-1.26	-1.01	-0.72	-0.42	-0.10	0.22
70-120 deg	0.53	0.83	1.10	1.34	1.54	1.69
130-180 deg	1.79	1.84	1.83	1.76	1.64	1.48
190-240 deg	1.26	1.01	0.72	0.42	0.10	-0.22
250-300 deg	-0.53	-0.83	-1.11	-1.34	-1.54	-1.69
310-360 deg	-1.79	-1.84	-1.83	-1.76	-1.64	-1.47

Source ID: **STCK3**

Heights [m] (10 to 360 deg)

10-60 deg	9.14	33.52	33.52	33.52	33.52	33.52
70-120 deg	33.52	33.52	33.52	33.52	33.52	33.52
130-180 deg	33.52	33.52	33.52	15.24	15.24	15.24
190-240 deg	15.24	33.52	33.52	33.52	33.52	33.52
250-300 deg	33.52	33.52	33.52	33.52	33.52	33.52
310-360 deg	33.52	33.52	33.52	15.24	9.14	9.14

Source Pathway

AERMOD

Widths [m] (10 to 360 deg)						
10-60 deg	19.66	71.12	85.12	96.54	105.03	110.33
70-120 deg	112.27	110.80	105.97	110.80	112.27	110.33
130-180 deg	105.03	96.54	85.12	97.11	87.89	76.00
190-240 deg	79.41	71.12	85.12	96.54	105.03	110.33
250-300 deg	112.27	110.80	105.97	110.80	112.27	110.33
310-360 deg	105.03	96.54	85.12	97.11	19.66	14.76
Lengths [m] (10 to 360 deg)						
10-60 deg	31.62	112.27	110.33	105.03	96.54	85.12
70-120 deg	71.12	54.95	37.11	54.95	71.12	85.12
130-180 deg	96.54	105.03	110.33	75.67	73.45	75.56
190-240 deg	87.30	112.27	110.33	105.03	96.54	85.12
250-300 deg	71.12	54.95	37.11	54.95	71.12	85.12
310-360 deg	96.54	105.03	110.33	75.67	31.62	29.51
Along Flow [m] (10 to 360 deg)						
10-60 deg	-14.78	-100.06	-105.28	-107.29	-106.05	-101.58
70-120 deg	-94.03	-83.62	-70.67	-73.97	-75.03	-73.81
130-180 deg	-70.34	-64.74	-57.17	-105.93	-110.13	-111.89
190-240 deg	-122.17	-12.21	-5.05	2.26	9.50	16.46
250-300 deg	22.91	28.67	33.56	19.03	3.91	-11.32
310-360 deg	-26.20	-40.29	-53.16	30.26	-15.63	-14.14
Across Flow [m] (10 to 360 deg)						
10-60 deg	-2.29	39.47	31.25	22.07	12.22	2.00
70-120 deg	-8.28	-18.30	-27.78	-36.40	-43.92	-50.11
130-180 deg	-54.78	-57.78	-59.02	56.07	45.11	32.78
190-240 deg	15.73	-39.47	-31.25	-22.07	-12.22	-2.00
250-300 deg	8.28	18.30	27.78	36.40	43.92	50.11
310-360 deg	54.78	57.78	59.02	-56.07	-2.50	-2.43

Source ID: STCK4						
Heights [m] (10 to 360 deg)						
10-60 deg	33.52	33.52	33.52	33.52	33.52	33.52
70-120 deg	33.52	33.52	33.52	33.52	33.52	33.52
130-180 deg	33.52	33.52	33.52	33.52	33.52	33.52
190-240 deg	33.52	33.52	33.52	33.52	33.52	33.52
250-300 deg	33.52	33.52	33.52	33.52	33.52	33.52
310-360 deg	33.52	33.52	33.52	33.52	33.52	33.52
Widths [m] (10 to 360 deg)						
10-60 deg	54.95	71.12	85.12	96.54	105.03	110.33
70-120 deg	112.27	110.80	105.97	110.80	112.27	110.33
130-180 deg	105.03	96.54	85.12	71.12	54.95	37.11
190-240 deg	54.95	71.12	85.12	96.54	105.03	110.33

Source Pathway

AERMOD

250-300 deg	112.27	110.80	105.97	110.80	112.27	110.33
310-360 deg	105.03	96.54	85.12	71.12	54.95	37.11
Lengths [m] (10 to 360 deg)						
10-60 deg	110.80	112.27	110.33	105.03	96.54	85.12
70-120 deg	71.12	54.95	37.11	54.95	71.12	85.12
130-180 deg	96.54	105.03	110.33	112.27	110.80	105.97
190-240 deg	110.80	112.27	110.33	105.03	96.54	85.12
250-300 deg	71.12	54.95	37.11	54.95	71.12	85.12
310-360 deg	96.54	105.03	110.33	112.27	110.80	105.97
Along Flow [m] (10 to 360 deg)						
10-60 deg	-5.73	-11.74	-17.40	-22.52	-26.97	-30.59
70-120 deg	-33.29	-34.97	-35.59	-53.53	-69.84	-84.04
130-180 deg	-95.68	-104.41	-109.97	-112.18	-110.99	-106.43
190-240 deg	-105.08	-100.53	-92.93	-82.51	-69.58	-54.53
250-300 deg	-37.83	-19.98	-1.52	-1.42	-1.27	-1.09
310-360 deg	-0.87	-0.62	-0.36	-0.09	0.19	0.46
Across Flow [m] (10 to 360 deg)						
10-60 deg	26.06	34.29	41.48	47.40	51.89	54.80
70-120 deg	56.05	55.59	53.44	49.67	44.40	37.77
130-180 deg	29.99	21.30	11.97	2.27	-7.50	-17.04
190-240 deg	-26.06	-34.29	-41.48	-47.40	-51.89	-54.80
250-300 deg	-56.05	-55.59	-53.44	-49.67	-44.40	-37.77
310-360 deg	-29.99	-21.30	-11.97	-2.27	7.50	17.04

Source ID: STCK5						
Heights [m] (10 to 360 deg)						
10-60 deg	9.14	9.14	33.52	33.52	33.52	33.52
70-120 deg	33.52	33.52	33.52	33.52	33.52	33.52
130-180 deg	33.52	33.52	9.14	15.24	15.24	15.24
190-240 deg	15.24	15.24	33.52	33.52	33.52	33.52
250-300 deg	33.52	33.52	33.52	33.52	33.52	33.52
310-360 deg	33.52	33.52	9.14	9.14	9.14	9.14
Widths [m] (10 to 360 deg)						
10-60 deg	19.66	23.96	85.12	96.54	105.03	110.33
70-120 deg	112.27	110.80	105.97	110.80	112.27	110.33
130-180 deg	105.03	96.54	27.54	97.11	87.89	76.00
190-240 deg	79.41	81.29	85.12	96.54	105.03	110.33
250-300 deg	112.27	110.80	105.97	110.80	112.27	110.33
310-360 deg	105.03	96.54	27.54	23.96	19.66	14.76
Lengths [m] (10 to 360 deg)						
10-60 deg	31.62	32.78	110.33	105.03	96.54	85.12
70-120 deg	71.12	54.95	37.11	54.95	71.12	85.12

Source Pathway

AERMOD

130-180 deg	96.54	105.03	32.94	75.67	73.45	75.56
190-240 deg	87.30	96.57	110.33	105.03	96.54	85.12
250-300 deg	71.12	54.95	37.11	54.95	71.12	85.12
310-360 deg	96.54	105.03	32.94	32.78	31.62	29.51
Along Flow [m] (10 to 360 deg)						
10-60 deg	-1.99	-4.32	-97.08	-101.81	-103.44	-101.94
70-120 deg	-97.33	-89.77	-79.48	-85.18	-88.29	-88.71
130-180 deg	-86.44	-81.55	-32.79	-122.62	-125.99	-126.44
190-240 deg	-134.97	-139.59	-13.25	-3.22	6.90	16.81
250-300 deg	26.22	34.82	42.37	30.23	17.17	3.59
310-360 deg	-10.10	-23.48	-0.14	0.04	0.23	0.41
Across Flow [m] (10 to 360 deg)						
10-60 deg	8.92	11.18	46.15	38.17	29.03	19.01
70-120 deg	8.41	-2.44	-13.23	-23.60	-33.27	-41.92
130-180 deg	-49.29	-55.17	2.06	52.77	38.96	23.97
190-240 deg	4.52	-15.06	-46.15	-38.17	-29.03	-19.01
250-300 deg	-8.41	2.44	13.23	23.60	33.27	41.92
310-360 deg	49.29	55.17	-2.06	0.81	3.65	6.38

Source ID: STCK6						
Heights [m] (10 to 360 deg)						
10-60 deg	15.24	15.24	33.52	33.52	33.52	33.52
70-120 deg	33.52	15.24	15.24	15.24	15.24	15.24
130-180 deg	15.24	15.24	15.24	15.24	15.24	15.24
190-240 deg	15.24	15.24	15.24	15.24	15.24	15.24
250-300 deg	15.24	15.24	15.24	15.24	15.24	15.24
310-360 deg	15.24	15.24	15.24	15.24	15.24	15.24
Widths [m] (10 to 360 deg)						
10-60 deg	79.41	81.29	85.12	96.54	105.03	110.33
70-120 deg	112.27	73.45	75.56	87.30	96.57	103.05
130-180 deg	106.39	106.50	103.37	97.11	87.89	76.00
190-240 deg	79.41	81.29	80.70	78.65	80.08	79.08
250-300 deg	75.67	73.45	75.56	87.30	96.57	103.05
310-360 deg	106.39	106.50	103.37	97.11	87.89	76.00
Lengths [m] (10 to 360 deg)						
10-60 deg	87.30	96.57	110.33	105.03	96.54	85.12
70-120 deg	71.12	87.89	76.00	79.41	81.29	80.70
130-180 deg	78.65	80.08	79.08	75.67	73.45	75.56
190-240 deg	87.30	96.57	103.05	106.39	106.50	103.37
250-300 deg	97.11	87.89	76.00	79.41	81.29	80.70
310-360 deg	78.65	80.08	79.08	75.67	73.45	75.56

Source Pathway

AERMOD

Along Flow [m] (10 to 360 deg)

10-60 deg	-36.23	-43.62	-183.82	-186.02	-182.57	-173.57
70-120 deg	-159.30	-55.39	-51.36	-58.30	-63.90	-67.56
130-180 deg	-69.17	-68.68	-66.10	-61.52	-55.06	-47.83
190-240 deg	-51.07	-52.95	-53.35	-52.13	-49.33	-45.03
250-300 deg	-39.36	-32.49	-24.64	-21.12	-17.39	-13.14
310-360 deg	-9.48	-11.40	-12.98	-14.16	-18.39	-27.73

Across Flow [m] (10 to 360 deg)

10-60 deg	18.59	23.25	39.17	16.24	-7.19	-30.40
70-120 deg	-52.69	18.33	10.05	7.42	4.66	1.83
130-180 deg	-1.06	-3.92	-6.66	-9.19	-11.45	-13.36
190-240 deg	-18.59	-23.25	-27.21	-29.85	-28.64	-26.56
250-300 deg	-23.68	-18.33	-10.05	-7.42	-4.66	-1.83
310-360 deg	1.06	3.92	6.66	9.19	11.45	13.36

Emission Rate Units for Output

For Concentration

Unit Factor:	1E6
Emission Unit Label:	GRAMS/SEC
Concentration Unit Label:	MICROGRAMS/M**3

Source Pathway

AERMOD

Source Groups

Source Group ID: STCK6	List of Sources in Group (Source Range or Single Sources)
	STCK6
Source Group ID: STCK5	List of Sources in Group (Source Range or Single Sources)
	STCK5
Source Group ID: STCK4	List of Sources in Group (Source Range or Single Sources)
	STCK4
Source Group ID: STCK3	List of Sources in Group (Source Range or Single Sources)
	STCK3
Source Group ID: STCK2	List of Sources in Group (Source Range or Single Sources)
	STCK2
Source Group ID: STCK1	List of Sources in Group (Source Range or Single Sources)
	STCK1
Source Group ID: SLINE3	List of Sources in Group (Source Range or Single Sources)
	SLINE3
Source Group ID: SLINE2	List of Sources in Group (Source Range or Single Sources)
	SLINE2
Source Group ID: SLINE1	List of Sources in Group (Source Range or Single Sources)
	SLINE1
Source Group ID: AREA2	List of Sources in Group (Source Range or Single Sources)
	AREA2
Source Group ID: AREA1	List of Sources in Group (Source Range or Single Sources)
	AREA1
Source Group ID: ALL	List of Sources in Group (Source Range or Single Sources)
	All Sources Included

Receptor Pathway

AERMOD

Receptor Networks

Note: Terrain Elevations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)

Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Uniform Cartesian Grid

Receptor Network ID	Grid Origin X Coordinate [m]	Grid Origin Y Coordinate [m]	No. of X-Axis Receptors	No. of Y-Axis Receptors	Spacing for X-Axis [m]	Spacing for Y-Axis [m]
UCART1	552068.68	4167106.66	20	20	50.00	50.00

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	552138.38	4167496.49		7.20	
2	552138.38	4167482.80		6.99	
3	552133.43	4167510.18		7.13	
4	552231.92	4167905.62		8.06	

Plant Boundary Receptors

Meteorology Pathway

AERMOD

Met Input Data

Surface Met Data

Filename: ..\..\E Grand Ave\SFIAP_met\724940.SFC
Format Type: Default AERMET format

Profile Met Data

Filename: ..\..\E Grand Ave\SFIAP_met\724940.PFL
Format Type: Default AERMET format

Wind Speed



Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 9.14 [m]

Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface		2009			SAN FRANCISCO/INT'L ARPT
Upper Air		2009			OAKLAND/WSO AP

Data Period

Data Period to Process

Start Date: 1/1/2009 Start Hour: 1 End Date: 1/2/2014 End Hour: 24

Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

Table 1. Modeled Roadway Dimensions

Roadway Link Description	AERMOD ID	Length (miles)	Width (m)	Area (m ²)
Offsite	SLINE3	0.48	3.7	2,858.19
Onsite	SLINE4	0.40	3.7	2,381.82

Notes: All roadways modeled with standard 3.7 meter width per lane.

Table 2. Total Haul and Vendor Trip Information

Trip Type	Trips/Day
Heavy Duty Trucks (Vendor and Hauling)	1023

Note: Construction trips taken from the phase with the highest vendor (building construction) and hauling (grading/site preparation) truck trips.

Table 3. Modeled Roadway Trip Information

Roadway Link	Truck Trips		
	Percentage Total Trips	Hourly	Average Daily
Offsite	100%	127.9	1023
Onsite	100%	127.9	1023

Notes: Offsite truck emissions calculated for roadway within 0.36 miles of the site.
Onsite travel of trucks was assumed from Project Site plan.

Table 4. Onroad DPM Emission Rates

Vehicle Type	DPM Emission Rates ¹ (g/mi)					
	Idle ²	5 mph	15 mph	45 mph	Onsite Composite ⁴	Offsite Composite ⁵
HHDT	0.039	0.041	0.024	0.020	0.027	0.021
MHDT	0.018	0.069	0.048	0.039	0.051	0.039
Station Customer Composite ³	0.028	0.055	0.036	0.030	0.039	0.030

(1) DPM Emission Rates conservatively represented using EMFAC2021 PM10 Exhaust emission factors for 2023.

(2) Idle emission rates in grams per minute.

(3) Vender diesel vehicle fleet mix estimated at 50% HHDT 50% HDT

(4) Onsite Composite factor is 85% @ 15 mph + 15% @ 5 mph + 1 minute idle per mile

(5) Offsite Composite factor is 80% @ 45 mph + 10% @ 15 mph + 10% @ 5 mph + .1 minute idle per mile

Table 5. Modeled Roadway Emission Rates

Roadway Link	DPM Emissions ^{1,2}	
	Peak Hourly (lbs/hr)	Annual (lbs/yr)
Offsite	0.0053	10.6720
Onsite	0.0044	8.8933

(1) Peak Hourly Emissions = DPM Emission Rate (g/mi) * Peak Hourly Trips * Link Length (mi) / 453.6 (g/lb)

(2) Annual Emissions = DPM Emission Rate (g/mi) * Daily Trips * Link Length (mi) * 365 (days/yr) / 453.6 (g/lb)

Table 6. Construction Phase Information

Phase Name	Start Date	End Date
Demolition	4/1/2023	7/21/2023
Site Preperation	5/15/2023	9/1/2023
Grading	5/30/2023	9/18/2023
Building Construction	9/19/2023	9/3/2025
Paving	5/30/2025	9/18/2025
Architectural Coating	5/30/2025	9/18/2025

Source: CalEEMod - Annual Consite Construction

Table 7. Construction Offroad Equipment List

Phase Name	Equipment Type	Amount	Usage	Load
Demolition	Concrete/Industrial Saws	1	8	0.73
Demolition	Crushing/Proc. Equipment	1	8	0.78
Demolition	Excavators	3	8	0.38
Demolition	Rubber Tired Loaders	1	8	0.36
Demolition	Signal Boards	2	8	0.82
Demolition	Skid Steer Loaders	1	8	0.37
Demolition	Tractors/Loaders/Backhoes	1	8	0.37
Site Preparation	Bore/Drill Rigs	2	8	0.5
Site Preparation	Concrete/Industrial Saws	1	8	0.73
Site Preparation	Excavators	2	8	0.38
Site Preparation	Graders	1	8	0.41
Site Preparation	Rollers	1	8	0.38
Site Preparation	Rough Terrain Forklifts	2	8	0.4
Site Preparation	Rubber Tired Loaders	1	8	0.36
Site Preparation	Signal Boards	2	8	0.82
Site Preparation	Skid Steer Loaders	1	8	0.37
Site Preparation	Tractors/Loaders/Backhoes	2	8	0.37
Grading	Excavators	3	8	0.38
Grading	Graders	2	8	0.41
Grading	Rollers	1	8	0.38
Grading	Rough Terrain Forklifts	2	8	0.4
Grading	Rubber Tired Loaders	2	8	0.36

Grading	Signal Boards	2	8	0.82
Grading	Skid Steer Loaders	1	8	0.37
Grading	Tractors/Loaders/Backhoes	2	8	0.37
Building Construction	Concrete/Industrial Saws	2	8	0.73
Building Construction	Cranes	2	7	0.29
Building Construction	Excavators	3	8	0.38
Building Construction	Graders	1	8	0.41
Building Construction	Rollers	1	8	0.38
Building Construction	Rough Terrain Forklifts	3	8	0.4
Building Construction	Rubber Tired Loaders	1	8	0.36
Building Construction	Signal Boards	2	8	0.82
Building Construction	Skid Steer Loaders	1	8	0.37
Building Construction	Tractors/Loaders/Backhoes	2	7	0.37
Paving	Pavers	1	8	0.42
Paving	Paving Equipment	1	6	0.36
Paving	Rollers	1	6	0.38
Paving	Signal Boards	2	8	0.82
Paving	Skid Steer Loaders	2	8	0.37
Paving	Tractors/Loaders/Backhoes	1	8	0.37
Architectural Coating	Air Compressors	1	6	0.48
Architectural Coating	Surfacing Equipment	1	8	0.3

Source: CalEEMod - Annual Onsite Construction

Table 8. Annual Onsite Offroad DPM Exhaust Construction Emissions by Phase

Phase	Emissions (tons/yr)			Total (tons)
	2023	2024	2025	
Demolition	0.0231	0.0000	0.0000	0.0231
Site Preparation	0.0140	0.0000	0.0000	0.0140
Grading	0.0231	0.0000	0.0000	0.0231
Building Construction	0.0042	0.0148	0.0100	0.0290
Paving	0.0000	0.0000	0.0011	0.0011
Architectural Coating	0.0000	0.0000	0.0025	0.0025
Annual DPM Emissions	0.0644	0.0148	0.0136	0.0928

Source: CalEEMod - Annual Onsite PM10 construction total emissions

Note: Emissions modeling done for three years of construction

Table 9. Modeled Roadway Dimensions

Roadway Link Description	AERMOD ID	Length (miles)	Width (m)	Area (m ²)
Offsite	SLINE3	0.48	3.7	2,858.19
Onsite	SLINE1	0.27	3.7	1,607.73

Notes: All roadways modeled with standard 3.7 meter width per lane.

Table 10. Total Haul and Vendor Trip Information

Trip Type	Trips/Day
Operational Heavy Duty Trucks	70

Note: Daily truck trips from CalEEMod

Table 11. Modeled Roadway Trip Information

Roadway Link	Truck Trips		
	Percentage Total Trips	Hourly	Average Daily
Offsite	100%	8.8	70
Onsite	100%	8.8	70

Notes: Offsite truck emissions calculated for roadway within 0.48 miles of the site.

Onsite travel of trucks was assumed from Project Site plan.

Table 12. Onroad DPM Emission Rates

Vehicle Type	DPM Emission Rates ¹ (g/mi)					
	Idle ²	5 mph	15 mph	45 mph	Onsite Composite ⁴	Offsite Composite ⁵
HHDT	0.039	0.041	0.024	0.020	0.027	0.021
MHDT	0.018	0.069	0.048	0.039	0.051	0.039
Station Customer Composite ³	0.021	0.065	0.044	0.036	0.048	0.036

(1) DPM Emission Rates conservatively represented using EMFAC2021 PM10 Exhaust emission factors for 2023.

(2) Idle emission rates in grams per minute.

(3) Vender diesel vehicle fleet mix estimated at 16% HHDT 84% MDV per CalEEMod.

(4) Onsite Composite factor is 85% @ 15 mph + 15% @ 5 mph + 1 minute idle per mile

(5) Offsite Composite factor is 80% @ 45 mph + 10% @ 15 mph + 10% @ 5 mph + .1 minute idle per mile

Table 13. Modeled Roadway Emission Rates

Roadway Link	DPM Emissions ^{1,2}	
	Peak Hourly (lbs/hr)	Annual (lbs/yr)
Offsite	0.0004	0.8813
Onsite	0.0002	0.4957

(1) Peak Hourly Emissions = DPM Emission Rate (g/mi) * Peak Hourly Trips * Link Length (mi) / 453.6 (g/lb)

(2) Annual Emissions = DPM Emission Rate (g/mi) * Daily Trips * Link Length (mi) * 365 (days/yr) / 453.6 (g/lb)

Table 14. Calculated Emissions for Onsite Idling Truck Activities (Loading Dock)

On-Site Idle Emissions	Composite Emission Factor (g/hour)	Idling Time (min)	Daily Trucks	Peak Hourly (lbs/hr)	Annual (lbs/yr)
Project Trucks	0.021	20	70	0.0001	0.40
Total Onsite				0.0001	0.40

Source: EMFAC2021. PM10 Emission Factors are derived from EMFAC2017 PM10 Exhaust emission factors for 2022.

Table 15. Representative Chemical Usage Data

Compound	CAS	Chemical Usage		Vapor Pressure (mm Hg)	% Emitted
		Annual (lbs)	Hourly (lbs)		
Arsenic and compounds	7440-38-2	1.10E-01	1.10E-02	-	-
Benzene	71-43-2	16.40	1.64	75.00	0.75
Cadmium and compounds	7440-43-9	7.77	7.77E-01	-	-
Carbon tetrachloride	56-23-5	7.22	7.22E-01	91.00	0.91
Chloroform	67-66-3	438.00	43.80	156.70	1.57
Dibromo-3-chloropropane, 1,2-	96-12-8	1.10E-01	1.10E-02	0.80	0.01
Dioxane, 1,4-	123-91-1	33.80	3.38	27.00	0.27
Ethylene dibromide	106-93-4	5.86	5.86E-01	11.70	0.12
Ethylene dibromide	107-06-2	33.20	3.32	100.00	1.00
Formaldehyde	50-00-0	1.31E-02	1.31E-03	1.30	0.01
Glutaraldehyde	111-30-8	13.50	1.35	17.00	0.17
Manganese and Compounds	7439-96-5	24.30	2.43	0.09	-
Methylene chloride	75-09-2	717.00	71.70	3.50	0.04
Mercury and compounds	7439-97-6	7.49	7.49E-01	1.20	0.01
Potassium Bromate	1-2-7758	2.20	2.20E-01	-	-
Propylene	75-56-9	189.00	18.90	538.00	5.38

Source: Health Risk Analysis for Emissions of Air Toxics from Operational Sources University of California, San Francisco Mission Bay Site Genentech Hall Fume Hood Risk Screen December 7, 2011

Additional Data and Equations

Data Source Lab Area 385,000 Square Feet

Project Maximum Lab Area 87,000 Square Feet

Equation 1: Emissions = Chemical Usage * % Emitted * Project Lab Area / Data Source Lab Area

Table 16. Calculated Emissions From Project Laboratories

Compound	CAS	Emissions	
		Annual (lbs)	Hourly (lbs)
Arsenic and compounds	7440-38-2	-	-
Benzene	71-43-2	0.03	0.00
Cadmium and compounds	7440-43-9	-	-
Carbon tetrachloride	56-23-5	0.01	-
Chloroform	67-66-3	1.55	0.16
Dibromo-3-chloropropane, 1,2-	96-12-8	-	-
Dioxane, 1,4-	123-91-1	0.02	0.00
Ethylene dibromide	106-93-4	0.00	-
Ethylene dibromide	107-06-2	0.08	0.01

Formaldehyde	50-00-0	-	-
Glutaraldehyde	111-30-8	0.01	0.00
Manganese and Compounds	7439-96-5	-	-
Methylene chloride	75-09-2	0.06	0.01
Mercury and compounds	7439-97-6	0.00	-
Potassium Bromate	1-2-7758	-	-
Propylene	75-56-9	2.30	0.23

Note: Calculated emissions were input into HARP2 as point sources.

Table 17. Emergency Generator Operational Data						
Source	Number	Tier	Standby Rating (kW)	Load Factor	Fuel Type	Hours per Year (ea.)
Cummings DQKAB	3	4i	2000	0.25	diesel	100

Source: Tier 4 interim compliant (without DPF) after treatment QSK50 and QSK60 series engines 1250 kW - 2250 kW 60 Hz (Cummings, 2018)

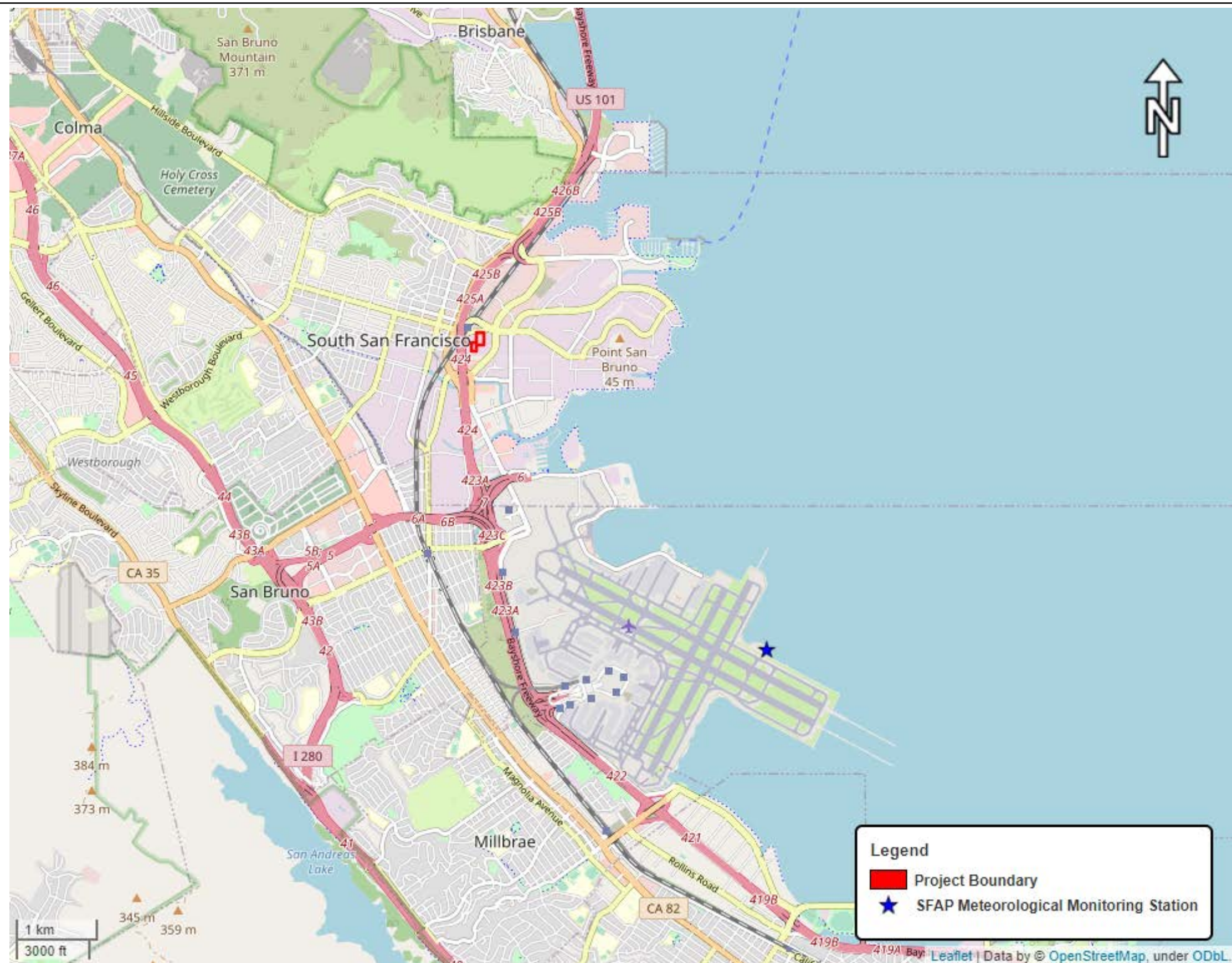
Table 18. Tier 4i Generator Emission Factors						
Description	Tier 4 Standards for Engines Over 750 HP (g/bhp-hr)					
	2011 Interim			2015 Final		
	PM	NOx	NMHC	PM	NOx	NMHC
generators sets < 1200	0.075	2.60	0.30	0.02	0.50	0.14
generators sets > 1200	0.075	2.60	0.30	0.02	0.50	0.14
all other equipment	0.075	2.60	0.30	0.02	0.50	0.14

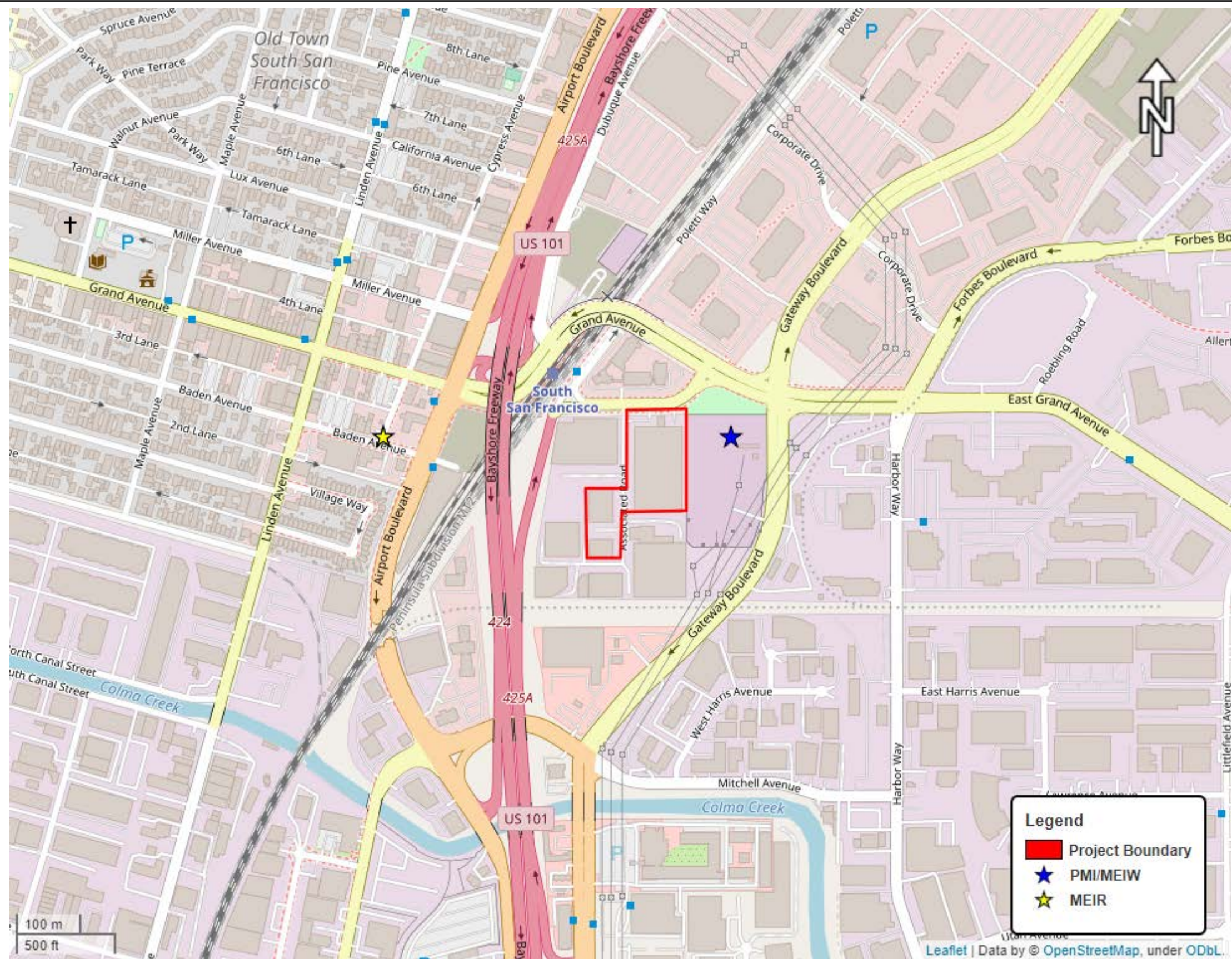
Source: <https://www.govinfo.gov/content/pkg/FR-2004-06-29/pdf/04-11293.pdf>

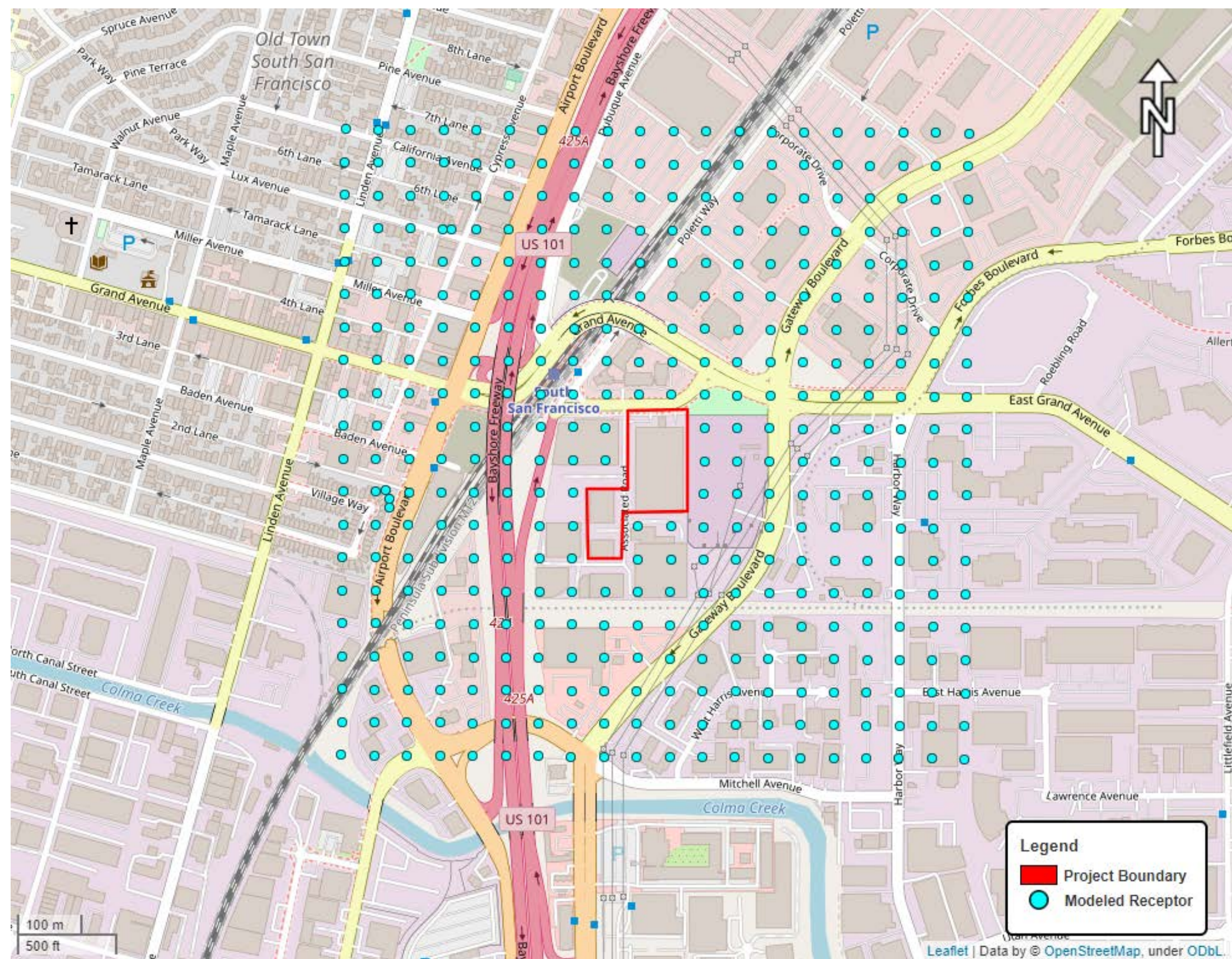
Equations

lbs/day = Hrs/day * Rating (kW) * 1.341 (bhp/kW) * Load Factor (%) * EF (g/bhp-hr) / 453.6 (g/lb) * pieces (#)
 lbs/yr = lbs/day * Days per Year

Table 19. Calculated Emissions from Generators		
Source	Particulate Matter Emissions	
	lbs/hr	lb/yr
Cummings DQKAB	0.33	33.26
Emissions / Point Source (3 total)	0.11	11.09







CalEEMod Output Files – Greenhouse Gas Emissions

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**120 E. Grand Avenue - Proposed Project****San Mateo County, Annual****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	499.44	1000sqft	1.85	499,435.00	0
Enclosed Parking with Elevator	756.00	Space	0.72	238,000.00	0
Other Non-Asphalt Surfaces	1.08	Acre	1.08	47,044.80	0
Other Non-Asphalt Surfaces	0.75	Acre	0.75	32,670.00	0
Other Non-Asphalt Surfaces	0.23	Acre	0.23	10,018.80	0
Strip Mall	4.00	1000sqft	0.00	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2025
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land uses = 499,435 sf of R&D building space, 4,000 sf of Retail space, 756-space Parking Structure, 1.08 acre of Service Yards, 0.75 acre of Internal Circulation, & 0.23 acre of Landscaping.

Construction Phase - Construction duration per Project Construction Contractor

Off-road Equipment - Ibid

Off-road Equipment - Ibid

Off-road Equipment - Equipment per Project Construction Contractor

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - Ibid

Off-road Equipment - Ibid

Off-road Equipment - Ibid

Demolition -

Grading -

Architectural Coating - Parking Area sf reduced to reflect that landscaped areas and service yards will not be painted/stripped.

Construction Off-road Equipment Mitigation - Project equipment is Tier 4 Engine Certified per Project Construction Contractor. BAAQMD Basic Mitigation Measures applied.

Mobile Land Use Mitigation - Project employees estimated from US Green Building Council "Building Area per Employee by Business Type."

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	19,664.00	14,280.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	40
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	80.00
tblConstructionPhase	NumDays	230.00	512.00
tblConstructionPhase	NumDays	20.00	80.00
tblConstructionPhase	NumDays	8.00	80.00
tblConstructionPhase	NumDays	18.00	80.00
tblConstructionPhase	NumDays	5.00	80.00
tblGrading	MaterialExported	0.00	7,012.50
tblGrading	MaterialExported	0.00	7,012.50
tblLandUse	LandUseSquareFeet	499,440.00	499,435.00
tblLandUse	LandUseSquareFeet	302,400.00	238,000.00
tblLandUse	LotAcreage	11.47	1.85
tblLandUse	LotAcreage	6.80	0.72
tblLandUse	LotAcreage	0.09	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

2.0 Emissions Summary

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
2023	0.4596	4.5007	5.1581	0.0122	0.2803	0.1699	0.4502	0.0601	0.1588	0.2189	0.0000	1,094.750 6	1,094.750 6	0.2510	0.0299	1,109.946 8
2024	0.5225	4.9813	5.9877	0.0156	0.4247	0.1723	0.5969	0.1157	0.1613	0.2769	0.0000	1,424.542 6	1,424.542 6	0.2565	0.0603	1,448.911 9
2025	3.0533	3.4771	4.6396	0.0117	0.3105	0.1180	0.4285	0.0844	0.1105	0.1949	0.0000	1,061.804 9	1,061.804 9	0.2003	0.0400	1,078.726 1
Maximum	3.0533	4.9813	5.9877	0.0156	0.4247	0.1723	0.5969	0.1157	0.1613	0.2769	0.0000	1,424.542 6	1,424.542 6	0.2565	0.0603	1,448.911 9

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					
2023	0.1555	1.0757	6.2326	0.0122	0.1639	0.0177	0.1816	0.0387	0.0176	0.0563	0.0000	1,094.749 6	1,094.749 6	0.2510	0.0299	1,109.945 8
2024	0.2130	1.5000	6.9497	0.0156	0.2854	0.0206	0.3060	0.0815	0.0203	0.1018	0.0000	1,424.541 6	1,424.541 6	0.2565	0.0603	1,448.910 9
2025	2.8418	1.1823	5.4049	0.0117	0.2082	0.0175	0.2258	0.0593	0.0173	0.0766	0.0000	1,061.804 1	1,061.804 1	0.2003	0.0400	1,078.725 3
Maximum	2.8418	1.5000	6.9497	0.0156	0.2854	0.0206	0.3060	0.0815	0.0203	0.1018	0.0000	1,424.541 6	1,424.541 6	0.2565	0.0603	1,448.910 9

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	20.45	71.00	-17.75	0.00	35.25	87.87	51.66	30.99	87.19	66.01	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)
3	3-19-2023	6-18-2023	1.1488	0.2636
4	6-19-2023	9-18-2023	2.1214	0.4667
5	9-19-2023	12-18-2023	1.4646	0.4347
6	12-19-2023	3-18-2024	1.3858	0.4325
7	3-19-2024	6-18-2024	1.3744	0.4235
8	6-19-2024	9-18-2024	1.3722	0.4214
9	9-19-2024	12-18-2024	1.3703	0.4298
10	12-19-2024	3-18-2025	1.2617	0.4231
11	3-19-2025	6-18-2025	1.8209	0.9343
12	6-19-2025	9-18-2025	3.6309	2.7191
		Highest	3.6309	2.7191

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	2.2578	1.0000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0225	0.0225	6.0000e-005	0.0000	0.0240
Energy	0.0663	0.6024	0.5060	3.6100e-003		0.0458	0.0458		0.0458	0.0458	0.0000	655.8069	655.8069	0.0126	0.0120	659.7041
Mobile	1.6912	1.5778	16.4932	0.0348	3.9807	0.0227	4.0034	1.0632	0.0211	1.0843	0.0000	3,208.715 2	3,208.715 2	0.2128	0.1396	3,255.623 4
Waste						0.0000	0.0000		0.0000	0.0000	8.5561	0.0000	8.5561	0.5057	0.0000	21.1973
Water						0.0000	0.0000		0.0000	0.0000	78.0026	0.0000	78.0026	8.0116	0.1892	334.6659
Total	4.0152	2.1804	17.0108	0.0384	3.9807	0.0685	4.0492	1.0632	0.0669	1.1301	86.5586	3,864.544 7	3,951.103 3	8.7427	0.3408	4,271.214 7

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	2.2578	1.0000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0225	0.0225	6.0000e-005	0.0000	0.0240
Energy	0.0663	0.6024	0.5060	3.6100e-003		0.0458	0.0458		0.0458	0.0458	0.0000	655.8069	655.8069	0.0126	0.0120	659.7041
Mobile	1.2849	1.0089	10.6580	0.0187	2.0849	0.0133	2.0981	0.5569	0.0123	0.5692	0.0000	1,723.0604	1,723.0604	0.1488	0.0905	1,753.7461
Waste						0.0000	0.0000		0.0000	0.0000	8.5561	0.0000	8.5561	0.5057	0.0000	21.1973
Water						0.0000	0.0000		0.0000	0.0000	78.0026	0.0000	78.0026	8.0116	0.1892	334.6659
Total	3.6090	1.6115	11.1756	0.0223	2.0849	0.0591	2.1440	0.5569	0.0581	0.6150	86.5586	2,378.8899	2,465.4485	8.6787	0.2917	2,769.3374

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	10.12	26.09	34.30	41.95	47.63	13.71	47.05	47.63	13.06	45.58	0.00	38.44	37.60	0.73	14.40	35.16

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2023	7/21/2023	5	80	
2	Site Preparation	Site Preparation	5/15/2023	9/1/2023	5	80	
3	Grading	Grading	5/30/2023	9/18/2023	5	80	

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Building Construction	Building Construction	9/19/2023	9/3/2025	5	512
5	Paving	Paving	5/30/2025	9/18/2025	5	80
6	Architectural Coating	Architectural Coating	5/30/2025	9/18/2025	5	80

Acres of Grading (Site Preparation Phase): 40**Acres of Grading (Grading Phase): 80****Acres of Paving: 2.78****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 755,153; Non-Residential Outdoor: 251,718; Striped Parking Area: 14,280 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crushing/Proc. Equipment	1	8.00	85	0.78
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Demolition	Rubber Tired Loaders	1	8.00	203	0.36
Demolition	Signal Boards	2	8.00	6	0.82
Demolition	Skid Steer Loaders	1	8.00	65	0.37
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Bore/Drill Rigs	2	8.00	221	0.50
Site Preparation	Concrete/Industrial Saws	1	8.00	81	0.73
Site Preparation	Excavators	2	8.00	158	0.38
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rollers	1	8.00	80	0.38
Site Preparation	Rough Terrain Forklifts	2	8.00	100	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Loaders	1	8.00	203	0.36
Site Preparation	Signal Boards	2	8.00	6	0.82

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Excavators	3	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rollers	1	8.00	80	0.38
Grading	Rough Terrain Forklifts	2	8.00	100	0.40
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Loaders	2	8.00	203	0.36
Grading	Signal Boards	2	8.00	6	0.82
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Concrete/Industrial Saws	2	8.00	81	0.73
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Excavators	3	8.00	158	0.38
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Graders	1	8.00	187	0.41
Building Construction	Rollers	1	8.00	80	0.38
Building Construction	Rough Terrain Forklifts	3	8.00	100	0.40
Building Construction	Rubber Tired Loaders	1	8.00	203	0.36
Building Construction	Signal Boards	2	8.00	6	0.82
Building Construction	Skid Steer Loaders	1	8.00	65	0.37
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	6.00	132	0.36
Paving	Rollers	1	6.00	80	0.38
Paving	Signal Boards	2	8.00	6	0.82

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paving	Skid Steer Loaders	2	8.00	65	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Architectural Coating	Surfacing Equipment	1	8.00	263	0.30

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	10	25.00	0.00	424.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	15	38.00	0.00	877.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	15	38.00	0.00	877.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	18	299.00	136.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	60.00	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

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Demolition - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0459	0.0000	0.0459	6.9500e-003	0.0000	6.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0781	0.6395	0.9394	1.6600e-003		0.0293	0.0293		0.0279	0.0279	0.0000	143.8346	143.8346	0.0335	0.0000	144.6717
Total	0.0781	0.6395	0.9394	1.6600e-003	0.0459	0.0293	0.0752	6.9500e-003	0.0279	0.0349	0.0000	143.8346	143.8346	0.0335	0.0000	144.6717

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	4.9000e-004	0.0333	0.0109	1.4000e-004	3.5600e-003	2.2000e-004	3.7800e-003	9.8000e-004	2.1000e-004	1.1900e-003	0.0000	14.4432	14.4432	1.4500e-003	2.3300e-003	15.1730
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1500e-003	1.4100e-003	0.0194	6.0000e-005	7.8700e-003	4.0000e-005	7.9100e-003	2.0900e-003	3.0000e-005	2.1300e-003	0.0000	5.8511	5.8511	1.5000e-004	1.5000e-004	5.8986
Total	2.6400e-003	0.0347	0.0303	2.0000e-004	0.0114	2.6000e-004	0.0117	3.0700e-003	2.4000e-004	3.3200e-003	0.0000	20.2943	20.2943	1.6000e-003	2.4800e-003	21.0715

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Demolition - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0207	0.0000	0.0207	3.1300e-003	0.0000	3.1300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0196	0.1225	1.0675	1.6600e-003		2.4800e-003	2.4800e-003		2.4800e-003	2.4800e-003	0.0000	143.8345	143.8345	0.0335	0.0000	144.6715
Total	0.0196	0.1225	1.0675	1.6600e-003	0.0207	2.4800e-003	0.0231	3.1300e-003	2.4800e-003	5.6100e-003	0.0000	143.8345	143.8345	0.0335	0.0000	144.6715

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	4.9000e-004	0.0333	0.0109	1.4000e-004	2.4900e-003	2.2000e-004	2.7100e-003	7.2000e-004	2.1000e-004	9.2000e-004	0.0000	14.4432	14.4432	1.4500e-003	2.3300e-003	15.1730
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1500e-003	1.4100e-003	0.0194	6.0000e-005	5.1500e-003	4.0000e-005	5.1900e-003	1.4300e-003	3.0000e-005	1.4600e-003	0.0000	5.8511	5.8511	1.5000e-004	1.5000e-004	5.8986
Total	2.6400e-003	0.0347	0.0303	2.0000e-004	7.6400e-003	2.6000e-004	7.9000e-003	2.1500e-003	2.4000e-004	2.3800e-003	0.0000	20.2943	20.2943	1.6000e-003	2.4800e-003	21.0715

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Site Preparation - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0216	0.0000	0.0216	2.3500e-003	0.0000	2.3500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1057	1.0453	1.2127	2.7000e-003		0.0416	0.0416		0.0387	0.0387	0.0000	235.6532	235.6532	0.0695	0.0000	237.3916
Total	0.1057	1.0453	1.2127	2.7000e-003	0.0216	0.0416	0.0632	2.3500e-003	0.0387	0.0411	0.0000	235.6532	235.6532	0.0695	0.0000	237.3916

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	1.0200e-003	0.0689	0.0225	2.8000e-004	7.3600e-003	4.5000e-004	7.8100e-003	2.0200e-003	4.3000e-004	2.4500e-003	0.0000	29.8743	29.8743	3.0000e-003	4.8100e-003	31.3837
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	3.2700e-003	2.1400e-003	0.0295	1.0000e-004	0.0120	6.0000e-005	0.0120	3.1800e-003	5.0000e-005	3.2400e-003	0.0000	8.8936	8.8936	2.3000e-004	2.2000e-004	8.9658
Total	4.2900e-003	0.0711	0.0520	3.8000e-004	0.0193	5.1000e-004	0.0198	5.2000e-003	4.8000e-004	5.6900e-003	0.0000	38.7679	38.7679	3.2300e-003	5.0300e-003	40.3495

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Site Preparation - 2023****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					9.7200e-003	0.0000	9.7200e-003	1.0600e-003	0.0000	1.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0330	0.1808	1.5815	2.7000e-003		4.2700e-003	4.2700e-003		4.2700e-003	4.2700e-003	0.0000	235.6530	235.6530	0.0695	0.0000	237.3913
Total	0.0330	0.1808	1.5815	2.7000e-003	9.7200e-003	4.2700e-003	0.0140	1.0600e-003	4.2700e-003	5.3300e-003	0.0000	235.6530	235.6530	0.0695	0.0000	237.3913

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	1.0200e-003	0.0689	0.0225	2.8000e-004	5.1500e-003	4.5000e-004	5.6000e-003	1.4800e-003	4.3000e-004	1.9100e-003	0.0000	29.8743	29.8743	3.0000e-003	4.8100e-003	31.3837
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	3.2700e-003	2.1400e-003	0.0295	1.0000e-004	7.8300e-003	6.0000e-005	7.8900e-003	2.1700e-003	5.0000e-005	2.2200e-003	0.0000	8.8936	8.8936	2.3000e-004	2.2000e-004	8.9658
Total	4.2900e-003	0.0711	0.0520	3.8000e-004	0.0130	5.1000e-004	0.0135	3.6500e-003	4.8000e-004	4.1300e-003	0.0000	38.7679	38.7679	3.2300e-003	5.0300e-003	40.3495

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Grading - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0428	0.0000	0.0428	4.6400e-003	0.0000	4.6400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1089	1.1330	1.1622	2.4200e-003		0.0438	0.0438		0.0404	0.0404	0.0000	211.0885	211.0885	0.0675	0.0000	212.7756
Total	0.1089	1.1330	1.1622	2.4200e-003	0.0428	0.0438	0.0866	4.6400e-003	0.0404	0.0450	0.0000	211.0885	211.0885	0.0675	0.0000	212.7756

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	1.0200e-003	0.0689	0.0225	2.8000e-004	7.3600e-003	4.5000e-004	7.8100e-003	2.0200e-003	4.3000e-004	2.4500e-003	0.0000	29.8743	29.8743	3.0000e-003	4.8100e-003	31.3837
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	3.2700e-003	2.1400e-003	0.0295	1.0000e-004	0.0120	6.0000e-005	0.0120	3.1800e-003	5.0000e-005	3.2400e-003	0.0000	8.8936	8.8936	2.3000e-004	2.2000e-004	8.9658
Total	4.2900e-003	0.0711	0.0520	3.8000e-004	0.0193	5.1000e-004	0.0198	5.2000e-003	4.8000e-004	5.6900e-003	0.0000	38.7679	38.7679	3.2300e-003	5.0300e-003	40.3495

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Grading - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0193	0.0000	0.0193	2.0900e-003	0.0000	2.0900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0301	0.1679	1.4733	2.4200e-003		3.8700e-003	3.8700e-003		3.8700e-003	3.8700e-003	0.0000	211.0882	211.0882	0.0675	0.0000	212.7753
Total	0.0301	0.1679	1.4733	2.4200e-003	0.0193	3.8700e-003	0.0231	2.0900e-003	3.8700e-003	5.9600e-003	0.0000	211.0882	211.0882	0.0675	0.0000	212.7753

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	1.0200e-003	0.0689	0.0225	2.8000e-004	5.1500e-003	4.5000e-004	5.6000e-003	1.4800e-003	4.3000e-004	1.9100e-003	0.0000	29.8743	29.8743	3.0000e-003	4.8100e-003	31.3837
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	3.2700e-003	2.1400e-003	0.0295	1.0000e-004	7.8300e-003	6.0000e-005	7.8900e-003	2.1700e-003	5.0000e-005	2.2200e-003	0.0000	8.8936	8.8936	2.3000e-004	2.2000e-004	8.9658
Total	4.2900e-003	0.0711	0.0520	3.8000e-004	0.0130	5.1000e-004	0.0135	3.6500e-003	4.8000e-004	4.1300e-003	0.0000	38.7679	38.7679	3.2300e-003	5.0300e-003	40.3495

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2023****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	0.1265	1.2535	1.4100	2.7000e-003		0.0524	0.0524		0.0490	0.0490	0.0000	234.7054	234.7054	0.0643	0.0000	236.3122
Total	0.1265	1.2535	1.4100	2.7000e-003		0.0524	0.0524		0.0490	0.0490	0.0000	234.7054	234.7054	0.0643	0.0000	236.3122

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.3600e-003	0.2369	0.0850	1.0500e-003	0.0329	1.2200e-003	0.0341	9.5000e-003	1.1700e-003	0.0107	0.0000	106.9085	106.9085	6.5700e-003	0.0158	111.7696
Worker	0.0238	0.0156	0.2145	7.1000e-004	0.0871	4.2000e-004	0.0875	0.0232	3.9000e-004	0.0236	0.0000	64.7302	64.7302	1.6500e-003	1.6300e-003	65.2557
Total	0.0292	0.2525	0.2995	1.7600e-003	0.1199	1.6400e-003	0.1216	0.0327	1.5600e-003	0.0342	0.0000	171.6387	171.6387	8.2200e-003	0.0174	177.0253

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0324	0.1751	1.6766	2.7000e-003		4.1900e-003	4.1900e-003		4.1900e-003	4.1900e-003	0.0000	234.7051	234.7051	0.0643	0.0000	236.3119
Total	0.0324	0.1751	1.6766	2.7000e-003		4.1900e-003	4.1900e-003		4.1900e-003	4.1900e-003	0.0000	234.7051	234.7051	0.0643	0.0000	236.3119

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.3600e-003	0.2369	0.0850	1.0500e-003	0.0236	1.2200e-003	0.0248	7.2300e-003	1.1700e-003	8.4000e-003	0.0000	106.9085	106.9085	6.5700e-003	0.0158	111.7696
Worker	0.0238	0.0156	0.2145	7.1000e-004	0.0570	4.2000e-004	0.0574	0.0158	3.9000e-004	0.0162	0.0000	64.7302	64.7302	1.6500e-003	1.6300e-003	65.2557
Total	0.0292	0.2525	0.2995	1.7600e-003	0.0806	1.6400e-003	0.0823	0.0230	1.5600e-003	0.0246	0.0000	171.6387	171.6387	8.2200e-003	0.0174	177.0253

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2024****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	0.4241	4.1013	4.9740	9.5500e-003		0.1665	0.1665		0.1558	0.1558	0.0000	831.0209	831.0209	0.2273	0.0000	836.7041
Total	0.4241	4.1013	4.9740	9.5500e-003		0.1665	0.1665		0.1558	0.1558	0.0000	831.0209	831.0209	0.2273	0.0000	836.7041

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	0.0183	0.8306	0.2998	3.6600e-003	0.1163	4.3400e-003	0.1206	0.0336	4.1500e-003	0.0378	0.0000	371.7936	371.7936	0.0238	0.0549	388.7450
Worker	0.0800	0.0494	0.7139	2.4200e-003	0.3084	1.4200e-003	0.3098	0.0821	1.3000e-003	0.0834	0.0000	221.7281	221.7281	5.3000e-003	5.3800e-003	223.4627
Total	0.0984	0.8800	1.0137	6.0800e-003	0.4247	5.7600e-003	0.4304	0.1157	5.4500e-003	0.1212	0.0000	593.5217	593.5217	0.0291	0.0603	612.2078

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2024****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1146	0.6200	5.9360	9.5500e-003		0.0148	0.0148		0.0148	0.0148	0.0000	831.0199	831.0199	0.2273	0.0000	836.7031
Total	0.1146	0.6200	5.9360	9.5500e-003		0.0148	0.0148		0.0148	0.0148	0.0000	831.0199	831.0199	0.2273	0.0000	836.7031

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	0.0183	0.8306	0.2998	3.6600e-003	0.0836	4.3400e-003	0.0879	0.0256	4.1500e-003	0.0298	0.0000	371.7936	371.7936	0.0238	0.0549	388.7450
Worker	0.0800	0.0494	0.7139	2.4200e-003	0.2019	1.4200e-003	0.2033	0.0559	1.3000e-003	0.0572	0.0000	221.7281	221.7281	5.3000e-003	5.3800e-003	223.4627
Total	0.0984	0.8800	1.0137	6.0800e-003	0.2854	5.7600e-003	0.2912	0.0815	5.4500e-003	0.0870	0.0000	593.5217	593.5217	0.0291	0.0603	612.2078

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2025****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	0.2650	2.4821	3.3228	6.4100e-003		0.0970	0.0970		0.0907	0.0907	0.0000	558.2723	558.2723	0.1524	0.0000	562.0819
Total	0.2650	2.4821	3.3228	6.4100e-003		0.0970	0.0970		0.0907	0.0907	0.0000	558.2723	558.2723	0.1524	0.0000	562.0819

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	0.0120	0.5515	0.2013	2.4000e-003	0.0781	2.9100e-003	0.0811	0.0226	2.7800e-003	0.0254	0.0000	244.8477	244.8477	0.0163	0.0362	256.0362
Worker	0.0513	0.0301	0.4519	1.5700e-003	0.2071	9.1000e-004	0.2081	0.0551	8.4000e-004	0.0560	0.0000	143.9696	143.9696	3.2400e-003	3.3900e-003	145.0621
Total	0.0633	0.5816	0.6532	3.9700e-003	0.2853	3.8200e-003	0.2891	0.0777	3.6200e-003	0.0814	0.0000	388.8173	388.8173	0.0196	0.0396	401.0983

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2025****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0770	0.4165	3.9876	6.4100e-003		9.9700e-003	9.9700e-003		9.9700e-003	9.9700e-003	0.0000	558.2716	558.2716	0.1524	0.0000	562.0813
Total	0.0770	0.4165	3.9876	6.4100e-003		9.9700e-003	9.9700e-003		9.9700e-003	9.9700e-003	0.0000	558.2716	558.2716	0.1524	0.0000	562.0813

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	0.0120	0.5515	0.2013	2.4000e-003	0.0561	2.9100e-003	0.0591	0.0172	2.7800e-003	0.0200	0.0000	244.8477	244.8477	0.0163	0.0362	256.0362
Worker	0.0513	0.0301	0.4519	1.5700e-003	0.1356	9.1000e-004	0.1365	0.0376	8.4000e-004	0.0384	0.0000	143.9696	143.9696	3.2400e-003	3.3900e-003	145.0621
Total	0.0633	0.5816	0.6532	3.9700e-003	0.1917	3.8200e-003	0.1956	0.0548	3.6200e-003	0.0584	0.0000	388.8173	388.8173	0.0196	0.0396	401.0983

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Paving - 2025****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	0.0301	0.2901	0.4712	7.4000e-004		0.0122	0.0122		0.0113	0.0113	0.0000	63.2457	63.2457	0.0197	0.0000	63.7374
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0301	0.2901	0.4712	7.4000e-004		0.0122	0.0122		0.0113	0.0113	0.0000	63.2457	63.2457	0.0197	0.0000	63.7374

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	1.5600e-003	9.1000e-004	0.0137	5.0000e-005	6.3000e-003	3.0000e-005	6.3300e-003	1.6800e-003	3.0000e-005	1.7000e-003	0.0000	4.3773	4.3773	1.0000e-004	1.0000e-004	4.4105
Total	1.5600e-003	9.1000e-004	0.0137	5.0000e-005	6.3000e-003	3.0000e-005	6.3300e-003	1.6800e-003	3.0000e-005	1.7000e-003	0.0000	4.3773	4.3773	1.0000e-004	1.0000e-004	4.4105

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Paving - 2025****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0104	0.1203	0.5143	7.4000e-004		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	63.2456	63.2456	0.0197	0.0000	63.7373
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0104	0.1203	0.5143	7.4000e-004		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	63.2456	63.2456	0.0197	0.0000	63.7373

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	1.5600e-003	9.1000e-004	0.0137	5.0000e-005	4.1200e-003	3.0000e-005	4.1500e-003	1.1400e-003	3.0000e-005	1.1700e-003	0.0000	4.3773	4.3773	1.0000e-004	1.0000e-004	4.4105
Total	1.5600e-003	9.1000e-004	0.0137	5.0000e-005	4.1200e-003	3.0000e-005	4.1500e-003	1.1400e-003	3.0000e-005	1.1700e-003	0.0000	4.3773	4.3773	1.0000e-004	1.0000e-004	4.4105

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.7 Architectural Coating - 2025****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.6747					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0140	0.1197	0.1374	3.9000e-004		4.9000e-003	4.9000e-003		4.6700e-003	4.6700e-003	0.0000	33.9604	33.9604	8.2400e-003	0.0000	34.1664
Total	2.6887	0.1197	0.1374	3.9000e-004		4.9000e-003	4.9000e-003		4.6700e-003	4.6700e-003	0.0000	33.9604	33.9604	8.2400e-003	0.0000	34.1664

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6800e-003	2.7400e-003	0.0412	1.4000e-004	0.0189	8.0000e-005	0.0190	5.0300e-003	8.0000e-005	5.1000e-003	0.0000	13.1319	13.1319	3.0000e-004	3.1000e-004	13.2316
Total	4.6800e-003	2.7400e-003	0.0412	1.4000e-004	0.0189	8.0000e-005	0.0190	5.0300e-003	8.0000e-005	5.1000e-003	0.0000	13.1319	13.1319	3.0000e-004	3.1000e-004	13.2316

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.7 Architectural Coating - 2025****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.6747					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.0603	0.1948	3.9000e-004		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003	0.0000	33.9604	33.9604	8.2400e-003	0.0000	34.1663
Total	2.6849	0.0603	0.1948	3.9000e-004		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003	0.0000	33.9604	33.9604	8.2400e-003	0.0000	34.1663

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6800e-003	2.7400e-003	0.0412	1.4000e-004	0.0124	8.0000e-005	0.0125	3.4300e-003	8.0000e-005	3.5000e-003	0.0000	13.1319	13.1319	3.0000e-004	3.1000e-004	13.2316
Total	4.6800e-003	2.7400e-003	0.0412	1.4000e-004	0.0124	8.0000e-005	0.0125	3.4300e-003	8.0000e-005	3.5000e-003	0.0000	13.1319	13.1319	3.0000e-004	3.1000e-004	13.2316

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

Increase Density

Increase Diversity

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2849	1.0089	10.6580	0.0187	2.0849	0.0133	2.0981	0.5569	0.0123	0.5692	0.0000	1,723.060 4	1,723.060 4	0.1488	0.0905	1,753.746 1
Unmitigated	1.6912	1.5778	16.4932	0.0348	3.9807	0.0227	4.0034	1.0632	0.0211	1.0843	0.0000	3,208.715 2	3,208.715 2	0.2128	0.1396	3,255.623 4

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Research & Development	5,623.69	948.94	554.38	10,605,646	5,554,574
Strip Mall	177.28	168.16	81.72	249,987	130,928
Total	5,800.97	1,117.10	636.10	10,855,633	5,685,502

4.3 Trip Type Information

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657
Other Non-Asphalt Surfaces	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657
Research & Development	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657
Strip Mall	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0663	0.6024	0.5060	3.6100e-003		0.0458	0.0458		0.0458	0.0458	0.0000	655.8069	655.8069	0.0126	0.0120	659.7041
NaturalGas Unmitigated	0.0663	0.6024	0.5060	3.6100e-003		0.0458	0.0458		0.0458	0.0458	0.0000	655.8069	655.8069	0.0126	0.0120	659.7041

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	1.22711e+007	0.0662	0.6015	0.5053	3.6100e-003		0.0457	0.0457		0.0457	0.0457	0.0000	654.8336	654.8336	0.0126	0.0120	658.7249
Strip Mall	18240	1.0000e-004	8.9000e-004	7.5000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.9734	0.9734	2.0000e-005	2.0000e-005	0.9791
Total		0.0663	0.6024	0.5060	3.6200e-003		0.0458	0.0458		0.0458	0.0458	0.0000	655.8070	655.8070	0.0126	0.0120	659.7041

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	1.22711e+007	0.0662	0.6015	0.5053	3.6100e-003		0.0457	0.0457		0.0457	0.0457	0.0000	654.8336	654.8336	0.0126	0.0120	658.7249
Strip Mall	18240	1.0000e-004	8.9000e-004	7.5000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.9734	0.9734	2.0000e-005	2.0000e-005	0.9791
Total		0.0663	0.6024	0.5060	3.6200e-003		0.0458	0.0458		0.0458	0.0458	0.0000	655.8070	655.8070	0.0126	0.0120	659.7041

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.29472e+006	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Research & Development	3.7108e+006	0.0000	0.0000	0.0000	0.0000
Strip Mall	40960	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.29472e+006	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Research & Development	3.7108e+006	0.0000	0.0000	0.0000	0.0000
Strip Mall	40960	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.2578	1.0000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0225	0.0225	6.0000e-005	0.0000	0.0240
Unmitigated	2.2578	1.0000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0225	0.0225	6.0000e-005	0.0000	0.0240

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2694					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.9874					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0600e-003	1.0000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0225	0.0225	6.0000e-005	0.0000	0.0240
Total	2.2578	1.0000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0225	0.0225	6.0000e-005	0.0000	0.0240

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2694					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.9874					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0600e-003	1.0000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0225	0.0225	6.0000e-005	0.0000	0.0240
Total	2.2578	1.0000e-004	0.0116	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0225	0.0225	6.0000e-005	0.0000	0.0240

7.0 Water Detail**7.1 Mitigation Measures Water**

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	78.0026	8.0116	0.1892	334.6659
Unmitigated	78.0026	8.0116	0.1892	334.6659

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	245.572 / 0	77.9086	8.0020	0.1889	334.2626
Strip Mall	0.29629 / 0.181597	0.0940	9.6500e-003	2.3000e-004	0.4033
Total		78.0026	8.0116	0.1892	334.6659

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	245.572 / 0	77.9086	8.0020	0.1889	334.2626
Strip Mall	0.29629 / 0.181597	0.0940	9.6500e-003	2.3000e-004	0.4033
Total		78.0026	8.0116	0.1892	334.6659

8.0 Waste Detail**8.1 Mitigation Measures Waste**

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.5561	0.5057	0.0000	21.1973
Unmitigated	8.5561	0.5057	0.0000	21.1973

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Research & Development	37.95	7.7035	0.4553	0.0000	19.0851
Strip Mall	4.2	0.8526	0.0504	0.0000	2.1122
Total		8.5561	0.5056	0.0000	21.1973

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.2 Waste by Land Use****Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Research & Development	37.95	7.7035	0.4553	0.0000	19.0851
Strip Mall	4.2	0.8526	0.0504	0.0000	2.1122
Total		8.5561	0.5056	0.0000	21.1973

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

120 E. Grand Avenue - Proposed Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number
----------------	--------

11.0 Vegetation

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**Emergency Generator Testing****San Mateo County, Annual****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	0.10	1000sqft	0.00	100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2025
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Model run done for emissions of emergency generator testing

Construction Phase - Model run done for emissions of emergency generator testing

Off-road Equipment - Model run done for emissions of emergency generator testing

Architectural Coating - Model run done for emissions of emergency generator testing

Consumer Products - Model run done for the testing of emergency generators

Area Coating - Model run done for emissions of emergency generator testing

Construction Off-road Equipment Mitigation - Tier 4 per BAAQMD

Area Mitigation - Model run done for emissions of emergency generator testing

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	0.00
tblArchitecturalCoating	EF_Parking	150.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	0.00
tblAreaCoating	Area_Parking	6	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	0.00	5.00
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblOffRoadEquipment	HorsePower	84.00	2,982.00

2.0 Emissions Summary

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2025	1.8900e-003	0.0308	0.0110	5.0000e-005	0.0000	5.1000e-004	5.1000e-004	0.0000	5.1000e-004	5.1000e-004	0.0000	5.6432	5.6432	1.5000e-004	0.0000	5.6470
Maximum	1.8900e-003	0.0308	0.0110	5.0000e-005	0.0000	5.1000e-004	5.1000e-004	0.0000	5.1000e-004	5.1000e-004	0.0000	5.6432	5.6432	1.5000e-004	0.0000	5.6470

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					
2025	0.0000	0.0000	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.6432	5.6432	1.5000e-004	0.0000	5.6470
Maximum	0.0000	0.0000	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.6432	5.6432	1.5000e-004	0.0000	5.6470

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	100.00	100.00	100.00	0.00	0.00	100.00	100.00	0.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational Unmitigated Operational

[illegible]

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

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

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Emergency Generator Testing	Architectural Coating	1/1/2025	1/7/2025	5	5	

Acres of Grading (Site Preparation Phase): 0

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 6 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Emergency Generator Testing	Generator Sets	3	0.30	2982	0.74

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
Emergency Generator Testing	3	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

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Emergency Generator Testing - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8900e-003	0.0308	0.0110	5.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	5.6432	5.6432	1.5000e-004	0.0000	5.6470
Total	1.8900e-003	0.0308	0.0110	5.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	5.6432	5.6432	1.5000e-004	0.0000	5.6470

Unmitigated Construction Off-Site

[illegible]

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

[illegible]

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.465403	0.073585	0.235906	0.146720	0.025583	0.006412	0.010355	0.002060	0.001446	0.000572	0.028871	0.000432	0.002657

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

[illegible]

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated

[illegible]

Mitigated

[illegible]

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Mitigated**

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

7.0 Water Detail**7.1 Mitigation Measures Water**

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

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

Emergency Generator Testing - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

120 E. Grand Avenue - Existing Conditions
San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	93.25	1000sqft	4.63	93,250.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2024
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - Site - 4.63 acres
- Construction Phase - No construction this model
- Energy Use -
- Fleet Mix - Fleet mix adjusted to account for 20% heavy-duty trucks at this warehouse use

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	0.00
tblConstructionPhase	PhaseEndDate	11/10/2023	10/17/2023
tblFleetMix	HHD	2.1250e-003	0.20
tblFleetMix	LDA	0.47	0.28
tblLandUse	LotAcreage	2.14	4.63

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

[illegible]

Mitigated Construction

[illegible][illegible]

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4129	1.0000e-005	8.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6700e-003	1.6700e-003	0.0000	0.0000	1.7700e-003
Energy	8.2000e-004	7.5000e-003	6.3000e-003	4.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1609	8.1609	1.6000e-004	1.5000e-004	8.2094
Mobile	0.0727	0.4847	0.7981	2.8400e-003	0.1789	3.2900e-003	0.1821	0.0481	3.1200e-003	0.0512	0.0000	283.8687	283.8687	0.0250	0.0316	293.9198
Waste						0.0000	0.0000		0.0000	0.0000	17.7942	0.0000	17.7942	1.0516	0.0000	44.0844
Water						0.0000	0.0000		0.0000	0.0000	6.8413	0.0000	6.8413	0.7027	0.0166	29.3522
Total	0.4864	0.4922	0.8053	2.8800e-003	0.1789	3.8600e-003	0.1827	0.0481	3.6900e-003	0.0518	24.6355	292.0313	316.6667	1.7794	0.0484	375.5675

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**2.2 Overall Operational****Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4129	1.0000e-005	8.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6700e-003	1.6700e-003	0.0000	0.0000	1.7700e-003
Energy	8.2000e-004	7.5000e-003	6.3000e-003	4.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1609	8.1609	1.6000e-004	1.5000e-004	8.2094
Mobile	0.0727	0.4847	0.7981	2.8400e-003	0.1789	3.2900e-003	0.1821	0.0481	3.1200e-003	0.0512	0.0000	283.8687	283.8687	0.0250	0.0316	293.9198
Waste						0.0000	0.0000		0.0000	0.0000	17.7942	0.0000	17.7942	1.0516	0.0000	44.0844
Water						0.0000	0.0000		0.0000	0.0000	6.8413	0.0000	6.8413	0.7027	0.0166	29.3522
Total	0.4864	0.4922	0.8053	2.8800e-003	0.1789	3.8600e-003	0.1827	0.0481	3.6900e-003	0.0518	24.6355	292.0313	316.6667	1.7794	0.0484	375.5675

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

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	10/18/2023	10/17/2023	5	0	

Acres of Grading (Site Preparation Phase): 0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Paving: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2023

Unmitigated Construction On-Site

[illegible]

[illegible]

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

[illegible]

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0727	0.4847	0.7981	2.8400e-003	0.1789	3.2900e-003	0.1821	0.0481	3.1200e-003	0.0512	0.0000	283.8687	283.8687	0.0250	0.0316	293.9198
Unmitigated	0.0727	0.4847	0.7981	2.8400e-003	0.1789	3.2900e-003	0.1821	0.0481	3.1200e-003	0.0512	0.0000	283.8687	283.8687	0.0250	0.0316	293.9198

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	162.26	162.26	162.26	473,705	473,705
Total	162.26	162.26	162.26	473,705	473,705

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.275819	0.072335	0.232457	0.144246	0.025248	0.006233	0.010124	0.200000	0.001469	0.000591	0.028445	0.000434	0.002601

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.0 Energy Detail**

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	8.2000e-004	7.5000e-003	6.3000e-003	4.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1609	8.1609	1.6000e-004	1.5000e-004	8.2094
NaturalGas Unmitigated	8.2000e-004	7.5000e-003	6.3000e-003	4.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1609	8.1609	1.6000e-004	1.5000e-004	8.2094

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.2 Energy by Land Use - Natural Gas****Unmitigated**

	Natural Gas 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					
Unrefrigerated Warehouse-No Rail	152930	8.2000e-004	7.5000e-003	6.3000e-003	4.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1609	8.1609	1.6000e-004	1.5000e-004	8.2094
Total		8.2000e-004	7.5000e-003	6.3000e-003	4.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1609	8.1609	1.6000e-004	1.5000e-004	8.2094

Mitigated

	Natural Gas 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					
Unrefrigerated Warehouse-No Rail	152930	8.2000e-004	7.5000e-003	6.3000e-003	4.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1609	8.1609	1.6000e-004	1.5000e-004	8.2094
Total		8.2000e-004	7.5000e-003	6.3000e-003	4.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1609	8.1609	1.6000e-004	1.5000e-004	8.2094

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	408435	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	408435	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.4129	1.0000e-005	8.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6700e-003	1.6700e-003	0.0000	0.0000	1.7700e-003
Unmitigated	0.4129	1.0000e-005	8.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6700e-003	1.6700e-003	0.0000	0.0000	1.7700e-003

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0486					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3642					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	8.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6700e-003	1.6700e-003	0.0000	0.0000	1.7700e-003
Total	0.4129	1.0000e-005	8.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6700e-003	1.6700e-003	0.0000	0.0000	1.7700e-003

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0486					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3642					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	8.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6700e-003	1.6700e-003	0.0000	0.0000	1.7700e-003
Total	0.4129	1.0000e-005	8.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6700e-003	1.6700e-003	0.0000	0.0000	1.7700e-003

7.0 Water Detail**7.1 Mitigation Measures Water**

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	6.8413	0.7027	0.0166	29.3522
Unmitigated	6.8413	0.7027	0.0166	29.3522

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	21.5641 / 0	6.8413	0.7027	0.0166	29.3522
Total		6.8413	0.7027	0.0166	29.3522

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	21.5641 / 0	6.8413	0.7027	0.0166	29.3522
Total		6.8413	0.7027	0.0166	29.3522

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	17.7942	1.0516	0.0000	44.0844
Unmitigated	17.7942	1.0516	0.0000	44.0844

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	87.66	17.7942	1.0516	0.0000	44.0844
Total		17.7942	1.0516	0.0000	44.0844

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	87.66	17.7942	1.0516	0.0000	44.0844
Total		17.7942	1.0516	0.0000	44.0844

9.0 Operational Offroad

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

120 E. Grand Avenue - Existing Conditions - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
