AIR QUALITY, ENERGY, AND GREENHOUSE GAS ANALYSIS

MAPES AND TRUMBLE INDUSTRIAL FACILITY PROJECT

CITY OF PERRIS

RIVERSIDE COUNTY, CALIFORNIA

LSA

November 2022

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RIVERSIDE COUNTY, CALIFORNIA

Submitted to:

Blue Marquise Investments, LLC
6300 Wilshire Boulevard, Suite 1420
Los Angeles, California 90048

Prepared by:

LSA
1500 Iowa Avenue, Suite 200
Riverside, California 92507
(951) 781-9310

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EXECUTIVE SUMMARY

LSA was retained by Blue Marquise Investments, LLC to prepare an Air Quality, Energy, and Greenhouse Gas Impact Analysis for the proposed Mapes and Trumble Industrial Facility Project (project) to be located in Perris, California.

This air quality, energy, and greenhouse gas (GHG) impact analysis provides a discussion of the proposed project, the physical setting of the project area, and the regulatory framework for air quality, energy, and GHGs. This assessment provides data on existing air quality and evaluates potential air quality and GHG impacts associated with the proposed project.

The proposed project would develop a 395,500-square-foot (sf) industrial warehouse building located southwest of the intersection of Trumble Road and Mapes Road in the City of Perris (City). The proposed warehouse project would include general office space, loading docks, and parking areas.

The project site is located on an undeveloped 19.16-acre lot, Assessor's Parcel Numbers 329-020-033, -034, -044, and -046. The site has a General Plan Industrial BP-Business Park land use designation and a corresponding BP zoning designation (City of Perris General Plan Map and Zoning Map). The proposed project construction schedule is assumed to begin in March 2023 and be completed in August 2024.

Emissions with regional effects during project construction, calculated with the California Emissions Estimator Model (CalEEMod Version 2020.4.0), would not exceed criteria pollutant thresholds established by the South Coast Air Quality Management District (SCAQMD). Compliance with SCAQMD Rules and Regulations during construction would reduce construction-related air quality impacts from fugitive dust emissions and construction equipment emissions. Standard dust suppression measures recommended by SCAQMD have been identified for short-term construction to meet the SCAQMD emissions thresholds. Construction and operational emissions for the proposed project would not exceed the localized significance thresholds (LSTs) based on the SCAQMD's guidance on measuring impacts on nearby sensitive receptors. The nearest sensitive receptors are identified as the singe-family residences located along Sherman Road approximately 1,375 feet (419 meters) east of the proposed project site.

Pollutant emissions from project operation, also calculated with CalEEMod, would not exceed the SCAQMD criteria pollutant thresholds. Long-term emissions from project operations would not exceed LSTs. Historical air quality data show that existing carbon monoxide (CO) levels for the project area and the general vicinity do not exceed either State or federal ambient air quality standards. The proposed project would not result in substantial increases in CO concentrations at intersections in the project vicinity that would result in the exceedance of federal or State CO concentration standards.

Project-related energy use was also projected for project construction and operation. Implementation of the proposed project would not result in a substantial increase in energy uses, nor would the project result in the wasteful, inefficient, or unnecessary consumption of fuel or

energy during project construction or operation. Energy impacts would be less than significant, and no mitigation measures would be necessary.

Although odor impacts are unlikely, the proposed project would be required to comply with SCAQMD Rule 402 in the event a nuisance complaint occurs. Impacts associated with objectionable odors would be less than significant.

This study addresses the potential of the proposed project to affect global climate change. The project's GHG emissions would be less than the City's threshold. Additionally, the proposed project's design would result in project consistency with all local and State policies and goals. Therefore, the proposed project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the GHG emissions. Short-term construction and long-term operational emissions of the principal GHGs, including carbon dioxide and methane, were analyzed.

The proposed project site is zoned as business park (BP) and the land use designation is consistent with the City's Zoning. Thus, the project would result in air pollutant emissions that are consistent with the City's planning. The City's General Plan is consistent with the Southern California Association of Governments' (SCAG) Regional Comprehensive Plan Guidelines and the SCAQMD Air Quality Management Plan (AQMP). Thus, the proposed project would be consistent with the regional AQMP.

This evaluation was prepared in conformance with appropriate standards, using procedures and methodologies in the SCAQMD *CEQA Air Quality Handbook* (1993) and associated updates (SCAQMD 2021). Air quality data posted on the California Air Resources Board (CARB) and the United States Environmental Protection Agency (EPA) websites are included to document the local air quality environment.

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LIST OF ABBREVIATIONS AND ACRONYMS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AAQS	ambient air quality standards
AB	Assembly Bill
AQMP	Air Quality Management Plan
AR4	IPCC Fourth Assessment Report
AR6	IPCC Sixth Assessment Report
Basin	South Coast Air Basin
Bio-CO_2	biologically generated carbon dioxide
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CalEEMod	California Emissions Estimator Model
CalGreen Code	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CEC	California Energy Commission
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CH_4	methane
City	City of Perris
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
DOT	United States Department of Transportation
EJ	Environmental Justice
EO	Executive Order

EPA	United States Environmental Protection Agency
ft	foot/feet
GCC	global climate change
GHG	greenhouse gas
GWP	global warming potential
H_2S	hydrogen sulfide
HFCs	hydrofluorocarbons
hr	hour
IPCC	Intergovernmental Panel on Climate Change
kBTU	thousand British thermal units
kWh	kilowatt hours
lbs/day	pounds per day
LST	localized significance threshold
MATES	*Multiple Air Toxics Exposure Study*
mg/m^3	milligrams per cubic meter
MMT	million metric tons
MMT CO_2e	million metric tons of carbon dioxide equivalent
mph	miles per hour
MT	metric tons
MT CO_2e	metric tons of carbon dioxide equivalent
MT CO_2e/yr	metric tons of carbon dioxide equivalent per year
MT/yr	metric tons per year
N_2O	nitrous oxide
NAAQS	national ambient air quality standards
NBio-CO_2	non-biologically generated carbon dioxide
ND	no data available
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
O_3	ozone (or smog)

PFCs	perfluorocarbons
PM	particulate matter
$PM_{2.5}$	particulate matter less than 2.5 microns in size
PM_{10}	particulate matter less than 10 microns in size
ppb	parts per billion
ppm	parts per million
project	Mapes and Trumble Industrial Facility Project
ROCs	reactive organic compounds
ROGs	reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SAFE	Safer, Affordable, Fuel-Efficient (Vehicles)
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
sf	square foot/feet
SF_6	sulfur hexafluoride
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_X	sulfur oxides
SRA	Source Receptor Area
State	State of California
UNFCCC	United Nations Framework Convention on Climate Change
VOCs	volatile organic compounds
VMT	vehicle miles traveled
Working Group	SCAQMD GHG CEQA Significance Threshold Working Group

INTRODUCTION

This air quality, energy, and greenhouse gas (GHG) impact analysis has been prepared to evaluate the potential air quality and climate change impacts associated with the proposed Mapes and Trumble Industrial Facility Project (project) in the City of Perris (City). This report provides a project-specific air quality and climate change impact analysis by examining the potential impacts of the proposed uses on the regional air quality and to nearby sensitive uses. This report incorporates energy assumptions for the proposed project and consumption in comparison to the county and State. This analysis follows the guidelines identified by the South Coast Air Quality Management District (SCAQMD) in its *CEQA Air Quality Handbook* (SCAQMD 1993) and associated updates (SCAQMD 2022a).

PROJECT LOCATION

The project site is located southwest of the Trumble Road and Mapes Road intersection in the City of Perris. The project site is an undeveloped 19.16-acre lot, consisting of Assessor's Parcel Numbers 329-020-033, -034, -044, and -046. The site has a General Plan Industrial BP-Business Park land use designation and a corresponding BP zoning designation (City of Perris General Plan Map and Zoning Map). The project site location is shown in Figure 1.

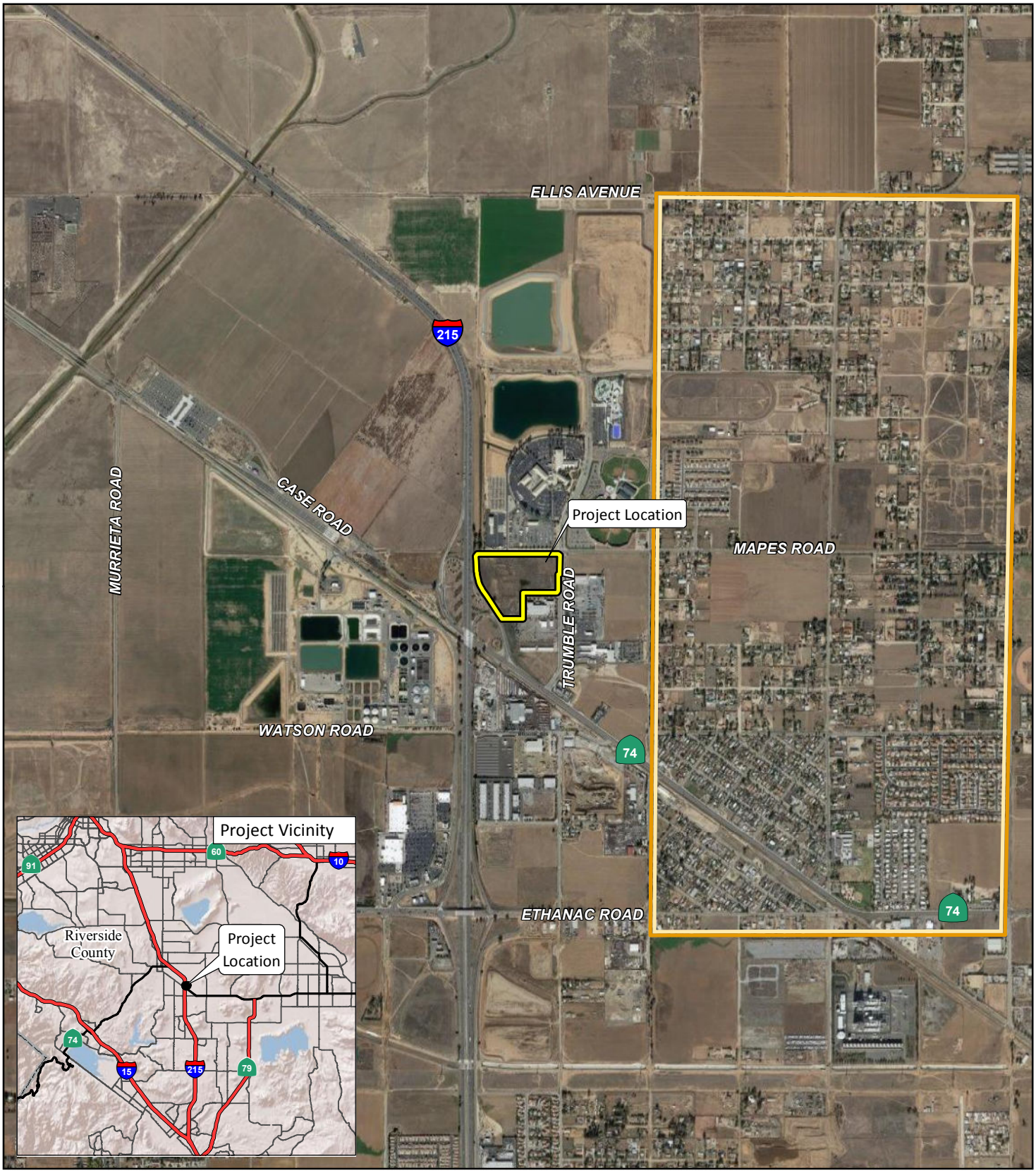
PROJECT DESCRIPTION

The proposed project would result in the development of the site with a 395,500-square-foot (sf) industrial warehouse building. The proposed warehouse project would include of 6,000 sf general office-mezzanine space, tractor trailer loading docks, and both auto and truck parking spaces. As the future tenant of the building is unknown at this time, the analysis assumes that half of the building would operate as a non-refrigerated warehouse and the other half as a refrigerated warehouse and that standard warehouse equipment (e.g., forklifts, material handlers) would be used. To raise the site by 12 inches above base flood elevation, 28,891 cubic yards of soil would be imported. The proposed project construction schedule is assumed to begin in March 2023 and be completed in August 2024. The site plan for the proposed project is shown in Figure 2.

EXISTING LAND USES IN THE PROJECT AREA

Sensitive receptors include residences, schools, hospitals, and similar uses sensitive to criteria pollutants. The project site is surrounded primarily by commercial and industrial land use types, with multi-family residential developments located approximately 1,390 feet east of the project site in the City of Menifee as shown in Figure 1. The areas adjacent to the project site include the following uses:

- **North:** Eastern Water Municipal District storage depot.
- **Northeast:** Big League Dreams Sports Complex.
- **East:** Sturgeon Electric Commercial Storage Yard.
- **South:** Commercial/Industrial building.
- **West:** Interstate 215 (I-215) and vacant property.



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LEGEND

Project Location

Sensitive Receptors

FIGURE 1

N

0 1000 2000

FEET

SOURCE: ESRI Streetmap, 2021; Google Earth, 2019.

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Mapes and Trumble Industrial Facility Project

Project Location with Sensitive Receptors

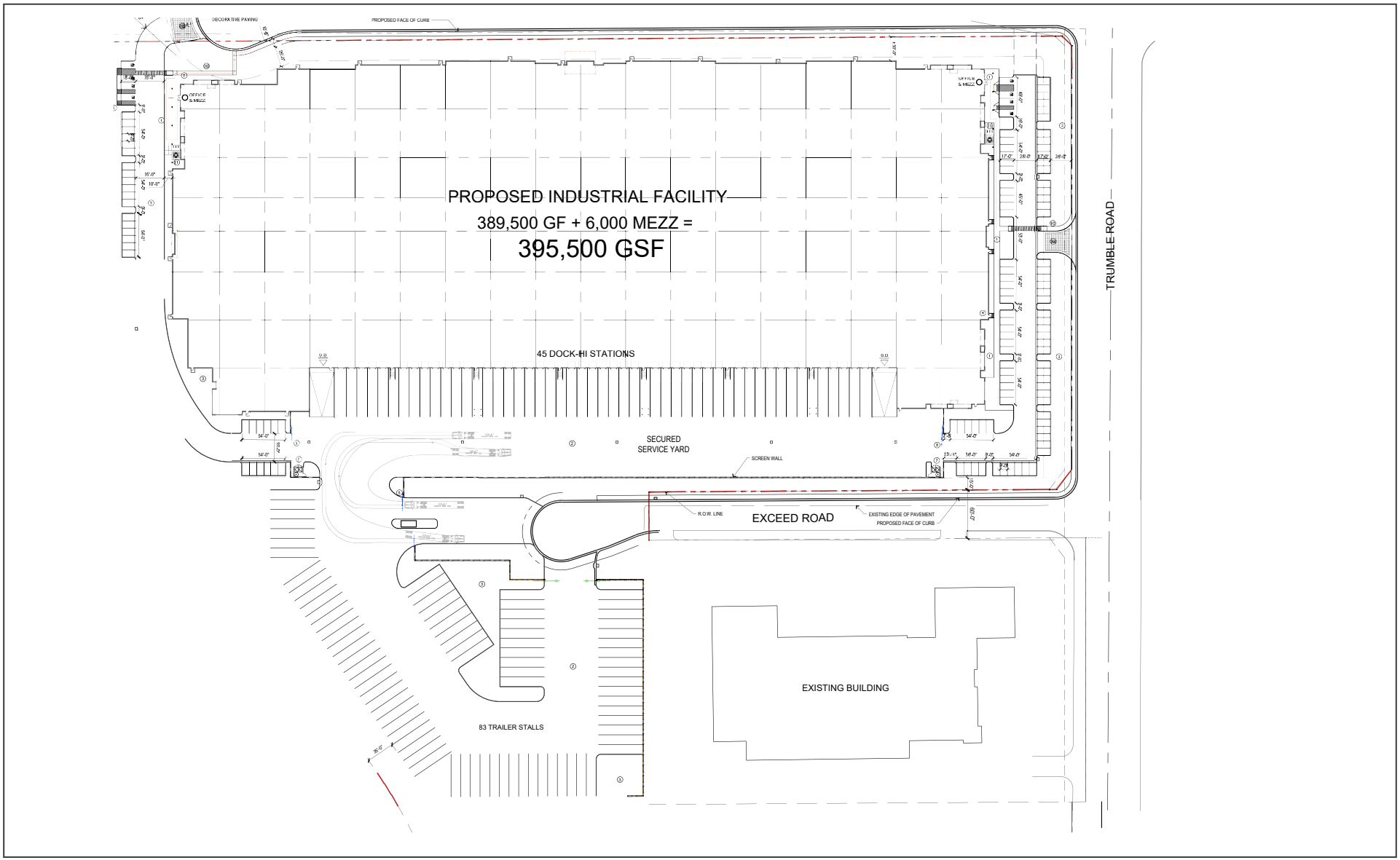

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FIGURE 2

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SOURCE: AO Architecture

Mapes and Trumble Industrial Facility Project

Site Plan

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PROJECT SETTING

Regional Climate and Air Quality

The project site is in the non-desert portion of Riverside County, California, which is part of the South Coast Air Basin (Basin) and is under the jurisdiction of the SCAQMD. This Basin includes all of Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties.

Both the State of California and the federal government have established health-based ambient air quality standards (AAQS) for seven air pollutants. As detailed in Table A, these pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns in size (PM_{10}), particulate matter less than 2.5 microns in size ($PM_{2.5}$), and lead. In addition, the State has set standards for sulfates, hydrogen sulfide (H_2S), vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

Table B summarizes the primary health effects and sources of common air pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (by the United States Environmental Protection Agency [EPA]), these health effects would not occur unless the standards are exceeded by a large margin or for a prolonged period of time. The California AAQS (CAAQS) are typically more stringent than National AAQS (NAAQS). Among the pollutants, O_3 and particulate matter ($PM_{2.5}$ and PM_{10}) are considered pollutants with regional effects, while the others have more localized effects (CARB 2021).

The California Clean Air Act (CCAA) provides the SCAQMD and other air districts with the authority to manage transportation activities at indirect sources. Indirect sources of pollution include any facility, building, structure, or installation, or combination thereof that attracts or generates mobile source emissions of any pollutant. In addition, local air districts also manage area source emissions that are generated when minor sources collectively emit a substantial amount of pollution. Examples of this would be the motor vehicles at an intersection, at a mall, and on highways. The SCAQMD also regulates stationary sources of pollution throughout its jurisdictional area. The California Air Resources Board (CARB) regulates direct emissions from motor vehicles.

Climate/Meteorology

Air quality in the Basin is not only affected by various emission sources (e.g., mobile and industry), but also by atmospheric conditions (e.g., wind speed, wind direction, temperature, and rainfall). The regional climate within the Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality within the Basin is primarily influenced by a wide range of emissions sources—such as dense population centers, heavy vehicular traffic, and industry—and meteorology.

Table A: Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)[8]	1-Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM_{10})[9]	24-Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		
Fine Particulate Matter ($PM_{2.5}$)[9]	24-Hour	—	—	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³	15 µg/m³	
Carbon Monoxide (CO)	1-Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8-Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	—	
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	
Nitrogen Dioxide (NO_2)[10]	1-Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1-Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3-Hour	—		—	0.5 ppm (1300 µg/m³)	
	24-Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30-Day Average	1.5 µg/m³	Atomic Absorption	—	—	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m³ (for certain areas)[13]	Same as Primary Standard	
	Rolling 3-Month Average[11]	—		0.15 µg/m³		
Visibility-Reducing Particles[14]	8-Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24-Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24-Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Source: Ambient Air Quality Standards (CARB 2016).

Footnotes are provided on the following page.

[1] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility-reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth-highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the EPA for further clarification and current national policies.

[3] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[4] Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

[5] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[6] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[7] Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

[8] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[9] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[10] To attain the 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[11] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[12] The CARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[13] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standards are approved.

[14] In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

°C = degrees Celsius
CARB = California Air Resources Board
EPA = United States Environmental Protection Agency
µg/m^3 = micrograms per cubic meter
mg/m^3 = milligrams per cubic meter
ppm = parts per million
ppb = parts per billion

Table B: Summary of Health Effects of the Major Criteria Air Pollutants

Pollutant	Health Effects	Examples of Sources
Particulate Matter ($PM_{2.5}$ and PM_{10}: less than or equal to 2.5 or 10 microns, respectively)	• Hospitalizations for worsened heart diseases • Emergency room visits for asthma • Premature death	• Cars and trucks (especially diesels) • Fireplaces, wood stoves • Windblown dust from roadways, agriculture, and construction
Ozone (O_3)	• Cough, chest tightness • Difficulty taking a deep breath • Worsened asthma symptoms • Lung inflammation	• Precursor sources[1]: motor vehicles, industrial emissions, and consumer products
Carbon Monoxide (CO)	• Chest pain in heart patients[2] • Headaches, nausea[2] • Reduced mental alertness[2] • Death at very high levels[2]	• Any source that burns fuel, such as cars, trucks, construction and farming equipment, and residential heaters and stoves
Nitrogen Dioxide (NO_2)	• Increased response to allergens	• See carbon monoxide sources
Toxic Air Contaminants	• Cancer • Chronic eye, lung, or skin irritation • Neurological and reproductive disorders	• Cars and trucks (especially diesels) • Industrial sources such as chrome platers • Neighborhood businesses such as dry cleaners and service stations • Building materials and products

Source: CARB Fact Sheet: Air Pollution and Health. (CARB 2009).

[1] Ozone is not generated directly by these sources. Rather, chemicals emitted by these precursor sources react with sunlight to form ozone in the atmosphere.

[2] Health effects from CO exposures occur at levels considerably higher than ambient.

CARB = California Air Resources Board

The annual average temperature varies little throughout the Basin, ranging from the low to middle 70s, measured in degrees Fahrenheit (°F). The nearest climatological station to the project site is the Sun City COOP Monitoring Station (Western Regional Climate Center 2022). The monthly average maximum temperature recorded at this station ranged from 66.1°F in January to 98.0°F in August, with an annual average maximum of 80.7°F. The monthly average minimum temperature recorded at this station ranged from 34.5°F in December to 59.4°F in August, with an annual average minimum of 46.9°F. January is typically the coldest month, and July and August are typically the warmest months in this area of the Basin.

The majority of annual rainfall in the Basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. The Sun City COOP Monitoring Station precipitation shows that average monthly rainfall varied from 3.25 inches in February to 0.66 inch or less from April to October, with an annual total of 11.22 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the

inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in midafternoon to late afternoon on hot summer days when the smog appears to clear up suddenly. Winter inversions frequently break by midmorning.

Winds in the project area blow predominantly from the south-southwest, with relatively low velocities. Wind speeds in the project area average about 5 miles per hour (mph). Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the Basin. Strong, dry, north, or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana conditions tend to last for several days at a time.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are CO and nitrogen oxides (NO_X) because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog.

Description of Global Climate Change and its Sources

Earth's natural warming process is known as the "greenhouse effect." This greenhouse effect compares the Earth and the atmosphere surrounding it to a greenhouse with glass panes. The glass allows solar radiation (sunlight) into Earth's atmosphere but prevents radiated heat from escaping, thus warming Earth's atmosphere. GHGs keep the average surface temperature of the Earth to approximately 60°F. However, excessive concentrations of GHGs in the atmosphere can result in increased global mean temperatures, with associated adverse climatic and ecological consequences (Intergovernmental Panel on Climate Change [IPCC] 2007).

Scientists refer to the global warming context of the past century as the "enhanced greenhouse effect" to distinguish it from the natural greenhouse effect (Pew Center 2006). While the increase in temperature is known as "global warming," the resulting change in weather patterns is known as "global climate change." Global climate change is evidenced in changes to global temperature rise, warming oceans, shrinking ice sheets, glacial retreat, decreased snow cover, sea level rise, declining Arctic sea ice, extreme weather events, and ocean acidification (IPCC 2007).

Higher temperatures, conducive to air pollution formation, could worsen air quality in California. While climate change may increase the concentration of ground-level ozone, the magnitude of the effect and, therefore, its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would exacerbate air quality. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat related deaths, illnesses, and asthma attacks throughout the state. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains

would temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus reducing the pollution associated with wildfires.

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change (GCC) are the following:[1]

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

Over the last 200 years, human activities have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which can cause global warming. Although GHGs produced by human activities include naturally occurring GHGs (e.g., CO_2, CH_4, and N_2O), some gases (e.g., HFCs, PFCs, and SF_6) are completely new to the atmosphere. Water vapor is a GHG, but is generally excluded from the list of GHGs, because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes (e.g., oceanic evaporation). For the purposes of this air quality study, the term "GHGs" will refer collectively to the six gases identified in the bulleted list provided above.

These GHGs vary considerably in terms of global warming potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. GWP is based on several factors, including the relative effectiveness of a gas in absorbing infrared radiation and the length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. For example, N_2O is 265 times more potent at contributing to global warming than CO_2. GHG emissions are typically measured in terms of metric tons[2] of "CO_2 equivalents" (MT CO_2e). Table C identifies the GWP for each type of GHG analyzed in this report. The EPA and CARB use GWP values from the 2007 IPCC Fourth Assessment Report (AR4). The IPCC has published the 2021 IPCC Sixth Assessment Report (AR6) with updated GWP values.

1 The GHGs listed are consistent with the definition in Assembly Bill 32 (Government Code 38505), as discussed later in this section.

2 A metric ton is equivalent to approximately 1.1 tons.

Table C: Global Warming Potential for Selected Greenhouse Gases

Greenhouse Gas	AR4 Values	AR6 Values
Carbon Dioxide (CO_2)	1 (by definition)	1 (by definition)
Methane (CH_4)	25	29.8 ± 11
Nitrous Oxide (N_2O)	298	273 ± 130

Sources: CARB. *2017 Climate Change Scoping Plan,*[1] and IPCC Sixth Assessment Report

[1] The EPA and CARB use global warming potential values from the IPCC Fourth Assessment Report (AR4) (2007).

AR4 = IPCC Assessment Report 4
AR6 = IPCC Assessment Report 6
CARB = California Air Resources Board
EPA = United States Environmental Protection Agency
IPCC = Intergovernmental Panel on Climate Change

The following discussion summarizes the characteristics of the six primary GHGs.

Carbon Dioxide

In the atmosphere, carbon generally exists in its oxidized form, as CO_2. Natural sources of CO_2 include the respiration (breathing) of humans, animals, and plants; volcanic outgassing; decomposition of organic matter; and evaporation from the oceans. Human-caused sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. The Earth maintains a natural carbon balance, and when concentrations of CO_2 are upset, the system gradually returns to its natural state through natural processes. Natural changes to the carbon cycle work slowly, especially compared to the rapid rate at which humans are adding CO_2 to the atmosphere. Natural removal processes (e.g., photosynthesis by land- and ocean-dwelling plant species) cannot keep pace with this extra input of human-made CO_2; consequently, the gas is building up in the atmosphere. The concentration of CO_2 in the atmosphere has risen from about 280 parts per million (ppm) prior to the Industrial Revolution to more than 400 ppm currently (NOAA 2022).

Methane

CH_4 is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources of CH_4 include fires, geologic processes, and bacteria that produce CH_4 in a variety of settings (most notably, wetlands) (University of New Hampshire 2010). Anthropogenic sources include rice cultivation, livestock, landfills and waste treatment, biomass burning, and fossil fuel combustion (e.g., the burning of coal, oil, and natural gas). As with CO_2, the major removal process of atmospheric CH_4—a chemical breakdown in the atmosphere—cannot keep pace with source emissions, and CH_4 concentrations in the atmosphere are increasing.

[1] California Air resources Board. 2017. *2017 Climate Change Scoping Plan*. November. Accessible online at: www.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf (accessed November 2022).

Nitrous Oxide

N_2O is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. N_2O is also a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion sources emit N_2O. The quantity of N_2O emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in California.

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride

HFCs are primarily used as substitutes for O_3-depleting substances regulated under the Montreal Protocol.[1] PFCs and SF_6 are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in the State; however, the rapid growth in the semiconductor industry, which is active in the State, has led to greater use of PFCs. However, there are no known project-related emissions of these three GHGs; therefore, these substances are not discussed further in this analysis.

Greenhouse Gas Emissions Sources and Inventories

An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on national, State, and local GHG emission inventories. However, because GHGs persist for a long time in the atmosphere (Table C), accumulate over time, and are generally well mixed, their impact on the atmosphere and climate cannot be tied to a specific point of emission.

United States Emissions

In 2020, the United States emitted approximately 5.2 billion MT CO_2e. Emissions decreased from 2019 to 2020 by 11 percent (after accounting for sequestration from the land sector). The primary driver for the decrease was an 11 percent decrease in CO_2 emissions from fossil fuel combustion. This decrease was primarily due to a 13 percent decrease in transportation emissions driven by decreased demand due to the ongoing COVID-19 pandemic. Electric power sector emissions also decreased 10 percent, reflecting both a slight decrease in demand from the COVID-19 pandemic and a continued shift from coal to less carbon intensive natural gas and renewables. GHG emissions in 2020 (after accounting for sequestration from the land sector) were 21 percent below 2005 levels. (EPA 2022a).

[1] The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for O_3 depletion and that are also potent GHGs.

State of California Emissions

According to CARB emission inventory estimates, the State emitted approximately 418 million MT of CO_2e (MMT CO_2e) emissions in 2019. This is a decrease of 1.7 MMT CO_2e from 2018 and 13 MMT CO_2e below the State's 2020 GHG target (CARB 2022).

CARB estimates that transportation was the source of approximately 40 percent of the State's GHG emissions in 2019, followed by electricity generation (both in-state and out-of-state) at 15 percent and industrial sources at 21 percent. The remaining sources of GHG emissions were residential and commercial activities at 9.7 percent and agriculture at 7.7 percent (CARB 2021).

Air Pollution Constituents and Attainment Status

CARB coordinates and oversees both State and federal air pollution control programs within California. CARB oversees activities of local air quality management agencies and maintains air quality monitoring stations throughout the State in conjunction with the EPA and local air districts. CARB has divided the State into 15 air basins based on meteorological and topographical factors of air pollution. CARB and the EPA use data collected at these stations to classify air basins as Attainment, Nonattainment, Nonattainment-Transitional, or Unclassified, based on air quality data for the most recent three calendar years compared with the AAQS.

Attainment areas may be the following:

- **Attainment/Unclassified ("Unclassifiable" in some lists).** These basins have never violated the air quality standard of interest or do not have enough monitoring data to establish Attainment or Nonattainment status.

- **Attainment-Maintenance (National Ambient Air Quality Standards [NAAQS] only).** These basins violated a NAAQS that is currently in use (were Nonattainment) in or after 1990, but now attain the standard and are officially redesignated as Attainment by the EPA with a Maintenance State Implementation Plan.

- **Attainment (usually only for California Ambient Air Quality Standards [CAAQS], but sometimes for NAAQS).** These basins have adequate monitoring data to show attainment, have never been Nonattainment, or, for NAAQS, have completed the official Maintenance period.

Nonattainment areas are imposed with additional restrictions as required by the EPA. The air quality data are also used to monitor progress in attaining air quality standards. Table D lists the attainment status for the criteria pollutants in the Basin.

Ozone

O_3 (smog) is formed by photochemical reactions between oxides of nitrogen and reactive organic gases (ROGs) rather than being directly emitted. O_3 is a pungent, colorless gas typical of Southern California smog. Elevated O_3 concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors (e.g., the sick, the elderly, and young children). O_3 levels peak during summer and early fall.

Table D: Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
O_3	Nonattainment (1-hour) Nonattainment (8-hour)	Extreme Nonattainment (1-hour) Extreme Nonattainment (8-hour)
PM_{10}	Nonattainment (24-hour) Nonattainment (Annual)	Attainment-Maintenance (24-hour)
$PM_{2.5}$	Nonattainment (Annual)	Serious Nonattainment (24-hour) Moderate Nonattainment (Annual)
CO	Attainment (1-hour) Attainment (8-hour)	Attainment-Maintenance (1-hour) Attainment-Maintenance (8-hour)
NO_2	Attainment (1-hour) Attainment (Annual)	Attainment/Unclassified (1-hour) Attainment-Maintenance (Annual)
SO_2	Attainment (1-hour) Attainment (24-hour)	Attainment/Unclassified (1-hour) Attainment/Unclassified (Annual)
Lead	Attainment[1] (30-day average)	Attainment[1] (3-month rolling)
All Others	Attainment/Unclassified	N/A

Sources: National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin (SCAQMD 2016b), and Nonattainment Areas for Criteria Pollutants (Green Book) (EPA Green Book).

[1] Only the Los Angeles County portion of the Basin is in nonattainment for lead.

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

Carbon Monoxide

CO is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. CO is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions.

Nitrogen Oxides

NO_2, a reddish brown gas, and nitric oxide (NO), a colorless, odorless gas, are formed from fuel combustion under high temperature or pressure. These compounds are referred to as nitrogen oxides, or NO_X. NO_X is a primary component of the photochemical smog reaction. It also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition (i.e., acid rain). NO_2 decreases lung function and may reduce resistance to infection.

Sulfur Dioxide

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

Lead

Lead is found in old paints and coatings, plumbing, and a variety of other materials. Once in the bloodstream, lead can cause damage to the brain, nervous system, and other body systems. Children are highly susceptible to the effects of lead.

Particulate Matter

Particulate matter (PM) is the term used for a mixture of solid particles and liquid droplets found in the air. Respirable particles (PM_{10}) derive from a variety of sources, including windblown dust and grinding operations. Fuel combustion and the resultant exhaust from power plants and diesel buses and trucks are primarily responsible for fine particle ($PM_{2.5}$) levels. Fine particles can also form in the atmosphere through chemical reactions. PM_{10} can accumulate in the respiratory system and aggravate health problems (e.g., asthma). The EPA's scientific review concluded that $PM_{2.5}$ particles, which penetrate deeply into the lungs, are more likely than coarse particles to contribute to the health effects listed in a number of recently published community epidemiological studies at concentrations that extend well below those allowed by the current PM_{10} standards. These health effects include premature death and increased hospital admissions and emergency room visits (primarily for the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individuals with cardiopulmonary disease [e.g., asthma]); decreased lung functions (particularly in children and individuals with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms.

Volatile Organic Compounds

Volatile organic compounds (VOCs; also known as ROGs, and reactive organic compounds [ROCs]) are formed from the combustion of fuels and the evaporation of organic solvents. VOCs are not defined as criteria pollutants; however, because VOCs accumulate in the atmosphere more quickly during the winter when sunlight is limited and photochemical reactions are slower, they are a prime component of the photochemical smog reaction.

Sulfates

Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently is converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of the State due to regional meteorological features.

Hydrogen Sulfide

H_2S is a colorless gas with the odor of rotten eggs. H_2S is formed during bacterial decomposition of sulfur-containing organic substances. In addition, H_2S can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation. In 1984, a CARB committee concluded that the ambient standard for H_2S is adequate to protect public health and to significantly reduce odor annoyance.

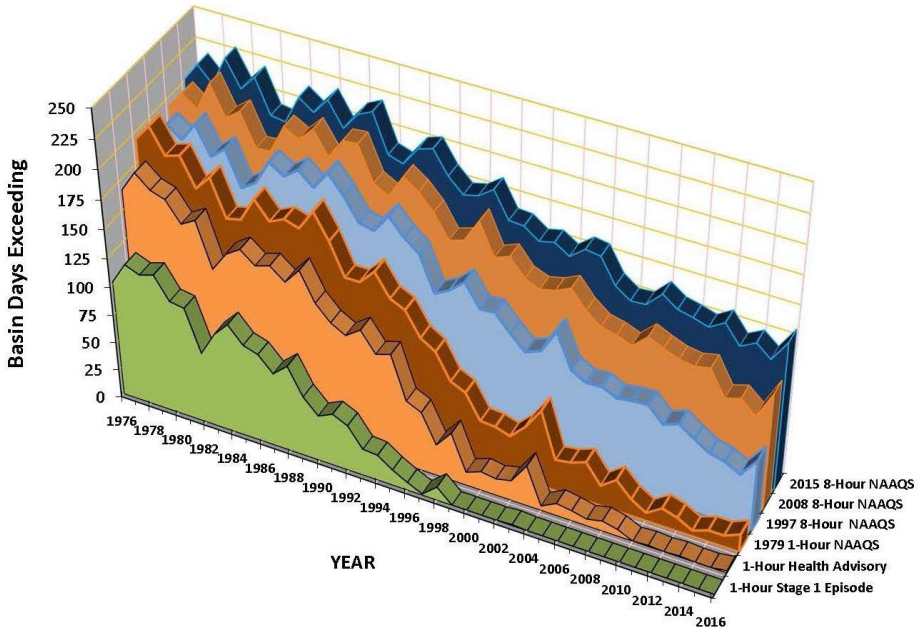
Visibility-Reducing Particles

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

REGIONAL AIR QUALITY IMPROVEMENT

Criteria Pollutants

As previously discussed, the project is under the jurisdiction of the SCAQMD, which is responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the Basin to bring the area into compliance with federal and State air quality standards. Air quality in the Basin has improved as a result of the development of SCAQMD rules and control programs and the development and application of cleaner technology. O_3, NO_x, VOCs, and CO have been generally decreasing since 1975. The levels of PM_{10} and $PM_{2.5}$ in the air have decreased since 1975, and direct emissions of $PM_{2.5}$ have decreased, although direct emissions of PM_{10} have shown little change. Figure 3 shows the O_3 trend in the Basin.



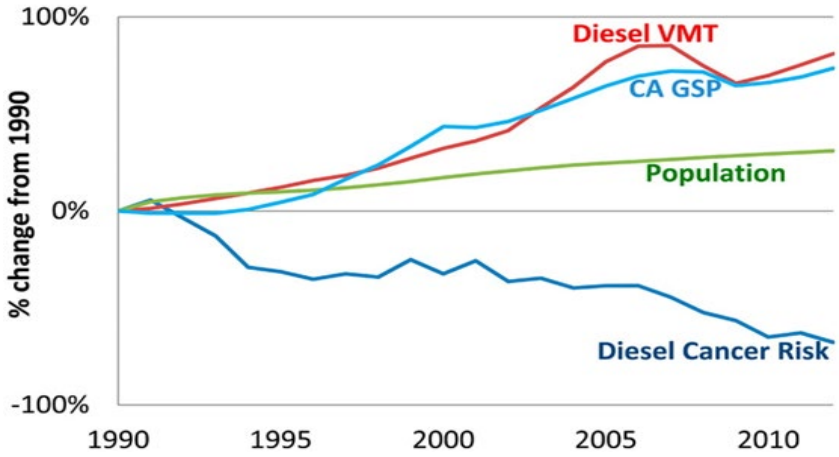
Source: South Coast Air Basin Ozone Trend (SCAQMD).

Figure 3: South Coast Air Basin Ozone Trend

Toxic Air Contaminants Trends

In 1984, CARB adopted regulations to reduce toxic air contaminant (TAC) emissions from mobile and stationary sources and consumer products. A CARB study showed that the ambient concentration and emissions of the seven TACS responsible for the most cancer risk from airborne exposure have

declined by 76 percent between 1990 and 2012 (Propper et al. 2015). Concentrations of diesel PM, the most important TAC, have declined by 68 percent between 1990 and 2012, despite a 31 percent increase in State population and an 81 percent increase in diesel vehicle miles traveled (VMT), as shown in Figure 4. The study also found that the significant reductions in cancer risk to California residents from the implementation of air toxics controls are likely to continue.



Source: Ambient and Emission Trends of Toxic Air Contaminants in California (Propper et al. 2015).

Figure 4: California Population, Gross State Product, Diesel Cancer Risk, Diesel Vehicle Miles Traveled

Cancer Risk Trends

According to CARB, cancer risk in the Basin has declined since 1990. The SCAQMD has conducted five *Multiple Air Toxics Exposure Study in the South Coast Air Basin* studies starting in the late 1980s (SCAQMD 2022b). The latest MATES V study monitored air toxins between May 1, 2018, to April 30, 2019, and found that cancer risk from air toxics has declined significantly in the Air Basin with a 40 percent decrease in cancer risk since the monitoring for the MATES IV study that occurred between July 1, 2012, and June 30, 2013, and an 84 percent decrease in cancer risk since the monitoring for the MATES II study that occurred between April 1, 1998, and March 31, 1999.

The MATES V study also analyzed impacts specific to the communities experiencing environmental injustices (Environmental Justice [EJ] communities) that were evaluated using the Senate Bill (SB) 535 definition of disadvantaged communities, which found that between MATES IV and MATES V, the cancer risk from air toxics decreased by 57 percent in EJ communities overall, compared to a 53 percent reduction in non-EJ communities.

LOCAL AIR QUALITY

The SCAQMD, together with CARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring station that monitors air pollutant data closest to the site is the Perris Air Quality Monitoring Station at 237 ½ North D Street, approximately 3 miles northwest of the project site. While this is the closest station only O_3 and PM_{10} data were available. CO and NO_2 data were available at the Lake Elsinore Air Quality Monitoring Station at 506 West Flint Street approximately 10 miles southwest of the project site. $PM_{2.5}$ data were available at the Riverside-Rubidoux Air

Quality Monitoring Station at 5888 Mission Boulevard in the Rubidoux neighborhood of Jurupa Valley, approximately 22 miles northwest of the project site. The air quality trends from these stations are used to represent the ambient air quality in the project area. The ambient air quality data in Table E show that CO and NO_2 levels are below the applicable State and federal standards. However, O_3 levels frequently exceed standards and PM_{10} and $PM_{2.5}$ levels occasionally exceed their respective 24-hour and annual standards.

Table E: Air Quality Concentrations in the Project Vicinity

Pollutant	Standard	2019	2020	2021
CO (Measured at the Lake Elsinore Monitoring Station)[1]				
Maximum 1-hour concentration (ppm)		1.6	0.9	0.9
No. of days exceeded	State: 20 ppm	0	0	0
	Federal: 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		0.7	0.7	0.8
No. of days exceeded	State: 9 ppm	0	0	0
	Federal: 9 ppm	0	0	0
O_3 (Measured at the Perris Monitoring Station)[2]				
Maximum 1-hour concentration (ppm)		0.118	0.114	0.117
No. of days exceeded	State: 0.09 ppm	28	34	ND
Max 8-hr concentration (ppm)		0.095	0.106	0.094
No. of days exceeded	State: 0.07 ppm	64	74	ND
	Federal: 0.07 ppm	64	74	ND
PM_{10} (Measured at the Perris Monitoring Station)[2]				
Maximum 24-hour concentration (µg/m^3)		97	92	77
No. of days exceeded	State: 50 µg/m^3	4	6	ND
	Federal: 150 µg/m^3	0	0	0
Annual avg. concentration (µg/m^3)		25.4	36.9	32.4
Exceeds Standard?	State: 20 µg/m^3	Yes	Yes	Yes
$PM_{2.5}$ (Measured at the Riverside - Rubidoux Monitoring Station)[3]				
Maximum 24-hour concentration (µg/m^3)		57.6	61.9	82.1
No. of days exceeded	Federal: 35 µg/m^3	5	12	ND
Annual avg. concentration (µg/m^3)		11.2	14.2	13.3
Exceeds Standard?	State: 12 µg/m^3	No	Yes	Yes
	Federal: 12 µg/m^3	No	Yes	Yes
NO_2 (Measured at the Lake Elsinore Monitoring Station)[1]				
Maximum 1-hour concentration (ppb):		38	44	44
No. of days exceeded	State: 180 ppb	0	0	0
	Federal: 100 ppb	0	0	0
Annual avg. concentration (ppb):		6.8	7.4	7.0
Exceeds standard?	State: 30 ppb	No	No	No
	Federal: 53 ppb	No	No	No

Sources: Air Data: Air Quality Data Collected at Outdoor Monitors across the U.S. (EPA 2022b); and CARB's iADAM (CARB 2021c).
Notes: Data were collected from the closest station to the project site where each criteria pollutant datum was available.

1. The Lake Elsinore Air Quality Monitoring Station is located at 506 West Flint Street.
2. The Perris Air Quality Monitoring Station is located at 237 ½ North D Street.
3. The Riverside - Rubidoux Air Quality Monitoring Station is located at 5888 Mission Boulevard.

µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
CO = carbon monoxide
EPA = United States Environmental Protection Agency
ND = No data available
NO_2 = nitrogen dioxide
O_3 = ozone
$PM_{2.5}$ = particulate matter smaller than 2.5 microns in size
PM_{10} = particulate matter smaller than 10 microns in size
ppb = parts per billion
ppm = parts per million

REGULATORY SETTINGS

Federal Regulations/Standards

Pursuant to the Federal Clean Air Act (CAA) of 1970, the EPA established the NAAQS. The NAAQS were established for six major pollutants, termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established AAQS, or criteria, for outdoor concentrations to protect public health.

The EPA has designated the Southern California Association of Governments (SCAG) as the Metropolitan Planning Organization responsible for ensuring compliance with the requirements of the CAA for the Basin.

The United States has historically had a voluntary approach to reducing GHG emissions; however, on April 2, 2007, the United States Supreme Court ruled that the EPA has the authority to regulate CO_2 emissions under the CAA. The Supreme Court ruled that GHGs fit within the CAA's definition of a pollutant and that the EPA did not have a valid rationale for not regulating GHGs. In December 2009, the EPA issued an endangerment finding for GHGs under the CAA.

On December 7, 2009, the EPA Administrator signed a final action under the CAA, finding that six GHGs (i.e., CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to GCC.

On September 15, 2011, the EPA and the USDOT issued a final rule for the first national standards to improve fuel efficiency of medium- and heavy-duty trucks and buses, model years 2014 to 2018. For combination tractors, the agencies proposed engine and vehicle standards that would achieve up to a 20 percent reduction from the model year 2014 in fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies proposed separate gasoline and diesel truck standards, which would achieve up to a 10 percent reduction from the model year 2014 for gasoline vehicles and a 15 percent reduction for diesel vehicles (12 and 17 percent, respectively, if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10 percent reduction from model year 2014 in fuel consumption. On October 25, 2016, the EPA and USDOT issued Phase 2 of the national standards to improve fuel efficiency standards for medium- and heavy-duty trucks and buses for model years 2021 to 2027 to achieve vehicle fuel savings as high as 25 percent, depending on the vehicle category.

On August 2, 2018, the previous Administration released a notice of proposed rulemaking, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule) to amend the CAFE and GHG emission standards established in 2012 for model years 2021 through 2026. The SAFE Vehicles Rule would decrease fuel economy and would withdraw the California Waiver for the California Advanced Clean Car program, Zero Emissions Vehicle mandate, and GHG emission standards for model years 2021 through 2026.

The current administration withdrew portions of the SAFE Rule, concluding that the SAFE Rule overstepped the agency's legal authority and finalized updated CAFE Standards for model years 2024 through 2026. The final rule establishes standards that would require an industry-wide fleet average of approximately 49 miles per gallon for passenger cars and light trucks in model year 2026,

by increasing fuel efficiency by 8 percent annually for model years 2024 and 2025, and 10 percent annually for model years 2026. The agency projects the final standards will save consumers nearly $1,400 in total fuel expenses over the lifetimes of vehicles produced in these model years and avoid the consumption of about 234 billion gallons of gas between model years 2030 to 2050. The National Highway Traffic Safety Administration (NHTSA) also projects that the standards will cut GHGs from the atmosphere, reduce air pollution, and reduce the country's dependence on oil.

State Agencies, Regulations, and Standards

In 1967, the State Legislature passed the Mulford-Carrell Act, which combined two Department of Health bureaus (i.e., the Bureau of Air Sanitation and the Motor Vehicle Pollution Control Board) to establish CARB. Since its formation, CARB has worked with the public, the business sector, and local governments to find solutions to the State's air pollution problems. California adopted the California Clean Air Act (CCAA) in 1988. CARB administers the CAAQS for the 10 air pollutants designated in the CCAA. These 10 State air pollutants are the 6 criteria pollutants designated by the CAA as well as four others: visibility-reducing particulates, H_2S, sulfates, and vinyl chloride.

The California Global Warming Solutions Act of 2006, widely known as Assembly Bill (AB) 32, requires CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB was directed to set a statewide GHG emissions limit and set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

In 2016, the Legislature passed and Governor Jerry Brown signed, Senate Bill (SB) 32 and AB 197. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown's April 2015 Executive Order (EO) B-30-15. SB 32 builds on AB 32 and keeps California on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an IPCC analysis of the emissions trajectory that would stabilize atmospheric GHG concentrations at 450 ppm CO_2e and reduce the likelihood of catastrophic impacts from climate change. The companion bill to SB 32, AB 197, provides additional direction to CARB related to the adoption of strategies to reduce GHG emissions.

In December 2017, CARB adopted "California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target" (CARB 2017) that describes the actions the State will take to achieve the SB 32 climate goal of reducing GHG emissions at least 40 percent below 1990 levels by 2030. The 2017 Scoping Plan includes input from a range of State agencies and is the result of a 2-year development process, including extensive public and stakeholder outreach, designed to ensure that California's climate and air quality efforts continue to improve public health and drive development of a more sustainable economy. It outlines an approach that cuts across economic sectors to combine GHG reductions with reductions of smog-causing pollutants, while also safeguarding public health and economic goals. The 2017 Scoping Plan reflects the direction from

the Legislature on the Cap-and-Trade Program, as described in AB 398, the need to extend key existing emissions reductions programs, and acknowledges the parallel actions required under AB 617 to strengthen monitoring and reduce air pollution at the community level.

The actions identified in the 2017 Scoping Plan can reduce overall GHG emissions in California and deliver strong policy signals that will continue to drive investment and certainty in a low-carbon economy. The 2017 Scoping Plan builds upon the successful framework established by the original Scoping Plan and the 2014 Scoping Plan, while also identifying new, technologically feasibility and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities.

Although the 2017 Scoping Plan does not impose any specific mandates or policies that specifically apply to individual development projects such as the proposed project, the Scoping Plan encourages local municipalities to update building codes and establish sustainable development practices for accommodating future growth. Key policies that involve the residential and commercial building sectors that are indirectly applicable to the proposed project include the implementation of SB 275 (promoting infill development and high density housing in high quality transit areas), implementing green building practices (i.e., the California Green Building Standards Code [CALGreen Code), energy efficiency and water conservation policies, and waste diversion efforts.

Senate Bill 97 and State CEQA Guidelines

In August 2007, the Legislature adopted SB 97, requiring the Office of Planning and Research (OPR) to prepare and transmit new CEQA guidelines for the mitigation of GHG emissions or the effects of GHG emissions to the California Natural Resources Agency. OPR submitted its proposed guidelines to the Secretary for Natural Resources on April 13, 2009, and the *State CEQA Guidelines* amendments were adopted on December 30, 2009, and became effective on March 18, 2010.

The *State CEQA Guidelines* amendments do not specify a threshold of significance for GHG emissions or prescribe assessment methodologies or specific mitigation measures. Instead, the amendments encourage lead agencies to consider many factors in performing a CEQA analysis but rely on the lead agencies in making their own significance determinations based upon substantial evidence. The *State CEQA Guidelines* amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses.

The *State CEQA Guidelines* amendments require a lead agency to make a good-faith effort based on the extent possible on scientific and factual data to describe, calculate or estimate the amount of GHG emissions resulting from a project. The *State CEQA Guidelines* amendments give discretion to the lead agency whether to (1) use a model or methodology to quantify GHG emissions resulting from a project and which model or methodology to use and/or (2) rely on a qualitative analysis or performance-based standards. The California Natural Resources Agency is required to periodically update the guidelines to incorporate new information or criteria established by CARB pursuant to AB 32.

California Green Building Standards

The California Green Building Standards Code, which is Part 11 of the California Code of Regulations, is commonly referred to as the CALGreen Code. The CALGreen Code applies to non-residential and residential developments and contains requirements for construction site selection, storm water control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. The CALGreen Code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The CALGreen Code also requires building commissioning, which is a process for the verification that all building systems, such as heating and cooling equipment and lighting systems, function at their maximum efficiency. The proposed project would be subject to the 2022 CALGreen Code that becomes effective on January 1, 2022. Requirements of the 2022 CALGreen Code that are applicable to the proposed project include the following:

5.106.4 **Bicycle Parking.** Provide bicycle racks within 200 feet of the visitor's entrance for 5 percent of new visitor motorized vehicle parking spaces, with a minimum of one two-bike capacity rack.

5.106.5.3 **Electric Vehicle (EV) charging.** Provide EV infrastructure and facilitate EV charging in compliance with the California Building Code and the California Electrical Code. The number of EV capable spaces required are specified at approximately 20 percent of the total spaces. Provisions for medium- and heavy-duty EV spaces shall be included.

5.106.12 **Shade Trees.** Shade trees shall be planted to provide shade over 50 percent of the parking area within 15 years unless solar photovoltaic shade structures provide this shade.

5.303.3 **Water Conserving Plumbing Fixtures and Fittings.** All water fixtures shall comply with the California Code of Regulations, Title 20, (Appliance Efficiency Regulations), Section 1605.1(h)(4) and Section 1605.3(h)(4)(A).

5.304.1 **Outdoor Water Use.** Development shall comply with the City's water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

5.408.1 **Construction Waster Management.** Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2, or 5.408.1.3, or meet the City's construction and demolition waste management ordinance, whichever is more stringent.

5.410.1 **Recycling by Occupants.** Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals, or meet the City's local recycling ordinance, whichever is more restrictive.

Regional Air Quality Planning Framework

SCAG is a council of governments for Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. SCAG is a regional planning agency and a forum for regional issues relating to transportation, the economy and community development, and the environment. Although SCAG is not an air quality management agency, it is responsible for developing transportation, land use, and energy conservation measures that affect air quality.

On September 3, 2020, the Regional Council of SCAG adopted *Connect SoCal*, also known as the *2020–2045 Regional Transportation Plan/Sustainable Communities Strategy: A Plan for Mobility, Accessibility, Sustainability, and High Quality of Life* (2020–2045 RTP/SCS). The 2020–2045 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions (CTCs), tribal governments, non-profit organizations, businesses, and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura (SCAG 2020).

South Coast Air Quality Management District

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the Basin. To that end, the SCAQMD, a regional agency, works directly with SCAG, county transportation commissions and local governments, and cooperates actively with State and federal government agencies. The SCAQMD develops air quality-related rules and regulations, establishes permitting requirements, inspects emissions sources, and provides regulatory enforcement through such measures as educational programs or fines, when necessary.

Regional Air Quality Management Plan

The SCAQMD and SCAG are responsible for formulating and implementing the AQMP for the Basin. The main purpose of an AQMP is to bring the area into compliance with federal and State air quality standards. SCAQMD prepares a new AQMP every 3 years, updating the previous plan and a 20-year horizon.

The 2022 AQMP is currently under development; however, the latest plan is the 2016 AQMP (SCAQMD 2017), which incorporates the scientific and planning assumptions, and also includes emission inventory methodologies for various source categories. The 2016 AQMP includes the integrated strategies and measures needed to meet the NAAQS, implementation of new technology measures, and demonstrations of attainment of the 1-hour and 8-hour O_3 NAAQS as well as the latest 24-hour and annual $PM_{2.5}$ standards. Key elements of the 2016 AQMP include the following:

- Calculation and credit for co-benefits from other planning efforts (e.g., climate, energy, and transportation)
- A strategy with fair-share emission reductions at the federal, State, and local levels
- Investment in strategies and technologies meeting multiple air quality objectives

- Identification of new partnerships and significant funding for incentives to accelerate deployment of zero and near-zero technologies
- Enhanced socioeconomic assessment, including an expanded environmental-justice analysis
- Attainment of the 24-hour $PM_{2.5}$ standard in 2019 with no additional measures
- Attainment of the annual $PM_{2.5}$ standard by 2025 with implementation of a portion of the O_3 strategy
- Attainment of the 1-hour O_3 standard by 2022 with no reliance on "black box" future technology (CAA Section 182(e)(5) measures)

SCAQMD adopts rules and regulations to implement portions of the AQMP. Several of these rules may apply to project construction or operation. For example, SCAQMD Rule 403 requires the implementation of the best-available fugitive dust control measure during active construction periods capable of generating fugitive dust emissions from on-site earthmoving activities, construction/demolition activities, and construction equipment travel on paved and unpaved roads.

Although the SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate the air quality issues associated with new development projects within the Basin, such as the proposed project. Instead, the SCAQMD published the *CEQA Air Quality Handbook* (SCAQMD 1993) and newer thresholds of significance to assist lead agencies, as well as consultants, project proponents, and other interested parties in evaluating potential air quality impacts of projects proposed in the Basin. The *CEQA Air Quality Handbook* and newer thresholds of significance provide standards, methodologies, and procedures for conducting air quality analyses in Environmental Impact Reports and were used extensively in the preparation of this analysis. SCAQMD is currently in the process of developing an *Air Quality Analysis Guidance Handbook* (SCAQMD 2020) to replace the *CEQA Air Quality Handbook* (1993) but the date that the new Handbook will be completed and published is presently unknown..

To assist the CEQA practitioner in conducting an air quality analysis in the interim while the replacement *Air Quality Analysis Guidance Handbook* is being prepared, supplemental guidance/ information is provided on the SCAQMD website and includes (1) on-road vehicle emission factors, (2) background CO concentrations, (3) localized significance thresholds (LSTs), (4) mitigation measures and control efficiencies, (5) mobile-source toxics analysis, (6) off-road mobile-source emission factors, (7) $PM_{2.5}$ significance thresholds and calculation methodology, and (8) updated SCAQMD Air Quality Significance Thresholds. SCAQMD also recommends using approved models to calculate emissions from land use projects, such as the CalEEMod. These recommendations were followed in the preparation of this analysis.

The following SCAQMD rules and regulations would apply to the proposed project:

- SCAQMD Rule 403 requires projects to incorporate fugitive dust control measures (SCAQMD 2005).

- SCAQMD Rule 1113 limits the VOC content of architectural coatings (SCAQMD 2016a).

- SCAQMD Rule 2305, the Warehouse Indirect Source Rule, requires the owners and operators of warehouses greater than 100,000 square feet to directly reduce NOx and particulate matter emissions, or to otherwise facilitate emission and exposure reductions of these pollutants in nearby communities. The warehouse rule is a menu-based points system requiring warehouse operators to annually earn a specified number of points. These points can be earned by completing actions from a menu that can include acquiring and using natural gas, Near-Zero Emissions and/or Zero- Emissions on-road trucks, zero-emission cargo handling equipment, solar panels or zero-emission charging and fueling infrastructure, or other options. SCAQMD expects this rule to reduce emissions from warehouse uses by 10–15 percent.

Local Regulations

The City of Perris Comprehensive General Plan 2030 (General Plan) serves as a guide for decision on growth, capital investment, and physical development in the City. The General Plan guides future development and gives direction on how to make the future happen. The General Plan does not address Air Quality directly, however the City is committed to imposing guidance and rules set for by the SCAQMD (City of Perris 2015). The City supports efforts to improve air quality through energy efficient technologies, use of alternative fuels, and land use and transportation planning. Additionally, the City will implement the Best Available Control Measures to reduce construction emissions to below daily emission standards established by the SCAQMD.

City of Perris Climate Action Plan

The City of Perris Climate Action Plan (CAP) was adopted by the City Council on February 23, 2016. The CAP was developed to address global climate change through the reduction of harmful GHG emissions at the community level, and as part of California's mandated statewide GHG emissions reduction goals under AB 32. Perris's CAP, including the GHG inventories and forecasts contained within, is based on Western Riverside Council of Government's (WRCOG) Subregional CAP. The Perris CAP utilized WRCOG's analysis of existing GHG reduction programs and policies that have already been implemented in the subregion and applicable best practices from other regions to assist in meeting the 2020 subregional reduction target. The CAP reduction measures chosen for the City's CAP were based on their GHG reduction potential, cost-benefit characteristics, funding availability, and feasibility of implementation in the City of Perris. The CAP used an inventory base year of 2010 and included emissions from the following sectors: residential energy, commercial/ industrial energy, transportation, waste, and wastewater. The CAP's 2020 reduction target is 15 percent below 2010 levels, and the 2035 reduction target is 47.5 percent below 2010 levels. The City of Perris is expected to meet these reduction targets through implementation of statewide and local measures. Beyond 2020, EO S-03-05 calls for a reduction of GHG emissions to a level 80 percent below 1990 levels by 2050.

The CAP includes emissions forecasts for the years 2020 and 2035 for both community-wide and government operations emissions, based on methodology established in the Energy Action Plans (EAP) produced under the Western Riverside Energy Leader Partnership (WRELP) for forecasting growth in energy and water demand within residential, community and government operations.

Western Riverside Council of Governments Subregional Climate Action Plan

The Western Riverside Council of Governments (WRCOG) completed a Subregional Climate Action Plan (CAP) (WRCOG 2014) in June 2014. Twelve cities in Western Riverside County, including Perris, joined efforts to develop this Subregional CAP, which sets forth a subregional emissions reduction target, emissions reduction measures, and action steps to assist each community to demonstrate consistency with California's Global Warming Solutions Act of 2006 (AB 32).

THRESHOLDS OF SIGNIFICANCE

Certain air districts (e.g., the SCAQMD) have created guidelines and requirements to conduct air quality analyses. The SCAQMD's current guidelines, the *CEQA Air Quality Handbook* (SCAQMD 1993) with associated updates, were followed in this assessment of air quality and GHG impacts for the proposed project.

Based on the *State CEQA Guidelines,* Appendix G (Public Resources Code Sections 15000–15387), a project would normally be considered to have a significant effect on air quality if the project would violate any CAAQS, contribute substantially to an existing air quality violation, expose sensitive receptors to substantial pollutants concentrations, or conflict with adopted environmental plans and goals of the community in which it is located.

POLLUTANTS WITH REGIONAL EFFECTS

The SCAQMD has established daily emissions thresholds for construction and operation of a proposed project in the Basin. The emissions thresholds were established based on the attainment status of the Basin with regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (SCAQMD 2017), these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

Regional Emissions Thresholds

Table F lists the CEQA significance thresholds for construction and operational emissions established for the Basin.

Table F: Regional Thresholds for Construction and Operational Emissions

Emissions Source	Pollutant Emissions Thresholds (lbs/day)					
	VOCs	NO_x	CO	PM_{10}	$PM_{2.5}$	SO_x
Construction	75	100	550	150	55	150
Operational	55	55	550	150	55	150

Source: South Coast Air Quality Management District Air Quality Significance Thresholds (SCAQMD 2019).
CO = carbon monoxide
lbs/day = pounds per day
NOx = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOC = volatile organic compounds

Projects in the Basin with construction- or operation-related emissions that exceed any of their respective emission thresholds would be considered significant under SCAQMD guidelines. These thresholds, which the SCAQMD developed and which apply throughout the Basin, apply as both project and cumulative thresholds. If a project exceeds these standards, it is considered to have a project-specific and cumulative impact.

Local Microscale Concentration Standards

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. Because ambient CO levels are below the standards throughout the Basin, a project would be considered to have a significant CO impact if project emissions result in an exceedance of one or more of the 1-hour or 8-hour standards. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20.0 ppm
- California State 8-hour CO standard of 9.0 ppm

LOCALIZED IMPACTS ANALYSIS

The SCAQMD published its *Final Localized Significance Threshold Methodology* in June 2003 and updated it in July 2008, recommending that all air quality analyses include an assessment of both construction and operational impacts on the air quality of nearby sensitive receptors (SCAQMD 2008). LSTs represent the maximum emissions from a project site that are not expected to result in an exceedance of the NAAQS or the CAAQS for CO, NO_2, PM_{10} and $PM_{2.5}$, as previously shown in Table A. LSTs are based on the ambient concentrations of that pollutant within the project Source Receptor Area (SRA) and the distance to the nearest sensitive receptor. For this project, the appropriate SRA is identified as the Perris Valley area (SRA 24).

Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. The nearest sensitive receptors are identified as the single-family residences located approximately 1,390 ft east of the proposed project site. Additionally, the Big League Dreams Sports Complex is just to the northeast of the project site. The distance from the closest construction area to the closest playing field is approximately 650 feet and from the closest loading dock to the closest playing field is approximately 965 feet.

The LST methodology uses lookup tables based on site acreage to determine the significance of emissions for CEQA purposes. However, CalEEMod does not allow the user to mitigate construction emissions by directly modifying acreage disturbed. CalEEMod calculates construction emissions (off-road exhaust and fugitive dust) based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment. For construction emissions, the localized significance for a project greater than 5 acres can be determined by following this SCAQMD guidance to approximate the amount of acreage disturbed per day. For this 19.16-acre project site, construction and grading would occur on no more than 5 acres each day; thus, LST screening thresholds of 5 acres for construction were used in this analysis. Table G lists the LST emission thresholds that apply during project construction based on size and distance to sensitive receptors during construction and operation, respectively.

Table G: SCAQMD Localized Significance Thresholds

Emissions Source Category	Pollutant Emissions (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Construction (5 acres, 650 feet [198 meters] distance)	486	6,792	95	31
Operational (5 acres, 965 feet [294 meters] distance)	579	11,770	31	14

Source: Compiled by LSA Associates, Inc. (July 2022).
Note: LSTs are based in SRA 24 – Perris Valley, distances of 650 and 965 feet to nearest sensitive receptors.
CO = carbon monoxide
LST = localized significance thresholds
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SRA = Source Receptor Area

GLOBAL CLIMATE CHANGE

State CEQA Guidelines Section 15064(b) provides that the "determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data," and further, states that an "ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting."

Appendix G of the *State CEQA Guidelines* includes significance thresholds for GHG emissions. A project would normally have a significant effect on the environment if it would do either of the following:

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

Currently, there is no statewide GHG emissions threshold that has been used to determine the potential GHG emissions impacts of a project. While CARB published some draft thresholds in 2008, they were never adopted, and CARB recommended that local air districts and lead agencies adopt their own thresholds for GHG impacts. Threshold methodology and thresholds are still being developed and revised by air districts in California.

The City's CAP has a 2020 reduction target of 15 percent below 2010 levels, and a 2035 reduction target of 47.5 percent below 2010 levels. The City of Perris is expected to meet these reduction targets through implementation of Statewide and local measures. However, the City's CAP it is not a qualified CAP, meaning that it does not meet the requirements for tiering and streamlining under section 15183.5 of the *State CEQA Guidelines*. Therefore, consistency with the CAP goals and policies will be demonstrated for informational purposes.

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, the SCAQMD convened a GHG CEQA Significance Threshold Working Group (Working Group) in 2008. This Working Group proposed a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency (SCAQMD 2008). The most recent proposal issued in September 2010 uses the following tiered approach to evaluate potential GHG impacts from various uses:

Tier 1: Determine if CEQA categorical exemptions are appliable. If not, move to Tier 2.

Tier 2: Consider whether or not the proposed project is consistent with a locally adopted GHG reduction plan that has gone through public hearings and CEQA review, that has an approved inventory, including monitoring, etc. If not, move to Tier 3.

Tier 3: Consider whether the proposed project generates GHG emissions in excess of screening thresholds for individual land uses of 3,000 (all projects) or 10,000 (industrial projects).

Tier 4: Consider whether the project generates GHG emissions in excess of applicable performance standards for the project service population (population plus employment). The efficiency targets were established based on the goal of AB 32 to reduce statewide GHG emissions by 2020 and 2035. The 2020 efficiency targets are 4.8 MT CO_2e per service population for project-level analyses and 6.6 MT CO_2e for plan-level analyses. The 2035 targets that reduce emissions to 40 percent below 1990 levels are 3.0 MT CO_2e per service population for project-level analyses and 4.1 MT CO_2e per service population for plan-level analyses. If the project generates emissions in excess of the applicable efficiency targets, move to Tier 5.

Tier 5: Consider the implementation of CEQA mitigation (including the purchase of GHG offsets) to reduce the project efficiency target to Tier 4 levels.

The thresholds identified above have not been adopted by the SCAQMD or distributed for widespread public review and comment, and the working group tasked with developing the thresholds has not met since September 2010. The future schedule and likelihood of threshold adoption is uncertain. If CARB adopts statewide significance thresholds, SCAQMD staff plans to report back to the SCAQMD Governing Board regarding any recommended changes or additions to the SCAQMD's interim threshold. In the absence of other thresholds of significance promulgated by the SCAQMD, the City of Perris has been using the SCAQMD's 10,000 MT CO_2e threshold for industrial projects and the draft thresholds for non-industrial projects for the purpose of evaluating the GHG impacts associated with proposed general development projects. Other lead agencies throughout the Basin have also been using these adopted and draft thresholds. The evaluation of impacts under the 10,000 metric tons of carbon dioxide equivalent per year (MT CO_2e/yr) threshold is also considered to be conservative since it is being applied to all of the GHG emissions generated by the project (i.e., area sources, energy sources, vehicular sources, solid waste sources, and water sources) whereas the SCAQMD's 10,000 MT CO_2e/yr threshold applies only to the new stationary sources generated at industrial facilities.

Thus, the applicable GHG threshold for project-level and cumulative GHG emissions is 10,000 MT CO_2e/yr.

ENERGY

While no quantitative thresholds related to energy are included in the *State CEQA Guidelines*, the *State CEQA Guidelines* indicate that a project would normally have a significant adverse energy impact if the project would do either of the following:

- Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation

  OR

- Conflict with or obstruct a State or local plan for renewable energy or energy efficiency

For the purposes of this analysis, impacts to energy resources will be considered significant if the project would result in the wasteful, inefficient, or unnecessary consumption of fuel or energy; and/or conversely, if the project would not incorporate renewable energy or energy efficiency measures into building design, equipment use, transportation, or other project features.

IMPACTS AND MITIGATION

AIR QUALITY IMPACTS

Air pollutant emissions associated with the project would occur over the short term from construction activities and over the long term from project-related vehicular trips and due to energy consumption (e.g., electricity and natural gas usage) by the proposed land uses.

Construction Impacts

Equipment Exhaust and Related Construction Activities

Construction activities produce combustion emissions from various sources (utility engines, tenant improvements, and motor vehicles transporting the construction crew). Exhaust emissions from construction activities envisioned on site would vary daily as construction activity levels change.

The construction analysis includes estimates of the construction equipment to be used during each construction phase, the hours of use for each piece of construction equipment, the quantities of earth and debris to be moved, and the on-road vehicle trips (e.g., worker, soil-hauling, and vendor trips). It was assumed that architectural coatings would be applied during the latter portion of the building construction phase. The paving phase was extended to account for the large paved area.

CalEEMod version 2020.4.0 was used to develop the construction equipment inventory and calculate the construction emissions. CalEEMod defaults are assumed for the construction activities, off-road equipment, worker trip rates, and on-road construction fleet mix and trip lengths, other than assuming that the architectural coatings would be applied during the building construction phase and that 28,891 cubic yards of soil would be imported. Table H shows the tentative schedule beginning in March 2023 and would be completed in August 2024, a duration of approximately 17 months. Table I lists the estimated construction equipment that would be used during project construction as estimated by CalEEMod default values.

Table H: Project Construction Schedule

Phase Name	Phase Start Date	Phase End Date	Number of Days
Site Preparation	3/1/2023	3/14/2023	10
Grading	3/15/2023	4/25/2023	30
Building Construction	4/26/2023	6/18/2024	300
Architectural Coating	1/2/2024	6/18/2024	121
Paving	6/19/2024	8/15/2024	42

Source: Compiled by LSA Associates, Inc. (November 2022).
Note: Analysis assumes a 2024 opening year.

Table I: Diesel Construction Equipment Used by Construction Phase

Construction Phase	Off-Road Equipment Type	Off-Road Equipment Unit Amount	Hours Used per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	3	8	247	0.4
	Tractors/Loaders/Backhoes	4	8	97	0.37
Grading	Excavators	2	8	158	0.38
	Graders	1	8	187	0.41
	Rubber Tired Dozers	1	8	247	0.4
	Scrapers	2	8	367	0.48
	Tractors/Loaders/Backhoes	2	8	97	0.37
Building Construction	Cranes	1	7	231	0.29
	Forklifts	3	8	89	0.2
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/Backhoes	3	7	97	0.37
	Welders	1	8	46	0.45
Architectural Coating	Air Compressors	1	6	78	0.48
Paving	Pavers	2	8	130	0.42
	Paving Equipment	2	8	132	0.36
	Rollers	2	8	80	0.38

Source: Compiled by LSA Associates, Inc., using CalEEMod defaults (November 2022).
CalEEMod = California Emissions Estimator Model

The emissions rates shown in Table J are from the CalEEMod output tables listed as "Mitigated Construction," even though the only measures that have been applied to the analysis are the required construction emissions control measures, or standard conditions. They are also the combination of the on- and off-site emissions and the greater of summer and winter emissions. No exceedances of any criteria pollutants are expected. Standard measures are documented in the CalEEMod outputs included as Appendix A.

Table J: Short-Term Regional Construction Emissions

	Total Regional Pollutant Emissions (lbs/day)							
Construction Phase	**VOC**	**NO_X**	**CO**	**SO_X**	**Fugitive PM_{10}**	**Exhaust PM_{10}**	**Fugitive $PM_{2.5}$**	**Exhaust $PM_{2.5}$**
Site Preparation	3	28	19	<1	9	1	5	1
Grading	4	45	32	<1	6	2	2	1
Building Construction	3	20	31	<1	5	<1	1	<1
Architectural Coating	16	1	4	<1	<1	<1	<1	<1
Paving	2	10	15	<1	<1	<1	<1	<1
Peak Daily	**19**	**45**	**35**	**<1**	**10**		**6**	
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**		**55**	
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**		**No**	

Source: Compiled by LSA Associates, Inc. (November 2022).
Note: The daily emissions for Architectural Coatings and Building Construction are combined as it was assumed that they would occur simultaneously. PM_{10} and $PM_{2.5}$ emissions are from the Mitigated results - the only "mitigation" applied in this modeling are required dust control measures per SCAQMD Rule 403. Some values may not appear to add up correctly due to rounding.
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOC = volatile organic compounds

Fugitive Dust

Fugitive dust emissions are generally associated with land clearing and exposure of soils to the air and wind, as well as cut-and-fill grading operations. Dust generated during construction varies substantially on a project-by-project basis, depending on the level of activity, the specific operations, and weather conditions at the time of construction.

The construction calculations prepared for this project assumed that dust control measures (watering a minimum of two times daily) would be employed to reduce emissions of fugitive dust during site grading. Furthermore, all construction would need to comply with SCAQMD Rule 403 regarding the emission of fugitive dust. Table J lists total construction emissions (i.e., fugitive-dust emissions and construction-equipment exhausts) that have incorporated the following Rule 403 measures that would be implemented to significantly reduce PM_{10} emissions from construction:

- Water active sites at least twice daily (locations where grading is to occur shall be thoroughly watered prior to earthmoving).
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 2 feet (0.6 meter) of freeboard (vertical space between the top of the load and the top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.

These Rule 403 measures were incorporated in the CalEEMod analysis as a standard condition.

Architectural Coatings

Architectural coatings contain VOCs that are part of the O_3 precursors. Based on the proposed project, it is estimated that application of the architectural coatings for the proposed peak construction day would result in a peak of 19 pounds per day (lbs/day) of VOCs. Therefore, VOC emissions from architectural coating application would not exceed the SCAQMD VOC threshold of 75 lbs/day.

Odors from Construction Activities

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

SCAQMD Rule 402, regarding nuisances, states,

> "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."

The proposed uses are not anticipated to emit any objectionable odors. Therefore, objectionable odors posing a health risk to potential on-site and existing off-site uses would not occur as a result of construction of the proposed project.

Naturally Occurring Asbestos

The proposed project site is in Riverside County, which is among the counties found to have serpentine and ultramafic rock in their soils (California Department of Conservation 2022). However, according to the California Geological Survey, no such rock has been identified in the project vicinity. Therefore, there would be no impact regarding the potential risk for naturally occurring asbestos during project construction.

Localized Impacts Analysis

If a project proves to be below the SCAQMD's construction LSTs would result in a less than significant impact on nearby sensitive receptors. Table K shows the proposed project's estimated peak day construction pollutant emission concentrations for a project based in SRA 24.

Table K: Construction Localized Impacts Analysis

Emissions Sources	NO_X	CO	PM_{10}	$PM_{2.5}$
On-Site Emissions (lbs/day)	35	28	10	6
Localized Significance Threshold	**486**	**6,792**	**95**	**31**
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Compiled by LSA Associates, Inc. (November 2022).
Note: LST analysis is based on SRA 24 – Perris Valley, 5 acres, sensitive receptors located approximately 650 feet away.
CO = carbon monoxide
lbs/day = pounds per day
LST = localized significance thresholds
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SRA = Source Receptor Area

Table K shows that pollutant emissions on the peak day of construction emissions would not exceed the SCAQMD's construction LSTs. Therefore, construction activities of the proposed project would not result in a significant impact on nearby sensitive receptors.

Long-Term Regional Air Quality Impacts

Operational Emissions

Long-term air pollutant emission impacts are those associated with area and mobile sources involving any project-related changes. The proposed project would result in increases to both. The area source emission categories include sources such as consumer products, architectural coatings, and landscaping equipment. Mobile source emissions are those associated with any form of transportation related to the project. Energy sources include natural gas consumption for the heating of water and indoor air temperature.

The proposed project would generate emissions from daily operations and a large amount of heavy duty truck trips from warehouse operations. As the final configuration of the warehouse is not known at the time of this analysis, the CalEEMod land use inputs include both an unrefrigerated

warehouse and a refrigerated warehouse, splitting the full warehouse space in half. It was also assumed there would be standard warehouse equipment (e.g., forklifts, material handlers), and to analyze the worst-case scenario, it was assumed they would all be diesel-powered. The warehouse would include 6,000 sf of office space and a large parking area. The *Trumble and Mapes Industrial Facility Traffic Study* (LSA 2022) determined that the project configured as a non-refrigerated warehouse would generate 495 cars, 49 two-axle trucks, 40 three-axle trucks, and 135 four-plus axle trucks daily. Using the trip rates from the traffic study for the non-refrigerated half and standard ITE trip rates for a cold-storage warehouse, the project would generate a daily trip rate of 519 cars, 76 two-axle trucks, 36 three-axle trucks, and 148 four-plus axle trucks. Trip lengths as recommended by SCAQMD of 15.3 miles for the smaller trucks and 39.9 miles for the heavy-duty trucks were used. CalEEMod includes evaporative, starting, and idling emissions for each vehicle for every trip. Table L shows the long-term operational emissions associated with the implementation of the proposed project.

Table L: Opening Year Regional Operational Emissions

Emission Category	Pollutant Emissions (lbs/day)					
	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Sources	9	<1	<1	0	<1	<1
Energy Sources	<1	3	2	<1	<1	<1
Mobile Sources	1	21	24	<1	12	3
Warehouse Equipment	1	14	18	<1	<1	<1
Total Daily Emissions	**12**	**38**	**45**	**<1**	**13**	**4**
SCAQMD Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA Associates, Inc. (November 2022).
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOC = volatile organic compound

Based on the results presented in Table L, the proposed project operational emissions would not exceed the SCAQMD's daily criteria pollutant emissions thresholds. As described above, the SCAQMD thresholds were set at a level that protects public health with an adequate margin of safety. As these project emissions are all less than the SCAQMD thresholds, there would not be any impact to public health. Therefore, operation of the proposed project would result in a less than significant impact.

Localized Impacts Analysis

By design, the localized impacts analysis only includes on-site sources; however, the CalEEMod outputs do not separate on-site and off-site emissions for operations. For a worst-case scenario assessment, the emissions shown in Table M include all on-site project-related stationary sources and 5 percent of the project-related new mobile sources, which is an estimate of the amount of project-related new vehicle traffic that would occur on site. A total of 5 percent is considered conservative because the average round-trip lengths assumed are 16.6 miles for commercial-work trips, 8.4 miles for commercial-customer trips, and 6.9 miles for other types of trips. Table M shows the peak day emissions of the operational activities compared with the appropriate LSTs based in SRA 24, Perris Valley.

Table M: Long-Term Operational Localized Impacts Analysis

Emissions Sources	NO_X	CO	PM_{10}	$PM_{2.5}$
On-Site Emissions (lbs/day)	15	19	1	<1
Localized Significance Threshold	**579**	**11,770**	**31**	**14**
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Compiled by LSA Associates, Inc. (November 2022)
Note: LST analysis is based on SRA 24 – Perris Valley, 5 acres, sensitive receptors located approximately 965 ft away.
CO = carbon monoxide
LST = localized significance thresholds
NOx = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SRA = Source Receptor Area

Table M shows that the operational emission rates would not exceed the LSTs for sensitive receptors in the project area. Therefore, the proposed operational activity would not result in a locally significant air quality impact.

As described above, in addition to vehicle emissions during movement, CalEEMod includes evaporative, starting, and idling emissions for every trip. Thus, these LST emissions include the idling emissions from the trucks at the loading docks. As Table M shows, the PM_{10} and $PM_{2.5}$ emissions from all project sources, including the trucks, would be very low—well below LST thresholds. As the LST thresholds include the ambient levels of the pollutants and are designed to be protective of human health, these results demonstrate that there would not be a significant health risk to nearby residents. A separate Health Risk Assessment report was prepared to more thoroughly evaluate the impacts from truck operations on site to sensitive receptors near the project site.

Odors from Operational Activities

Land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. No sources of objectionable odors have been identified for the proposed project nor is anyone living within 1,370 feet of the project site; therefore, the impacts associated with odors would be less than significant, and no mitigation measures are required.

CO Hot Spot Analysis

Vehicular trips associated with the proposed project would contribute to congestion at intersections and along roadway segments in the project vicinity. Localized air quality impacts would occur when emissions from vehicular traffic increase as a result of the proposed project. The primary mobile-source pollutant of local concern is CO, a direct function of vehicle idling time and, thus, of traffic flow conditions. CO transport is extremely limited; under normal meteorological conditions, CO disperses rapidly with distance from the source. However, under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels, affecting local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended to determine a project's effect on local CO levels.

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate project vicinity are not available. Ambient CO levels monitored at the Lake Elsinore Station, the closest station with complete monitored CO data, showed a highest recorded 1-hour concentration of 1.6 ppm (the State standard is 20 ppm) and a highest 8-hour concentration of 0.8 ppm (the State standard is 9 ppm) during the past 3 years (Table E). The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis.

Given the extremely low level of CO concentrations in the project area (see Table E), the project-related vehicles are not expected to contribute significantly or to result in CO concentrations exceeding the State or federal CO standards. Because no CO hot spots would occur, there would be no project-related impacts on CO concentrations.

AIR QUALITY MANAGEMENT PLAN CONSISTENCY

A consistency determination plays an essential role in local-agency project review by linking local planning and unique individual projects to the air quality plans. A consistency determination fulfills the CEQA goal of fully informing local-agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are addressed. Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review due to the air quality plan strategy being based on projections from local General Plans.

The AQMP is based on regional growth projections developed by SCAG. The SCAQMD defines regionally significant projects as those that would house more than 1,000 persons, occupy more than 40 acres of land, or encompass more than 650,000 sf of floor area. The proposed project is a warehouse development that would not include residential units, is less than 40 acres, and at 395,500 sf, is less than 650,000 sf of floor area. Thus, the proposed project would not be defined as a regionally significant project under CEQA; therefore, it does not meet SCAG's Intergovernmental Review criteria.

The proposed land use is consistent with the General Plan zoning. Thus, the proposed project, as analyzed, would result in air emissions that are consistent with the City's plans. The City's General Plan is consistent with the SCAG Regional Comprehensive Plan Guidelines and the SCAQMD AQMP. Pursuant to the methodology provided in Chapter 12 of the 1993 SCAQMD *CEQA Air Quality Handbook*, consistency with the Basin's 2016 AQMP is affirmed when a project would not increase the frequency or severity of an air quality standards violation or cause a new violation, and is consistent with the growth assumptions in the AQMP. Consistency review is presented as follows:

1. The project would result in short-term construction and long-term operational pollutant emissions that are all less than the CEQA significance emissions thresholds established by SCAQMD, as demonstrated above. Therefore, the project would not result in an increase in the frequency or severity of an air quality standard violation or cause a new air quality standard violation.

2. The *CEQA Air Quality Handbook* (SCAQMD 1993) indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant projects include airports, electricity-generating facilities, petroleum and gas refineries, designation of oil-drilling districts, water ports, solid-waste disposal sites, and offshore-drilling facilities; therefore, as a relatively small warehouse, the proposed project is not defined as significant.

Based on the consistency analysis presented above, the proposed project would be consistent with the regional AQMP.

ENERGY USE ANALYSIS

This section discusses energy use resulting from implementation of the proposed project and evaluates whether the proposed project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency.

Consumption of Energy Resources

The proposed project would increase the demand for energy through day-to-day operations and fuel consumption associated with project construction.

Construction

The anticipated construction schedule assumes that the proposed project would be built in approximately 17 months. Construction-specific phases were assessed for their energy consumption under each construction sub-phase: grading, site preparation, building construction, paving, and architectural coating activities.

Construction would require energy for the manufacture and transportation of construction materials, preparation of the site for grading and building activities, and construction of the building. All or most of this energy would be derived from nonrenewable resources. Petroleum fuels (e.g., diesel and gasoline) would be the primary sources of energy for these activities. However, construction activities are not anticipated to result in an inefficient use of energy as gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the project. Energy (i.e., fuel) usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the State's available energy sources.

Operation

Energy use includes both direct and indirect sources of emissions. Direct sources of emissions include on-site natural gas usage for heating, while indirect sources include electricity generated by off-site power plants.

CalEEMod divides building electricity and natural gas use into uses that are subject to Title 24 standards and those that are not. For electricity, Title 24 uses include the major building envelope systems covered by Part 6 (California Energy Code) of Title 24, such as space heating, space cooling,

water heating, and ventilation. Non-Title 24 uses include all other end uses, such as appliances, electronics, and other miscellaneous plug-in uses. Because some lighting is not considered as part of the building envelope energy budget, CalEEMod considers lighting as a separate electricity use category.

For natural gas, uses are likewise categorized as Title 24 or Non-Title 24. Title 24 uses include building heating and hot water end uses. Non-Title 24 natural gas uses include appliances.

Table N shows the estimated potential increased electricity, natural gas, gasoline, and diesel demand associated with the proposed project. The electricity and natural gas rates are from the CalEEMod analysis, while the gasoline and diesel rates are based on the traffic analysis in conjunction with United States Department of Transportation (DOT) fuel efficiency data (see Appendix B).

Table N: Estimated Annual Energy Use of the Proposed Project

Land Use	Electricity Use (kWh per year)	Natural Gas Use (kBTU per year)	Gasoline (gallons per year)	Diesel (gallons per year)
Office	55,140	20,580	N/A	N/A
Unrefrigerated Warehouse	452,400	391,950	74,382	95,929
Refrigerated Warehouse	7,768,800	10,087,400	84,671	122,373
Parking Lighting	145,142	N/A	N/A	N/A
Total	8,421,482	10,499,930	159,053	218,303

Source: Compiled by LSA Associates, Inc. (November 2022).
kBTU = thousand British thermal units
kWh = kilowatt hours
N/A = not applicable

As shown in Table N, the estimated increase in electricity demand associated with the operation of the proposed project assuming that half of the building would operate as an un-refrigerated warehouse and the other half as a refrigerated warehouse would be 8,421,482 kilowatt hours (kWh) per year. As discussed above, in total, electricity consumption in Riverside County in 2020 was 16,857,930,966 kWh; therefore, operation of the proposed project would negligibly increase the annual electricity consumption in Riverside County by less than 0.05 percent (CEC 2022a).

Table N also shows that the estimated increase in natural gas demand associated with the proposed project assuming that half of the building would operate as an un-refrigerated warehouse and the other half as a refrigerated warehouse would be 10,499,930 thousand British thermal units (kBTU) per year, which equals 104,999 therms. In 2020, total natural gas consumption in Riverside County was 436,941,555 therms (CEC 2022b). Therefore, operation of the proposed project would negligibly increase the annual natural gas consumption in Riverside County by 0.02 percent.

In addition, the project would result in energy usage associated with motor vehicle gasoline to fuel project-related trips. As shown above in Table N, the proposed project would result in the consumption of 159,053 gallons of gasoline and 218,303 gallons of diesel per year. In 2015, vehicles in California consumed approximately 15.1 billion gallons of gasoline and 3.8 billion gallons of diesel

fuel (CEC 2022d). Therefore, gasoline demand generated by vehicle trips associated with the proposed project would be a minimal fraction of gasoline and diesel fuel consumption in California.

Electrical and natural gas demand associated with project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Furthermore, the proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. The project would be required to adhere to all federal, State, and local requirements for energy efficiency, including current CALGreen Code standards, which would help to reduce energy and natural gas consumption. Therefore, construction and operation of the proposed project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources.

Conflict with or Obstruction of a State or Local Plan for Renewable Energy or Energy Efficiency

The CEC recently adopted the 2020 Integrated Energy Policy Report. The 2020 Integrated Energy Policy Report provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs. The 2020 Integrated Energy Policy Report covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast (CEC 2022c).

As indicated above, energy usage on the project site during construction would be temporary in nature. In addition, energy usage associated with operation of the proposed project would be relatively small in comparison to the State's available energy sources, and energy impacts would be negligible at the regional level. Because California's energy conservation planning actions are conducted at a regional level, and because the project's total impact on regional energy supplies would be minor, the proposed project would not conflict with or obstruct California's energy conservation plans as described in the CEC's 2020 Integrated Energy Policy Report.

GREENHOUSE GAS EMISSIONS

This section evaluates potential significant impacts to GCC that could result from implementation of the proposed project. Because it is not possible to tie specific GHG emissions to actual changes in climate, this evaluation focuses on the project's emissions of GHGs.

Emissions Background

Emissions estimates for the proposed project are discussed below. Bearing in mind that CEQA does not require "perfection" but instead "adequacy, completeness, and a good faith effort at full disclosure," the analysis below is based on methodologies and information available to the City and the applicant at the time this analysis was prepared. Estimation of GHG emissions in the future does not account for all changes in technology that may reduce such emissions; therefore, the estimates are based on past performance and represent a scenario that is worse than that which is likely to be encountered (after energy-efficient technologies have been implemented). While information is

presented below to assist the public and decision-makers in understanding the project's potential contribution to GCC impacts, the information available to the City is not sufficiently detailed to allow a direct comparison between particular project characteristics and particular climate change impacts or between any particular proposed mitigation measure and any reduction in climate change impacts.

Construction and operation of the proposed project would generate GHG emissions, with the majority of energy consumption (and associated generation of GHG emissions) occurring during the project's operation (as opposed to during its construction). Typically, more than 80 percent of the total energy consumption takes place during the use of buildings, and less than 20 percent of energy is consumed during construction.

Overall, the following activities associated with the proposed project could directly or indirectly contribute to the generation of GHG emissions.

- **Construction Activities:** During construction of the project, GHGs would be emitted through the operation of construction equipment and from worker and vendor vehicles, each of which typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs (e.g., CO_2, CH_4, and N_2O). Furthermore, CH_4 is emitted during the fueling of heavy equipment.

- **Gas, Electricity, and Water Use:** Area-source emissions would be associated with activities including landscaping and maintenance of the project, natural gas for heating, and other sources. Increases in energy-source emissions would also occur at off-site utility providers as a result of the project's demand for electricity, natural gas, and water. Natural gas use results in the emission of two GHGs: CH_4 (the major component of natural gas) and CO_2 (from the combustion of natural gas). Electricity use can result in GHG production if the electricity is generated by combusting fossil fuel. California's water conveyance system is energy-intensive. Water-related electricity accounts for nearly 12 percent of California's total electricity consumption. As of 2019, water-related emissions from water conveyance, heating, and treatment have been reduced by 42 percent below 1990 levels. (California Department of Water Resources n.d.).

- **Solid Waste Disposal:** Solid waste generated by the project could contribute to GHG emissions in a variety of ways. Landfilling and other methods of disposal use energy for transporting and managing the waste, and they produce additional GHGs to varying degrees. Landfilling, the most common waste management practice, results in the release of CH_4 from the anaerobic decomposition of organic materials. CH_4 is 25 times more potent a GHG than CO_2. However, landfill CH_4 can also be a source of energy. In addition, many materials in landfills do not decompose fully, and the carbon that remains is sequestered in the landfill and not released into the atmosphere.

- **Motor Vehicle Use:** Mobile-source emissions of GHGs would include project-generated vehicle trips associated with on-site facilities and customers/visitors to the project site. Transportation associated with the proposed project would result in GHG emissions from the combustion of fossil fuels in daily automobile and truck trips.

Construction Emissions

Construction emissions were calculated using the same methodology as described for the criteria pollutants using CalEEMod. Table O shows the estimated GHG emissions associated with the proposed project's complete construction period.

Table O: Construction Greenhouse Gas Emissions

Construction Phase	Total Emissions per Phase (MT)			Total Emissions per Phase (MT CO_2e)
	CO_2	CH_4	N_2O	
Site Preparation	17	<1	<1	18
Grading	158	<1	<1	162
Building Construction	1,142	<1	<1	1,163
Paving	45	<1	<1	45
Architectural Coating	51	<1	<1	51
Total Emissions for the Entire Construction Process				**1,439**
Total Construction Emissions Amortized over 30 Years				**48**

Source: Compiled by LSA Associates, Inc. (November 2022

CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT CO_2e = metric tons of carbon dioxide equivalent
MT = metric tons
N_2O = nitrous oxide

Operational Emissions

Operational GHG emissions are calculated through varying means of combining emission factors from vehicular traffic data, energy consumption, water conveyance and treatment, and waste generation. The same methodology described above for criteria pollutant emissions applies to operational GHG estimates. Based on SCAQMD guidance, construction emissions were amortized over 30 years (a typical project lifetime) and added to the total project operational emissions. The GHG emissions estimates presented in Table P show the emissions associated with the level of development envisioned by the proposed project at opening.

As shown in Table P, again assuming that half of the proposed project building would operate as an un-refrigerated warehouse and the other half as a refrigerated warehouse, project operations would result in GHG emissions of 5,770 MT CO_2e/yr. This is less than the threshold of 10,000 MT CO_2e/yr. Therefore, impacts related to the generation of GHG emissions, either directly, indirectly, or cumulatively, would not have a significant impact on the environment and would be less than significant. As shown in Table P approximately 36 percent of the GHG emissions would result from energy consumption and 49 percent from mobile sources.

Table P: Long-Term Operational Greenhouse Gas Emissions - Half Un-Refrigerated and Half Refrigerated Warehouse

Source	Pollutant Emissions (MT/yr)					
	Bio-CO_2	NBio-CO_2	Total CO_2	CH_4	N_2O	CO_2e
Construction Emissions Amortized over 30 Years						48
Operational Emissions						
Area	0	<1	<1	<1	0	<1
Energy	0	2,054	2,054	<1	<1	2,065
Mobile	0	2,723	2,723	<1	<1	2,850
Warehouse Equipment	0	280	280	<1	0	283
Waste	76	0	76	4	0	187
Water	29	212	241	3	<1	337
Total Operational Project Emissions						**5,770**
					City of Perris Threshold	**10,000**
					Would the Project Exceed the Threshold?	**No**

Source: Compiled by LSA Associates, Inc. (November 2022)
Note: Some values may not appear to add up correctly due to rounding.
Bio-CO_2 = biologically generated CO_2
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT/yr = metric tons per year
N_2O = nitrous oxide
NBio-CO_2 = non-biologically generated CO_2
SCAQMD = South Coast Air Quality Management District

Consistency with Greenhouse Gas Reduction Plans

The City of Perris adopted its CAP in February 2016. The measures identified in the CAP represent the City's actions to achieve the GHG reduction targets of AB 32 for target year 2020. Local measures included in the CAP include:

- An energy measure that directs the City to create an energy action plan to reduce energy consumption citywide.
- Land use and transportation measures that encourage alternative modes of transportation (walking, biking, and transit), reduce motor vehicle use by allowing a reduction in parking supply, voluntary transportation demand management to reduce vehicle miles traveled, and land use strategies that improve jobs-housing balance (increased density and mixed-use).
- Solid waste measures that reduce landfilled solid waste in the City.

The proposed project would not conflict with these local strategies. Additionally, the proposed project is consistent with State and regional strategies, listed in the CAP. Further, the proposed project is subject to California Building Code requirements. New buildings must achieve the 2021 Building and Energy Efficiency Standards and the 2021 CALGreen Code requirements, which include water conservation measures. Overall, the proposed project overall would not conflict with the City of Perris CAP, and impacts would be less than significant.

The CARB Scoping Plan is applicable to State agencies but is not directly applicable to cities/counties and individual projects (i.e., the Scoping Plan does not require the City to adopt policies, programs,

or regulations to reduce GHG emissions). However, new regulations adopted by the State agencies outlined in the Scoping Plan result in GHG emissions reductions at the local level. As a result, local jurisdictions benefit from reductions in transportation emissions rates, increases in water efficiency in the building and landscape codes, and other statewide actions that would affect a local jurisdiction's emissions inventory from the top down.

Statewide strategies to reduce GHG emissions include the low-carbon fuel standards and changes in the corporate average fuel economy standards (e.g., Pavley I and Pavley II, and California Advanced Clean Cars program). Although measures in the Scoping Plan apply to State agencies and not the proposed project, the project's GHG emissions would be reduced by compliance with statewide measures that have been adopted since AB 32 and SB 32 were adopted. Therefore, the proposed project would be consistent with the CARB Scoping Plan.

The City of Perris is a member city of SCAG. SCAG's Connect SoCal 2020–2045 RTP/SCS, adopted September 3, 2020, is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The RTP/SCS embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions, tribal governments, nonprofit organizations, businesses, and local stakeholders in Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. The RTP/SCS establishes GHG emissions goals for automobiles and light-duty trucks for 2020 and 2035 and establishes an overall GHG target for the region consistent with both the statewide GHG reduction targets for 2020 and the post-2020 statewide GHG reduction goals.

The Connect SoCal 2020–2045 RTP/SCS contains more than 4,000 transportation projects, including highway improvements, railroad grade separations, bicycle lanes, new transit hubs, and replacement bridges. These future investments were included in county plans developed by the six-county transportation commissions and seek to reduce traffic bottlenecks, improve the efficiency of the region's network, and expand mobility choices. The Connect SoCal 2020–2045 RTP/SCS is an important planning document for the region, allowing project sponsors to qualify for federal funding. In addition, the Connect SoCal 2020–2045 RTP/SCS is supported by a combination of transportation and land use strategies that help the region achieve State GHG emission reduction goals and federal CAA requirements, preserve open space areas, improve public health and roadway safety, support the vital goods movement industry, and use resources more efficiently. The proposed project's consistency with the Connect SoCal 2020–2045 RTP/SCS goals is analyzed in detail in Table Q.

Implementing SCAG's RTP/SCS will greatly reduce the regional GHG emissions from transportation and help to achieve statewide emission reduction targets. As demonstrated in Table Q, the proposed project would not conflict with the stated goals of the RTP/SCS; therefore, the proposed project would not interfere with SCAG's ability to achieve the region's 2020 and post-2020 mobile source GHG reduction targets outlined in the Connect SoCal 2020–2045 RTP/SCS, and it can be assumed that regional mobile emissions would decrease in line with the goals of the RTP/SCS. Furthermore, the proposed project is not regionally significant per *State CEQA Guidelines* Section 15206 and as such, it would not conflict with the SCAG RTP/SCS targets, because those targets were established and are applicable on a regional level.

Table Q: Southern California Association of Governments RTP/SCS Goals

SCAG Measure	Project Consistency
Goal 1: Align the plan investments and policies with improving regional economic development and competitiveness.	Not Applicable: This is not a project-specific policy and is therefore not applicable for the project's land uses.
Goal 2: Maximize mobility and accessibility for all people and goods in the region.	Consistent: Improvements to the transportation network in Perris are developed and maintained to meet the needs of local and regional transportation and to ensure efficient mobility. A number of regional and local plans and programs are used to guide development and maintenance of transportation networks, including but not limited to: • Caltrans Traffic Impact Studies Guidelines • Caltrans Highway Capacity Manual • SCAG RTP/SCS
Goal 3: Ensure travel safety and reliability for all people and goods in the region.	Consistent: All modes of transit in Perris are required to follow safety standards set by corresponding regulatory documents. Pedestrian walkways and bicycle routes must follow safety precautions and standards established by local (e.g., City of Perris, County of Riverside) and regional (e.g., SCAG, Caltrans) agencies. Roadways for motorists must follow safety standards established for the local and regional plans. The project would be consistent with ingress and egress to public streets from the project site, including crosswalks and pedestrian walkways.
Goal 4: Preserve and ensure a sustainable regional transportation system.	Consistent: All new roadway developments and improvements to the existing transportation network must be assessed with some level of traffic analysis (e.g., traffic assessments, traffic impact studies) to determine how the developments would impact existing traffic capacities and to determine the needs for improving future traffic capacities.
Goal 5: Maximize the productivity of our transportation system.	Consistent: The local and regional transportation system would be improved and maintained to encourage efficiency and productivity. The City's Public Works oversees the improvement and maintenance of all aspects of the public right-of-way on an as-needed basis. The City also strives to maximize productivity of the region's public transportation system (e.g., bus, bicycle) for residents, visitors, and workers coming into and out of Perris.
Goal 6: Protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).	Consistent: The reduction of energy use, improvement of air quality, and promotion of more environmentally sustainable developments are encouraged through alternative transportation methods, green design techniques for buildings, and other energy reducing techniques. For example, development projects are required to comply with the provisions of the California Building and Energy Efficiency Standards and the California Green Building Standards Code (CALGreen Code). The City also strives to maximize the protection of the environment and improvement of air quality by encouraging and improving the use of the region's public transportation system (e.g., bus, bicycle) for residents, visitors, and workers coming into and out of Santa Ana. The project would provide pedestrian networks on-site and connecting off-site.
Goal 7: Actively encourage and create incentives for energy efficiency, where possible.	Consistent: This is not a project-specific policy and is therefore not applicable. However, the project would be consistent with the energy-efficiency requirements of Title 24.

Table Q: Southern California Association of Governments RTP/SCS Goals

SCAG Measure	Project Consistency
Goal 8: Encourage land use and growth patterns that facilitate transit and non-motorized transportation.	Consistent: See response to RTP/SCS Goal 6.
Goal 9: Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	Consistent: The City of Perris monitors existing and newly constructed roadways and transit routes to determine the adequacy and safety of these systems. Other local and regional agencies (e.g., Caltrans and SCAG) work with the City to manage these systems. Security situations involving roadways and evacuations would be addressed in the County of Riverside's emergency management protocols developed in accordance with the State and federally mandated emergency management regulations.

Source: Compiled by LSA Associates, Inc. (July 2022).
Caltrans = California Department of Transportation
City = City of Perris
RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy
SCAG = Southern California Association of Governments

The project would be consistent with applicable measures in the City's CAP. In addition, the project would be consistent with policies in the 2017 Scoping Plan, such as compliance with Title 24 energy reduction measures. Therefore, since the project's GHG emissions would not exceed City's GHG emission threshold, and since the proposed project would not conflict with an adopted plan, policy, or regulation pertaining to GHGs it can be concluded that the project's GHG emissions impacts would be less than significant.

STANDARD CONDITIONS

Construction

The project is required to comply with regional rules that assist in reducing short-term air pollutant emissions. SCAQMD Rule 403 requires that fugitive dust be controlled with the best-available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Applicable dust suppression techniques from Rule 403 are summarized below. Implementation of these dust suppression techniques can reduce the fugitive dust generation (and thus the PM_{10} component). Compliance with these rules would reduce impacts on nearby sensitive receptors (SCAQMD 2005). As shown previously in Table J, implementation of Rule 403 measures would result in dust emissions below SCAQMD thresholds.

The applicable Rule 403 measures are as follows:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least twice daily (locations where grading is to occur shall be thoroughly watered prior to earthmoving).

- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 2 feet (0.6 meters) of freeboard (vertical space between the top of the load and the top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114.
- Pave construction access roads at least 100 feet (30 meters) onto the site from the main road.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.

The applicable California Department of Resources Recycling and Recovery (CalRecycle) Sustainable (Green) Building Program Measures are:

- Recycle/reuse at least 50 percent of the construction material (including, but not limited to, soil, mulch, vegetation, concrete, lumber, metal, and cardboard) (CalRecycle).
- Use "green building materials" such as those materials that are rapidly renewable or resource-efficient, and recycled and manufactured in an environmentally friendly way, for at least 10 percent of the project, as specified on the CalRecycle website.

Operations

The proposed project is required to comply with Title 24 of the California Code of Regulations established by the CEC regarding energy conservation and green building standards. The project would not exceed SCAQMD criteria pollutant thresholds based on project information and provided analysis. Therefore, the proposed project would result in a less than significant impact, and no mitigation is required.

CUMULATIVE IMPACTS

The project would contribute criteria pollutants temporarily to the area during project construction. A number of individual projects in the area may be under construction simultaneously with the proposed project. Depending on construction schedules and actual implementation of projects in the area, generation of fugitive dust and pollutant emissions during construction could result in substantial short-term increases in air pollutants. However, each project would be required to comply with current SCAQMD standard construction measures. The proposed project's short-term construction emissions would not exceed the SCAQMD significance thresholds. Therefore, it would not have a significant short-term cumulative air quality impact.

The project's long-term operational emissions would not exceed the SCAQMD's criteria pollutant thresholds. Therefore, the project would not result in a significant operational impact related to long-term air quality emissions.

The project's short-term energy usage during construction would be temporary in nature. The project's long-term energy usage associated with operation of the proposed project would be negligible in comparison to the State and regional level available energy sources. Because California's energy conservation planning actions are conducted at a regional level, and because the project's total impacts on regional energy supplies would be negligible, the proposed project would

not conflict with or obstruct California's energy conservation plans as described in the CEC's 2020 Integrated Energy Policy Report, and thus would have a less than significant cumulative impact.

As climate change impacts are cumulative in nature, no typical single project can result in emissions of such a magnitude that it, in and by itself, would be significant on a project basis. As the project would not exceed the City's GHG emissions threshold and would be consistent with applicable measures in the City's CAP and policies in the 2017 Scoping Plan, such as compliance with Title 24 energy reduction measures, the project would not conflict with an adopted plan, policy, or regulation pertaining to GHGs. Thus, the project's cumulative GHG emissions impacts would be less than significant.

CONCLUSION

Based on the analysis presented above, both construction and operational criteria pollutant emissions associated with the proposed project would not exceed the SCAQMD's established significance thresholds. The proposed project is not expected to produce significant emissions that would affect nearby sensitive receptors. The proposed project would also not result in objectionable odors affecting a substantial number of people. The project's energy use would not be significant in any way. GHG emissions released during operation of the project would not exceed the established significance threshold and would be considered less than significant. Additionally, the project would not conflict with the goals and objectives of a State or regional plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions.

REFERENCES

California Air Resources Board (CARB). 2009. Health: Air Pollution Health Effects. Website: www.arb.ca.gov/our-work/topics/health (accessed November 2022).

———. 2016. Ambient Air Quality Standards. May 4. Website: www.arb.ca.gov/research/aaqs/aaqs2.pdf (accessed November 2022).

———. 2017. *California's 2017 Climate Change Scoping Plan*. November. Website: www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf (accessed November 2022).

———. 2022a. Common Air Pollutants. Website: www.arb.ca.gov/resources/common-air-pollutants (accessed November 2022).

———. 2022b. State and Federal Area Designations. February. Website: www.arb.ca.gov/desig/desig.htm (accessed November 2022).

———. 2022c. iADAM: Air Quality Data Statistics. Website: www.arb.ca.gov/adam/topfour/topfour1.php (accessed November 2022).

———. 2022d. GHG Current California Emission Inventory Data. Website: www.arb.ca.gov/cc/inventory/data/data.htm (accessed November 2022).

California Department of Conservation. Asbestos. 2022. Website: www.conservation.ca.gov/cgs/minerals/hazardous_minerals/asbestos (accessed November 2022).

California Department of Resources Recycling and Recovery (CalRecycle). 2021. Construction and Demolition Debris Recycling. Website: www.calrecycle.ca.gov/ConDemo (accessed November 2022).

California Department of Water Resources. n.d. Water Energy Nexus. Website: water.ca.gov/Programs/All-Programs/Climate-Change-Program/Water-Energy-Nexus (accessed November 2022).

California Energy Commission (CEC). 2005. *California's Water-Energy Relationship.* November. Website: large.stanford.edu/courses/2012/ph240/spearrin1/docs/CEC-700-2005-011-SF.PDF (accessed November 2022).

———. 2020. California Gasoline Data, Facts, and Statistics. Website: www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-gasoline-data-facts-and-statistics (accessed November 2022).

———. 2021a. Electricity Consumption by County. Website: www.ecdms.energy.ca.gov/elecbycounty.aspx (accessed November 2022).

———. 2021b. Gas Consumption by County. Website: ecdms.energy.ca.gov/gasbycounty.aspx (accessed November 2022).

———. 2021c. 2020 Integrated Energy Policy Report. Publication Number: CEC-100-2020-001-V1-CMF.

City of Perris. 2005 (as amended through 2022). *Comprehensive General Plan 2030*. Website: www.cityofperris.org/departments/development-services/general-plan (accessed November 2022).

_____. 2016. Climate Action Plan. February 23. Website: www.cityofperris.org/Home/Show Document?id=12935 (accessed November 2022).

_____. City of Perris General Plan Map. Website: www.cityofperris.org/home/showpublished document/457/637203139714030000 (accessed November 2022).

_____. City of Perris Zoning Map. Website: www.cityofperris.org/departments/development-services/zoning (accessed November 2022).

Intergovernmental Panel on Climate Change (IPCC). 2007. Climate Change 2007: The Physical Science Basis. Website: www.ipcc.ch/site/assets/uploads/2018/05/ar4_wg1_full_report-1.pdf (accessed November 2022).

_____. 2021. Climate Change 2021: The Physical Science Basis. Website: www.ipcc.ch/report/ar6/wg1/ (accessed November 2022).

LSA Associates, Inc. (LSA). 2022. *Trumble and Mapes Industrial Facility Traffic Study*. June.

National Oceanic and Atmospheric Administration (NOAA). 2022. Climate Change: Atmospheric Carbon Dioxide. Website: www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide (accessed November 2022).

Ralph Propper, Patrick Wong, Son Bui, Jeff Austin, William Vance, Álvaro Alvarado, Bart Croes, and Dongmin Luo. 2015. Ambient and Emission Trends of Toxic Air Contaminants in California. *Environmental Science and Technology*. 49 (19), 11329–11339. Website: pubs.acs.org/doi/abs/10.1021/acs.est.5b02766 (accessed November 2022).

South Coast Air Quality Management District (SCAQMD). 1993. *CEQA Air Quality Handbook*. April. Website: www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook (accessed November 2022).

_____. 2005. Rule 403. Fugitive Dust. Website: www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf (accessed November 2022).

_____. 2008. *Final Localized Significance Threshold Methodology*. June. Website: www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf (accessed November 2022).

_____. 2016a. Advisory Notice on Rule 1113. Website: www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf (accessed November 2022).

_____. 2016b. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin. Website: www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf (accessed November 2022).

_____. 2017. *Final 2016 Air Quality Management Plan*. February. Website: www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf (accessed November 2022).

_____. 2019. South Coast AQMD Air Quality Significance Thresholds. April. Website: www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf (accessed November 2022).

_____. 2022a. Air Quality Analysis Handbook. Website: www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook (accessed November 2022).

———. 2022b. *Health Studies*. May. Website: www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/ (accessed November 2022).

_____. Greenhouse Gases (GHG) CEQA Significance Thresholds. Website: www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds/ (accessed November 2022).

_____. South Coast Air Basin Ozone Trend. Website: www.aqmd.gov/docs/default-source/air-quality/south-coast-air-basin-smog-trend-ozone-chart.pdf (accessed November 2022).

Southern California Association of Governments (SCAG). 2020. Connect SoCal. September. Website: scag.ca.gov/connect-socal (accessed November 2022).

The Water Nexus. Website: water.ca.gov/Programs/All-Programs/Climate-Change-Program/Water-Energy-Nexus (accessed November 2022).

United Nations Environment Programme (UNEP). 2007. *Buildings and Climate Change: Status, Challenges and Opportunities*. Paris. Website: www.uncclearn.org/wp-content/uploads/library/unep207.pdf (accessed November 2022).

United States Department of Transportation. 2021. "Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles." Website: www.bts.gov/content/average-fuel-efficiency-us-light-duty-vehicles (accessed November 2022).

United States Environmental Protection Agency (EPA). 2022a. Inventory of U.S. Greenhouse Gas Emissions and Sinks. Website: www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks (accessed November 2022).

———. 2022b. Air Data: Air Quality Data Collected at Outdoor Monitors Across the US. Website: www.epa.gov/outdoor-air-quality-data (accessed November 2022).

———. Nonattainment Areas for Criteria Pollutants (Green Book). Website: www.epa.gov/green-book (accessed November 2022).

University of New Hampshire. 2010. *Methane and Nitrous Oxide Emissions from Natural Sources*. University of New Hampshire Scholars' Repository. April. Website: scholars.unh.edu/cgi/viewcontent.cgi?article=1483&context=earthsci_facpub (accessed November 2022).

Western Regional Climate Center. 2022. Sun City Monitoring Station. Website: wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca8655 (accessed November 2022).

APPENDIX A

CALEEMOD PRINTOUTS

Trumble & Mapes Warehouse Facility

Project Trip Generation

Land Uses	Units		Daily	
Non-Refrigerated Warehouse	198	TSF		
Trips/Unit (Cars)			1.249	
Trips/Unit (2-Axle Trucks)			0.123	
Trips/Unit (3-Axle Trucks)			0.100	
Trips/Unit (4+ Axle Trucks)			0.338	
Trips/Unit (Total)			1.810	
Refrigerated Warehouse	198	TSF		
Trips/Unit (Cars)			1.370	
Trips/Unit (2-Axle Trucks)			0.260	
Trips/Unit (3-Axle Trucks)			0.083	
Trips/Unit (4+ Axle Trucks)			0.407	
Trips/Unit (Total)			2.120	
Trip Generation (Cars)			519	66.6%
Trip Generation (2-Axle Trucks)			76	9.7%
Trip Generation (3-Axle Trucks)			36	4.6%
Trip Generation (4+ Axle Trucks)			148	19.0%
Trip Generation (Total Trucks)			260	
Trip Generation (Total)			778	100.0%

Note: Non-refrigerated warehouse rates from Mapes and Trumble Industrial Facility Project Traffic Study (LSA, June 2022). Refrigerated warehouse rates based on ITE Land Use 157.
TSF = Thousand Square-Feet

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Annual

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

Mapes & Trumble Industrial Facility Project

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	6.00	1000sqft	0.14	6,000.00	0
Refrigerated Warehouse-No Rail	195.00	1000sqft	4.48	195,000.00	0
Unrefrigerated Warehouse-No Rail	195.00	1000sqft	4.48	195,000.00	0
Other Non-Asphalt Surfaces	1.00	Acre	1.00	43,560.00	0
Parking Lot	9.52	Acre	9.52	414,691.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Warehouse is 390,000sf (split between refrigereated and unrefrigerated -no rail) and 6,000sf mazzanine & office. Total project site lot 19.62 acres including gated truck and trailer loading docks and storage.

Construction Phase - Assume architectural coatings are applied during the building construction phase. Extended the paving phase due to the large paved area.

Trips and VMT - Haul trips approximately 15 miles round trip entering/exiting the 215 fwy.

Grading - Soil quantity import to raise the site by 12 inches above base flood elevation.

Architectural Coating - Assume all coatings comply with SCAQMD Rule 1113.

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Vehicle Trips - Trip rates from traffic study, office is part of the warehouse traffic. Used SCAQMD WAIRE trip lengths.

Area Coating - Assume all coatings comply with SCAQMD Rule 1113.

Construction Off-road Equipment Mitigation - Dust constrol measures as required by SCAQMD Rule 403.

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Operational Off-Road Equipment - Assume standard warehouse equipment, worst case - diesel-powered.

Fleet Mix - Fleet mix from the traffic study.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	121.00
tblConstructionPhase	NumDays	20.00	42.00
tblFleetMix	HHD	0.02	0.19
tblFleetMix	HHD	0.02	0.19
tblFleetMix	LDA	0.54	0.52
tblFleetMix	LDA	0.54	0.55
tblFleetMix	LDT1	0.06	0.07
tblFleetMix	LDT1	0.06	0.07
tblFleetMix	LDT2	0.17	0.03
tblFleetMix	LDT2	0.17	0.04

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

tblFleetMix	LHD1	0.03	0.06
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD2	7.1910e-003	0.06
tblFleetMix	LHD2	7.1910e-003	0.03
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.14	0.03
tblFleetMix	MDV	0.14	0.04
tblFleetMix	MH	5.1890e-003	0.00
tblFleetMix	MH	5.1890e-003	0.00
tblFleetMix	MHD	0.01	0.04
tblFleetMix	MHD	0.01	0.05
tblFleetMix	OBUS	6.1100e-004	0.00
tblFleetMix	OBUS	6.1100e-004	0.00
tblFleetMix	SBUS	1.0970e-003	0.00
tblFleetMix	SBUS	1.0970e-003	0.00
tblFleetMix	UBUS	3.0900e-004	0.00
tblFleetMix	UBUS	3.0900e-004	0.00
tblGrading	MaterialImported	0.00	28,891.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	6.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	6.00
tblTripsAndVMT	HaulingTripLength	20.00	15.00
tblVehicleTrips	CNW_TL	6.90	15.30
tblVehicleTrips	CNW_TL	6.90	15.30
tblVehicleTrips	CNW_TTP	41.00	80.70
tblVehicleTrips	CNW_TTP	41.00	81.30
tblVehicleTrips	CW_TL	16.60	39.90

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

tblVehicleTrips	CW_TL	16.60	39.90
tblVehicleTrips	CW_TTP	59.00	19.30
tblVehicleTrips	CW_TTP	59.00	18.70
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	2.12	2.15
tblVehicleTrips	ST_TR	1.74	1.84
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	2.12	2.15
tblVehicleTrips	SU_TR	1.74	1.84
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	2.12	2.15
tblVehicleTrips	WD_TR	1.74	1.84

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3247	2.5923	3.1836	9.4000e-003	0.6947	0.0969	0.7916	0.2289	0.0906	0.3195	0.0000	857.5399	857.5399	0.0908	0.0497	874.6321
2024	1.1729	1.4434	2.2944	6.1100e-003	0.3453	0.0547	0.4000	0.0929	0.0515	0.1444	0.0000	554.9638	554.9638	0.0544	0.0264	564.1771
Maximum	**1.1729**	**2.5923**	**3.1836**	**9.4000e-003**	**0.6947**	**0.0969**	**0.7916**	**0.2289**	**0.0906**	**0.3195**	**0.0000**	**857.5399**	**857.5399**	**0.0908**	**0.0497**	**874.6321**

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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	0.3247	2.5923	3.1836	9.4000e-003	0.5638	0.0969	0.6606	0.1708	0.0906	0.2614	0.0000	857.5395	857.5395	0.0908	0.0497	874.6318
2024	1.1729	1.4434	2.2944	6.1100e-003	0.3453	0.0547	0.4000	0.0929	0.0515	0.1444	0.0000	554.9636	554.9636	0.0544	0.0264	564.1769
Maximum	**1.1729**	**2.5923**	**3.1836**	**9.4000e-003**	**0.5638**	**0.0969**	**0.6606**	**0.1708**	**0.0906**	**0.2614**	**0.0000**	**857.5395**	**857.5395**	**0.0908**	**0.0497**	**874.6318**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**12.59**	**0.00**	**10.99**	**18.05**	**0.00**	**12.52**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-1-2023	5-31-2023	1.1652	1.1652
2	6-1-2023	8-31-2023	0.7493	0.7493
3	9-1-2023	11-30-2023	0.7458	0.7458
4	12-1-2023	2-29-2024	1.0903	1.0903
5	3-1-2024	5-31-2024	1.2860	1.2860
6	6-1-2024	8-31-2024	0.4829	0.4829
		Highest	1.2860	1.2860

2.2 Overall Operational

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Annual

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

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.5560	5.0000e-005	5.1800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0101	0.0101	3.0000e-005	0.0000	0.0108
Energy	0.0566	0.5147	0.4324	3.0900e-003		0.0391	0.0391		0.0391	0.0391	0.0000	2,053.8259	2,053.8259	0.1368	0.0256	2,064.8603
Mobile	0.2258	3.8399	3.9567	0.0292	2.0818	0.0441	2.1258	0.5647	0.0420	0.6067	0.0000	2,764.2416	2,764.2416	0.0391	0.2836	2,849.7284
Offroad	0.1917	1.8037	2.3866	3.1900e-003		0.0999	0.0999		0.0919	0.0919	0.0000	280.2456	280.2456	0.0906	0.0000	282.5115
Waste						0.0000	0.0000		0.0000	0.0000	75.5492	0.0000	75.5492	4.4648	0.0000	187.1699
Water						0.0000	0.0000		0.0000	0.0000	28.9507	212.0128	240.9635	2.9914	0.0724	337.3178
Total	**2.0301**	**6.1583**	**6.7809**	**0.0355**	**2.0818**	**0.1831**	**2.2648**	**0.5647**	**0.1730**	**0.7377**	**104.4998**	**5,310.3359**	**5,414.8357**	**7.7228**	**0.3815**	**5,721.5986**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.5560	5.0000e-005	5.1800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0101	0.0101	3.0000e-005	0.0000	0.0108
Energy	0.0566	0.5147	0.4324	3.0900e-003		0.0391	0.0391		0.0391	0.0391	0.0000	2,053.8259	2,053.8259	0.1368	0.0256	2,064.8603

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

Mobile	0.2258	3.8399	3.9567	0.0292	2.0818	0.0441	2.1258	0.5647	0.0420	0.6067	0.0000	2,764.2416	2,764.2416	0.0391	0.2836	2,849.7284
Offroad	0.1917	1.8037	2.3866	3.1900e-003		0.0999	0.0999		0.0919	0.0919	0.0000	280.2456	280.2456	0.0906	0.0000	282.5115
Waste						0.0000	0.0000		0.0000	0.0000	75.5492	0.0000	75.5492	4.4648	0.0000	187.1699
Water						0.0000	0.0000		0.0000	0.0000	28.9507	211.9342	240.8849	2.9914	0.0724	337.2389
Total	**2.0301**	**6.1583**	**6.7809**	**0.0355**	**2.0818**	**0.1831**	**2.2648**	**0.5647**	**0.1730**	**0.7377**	**104.4998**	**5,310.2573**	**5,414.7572**	**7.7228**	**0.3815**	**5,721.5197**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/1/2023	3/14/2023	5	10	
2	Grading	Grading	3/15/2023	4/25/2023	5	30	
3	Building Construction	Building Construction	4/26/2023	6/18/2024	5	300	
4	Architectural Coating	Architectural Coating	1/2/2024	6/18/2024	5	121	
5	Paving	Paving	6/19/2024	8/15/2024	5	42	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 10.52

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 594,000; Non-Residential Outdoor: 198,000; Striped Parking Area: 27,495

Date: 11/21/2022 11:21 AM

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	3,611.00	14.70	6.90	15.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	358.00	140.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	72.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 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					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606
Total	**0.0133**	**0.1376**	**0.0912**	**1.9000e-004**	**0.0983**	**6.3300e-003**	**0.1046**	**0.0505**	**5.8200e-003**	**0.0563**	**0.0000**	**16.7254**	**16.7254**	**5.4100e-003**	**0.0000**	**16.8606**

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

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

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	2.9000e-004	2.2000e-004	2.8200e-003	1.0000e-005	9.9000e-004	0.0000	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7523	0.7523	2.0000e-005	2.0000e-005	0.7587
Total	**2.9000e-004**	**2.2000e-004**	**2.8200e-003**	**1.0000e-005**	**9.9000e-004**	**0.0000**	**9.9000e-004**	**2.6000e-004**	**0.0000**	**2.7000e-004**	**0.0000**	**0.7523**	**0.7523**	**2.0000e-005**	**2.0000e-005**	**0.7587**

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					0.0442	0.0000	0.0442	0.0227	0.0000	0.0227	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606
Total	**0.0133**	**0.1376**	**0.0912**	**1.9000e-004**	**0.0442**	**6.3300e-003**	**0.0506**	**0.0227**	**5.8200e-003**	**0.0286**	**0.0000**	**16.7253**	**16.7253**	**5.4100e-003**	**0.0000**	**16.8606**

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					

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9000e-004	2.2000e-004	2.8200e-003	1.0000e-005	9.9000e-004	0.0000	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7523	0.7523	2.0000e-005	2.0000e-005	0.7587
Total	**2.9000e-004**	**2.2000e-004**	**2.8200e-003**	**1.0000e-005**	**9.9000e-004**	**0.0000**	**9.9000e-004**	**2.6000e-004**	**0.0000**	**2.7000e-004**	**0.0000**	**0.7523**	**0.7523**	**2.0000e-005**	**2.0000e-005**	**0.7587**

3.3 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					0.1399	0.0000	0.1399	0.0551	0.0000	0.0551	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0498	0.5177	0.4208	9.3000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	81.8028	81.8028	0.0265	0.0000	82.4642
Total	**0.0498**	**0.5177**	**0.4208**	**9.3000e-004**	**0.1399**	**0.0214**	**0.1613**	**0.0551**	**0.0197**	**0.0747**	**0.0000**	**81.8028**	**81.8028**	**0.0265**	**0.0000**	**82.4642**

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

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

Category	tons/yr										MT/yr					
Hauling	3.4300e-003	0.1520	0.0459	7.6000e-004	0.0234	1.6400e-003	0.0250	6.4200e-003	1.5700e-003	7.9800e-003	0.0000	73.4861	73.4861	1.0400e-003	0.0116	76.9629
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.7000e-004	7.2000e-004	9.3900e-003	3.0000e-005	3.3000e-003	2.0000e-005	3.3100e-003	8.8000e-004	1.0000e-005	8.9000e-004	0.0000	2.5076	2.5076	6.0000e-005	7.0000e-005	2.5290
Total	**4.4000e-003**	**0.1528**	**0.0553**	**7.9000e-004**	**0.0267**	**1.6600e-003**	**0.0283**	**7.3000e-003**	**1.5800e-003**	**8.8700e-003**	**0.0000**	**75.9937**	**75.9937**	**1.1000e-003**	**0.0117**	**79.4918**

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					0.0630	0.0000	0.0630	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0498	0.5177	0.4208	9.3000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	81.8027	81.8027	0.0265	0.0000	82.4641
Total	**0.0498**	**0.5177**	**0.4208**	**9.3000e-004**	**0.0630**	**0.0214**	**0.0843**	**0.0248**	**0.0197**	**0.0445**	**0.0000**	**81.8027**	**81.8027**	**0.0265**	**0.0000**	**82.4641**

Mitigated Construction Off-Site

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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					
Hauling	3.4300e-003	0.1520	0.0459	7.6000e-004	0.0234	1.6400e-003	0.0250	6.4200e-003	1.5700e-003	7.9800e-003	0.0000	73.4861	73.4861	1.0400e-003	0.0116	76.9629
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.7000e-004	7.2000e-004	9.3900e-003	3.0000e-005	3.3000e-003	2.0000e-005	3.3100e-003	8.8000e-004	1.0000e-005	8.9000e-004	0.0000	2.5076	2.5076	6.0000e-005	7.0000e-005	2.5290
Total	**4.4000e-003**	**0.1528**	**0.0553**	**7.9000e-004**	**0.0267**	**1.6600e-003**	**0.0283**	**7.3000e-003**	**1.5800e-003**	**8.8700e-003**	**0.0000**	**75.9937**	**75.9937**	**1.1000e-003**	**0.0117**	**79.4918**

3.4 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	0.1400	1.2803	1.4457	2.4000e-003		0.0623	0.0623		0.0586	0.0586	0.0000	206.3062	206.3062	0.0491	0.0000	207.5332
Total	**0.1400**	**1.2803**	**1.4457**	**2.4000e-003**		**0.0623**	**0.0623**		**0.0586**	**0.0586**	**0.0000**	**206.3062**	**206.3062**	**0.0491**	**0.0000**	**207.5332**

Unmitigated Construction Off-Site

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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					
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	0.0135	0.4272	0.1702	2.1800e-003	0.0787	3.5500e-003	0.0823	0.0227	3.4000e-003	0.0261	0.0000	209.6401	209.6401	2.1200e-003	0.0310	218.9307
Worker	0.1034	0.0766	0.9976	2.9000e-003	0.3502	1.6700e-003	0.3519	0.0930	1.5300e-003	0.0945	0.0000	266.3195	266.3195	6.6500e-003	7.0700e-003	268.5930
Total	**0.1169**	**0.5038**	**1.1678**	**5.0800e-003**	**0.4289**	**5.2200e-003**	**0.4341**	**0.1157**	**4.9300e-003**	**0.1206**	**0.0000**	**475.9596**	**475.9596**	**8.7700e-003**	**0.0381**	**487.5236**

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	0.1400	1.2803	1.4457	2.4000e-003		0.0623	0.0623		0.0586	0.0586	0.0000	206.3060	206.3060	0.0491	0.0000	207.5329
Total	**0.1400**	**1.2803**	**1.4457**	**2.4000e-003**		**0.0623**	**0.0623**		**0.0586**	**0.0586**	**0.0000**	**206.3060**	**206.3060**	**0.0491**	**0.0000**	**207.5329**

Mitigated Construction Off-Site

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
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	0.0135	0.4272	0.1702	2.1800e-003	0.0787	3.5500e-003	0.0823	0.0227	3.4000e-003	0.0261	0.0000	209.6401	209.6401	2.1200e-003	0.0310	218.9307
Worker	0.1034	0.0766	0.9976	2.9000e-003	0.3502	1.6700e-003	0.3519	0.0930	1.5300e-003	0.0945	0.0000	266.3195	266.3195	6.6500e-003	7.0700e-003	268.5930
Total	**0.1169**	**0.5038**	**1.1678**	**5.0800e-003**	**0.4289**	**5.2200e-003**	**0.4341**	**0.1157**	**4.9300e-003**	**0.1206**	**0.0000**	**475.9596**	**475.9596**	**8.7700e-003**	**0.0381**	**487.5236**

3.4 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	0.0898	0.8201	0.9862	1.6400e-003		0.0374	0.0374		0.0352	0.0352	0.0000	141.4280	141.4280	0.0334	0.0000	142.2641
Total	**0.0898**	**0.8201**	**0.9862**	**1.6400e-003**		**0.0374**	**0.0374**		**0.0352**	**0.0352**	**0.0000**	**141.4280**	**141.4280**	**0.0334**	**0.0000**	**142.2641**

Unmitigated Construction Off-Site

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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					
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	9.1100e-003	0.2928	0.1153	1.4700e-003	0.0540	2.4200e-003	0.0564	0.0156	2.3100e-003	0.0179	0.0000	141.4725	141.4725	1.5000e-003	0.0209	147.7343
Worker	0.0661	0.0467	0.6394	1.9300e-003	0.2400	1.0900e-003	0.2411	0.0637	1.0000e-003	0.0647	0.0000	176.7540	176.7540	4.1300e-003	4.5000e-003	178.1987
Total	**0.0752**	**0.3395**	**0.7548**	**3.4000e-003**	**0.2940**	**3.5100e-003**	**0.2975**	**0.0793**	**3.3100e-003**	**0.0826**	**0.0000**	**318.2265**	**318.2265**	**5.6300e-003**	**0.0254**	**325.9329**

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	0.0898	0.8201	0.9862	1.6400e-003		0.0374	0.0374		0.0352	0.0352	0.0000	141.4278	141.4278	0.0334	0.0000	142.2639
Total	**0.0898**	**0.8201**	**0.9862**	**1.6400e-003**		**0.0374**	**0.0374**		**0.0352**	**0.0352**	**0.0000**	**141.4278**	**141.4278**	**0.0334**	**0.0000**	**142.2639**

Mitigated Construction Off-Site

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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					
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	9.1100e-003	0.2928	0.1153	1.4700e-003	0.0540	2.4200e-003	0.0564	0.0156	2.3100e-003	0.0179	0.0000	141.4725	141.4725	1.5000e-003	0.0209	147.7343
Worker	0.0661	0.0467	0.6394	1.9300e-003	0.2400	1.0900e-003	0.2411	0.0637	1.0000e-003	0.0647	0.0000	176.7540	176.7540	4.1300e-003	4.5000e-003	178.1987
Total	**0.0752**	**0.3395**	**0.7548**	**3.4000e-003**	**0.2940**	**3.5100e-003**	**0.2975**	**0.0793**	**3.3100e-003**	**0.0826**	**0.0000**	**318.2265**	**318.2265**	**5.6300e-003**	**0.0254**	**325.9329**

3.5 Architectural Coating - 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					
Archit. Coating	0.9496					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0109	0.0737	0.1095	1.8000e-004		3.6900e-003	3.6900e-003		3.6900e-003	3.6900e-003	0.0000	15.4472	15.4472	8.7000e-004	0.0000	15.4689
Total	**0.9605**	**0.0737**	**0.1095**	**1.8000e-004**		**3.6900e-003**	**3.6900e-003**		**3.6900e-003**	**3.6900e-003**	**0.0000**	**15.4472**	**15.4472**	**8.7000e-004**	**0.0000**	**15.4689**

Unmitigated Construction Off-Site

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0132	9.3200e-003	0.1276	3.8000e-004	0.0479	2.2000e-004	0.0481	0.0127	2.0000e-004	0.0129	0.0000	35.2569	35.2569	8.2000e-004	9.0000e-004	35.5451
Total	**0.0132**	**9.3200e-003**	**0.1276**	**3.8000e-004**	**0.0479**	**2.2000e-004**	**0.0481**	**0.0127**	**2.0000e-004**	**0.0129**	**0.0000**	**35.2569**	**35.2569**	**8.2000e-004**	**9.0000e-004**	**35.5451**

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	0.9496					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0109	0.0737	0.1095	1.8000e-004		3.6900e-003	3.6900e-003		3.6900e-003	3.6900e-003	0.0000	15.4472	15.4472	8.7000e-004	0.0000	15.4689
Total	**0.9605**	**0.0737**	**0.1095**	**1.8000e-004**		**3.6900e-003**	**3.6900e-003**		**3.6900e-003**	**3.6900e-003**	**0.0000**	**15.4472**	**15.4472**	**8.7000e-004**	**0.0000**	**15.4689**

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0132	9.3200e-003	0.1276	3.8000e-004	0.0479	2.2000e-004	0.0481	0.0127	2.0000e-004	0.0129	0.0000	35.2569	35.2569	8.2000e-004	9.0000e-004	35.5451
Total	**0.0132**	**9.3200e-003**	**0.1276**	**3.8000e-004**	**0.0479**	**2.2000e-004**	**0.0481**	**0.0127**	**2.0000e-004**	**0.0129**	**0.0000**	**35.2569**	**35.2569**	**8.2000e-004**	**9.0000e-004**	**35.5451**

3.6 Paving - 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	0.0208	0.2000	0.3071	4.8000e-004		9.8400e-003	9.8400e-003		9.0500e-003	9.0500e-003	0.0000	42.0557	42.0557	0.0136	0.0000	42.3958
Paving	0.0125					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0332**	**0.2000**	**0.3071**	**4.8000e-004**		**9.8400e-003**	**9.8400e-003**		**9.0500e-003**	**9.0500e-003**	**0.0000**	**42.0557**	**42.0557**	**0.0136**	**0.0000**	**42.3958**

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.5000e-004	6.7000e-004	9.2200e-003	3.0000e-005	3.4600e-003	2.0000e-005	3.4800e-003	9.2000e-004	1.0000e-005	9.3000e-004	0.0000	2.5496	2.5496	6.0000e-005	6.0000e-005	2.5704
Total	**9.5000e-004**	**6.7000e-004**	**9.2200e-003**	**3.0000e-005**	**3.4600e-003**	**2.0000e-005**	**3.4800e-003**	**9.2000e-004**	**1.0000e-005**	**9.3000e-004**	**0.0000**	**2.5496**	**2.5496**	**6.0000e-005**	**6.0000e-005**	**2.5704**

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	0.0208	0.2000	0.3071	4.8000e-004		9.8400e-003	9.8400e-003		9.0500e-003	9.0500e-003	0.0000	42.0557	42.0557	0.0136	0.0000	42.3957
Paving	0.0125					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0332**	**0.2000**	**0.3071**	**4.8000e-004**		**9.8400e-003**	**9.8400e-003**		**9.0500e-003**	**9.0500e-003**	**0.0000**	**42.0557**	**42.0557**	**0.0136**	**0.0000**	**42.3957**

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.5000e-004	6.7000e-004	9.2200e-003	3.0000e-005	3.4600e-003	2.0000e-005	3.4800e-003	9.2000e-004	1.0000e-005	9.3000e-004	0.0000	2.5496	2.5496	6.0000e-005	6.0000e-005	2.5704
Total	**9.5000e-004**	**6.7000e-004**	**9.2200e-003**	**3.0000e-005**	**3.4600e-003**	**2.0000e-005**	**3.4800e-003**	**9.2000e-004**	**1.0000e-005**	**9.3000e-004**	**0.0000**	**2.5496**	**2.5496**	**6.0000e-005**	**6.0000e-005**	**2.5704**

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					

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

Mitigated	0.2258	3.8399	3.9567	0.0292	2.0818	0.0441	2.1258	0.5647	0.0420	0.6067	0.0000	2,764.2416	2,764.2416	0.0391	0.2836	2,849.7284
Unmitigated	0.2258	3.8399	3.9567	0.0292	2.0818	0.0441	2.1258	0.5647	0.0420	0.6067	0.0000	2,764.2416	2,764.2416	0.0391	0.2836	2,849.7284

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	420.03	420.03	420.03	2,858,689	2,858,689
Unrefrigerated Warehouse-No Rail	358.02	358.02	358.02	2,418,718	2,418,718
Total	778.05	778.05	778.05	5,277,407	5,277,407

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No Rail	39.90	8.40	15.30	19.30	0.00	80.70	92	5	3
Unrefrigerated Warehouse-No	39.90	8.40	15.30	18.70	0.00	81.30	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Other Non-Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Parking Lot	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Refrigerated Warehouse-No Rail	0.518000	0.065000	0.032000	0.032000	0.061000	0.061000	0.038000	0.193000	0.000000	0.000000	0.000000	0.000000	0.000000
Unrefrigerated Warehouse-No Rail	0.552000	0.069000	0.035000	0.035000	0.034000	0.034000	0.054000	0.187000	0.000000	0.000000	0.000000	0.000000	0.000000

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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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,493.5123	1,493.5123	0.1261	0.0153	1,501.2171
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,493.5123	1,493.5123	0.1261	0.0153	1,501.2171
NaturalGas Mitigated	0.0566	0.5147	0.4324	3.0900e-003		0.0391	0.0391		0.0391	0.0391	0.0000	560.3136	560.3136	0.0107	0.0103	563.6433
NaturalGas Unmitigated	0.0566	0.5147	0.4324	3.0900e-003		0.0391	0.0391		0.0391	0.0391	0.0000	560.3136	560.3136	0.0107	0.0103	563.6433

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					

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

General Office Building	20580	1.1000e-004	1.0100e-003	8.5000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.0982	1.0982	2.0000e-005	2.0000e-005	1.1048
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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	1.00874e+007	0.0544	0.4945	0.4154	2.9700e-003		0.0376	0.0376		0.0376	0.0376	0.0000	538.2994	538.2994	0.0103	9.8700e-003	541.4983
Unrefrigerated Warehouse-No Rail	391950	2.1100e-003	0.0192	0.0161	1.2000e-004		1.4600e-003	1.4600e-003		1.4600e-003	1.4600e-003	0.0000	20.9159	20.9159	4.0000e-004	3.8000e-004	21.0402
Total		**0.0566**	**0.5147**	**0.4324**	**3.1000e-003**		**0.0391**	**0.0391**		**0.0391**	**0.0391**	**0.0000**	**560.3136**	**560.3136**	**0.0107**	**0.0103**	**563.6433**

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					
General Office Building	20580	1.1000e-004	1.0100e-003	8.5000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.0982	1.0982	2.0000e-005	2.0000e-005	1.1048
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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	1.00874e+007	0.0544	0.4945	0.4154	2.9700e-003		0.0376	0.0376		0.0376	0.0376	0.0000	538.2994	538.2994	0.0103	9.8700e-003	541.4983
Unrefrigerated Warehouse-No Rail	391950	2.1100e-003	0.0192	0.0161	1.2000e-004		1.4600e-003	1.4600e-003		1.4600e-003	1.4600e-003	0.0000	20.9159	20.9159	4.0000e-004	3.8000e-004	21.0402
Total		**0.0566**	**0.5147**	**0.4324**	**3.1000e-003**		**0.0391**	**0.0391**		**0.0391**	**0.0391**	**0.0000**	**560.3136**	**560.3136**	**0.0107**	**0.0103**	**563.6433**

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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			
General Office Building	55140	9.7788	8.3000e-004	1.0000e-004	9.8293
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	145142	25.7403	2.1700e-003	2.6000e-004	25.8731
Refrigerated Warehouse-No Rail	7.7688e+006	1,377.7621	0.1163	0.0141	1,384.8697
Unrefrigerated Warehouse-No Rail	452400	80.2311	6.7700e-003	8.2000e-004	80.6450
Total		**1,493.5123**	**0.1261**	**0.0153**	**1,501.2171**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	55140	9.7788	8.3000e-004	1.0000e-004	9.8293
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000

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

Parking Lot	145142	25.7403	2.1700e-003	2.6000e-004	25.8731
Refrigerated Warehouse-No Rail	7.7688e+006	1,377.7621	0.1163	0.0141	1,384.8697
Unrefrigerated Warehouse-No Rail	452400	80.2311	6.7700e-003	8.2000e-004	80.6450
Total		**1,493.5123**	**0.1261**	**0.0153**	**1,501.2171**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.5560	5.0000e-005	5.1800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0101	0.0101	3.0000e-005	0.0000	0.0108
Unmitigated	1.5560	5.0000e-005	5.1800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0101	0.0101	3.0000e-005	0.0000	0.0108

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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	tons/yr										MT/yr					
Architectural Coating	0.0950					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4606					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.8000e-004	5.0000e-005	5.1800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0101	0.0101	3.0000e-005	0.0000	0.0108
Total	**1.5560**	**5.0000e-005**	**5.1800e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0101**	**0.0101**	**3.0000e-005**	**0.0000**	**0.0108**

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	0.0950					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4606					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.8000e-004	5.0000e-005	5.1800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0101	0.0101	3.0000e-005	0.0000	0.0108
Total	**1.5560**	**5.0000e-005**	**5.1800e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0101**	**0.0101**	**3.0000e-005**	**0.0000**	**0.0108**

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

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	240.8849	2.9914	0.0724	337.2389
Unmitigated	240.9635	2.9914	0.0724	337.3178

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.0664 / 0.653602	4.0887	0.0351	8.6000e-004	5.2212
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000

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

Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	45.0938 / 0	118.4374	1.4782	0.0358	166.0483
Unrefrigerated Warehouse-No Rail	45.0938 / 0	118.4374	1.4782	0.0358	166.0483
Total		**240.9635**	**2.9914**	**0.0724**	**337.3178**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.0664 / 0.613732	4.0101	0.0351	8.6000e-004	5.1423
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	45.0938 / 0	118.4374	1.4782	0.0358	166.0483
Unrefrigerated Warehouse-No Rail	45.0938 / 0	118.4374	1.4782	0.0358	166.0483
Total		**240.8849**	**2.9914**	**0.0724**	**337.2389**

8.0 Waste Detail

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Annual

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

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	75.5492	4.4648	0.0000	187.1699
Unmitigated	75.5492	4.4648	0.0000	187.1699

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	5.58	1.1327	0.0669	0.0000	2.8062
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	183.3	37.2082	2.1989	0.0000	92.1819
Unrefrigerated Warehouse-No Rail	183.3	37.2082	2.1989	0.0000	92.1819

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

Total		**75.5492**	**4.4648**	**0.0000**	**187.1699**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	5.58	1.1327	0.0669	0.0000	2.8062
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	183.3	37.2082	2.1989	0.0000	92.1819
Unrefrigerated Warehouse-No Rail	183.3	37.2082	2.1989	0.0000	92.1819
Total		**75.5492**	**4.4648**	**0.0000**	**187.1699**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	6	8.00	260	89	0.20	Diesel
Other General Industrial Equipment	6	8.00	260	88	0.34	Diesel

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

UnMitigated/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
Equipment Type	tons/yr										MT/yr					
Forklifts	0.0735	0.6892	0.8887	1.1900e-003		0.0398	0.0398		0.0366	0.0366	0.0000	104.7471	104.7471	0.0339	0.0000	105.5940
Other General Industrial Equipment	0.1182	1.1145	1.4980	2.0000e-003		0.0601	0.0601		0.0552	0.0552	0.0000	175.4985	175.4985	0.0568	0.0000	176.9175
Total	**0.1917**	**1.8037**	**2.3866**	**3.1900e-003**		**0.0999**	**0.0999**		**0.0919**	**0.0919**	**0.0000**	**280.2456**	**280.2456**	**0.0906**	**0.0000**	**282.5115**

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

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Summer

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

Mapes & Trumble Industrial Facility Project

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	6.00	1000sqft	0.14	6,000.00	0
Refrigerated Warehouse-No Rail	195.00	1000sqft	4.48	195,000.00	0
Unrefrigerated Warehouse-No Rail	195.00	1000sqft	4.48	195,000.00	0
Other Non-Asphalt Surfaces	1.00	Acre	1.00	43,560.00	0
Parking Lot	9.52	Acre	9.52	414,691.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Warehouse is 390,000sf (split between refrigereated and unrefrigerated -no rail) and 6,000sf mazzanine & office. Total project site lot 19.62 acres including gated truck and trailer loading docks and storage.
Construction Phase - Assume architectural coatings are applied during the building construction phase. Extended the paving phase due to the large paved area.

Trips and VMT - Haul trips approximately 15 miles round trip entering/exiting the 215 fwy.

Grading - Soil quantity import to raise the site by 12 inches above base flood elevation.

Architectural Coating - Assume all coatings comply with SCAQMD Rule 1113.

Vehicle Trips - Trip rates from traffic study, office is part of the warehouse traffic. Used SCAQMD WAIRE trip lengths.

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Summer

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

Area Coating - Assume all coatings comply with SCAQMD Rule 1113.

Construction Off-road Equipment Mitigation - Dust constrol measures as required by SCAQMD Rule 403.

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Operational Off-Road Equipment - Assume standard warehouse equipment, worst case - diesel-powered.

Fleet Mix - Fleet mix from the traffic study.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	121.00
tblConstructionPhase	NumDays	20.00	42.00
tblFleetMix	HHD	0.02	0.19
tblFleetMix	HHD	0.02	0.19
tblFleetMix	LDA	0.54	0.52
tblFleetMix	LDA	0.54	0.55
tblFleetMix	LDT1	0.06	0.07
tblFleetMix	LDT1	0.06	0.07
tblFleetMix	LDT2	0.17	0.03
tblFleetMix	LDT2	0.17	0.04
tblFleetMix	LHD1	0.03	0.06

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Summer

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

tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD2	7.1910e-003	0.06
tblFleetMix	LHD2	7.1910e-003	0.03
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.14	0.03
tblFleetMix	MDV	0.14	0.04
tblFleetMix	MH	5.1890e-003	0.00
tblFleetMix	MH	5.1890e-003	0.00
tblFleetMix	MHD	0.01	0.04
tblFleetMix	MHD	0.01	0.05
tblFleetMix	OBUS	6.1100e-004	0.00
tblFleetMix	OBUS	6.1100e-004	0.00
tblFleetMix	SBUS	1.0970e-003	0.00
tblFleetMix	SBUS	1.0970e-003	0.00
tblFleetMix	UBUS	3.0900e-004	0.00
tblFleetMix	UBUS	3.0900e-004	0.00
tblGrading	MaterialImported	0.00	28,891.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	6.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	6.00
tblTripsAndVMT	HaulingTripLength	20.00	15.00
tblVehicleTrips	CNW_TL	6.90	15.30
tblVehicleTrips	CNW_TL	6.90	15.30
tblVehicleTrips	CNW_TTP	41.00	80.70
tblVehicleTrips	CNW_TTP	41.00	81.30
tblVehicleTrips	CW_TL	16.60	39.90
tblVehicleTrips	CW_TL	16.60	39.90
tblVehicleTrips	CW_TTP	59.00	19.30

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Summer

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

tblVehicleTrips	CW_TTP	59.00	18.70
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	2.12	2.15
tblVehicleTrips	ST_TR	1.74	1.84
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	2.12	2.15
tblVehicleTrips	SU_TR	1.74	1.84
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	2.12	2.15
tblVehicleTrips	WD_TR	1.74	1.84

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.6324	44.1774	31.8130	0.1146	19.8582	1.5347	21.1252	10.1558	1.4159	11.3214	0.0000	11,605.8911	11,605.8911	2.0260	0.8549	11,911.2981
2024	18.9665	20.1009	34.5450	0.0949	5.7031	0.7352	6.4383	1.5329	0.6954	2.2283	0.0000	9,528.0243	9,528.0243	0.7370	0.4705	9,686.6687
Maximum	**18.9665**	**44.1774**	**34.5450**	**0.1146**	**19.8582**	**1.5347**	**21.1252**	**10.1558**	**1.4159**	**11.3214**	**0.0000**	**11,605.8911**	**11,605.8911**	**2.0260**	**0.8549**	**11,911.2981**

Mitigated Construction

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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
Year	lb/day										lb/day					
2023	3.6324	44.1774	31.8130	0.1146	9.0469	1.5347	10.3138	4.5995	1.4159	5.7651	0.0000	11,605.8911	11,605.8911	2.0260	0.8549	11,911.2981
2024	18.9665	20.1009	34.5450	0.0949	5.7031	0.7352	6.4383	1.5329	0.6954	2.2283	0.0000	9,528.0243	9,528.0243	0.7370	0.4705	9,686.6687
Maximum	**18.9665**	**44.1774**	**34.5450**	**0.1146**	**9.0469**	**1.5347**	**10.3138**	**4.5995**	**1.4159**	**5.7651**	**0.0000**	**11,605.8911**	**11,605.8911**	**2.0260**	**0.8549**	**11,911.2981**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**42.30**	**0.00**	**39.22**	**47.54**	**0.00**	**41.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.5273	3.8000e-004	0.0414	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0890	0.0890	2.3000e-004		0.0948
Energy	0.3102	2.8203	2.3690	0.0169		0.2143	0.2143		0.2143	0.2143		3,384.3288	3,384.3288	0.0649	0.0621	3,404.4401
Mobile	1.4025	19.9983	24.4847	0.1651	11.6220	0.2424	11.8644	3.1478	0.2307	3.3786		17,209.9202	17,209.9202	0.2378	1.7121	17,726.0815
Offroad	1.4744	13.8745	18.3585	0.0245		0.7681	0.7681		0.7066	0.7066	0.0000	2,376.2940	2,376.2940	0.7685		2,395.5075

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

Total	**11.7143**	**36.6935**	**45.2537**	**0.2066**	**11.6220**	**1.2249**	**12.8469**	**3.1478**	**1.1518**	**4.2997**	**0.0000**	**22,970.6319**	**22,970.6319**	**1.0714**	**1.7742**	**23,526.1239**

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	8.5273	3.8000e-004	0.0414	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0890	0.0890	2.3000e-004		0.0948
Energy	0.3102	2.8203	2.3690	0.0169		0.2143	0.2143		0.2143	0.2143		3,384.3288	3,384.3288	0.0649	0.0621	3,404.4401
Mobile	1.4025	19.9983	24.4847	0.1651	11.6220	0.2424	11.8644	3.1478	0.2307	3.3786		17,209.9202	17,209.9202	0.2378	1.7121	17,726.0815
Offroad	1.4744	13.8745	18.3585	0.0245		0.7681	0.7681		0.7066	0.7066	0.0000	2,376.2940	2,376.2940	0.7685		2,395.5075
Total	**11.7143**	**36.6935**	**45.2537**	**0.2066**	**11.6220**	**1.2249**	**12.8469**	**3.1478**	**1.1518**	**4.2997**	**0.0000**	**22,970.6319**	**22,970.6319**	**1.0714**	**1.7742**	**23,526.1239**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/1/2023	3/14/2023	5	10	

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

2	Grading	Grading	3/15/2023	4/25/2023	5	30	
3	Building Construction	Building Construction	4/26/2023	6/18/2024	5	300	
4	Architectural Coating	Architectural Coating	1/2/2024	6/18/2024	5	121	
5	Paving	Paving	6/19/2024	8/15/2024	5	42	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 10.52

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 594,000; Non-Residential Outdoor: 198,000; Striped Parking Area: 27,495

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	3,611.00	14.70	6.90	15.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	358.00	140.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	72.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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

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	0.0657	0.0406	0.6586	1.7700e-003	0.2012	9.4000e-004	0.2021	0.0534	8.7000e-004	0.0542		178.8733	178.8733	4.1400e-003	4.2200e-003	180.2350
Total	**0.0657**	**0.0406**	**0.6586**	**1.7700e-003**	**0.2012**	**9.4000e-004**	**0.2021**	**0.0534**	**8.7000e-004**	**0.0542**		**178.8733**	**178.8733**	**4.1400e-003**	**4.2200e-003**	**180.2350**

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					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**8.8457**	**1.2660**	**10.1117**	**4.5461**	**1.1647**	**5.7108**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Summer

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

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	0.0657	0.0406	0.6586	1.7700e-003	0.2012	9.4000e-004	0.2021	0.0534	8.7000e-004	0.0542		178.8733	178.8733	4.1400e-003	4.2200e-003	180.2350
Total	**0.0657**	**0.0406**	**0.6586**	**1.7700e-003**	**0.2012**	**9.4000e-004**	**0.2021**	**0.0534**	**8.7000e-004**	**0.0542**		**178.8733**	**178.8733**	**4.1400e-003**	**4.2200e-003**	**180.2350**

3.3 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					9.3255	0.0000	9.3255	3.6722	0.0000	3.6722			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.3255**	**1.4245**	**10.7500**	**3.6722**	**1.3105**	**4.9828**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Summer

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

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	0.2376	9.6167	3.0301	0.0505	1.5806	0.1092	1.6898	0.4334	0.1044	0.5378		5,395.6653	5,395.6653	0.0772	0.8502	5,650.9534
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	0.0730	0.0451	0.7317	1.9700e-003	0.2236	1.0500e-003	0.2246	0.0593	9.6000e-004	0.0603		198.7481	198.7481	4.5900e-003	4.6900e-003	200.2612
Total	**0.3106**	**9.6618**	**3.7618**	**0.0525**	**1.8042**	**0.1102**	**1.9144**	**0.4927**	**0.1054**	**0.5981**		**5,594.4134**	**5,594.4134**	**0.0818**	**0.8549**	**5,851.2145**

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					4.1965	0.0000	4.1965	1.6525	0.0000	1.6525			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**4.1965**	**1.4245**	**5.6210**	**1.6525**	**1.3105**	**2.9630**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Summer

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

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	0.2376	9.6167	3.0301	0.0505	1.5806	0.1092	1.6898	0.4334	0.1044	0.5378		5,395.6653	5,395.6653	0.0772	0.8502	5,650.9534
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	0.0730	0.0451	0.7317	1.9700e-003	0.2236	1.0500e-003	0.2246	0.0593	9.6000e-004	0.0603		198.7481	198.7481	4.5900e-003	4.6900e-003	200.2612
Total	**0.3106**	**9.6618**	**3.7618**	**0.0525**	**1.8042**	**0.1102**	**1.9144**	**0.4927**	**0.1054**	**0.5981**		**5,594.4134**	**5,594.4134**	**0.0818**	**0.8549**	**5,851.2145**

3.4 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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
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	0.1578	4.5739	1.8833	0.0245	0.8967	0.0398	0.9365	0.2582	0.0381	0.2963		2,593.7940	2,593.7940	0.0265	0.3833	2,708.6742
Worker	1.3071	0.8077	13.0982	0.0352	4.0016	0.0187	4.0203	1.0612	0.0172	1.0785		3,557.5904	3,557.5904	0.0823	0.0840	3,584.6746
Total	**1.4649**	**5.3816**	**14.9815**	**0.0597**	**4.8983**	**0.0586**	**4.9569**	**1.3194**	**0.0553**	**1.3748**		**6,151.3844**	**6,151.3844**	**0.1087**	**0.4673**	**6,293.3488**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
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	0.1578	4.5739	1.8833	0.0245	0.8967	0.0398	0.9365	0.2582	0.0381	0.2963		2,593.7940	2,593.7940	0.0265	0.3833	2,708.6742
Worker	1.3071	0.8077	13.0982	0.0352	4.0016	0.0187	4.0203	1.0612	0.0172	1.0785		3,557.5904	3,557.5904	0.0823	0.0840	3,584.6746
Total	**1.4649**	**5.3816**	**14.9815**	**0.0597**	**4.8983**	**0.0586**	**4.9569**	**1.3194**	**0.0553**	**1.3748**		**6,151.3844**	**6,151.3844**	**0.1087**	**0.4673**	**6,293.3488**

3.4 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	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
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	0.1553	4.5743	1.8617	0.0241	0.8967	0.0396	0.9363	0.2582	0.0379	0.2960		2,553.8181	2,553.8181	0.0274	0.3768	2,666.7918
Worker	1.2182	0.7194	12.2439	0.0341	4.0016	0.0179	4.0195	1.0612	0.0164	1.0777		3,444.3423	3,444.3423	0.0745	0.0780	3,469.4571
Total	**1.3735**	**5.2937**	**14.1056**	**0.0582**	**4.8983**	**0.0574**	**4.9557**	**1.3194**	**0.0543**	**1.3737**		**5,998.1604**	**5,998.1604**	**0.1019**	**0.4548**	**6,136.2489**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
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	0.1553	4.5743	1.8617	0.0241	0.8967	0.0396	0.9363	0.2582	0.0379	0.2960		2,553.8181	2,553.8181	0.0274	0.3768	2,666.7918
Worker	1.2182	0.7194	12.2439	0.0341	4.0016	0.0179	4.0195	1.0612	0.0164	1.0777		3,444.3423	3,444.3423	0.0745	0.0780	3,469.4571
Total	**1.3735**	**5.2937**	**14.1056**	**0.0582**	**4.8983**	**0.0574**	**4.9557**	**1.3194**	**0.0543**	**1.3737**		**5,998.1604**	**5,998.1604**	**0.1019**	**0.4548**	**6,136.2489**

3.5 Architectural Coating - 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					
Archit. Coating	15.6957					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**15.8765**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
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	0.2450	0.1447	2.4625	6.8500e-003	0.8048	3.5900e-003	0.8084	0.2134	3.3000e-003	0.2167		692.7169	692.7169	0.0150	0.0157	697.7679
Total	**0.2450**	**0.1447**	**2.4625**	**6.8500e-003**	**0.8048**	**3.5900e-003**	**0.8084**	**0.2134**	**3.3000e-003**	**0.2167**		**692.7169**	**692.7169**	**0.0150**	**0.0157**	**697.7679**

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	15.6957					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**15.8765**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
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	0.2450	0.1447	2.4625	6.8500e-003	0.8048	3.5900e-003	0.8084	0.2134	3.3000e-003	0.2167		692.7169	692.7169	0.0150	0.0157	697.7679
Total	**0.2450**	**0.1447**	**2.4625**	**6.8500e-003**	**0.8048**	**3.5900e-003**	**0.8084**	**0.2134**	**3.3000e-003**	**0.2167**		**692.7169**	**692.7169**	**0.0150**	**0.0157**	**697.7679**

3.6 Paving - 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	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.5939					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5820**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Unmitigated Construction Off-Site

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
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	0.0510	0.0301	0.5130	1.4300e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		144.3160	144.3160	3.1200e-003	3.2700e-003	145.3683
Total	**0.0510**	**0.0301**	**0.5130**	**1.4300e-003**	**0.1677**	**7.5000e-004**	**0.1684**	**0.0445**	**6.9000e-004**	**0.0452**		**144.3160**	**144.3160**	**3.1200e-003**	**3.2700e-003**	**145.3683**

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	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.5939					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5820**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Mitigated Construction Off-Site

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
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	0.0510	0.0301	0.5130	1.4300e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		144.3160	144.3160	3.1200e-003	3.2700e-003	145.3683
Total	**0.0510**	**0.0301**	**0.5130**	**1.4300e-003**	**0.1677**	**7.5000e-004**	**0.1684**	**0.0445**	**6.9000e-004**	**0.0452**		**144.3160**	**144.3160**	**3.1200e-003**	**3.2700e-003**	**145.3683**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.4025	19.9983	24.4847	0.1651	11.6220	0.2424	11.8644	3.1478	0.2307	3.3786		17,209.9202	17,209.9202	0.2378	1.7121	17,726.0815
Unmitigated	1.4025	19.9983	24.4847	0.1651	11.6220	0.2424	11.8644	3.1478	0.2307	3.3786		17,209.9202	17,209.9202	0.2378	1.7121	17,726.0815

4.2 Trip Summary Information

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Summer

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

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	420.03	420.03	420.03	2,858,689	2,858,689
Unrefrigerated Warehouse-No Rail	358.02	358.02	358.02	2,418,718	2,418,718
Total	778.05	778.05	778.05	5,277,407	5,277,407

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No Rail	39.90	8.40	15.30	19.30	0.00	80.70	92	5	3
Unrefrigerated Warehouse-No	39.90	8.40	15.30	18.70	0.00	81.30	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Other Non-Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Parking Lot	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Refrigerated Warehouse-No Rail	0.518000	0.065000	0.032000	0.032000	0.061000	0.061000	0.038000	0.193000	0.000000	0.000000	0.000000	0.000000	0.000000
Unrefrigerated Warehouse-No Rail	0.552000	0.069000	0.035000	0.035000	0.034000	0.034000	0.054000	0.187000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
NaturalGas Mitigated	0.3102	2.8203	2.3690	0.0169		0.2143	0.2143		0.2143	0.2143		3,384.3288	3,384.3288	0.0649	0.0621	3,404.4401
NaturalGas Unmitigated	0.3102	2.8203	2.3690	0.0169		0.2143	0.2143		0.2143	0.2143		3,384.3288	3,384.3288	0.0649	0.0621	3,404.4401

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					
General Office Building	56.3836	6.1000e-004	5.5300e-003	4.6400e-003	3.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004		6.6334	6.6334	1.3000e-004	1.2000e-004	6.6728
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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	27636.6	0.2980	2.7095	2.2760	0.0163		0.2059	0.2059		0.2059	0.2059		3,251.3618	3,251.3618	0.0623	0.0596	3,270.6830
Unrefrigerated Warehouse-No Rail	1073.84	0.0116	0.1053	0.0884	6.3000e-004		8.0000e-003	8.0000e-003		8.0000e-003	8.0000e-003		126.3336	126.3336	2.4200e-003	2.3200e-003	127.0843
Total		**0.3102**	**2.8203**	**2.3690**	**0.0169**		**0.2143**	**0.2143**		**0.2143**	**0.2143**		**3,384.3288**	**3,384.3288**	**0.0649**	**0.0621**	**3,404.4401**

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Summer

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

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					
General Office Building	0.0563836	6.1000e-004	5.5300e-003	4.6400e-003	3.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004		6.6334	6.6334	1.3000e-004	1.2000e-004	6.6728
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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	27.6366	0.2980	2.7095	2.2760	0.0163		0.2059	0.2059		0.2059	0.2059		3,251.3618	3,251.3618	0.0623	0.0596	3,270.6830
Unrefrigerated Warehouse-No Rail	1.07384	0.0116	0.1053	0.0884	6.3000e-004		8.0000e-003	8.0000e-003		8.0000e-003	8.0000e-003		126.3336	126.3336	2.4200e-003	2.3200e-003	127.0843
Total		**0.3102**	**2.8203**	**2.3690**	**0.0169**		**0.2143**	**0.2143**		**0.2143**	**0.2143**		**3,384.3288**	**3,384.3288**	**0.0649**	**0.0621**	**3,404.4401**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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	8.5273	3.8000e-004	0.0414	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0890	0.0890	2.3000e-004		0.0948
Unmitigated	8.5273	3.8000e-004	0.0414	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0890	0.0890	2.3000e-004		0.0948

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	0.5203					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.0031					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.8300e-003	3.8000e-004	0.0414	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0890	0.0890	2.3000e-004		0.0948
Total	**8.5273**	**3.8000e-004**	**0.0414**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0890**	**0.0890**	**2.3000e-004**		**0.0948**

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Summer

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

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	0.5203					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.0031					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.8300e-003	3.8000e-004	0.0414	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0890	0.0890	2.3000e-004		0.0948
Total	**8.5273**	**3.8000e-004**	**0.0414**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0890**	**0.0890**	**2.3000e-004**		**0.0948**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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
Forklifts	6	8.00	260	89	0.20	Diesel
Other General Industrial Equipment	6	8.00	260	88	0.34	Diesel

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Summer

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

UnMitigated/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
Equipment Type	lb/day										lb/day					
Forklifts	0.5652	5.3011	6.8358	9.1700e-003		0.3061	0.3061		0.2817	0.2817	0.0000	888.1850	888.1850	0.2873		895.3664
Other General Industrial	0.9092	8.5734	11.5227	0.0154		0.4619	0.4619		0.4250	0.4250	0.0000	1,488.1090	1,488.1090	0.4813		1,500.1411
Total	**1.4744**	**13.8745**	**18.3585**	**0.0245**		**0.7681**	**0.7681**		**0.7066**	**0.7066**	**0.0000**	**2,376.2940**	**2,376.2940**	**0.7685**		**2,395.5075**

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

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Winter

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

Mapes & Trumble Industrial Facility Project

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	6.00	1000sqft	0.14	6,000.00	0
Refrigerated Warehouse-No Rail	195.00	1000sqft	4.48	195,000.00	0
Unrefrigerated Warehouse-No Rail	195.00	1000sqft	4.48	195,000.00	0
Other Non-Asphalt Surfaces	1.00	Acre	1.00	43,560.00	0
Parking Lot	9.52	Acre	9.52	414,691.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Warehouse is 390,000sf (split between refrigereated and unrefrigerated -no rail) and 6,000sf mazzanine & office. Total project site lot 19.62 acres including gated truck and trailer loading docks and storage.
Construction Phase - Assume architectural coatings are applied during the building construction phase. Extended the paving phase due to the large paved area.

Trips and VMT - Haul trips approximately 15 miles round trip entering/exiting the 215 fwy.

Grading - Soil quantity import to raise the site by 12 inches above base flood elevation.

Architectural Coating - Assume all coatings comply with SCAQMD Rule 1113.

Vehicle Trips - Trip rates from traffic study, office is part of the warehouse traffic. Used SCAQMD WAIRE trip lengths.

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Winter

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

Area Coating - Assume all coatings comply with SCAQMD Rule 1113.

Construction Off-road Equipment Mitigation - Dust constrol measures as required by SCAQMD Rule 403.

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Operational Off-Road Equipment - Assume standard warehouse equipment, worst case - diesel-powered.

Fleet Mix - Fleet mix from the traffic study.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	121.00
tblConstructionPhase	NumDays	20.00	42.00
tblFleetMix	HHD	0.02	0.19
tblFleetMix	HHD	0.02	0.19
tblFleetMix	LDA	0.54	0.52
tblFleetMix	LDA	0.54	0.55
tblFleetMix	LDT1	0.06	0.07
tblFleetMix	LDT1	0.06	0.07
tblFleetMix	LDT2	0.17	0.03
tblFleetMix	LDT2	0.17	0.04
tblFleetMix	LHD1	0.03	0.06

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Winter

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

tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD2	7.1910e-003	0.06
tblFleetMix	LHD2	7.1910e-003	0.03
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.14	0.03
tblFleetMix	MDV	0.14	0.04
tblFleetMix	MH	5.1890e-003	0.00
tblFleetMix	MH	5.1890e-003	0.00
tblFleetMix	MHD	0.01	0.04
tblFleetMix	MHD	0.01	0.05
tblFleetMix	OBUS	6.1100e-004	0.00
tblFleetMix	OBUS	6.1100e-004	0.00
tblFleetMix	SBUS	1.0970e-003	0.00
tblFleetMix	SBUS	1.0970e-003	0.00
tblFleetMix	UBUS	3.0900e-004	0.00
tblFleetMix	UBUS	3.0900e-004	0.00
tblGrading	MaterialImported	0.00	28,891.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	6.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	6.00
tblTripsAndVMT	HaulingTripLength	20.00	15.00
tblVehicleTrips	CNW_TL	6.90	15.30
tblVehicleTrips	CNW_TL	6.90	15.30
tblVehicleTrips	CNW_TTP	41.00	80.70
tblVehicleTrips	CNW_TTP	41.00	81.30
tblVehicleTrips	CW_TL	16.60	39.90
tblVehicleTrips	CW_TL	16.60	39.90
tblVehicleTrips	CW_TTP	59.00	19.30

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Winter

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

tblVehicleTrips	CW_TTP	59.00	18.70
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	2.12	2.15
tblVehicleTrips	ST_TR	1.74	1.84
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	2.12	2.15
tblVehicleTrips	SU_TR	1.74	1.84
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	2.12	2.15
tblVehicleTrips	WD_TR	1.74	1.84

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.6065	44.7690	31.7452	0.1145	19.8582	1.5349	21.1252	10.1558	1.4161	11.3214	0.0000	11,598.2739	11,598.2739	2.0250	0.8567	11,904.2076
2024	18.8673	20.4101	31.8494	0.0912	5.7031	0.7354	6.4385	1.5329	0.6955	2.2284	0.0000	9,146.6317	9,146.6317	0.7364	0.4740	9,306.2787
Maximum	**18.8673**	**44.7690**	**31.8494**	**0.1145**	**19.8582**	**1.5349**	**21.1252**	**10.1558**	**1.4161**	**11.3214**	**0.0000**	**11,598.2739**	**11,598.2739**	**2.0250**	**0.8567**	**11,904.2076**

Mitigated Construction

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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
Year	lb/day										lb/day					
2023	3.6065	44.7690	31.7452	0.1145	9.0469	1.5349	10.3138	4.5995	1.4161	5.7651	0.0000	11,598.2739	11,598.2739	2.0250	0.8567	11,904.2076
2024	18.8673	20.4101	31.8494	0.0912	5.7031	0.7354	6.4385	1.5329	0.6955	2.2284	0.0000	9,146.6317	9,146.6317	0.7364	0.4740	9,306.2787
Maximum	**18.8673**	**44.7690**	**31.8494**	**0.1145**	**9.0469**	**1.5349**	**10.3138**	**4.5995**	**1.4161**	**5.7651**	**0.0000**	**11,598.2739**	**11,598.2739**	**2.0250**	**0.8567**	**11,904.2076**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**42.30**	**0.00**	**39.22**	**47.54**	**0.00**	**41.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.5273	3.8000e-004	0.0414	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0890	0.0890	2.3000e-004		0.0948
Energy	0.3102	2.8203	2.3690	0.0169		0.2143	0.2143		0.2143	0.2143		3,384.3288	3,384.3288	0.0649	0.0621	3,404.4401
Mobile	1.2127	21.1179	21.0096	0.1595	11.6220	0.2426	11.8646	3.1478	0.2310	3.3788		16,642.5841	16,642.5841	0.2356	1.7183	17,160.5195
Offroad	1.4744	13.8745	18.3585	0.0245		0.7681	0.7681		0.7066	0.7066	0.0000	2,376.2940	2,376.2940	0.7685		2,395.5075

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Winter

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

Total	**11.5246**	**37.8131**	**41.7786**	**0.2009**	**11.6220**	**1.2252**	**12.8472**	**3.1478**	**1.1521**	**4.2999**	**0.0000**	**22,403.2958**	**22,403.2958**	**1.0692**	**1.7803**	**22,960.5619**

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	8.5273	3.8000e-004	0.0414	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0890	0.0890	2.3000e-004		0.0948
Energy	0.3102	2.8203	2.3690	0.0169		0.2143	0.2143		0.2143	0.2143		3,384.3288	3,384.3288	0.0649	0.0621	3,404.4401
Mobile	1.2127	21.1179	21.0096	0.1595	11.6220	0.2426	11.8646	3.1478	0.2310	3.3788		16,642.5841	16,642.5841	0.2356	1.7183	17,160.5195
Offroad	1.4744	13.8745	18.3585	0.0245		0.7681	0.7681		0.7066	0.7066	0.0000	2,376.2940	2,376.2940	0.7685		2,395.5075
Total	**11.5246**	**37.8131**	**41.7786**	**0.2009**	**11.6220**	**1.2252**	**12.8472**	**3.1478**	**1.1521**	**4.2999**	**0.0000**	**22,403.2958**	**22,403.2958**	**1.0692**	**1.7803**	**22,960.5619**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/1/2023	3/14/2023	5	10	

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Winter

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

2	Grading	Grading	3/15/2023	4/25/2023	5	30	
3	Building Construction	Building Construction	4/26/2023	6/18/2024	5	300	
4	Architectural Coating	Architectural Coating	1/2/2024	6/18/2024	5	121	
5	Paving	Paving	6/19/2024	8/15/2024	5	42	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 10.52

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 594,000; Non-Residential Outdoor: 198,000; Striped Parking Area: 27,495

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Winter

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	3,611.00	14.70	6.90	15.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	358.00	140.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	72.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Winter

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

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	0.0616	0.0421	0.5348	1.6000e-003	0.2012	9.4000e-004	0.2021	0.0534	8.7000e-004	0.0542		162.0762	162.0762	4.1200e-003	4.3200e-003	163.4672
Total	**0.0616**	**0.0421**	**0.5348**	**1.6000e-003**	**0.2012**	**9.4000e-004**	**0.2021**	**0.0534**	**8.7000e-004**	**0.0542**		**162.0762**	**162.0762**	**4.1200e-003**	**4.3200e-003**	**163.4672**

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					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**8.8457**	**1.2660**	**10.1117**	**4.5461**	**1.1647**	**5.7108**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Winter

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

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	0.0616	0.0421	0.5348	1.6000e-003	0.2012	9.4000e-004	0.2021	0.0534	8.7000e-004	0.0542		162.0762	162.0762	4.1200e-003	4.3200e-003	163.4672
Total	**0.0616**	**0.0421**	**0.5348**	**1.6000e-003**	**0.2012**	**9.4000e-004**	**0.2021**	**0.0534**	**8.7000e-004**	**0.0542**		**162.0762**	**162.0762**	**4.1200e-003**	**4.3200e-003**	**163.4672**

3.3 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					9.3255	0.0000	9.3255	3.6722	0.0000	3.6722			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.3255**	**1.4245**	**10.7500**	**3.6722**	**1.3105**	**4.9828**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Winter

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

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	0.2163	10.2066	3.0998	0.0506	1.5806	0.1094	1.6900	0.4334	0.1046	0.5380		5,406.7115	5,406.7115	0.0762	0.8519	5,662.4938
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	0.0684	0.0468	0.5942	1.7800e-003	0.2236	1.0500e-003	0.2246	0.0593	9.6000e-004	0.0603		180.0847	180.0847	4.5800e-003	4.8000e-003	181.6302
Total	**0.2848**	**10.2534**	**3.6940**	**0.0524**	**1.8042**	**0.1104**	**1.9146**	**0.4927**	**0.1056**	**0.5983**		**5,586.7962**	**5,586.7962**	**0.0808**	**0.8567**	**5,844.1240**

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					4.1965	0.0000	4.1965	1.6525	0.0000	1.6525			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**4.1965**	**1.4245**	**5.6210**	**1.6525**	**1.3105**	**2.9630**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Winter

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

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	0.2163	10.2066	3.0998	0.0506	1.5806	0.1094	1.6900	0.4334	0.1046	0.5380		5,406.7115	5,406.7115	0.0762	0.8519	5,662.4938
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	0.0684	0.0468	0.5942	1.7800e-003	0.2236	1.0500e-003	0.2246	0.0593	9.6000e-004	0.0603		180.0847	180.0847	4.5800e-003	4.8000e-003	181.6302
Total	**0.2848**	**10.2534**	**3.6940**	**0.0524**	**1.8042**	**0.1104**	**1.9146**	**0.4927**	**0.1056**	**0.5983**		**5,586.7962**	**5,586.7962**	**0.0808**	**0.8567**	**5,844.1240**

3.4 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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
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	0.1461	4.8507	1.9467	0.0245	0.8967	0.0400	0.9367	0.2582	0.0382	0.2964		2,600.2312	2,600.2312	0.0259	0.3846	2,715.4787
Worker	1.2252	0.8380	10.6360	0.0319	4.0016	0.0187	4.0203	1.0612	0.0172	1.0785		3,223.5159	3,223.5159	0.0820	0.0860	3,251.1801
Total	**1.3713**	**5.6887**	**12.5827**	**0.0564**	**4.8983**	**0.0587**	**4.9570**	**1.3194**	**0.0555**	**1.3749**		**5,823.7471**	**5,823.7471**	**0.1079**	**0.4705**	**5,966.6588**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
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	0.1461	4.8507	1.9467	0.0245	0.8967	0.0400	0.9367	0.2582	0.0382	0.2964		2,600.2312	2,600.2312	0.0259	0.3846	2,715.4787
Worker	1.2252	0.8380	10.6360	0.0319	4.0016	0.0187	4.0203	1.0612	0.0172	1.0785		3,223.5159	3,223.5159	0.0820	0.0860	3,251.1801
Total	**1.3713**	**5.6887**	**12.5827**	**0.0564**	**4.8983**	**0.0587**	**4.9570**	**1.3194**	**0.0555**	**1.3749**		**5,823.7471**	**5,823.7471**	**0.1079**	**0.4705**	**5,966.6588**

3.4 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	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
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	0.1437	4.8514	1.9250	0.0241	0.8967	0.0397	0.9364	0.2582	0.0380	0.2962		2,560.2004	2,560.2004	0.0269	0.3781	2,673.5325
Worker	1.1453	0.7461	9.9470	0.0309	4.0016	0.0179	4.0195	1.0612	0.0164	1.0777		3,121.4972	3,121.4972	0.0744	0.0798	3,147.1482
Total	**1.2889**	**5.5975**	**11.8719**	**0.0550**	**4.8983**	**0.0576**	**4.9558**	**1.3194**	**0.0544**	**1.3738**		**5,681.6976**	**5,681.6976**	**0.1012**	**0.4579**	**5,820.6807**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
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	0.1437	4.8514	1.9250	0.0241	0.8967	0.0397	0.9364	0.2582	0.0380	0.2962		2,560.2004	2,560.2004	0.0269	0.3781	2,673.5325
Worker	1.1453	0.7461	9.9470	0.0309	4.0016	0.0179	4.0195	1.0612	0.0164	1.0777		3,121.4972	3,121.4972	0.0744	0.0798	3,147.1482
Total	**1.2889**	**5.5975**	**11.8719**	**0.0550**	**4.8983**	**0.0576**	**4.9558**	**1.3194**	**0.0544**	**1.3738**		**5,681.6976**	**5,681.6976**	**0.1012**	**0.4579**	**5,820.6807**

3.5 Architectural Coating - 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					
Archit. Coating	15.6957					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**15.8765**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
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	0.2303	0.1501	2.0005	6.2100e-003	0.8048	3.5900e-003	0.8084	0.2134	3.3000e-003	0.2167		627.7872	627.7872	0.0150	0.0161	632.9460
Total	**0.2303**	**0.1501**	**2.0005**	**6.2100e-003**	**0.8048**	**3.5900e-003**	**0.8084**	**0.2134**	**3.3000e-003**	**0.2167**		**627.7872**	**627.7872**	**0.0150**	**0.0161**	**632.9460**

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	15.6957					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**15.8765**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
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	0.2303	0.1501	2.0005	6.2100e-003	0.8048	3.5900e-003	0.8084	0.2134	3.3000e-003	0.2167		627.7872	627.7872	0.0150	0.0161	632.9460
Total	**0.2303**	**0.1501**	**2.0005**	**6.2100e-003**	**0.8048**	**3.5900e-003**	**0.8084**	**0.2134**	**3.3000e-003**	**0.2167**		**627.7872**	**627.7872**	**0.0150**	**0.0161**	**632.9460**

3.6 Paving - 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	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.5939					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5820**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Unmitigated Construction Off-Site

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
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	0.0480	0.0313	0.4168	1.2900e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		130.7890	130.7890	3.1200e-003	3.3500e-003	131.8638
Total	**0.0480**	**0.0313**	**0.4168**	**1.2900e-003**	**0.1677**	**7.5000e-004**	**0.1684**	**0.0445**	**6.9000e-004**	**0.0452**		**130.7890**	**130.7890**	**3.1200e-003**	**3.3500e-003**	**131.8638**

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	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.5939					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5820**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Mitigated Construction Off-Site

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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				
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	0.0480	0.0313	0.4168	1.2900e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		130.7890	130.7890	3.1200e-003	3.3500e-003	131.8638
Total	**0.0480**	**0.0313**	**0.4168**	**1.2900e-003**	**0.1677**	**7.5000e-004**	**0.1684**	**0.0445**	**6.9000e-004**	**0.0452**		**130.7890**	**130.7890**	**3.1200e-003**	**3.3500e-003**	**131.8638**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Mitigated	1.2127	21.1179	21.0096	0.1595	11.6220	0.2426	11.8646	3.1478	0.2310	3.3788		16,642.5841	16,642.5841	0.2356	1.7183	17,160.5195
Unmitigated	1.2127	21.1179	21.0096	0.1595	11.6220	0.2426	11.8646	3.1478	0.2310	3.3788		16,642.5841	16,642.5841	0.2356	1.7183	17,160.5195

4.2 Trip Summary Information

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Winter

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

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	420.03	420.03	420.03	2,858,689	2,858,689
Unrefrigerated Warehouse-No Rail	358.02	358.02	358.02	2,418,718	2,418,718
Total	778.05	778.05	778.05	5,277,407	5,277,407

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No Rail	39.90	8.40	15.30	19.30	0.00	80.70	92	5	3
Unrefrigerated Warehouse-No	39.90	8.40	15.30	18.70	0.00	81.30	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Other Non-Asphalt Surfaces	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Parking Lot	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Refrigerated Warehouse-No Rail	0.518000	0.065000	0.032000	0.032000	0.061000	0.061000	0.038000	0.193000	0.000000	0.000000	0.000000	0.000000	0.000000
Unrefrigerated Warehouse-No Rail	0.552000	0.069000	0.035000	0.035000	0.034000	0.034000	0.054000	0.187000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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					
NaturalGas Mitigated	0.3102	2.8203	2.3690	0.0169		0.2143	0.2143		0.2143	0.2143		3,384.3288	3,384.3288	0.0649	0.0621	3,404.4401
NaturalGas Unmitigated	0.3102	2.8203	2.3690	0.0169		0.2143	0.2143		0.2143	0.2143		3,384.3288	3,384.3288	0.0649	0.0621	3,404.4401

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					
General Office Building	56.3836	6.1000e-004	5.5300e-003	4.6400e-003	3.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004		6.6334	6.6334	1.3000e-004	1.2000e-004	6.6728
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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	27636.6	0.2980	2.7095	2.2760	0.0163		0.2059	0.2059		0.2059	0.2059		3,251.3618	3,251.3618	0.0623	0.0596	3,270.6830
Unrefrigerated Warehouse-No Rail	1073.84	0.0116	0.1053	0.0884	6.3000e-004		8.0000e-003	8.0000e-003		8.0000e-003	8.0000e-003		126.3336	126.3336	2.4200e-003	2.3200e-003	127.0843
Total		**0.3102**	**2.8203**	**2.3690**	**0.0169**		**0.2143**	**0.2143**		**0.2143**	**0.2143**		**3,384.3288**	**3,384.3288**	**0.0649**	**0.0621**	**3,404.4401**

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Winter

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

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					
General Office Building	0.0563836	6.1000e-004	5.5300e-003	4.6400e-003	3.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004		6.6334	6.6334	1.3000e-004	1.2000e-004	6.6728
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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	27.6366	0.2980	2.7095	2.2760	0.0163		0.2059	0.2059		0.2059	0.2059		3,251.3618	3,251.3618	0.0623	0.0596	3,270.6830
Unrefrigerated Warehouse-No Rail	1.07384	0.0116	0.1053	0.0884	6.3000e-004		8.0000e-003	8.0000e-003		8.0000e-003	8.0000e-003		126.3336	126.3336	2.4200e-003	2.3200e-003	127.0843
Total		**0.3102**	**2.8203**	**2.3690**	**0.0169**		**0.2143**	**0.2143**		**0.2143**	**0.2143**		**3,384.3288**	**3,384.3288**	**0.0649**	**0.0621**	**3,404.4401**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Mapes & Trumble Industrial Facility Project - Riverside-South Coast 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	8.5273	3.8000e-004	0.0414	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0890	0.0890	2.3000e-004		0.0948
Unmitigated	8.5273	3.8000e-004	0.0414	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0890	0.0890	2.3000e-004		0.0948

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	0.5203					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.0031					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.8300e-003	3.8000e-004	0.0414	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0890	0.0890	2.3000e-004		0.0948
Total	**8.5273**	**3.8000e-004**	**0.0414**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0890**	**0.0890**	**2.3000e-004**		**0.0948**

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Winter

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

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	0.5203					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.0031					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.8300e-003	3.8000e-004	0.0414	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0890	0.0890	2.3000e-004		0.0948
Total	**8.5273**	**3.8000e-004**	**0.0414**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0890**	**0.0890**	**2.3000e-004**		**0.0948**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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
Forklifts	6	8.00	260	89	0.20	Diesel
Other General Industrial Equipment	6	8.00	260	88	0.34	Diesel

Mapes & Trumble Industrial Facility Project - Riverside-South Coast County, Winter

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

UnMitigated/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
Equipment Type	lb/day										lb/day					
Forklifts	0.5652	5.3011	6.8358	9.1700e-003		0.3061	0.3061		0.2817	0.2817	0.0000	888.1850	888.1850	0.2873		895.3664
Other General Industrial	0.9092	8.5734	11.5227	0.0154		0.4619	0.4619		0.4250	0.4250	0.0000	1,488.1090	1,488.1090	0.4813		1,500.1411
Total	**1.4744**	**13.8745**	**18.3585**	**0.0245**		**0.7681**	**0.7681**		**0.7066**	**0.7066**	**0.0000**	**2,376.2940**	**2,376.2940**	**0.7685**		**2,395.5075**

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

APPENDIX B

ENERGY WORKSHEETS

Un-Refrigerated Warehouse Fuel Consumption Worksheet

Annual VMT from CalEEMod modeling	Gasoline-Fueled Percentage	Diesel-Fueled Percentage	Gasoline mpg	Gasoline Consumption (gallons/yr)	Diesel mpg	Diesel Consumption (gallons/yr)
2,384,466	68.3%	31.7%	22.2	73,329	8	94,571

		Fleet Mix from CalEEMod modeling												
Land Use	ADT	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Warehouse	353	55.2%	6.9%	3.5%	3.5%	3.4%	3.40%	5.4%	18.7%	0%	0%	0%	0%	0%
		Vehicle Percentages by fuel type												
Gasoline-powered:		98%	95%	75%	50%	50%	10%	5%	5%	0%	0%	100%	10%	50%
Diesel-powered:		2%	5%	25%	50%	50%	90%	95%	95%	100%	100%	0%	90%	50%

truck % = 44.80%

Refrigerated Warehouse Fuel Consumption Worksheet

Annual VMT from CalEEMod modeling	Gasoline-Fueled Percentage	Diesel-Fueled Percentage	Gasoline mpg	Gasoline Consumption (gallons/yr)	Diesel mpg	Diesel Consumption (gallons/yr)
2,813,566	65.8%	34.2%	22.2	83,335	8	120,442

		Fleet Mix from CalEEMod modeling												
Land Use	ADT	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Warehouse	353	51.8%	6.5%	3.2%	3.2%	6.1%	6.10%	3.8%	19.3%	0%	0%	0%	0%	0%
		Vehicle Percentages by fuel type												
Gasoline-powered:		98%	95%	75%	50%	50%	10%	5%	5%	0%	0%	100%	10%	50%
Diesel-powered:		2%	5%	25%	50%	50%	90%	95%	95%	100%	100%	0%	90%	50%

truck % = 48.20%