

# **AIR QUALITY AND GREENHOUSE GAS IMPACT ANALYSIS**

**AVENUE G INDUSTRIAL PROJECT  
LANCASTER, CALIFORNIA**



July 2022

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## **AVENUE G INDUSTRIAL PROJECT LANCASTER, CALIFORNIA**

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## EXECUTIVE SUMMARY

LSA was retained by Warmington Properties to prepare an Air Quality and Greenhouse Gas Impact Analysis for the proposed Avenue G Industrial Project (project) located in the City of Lancaster, California.

This air quality 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 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 1,260,630 square foot Hi-Cube warehouse with 20,000 square feet of office space included. The Hi-Cube warehouse would include 219 trailer loading docks, 732 standard automotive parking spaces, and 365 trailer parking spaces on a vacant 68.5-acre lot. The proposed project would begin construction in March 2023 and would be completed in March of 2024, a duration of approximately 12 months. Construction would require the import of approximately 135,250 cubic yards of soil during site grading and leveling. The proposed project would be consistent with current applicable Title 24 standards.

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 Antelope Valley Air Quality Management District (AVAQMD). Compliance with AVAQMD 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 AVAQMD have been identified for short-term construction to meet the AVAQMD emissions thresholds. Construction and operational emissions for the proposed project would not expose nearby sensitive receptors to excessive levels of criteria air pollutants. The nearest sensitive receptors are identified as the single-family residences located along 20th Street West approximately 3,865 feet (1,178 meters) southeast of the proposed project site.

Pollutant emissions from project operation, calculated with CalEEMod, would not exceed the AVAQMD criteria pollutant thresholds. Long-term emissions from project operations would not expose nearby sensitive receptors to excessive levels of criteria air pollutants. Historical air quality data shows 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.

The AVAQMD has established Regulation IV - Prohibitions, effectively rules for projects in the Air District. Although odor impacts are unlikely, the proposed project would be required to comply with AVAQMD Rule 402 in the event a nuisance complaint occurs. Impacts associated with objectionable odors would be less than significant. Fugitive dust emissions may be generated as a result of construction and earth moving, including some operational activities, would be reduced as a result of implementing AVAQMD Rule 403. The project would reduce use low volatile organic compound (VOC) paints consistent with the AVAQMD Rule 1113 Architectural Coating.

This study addresses the potential of the proposed project to affect global climate change. Short-term construction and long-term operational emissions of the principal GHGs, including carbon dioxide and methane, would not exceed the AVAQMD GHG emissions threshold.

The proposed project site is zoned as Fox Field Industrial Corridor Specific Plan (office/commercial) and the land use designation is consistent with the City's Zoning Map; thus, it would result in air pollutant emissions that are consistent with the City's General Plan. The City's General Plan is consistent with the Southern California Association of Government's (SCAG) Regional Comprehensive Plan Guidelines and the AVAQMD's Federal 8-Hour Ozone Attainment Plan. Thus, the proposed project would be consistent with the local, regional, and federal guidelines.

The proposed project would be consistent with the AVAQMD's California Environmental Quality Act (CEQA) and Federal Conformity Guidelines intended to assist in preparing environmental analysis or reviewing documents for any project within the jurisdiction, by providing background information and guidance on the preferred analysis approach. The guidelines include annual and daily GHG emission thresholds of significance for project generated criteria pollutants or GHG emissions within the jurisdiction.

Cumulative construction and operational emissions were found to be less than significant. 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. Given this consistency, it is concluded that the proposed project's impact to the climate from GHG emissions would not be cumulatively considerable.

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## LIST OF ABBREVIATIONS AND ACRONYMS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/m <sup>3</sup>	micrograms per cubic meter
AAQS	ambient air quality standards
AB	Assembly Bill
AQMP	Air Quality Management Plan
AVAQMD	Antelope Valley Air Quality Management District
AR4	IPCC Fourth Assessment Report
AR6	IPCC Sixth Assessment Report
Basin	Mojave Desert Air Basin
Bio-CO <sub>2</sub>	biologically generated carbon dioxide
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CalEEMod	California Emissions Estimator Model
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 <sub>4</sub>	methane
City	City of Lancaster
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
EO	Executive Order
EPA	United States Environmental Protection Agency
ft	foot/feet



GCC	global climate change
GHG	greenhouse gas
GWP	global warming potential
H <sub>2</sub> S	hydrogen sulfide
HFCs	hydrofluorocarbons
hr	hour
IPCC	Intergovernmental Panel on Climate Change
lbs/day	pounds per day
m	meter
MATES	<i>Multiple Air Toxics Exposure Study</i>
mg/m <sup>3</sup>	milligrams per cubic meter
MMT	million metric tons
MMT CO <sub>2</sub> e	million metric tons of carbon dioxide equivalent
mph	miles per hour
MT	metric tons
MT CO <sub>2</sub> e	metric tons of carbon dioxide equivalent
MT CO <sub>2</sub> e/yr	metric tons of carbon dioxide equivalent per year
MT/yr	metric tons per year
N <sub>2</sub> O	nitrous oxide
NAAQS	national ambient air quality standards
Nbio-CO <sub>2</sub>	non-biologically generated carbon dioxide
ND	no data available
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	nitrogen oxides
O <sub>3</sub>	ozone (or smog)
PFCs	perfluorocarbons
PM	particulate matter
PM <sub>2.5</sub>	particulate matter less than 2.5 microns in size
PM <sub>10</sub>	particulate matter less than 10 microns in size

ppb	parts per billion
ppm	parts per million
project	Avenue G Industrial 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
sf	square feet/foot
SF <sub>6</sub>	sulfur hexafluoride
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
SO <sub>x</sub>	sulfur oxides
SRA	Source Receptor Area
State	State of California
Tons/yr	tons per year
UNFCCC	United Nations Framework Convention on Climate Change
VDE	vehicle dust emissions
VOC	volatile organic compound
VMT	vehicle miles traveled

## INTRODUCTION

This air quality and greenhouse gas (GHG) impact analysis has been prepared to evaluate the potential air quality and climate change impacts associated with the proposed Avenue G Industrial Project (project) in the City of Lancaster (City), California. 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 rules and guidelines set forth by the Antelope Valley Air Quality Management District (AVAQMD).

## PROJECT LOCATION

The proposed project site is located adjacent to State Route 14 (SR 14) and West Avenue G, south of the SR 14 southbound on-ramp. The proposed project site is currently undeveloped. The project site zoning designation is Fox Field Industrial Corridor Specific Plan (Office Commercial), consistent with the anticipated use as an Hi-Cube Warehouse. Figure 1 shows the Project Location and Nearby Sensitive Receptors.

## PROJECT DESCRIPTION

The proposed project would develop a 1,260,630 square foot Hi-Cube warehouse, including 20,000 square feet of interior office space. Hi-Cube warehouses are considered parcel hub warehouses. The Hi-Cube warehouse would include 219 trailer loading docks, 732 standard automotive parking spaces, and 365 trailer parking spaces on an undeveloped 68.5-acre lot. The proposed project would begin construction in March 2023 and be completed in March of 2024, a duration of approximately 12 months. Construction would require the import of approximately 135,250 cubic yards of soil during site grading. The proposed project would be consistent with current applicable Title 24 standards. Figure 2 shows the proposed Site Plan.

## SENSITIVE RECEPTORS AND EXISTING LAND USES IN THE PROJECT AREA

Sensitive receptors include residences, schools, hospitals, and similar uses sensitive to air quality. The project site is surrounded by undeveloped land, SR 14, and the Antelope Valley Fair Grounds and Events Center. The closest sensitive receptors are identified as the single-family homes located approximately 3,865 feet southwest of the project site along 20th Street SW, across SR 14. The areas adjacent to the project site include the following uses:

- **North:** Avenue G and undeveloped land.
- **South:** Antelope Valley Fair and Events center.
- **Southeast:** SR 14 and single-family homes.
- **East:** SR 14, storm water holding pond, and undeveloped lots.
- **West:** 30th Street SW and undeveloped lots.



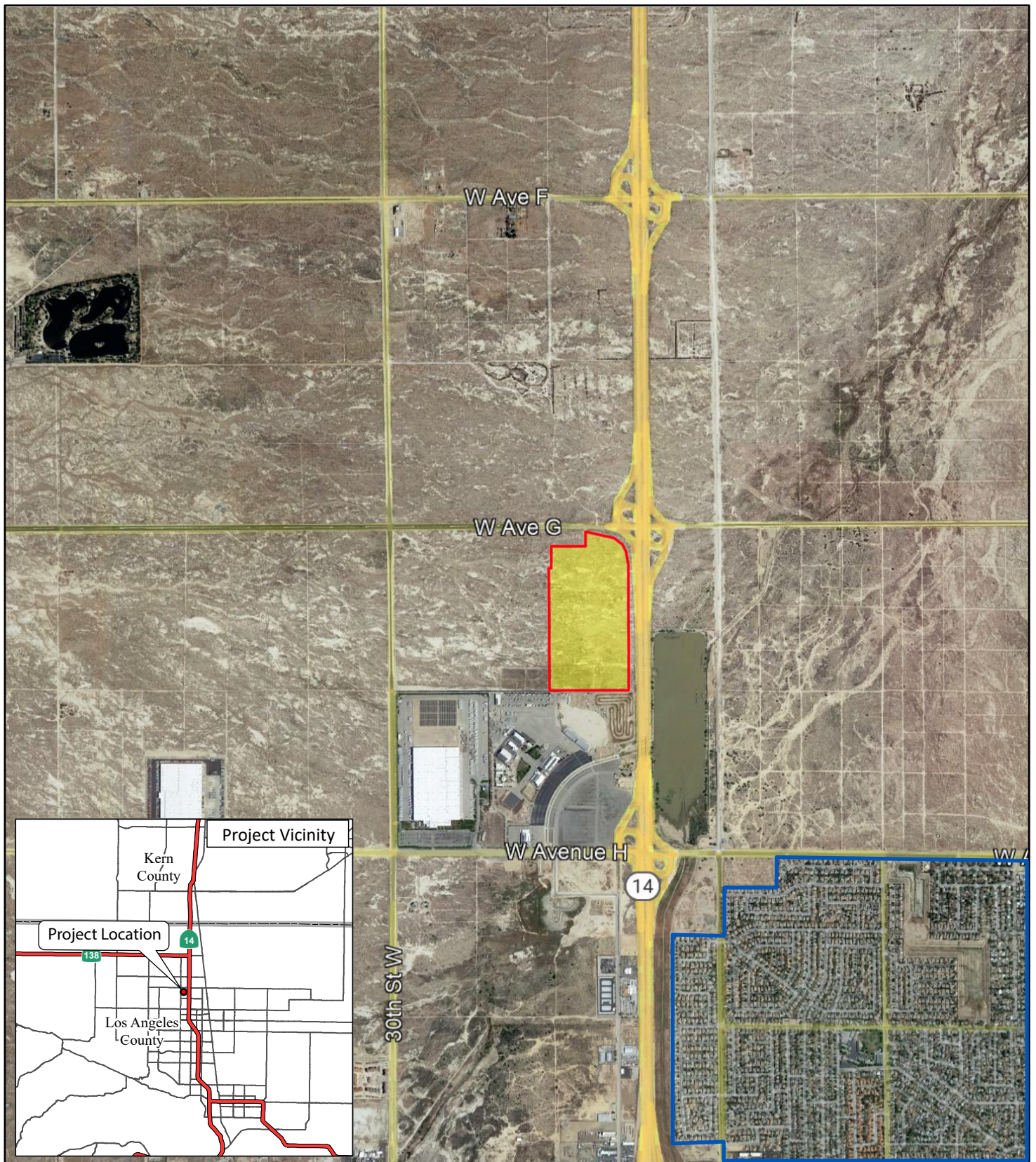


FIGURE 1

LSA

LEGEND

- Project Site
- Sensitive Receptors - Single Family Homes & Elementary Schools

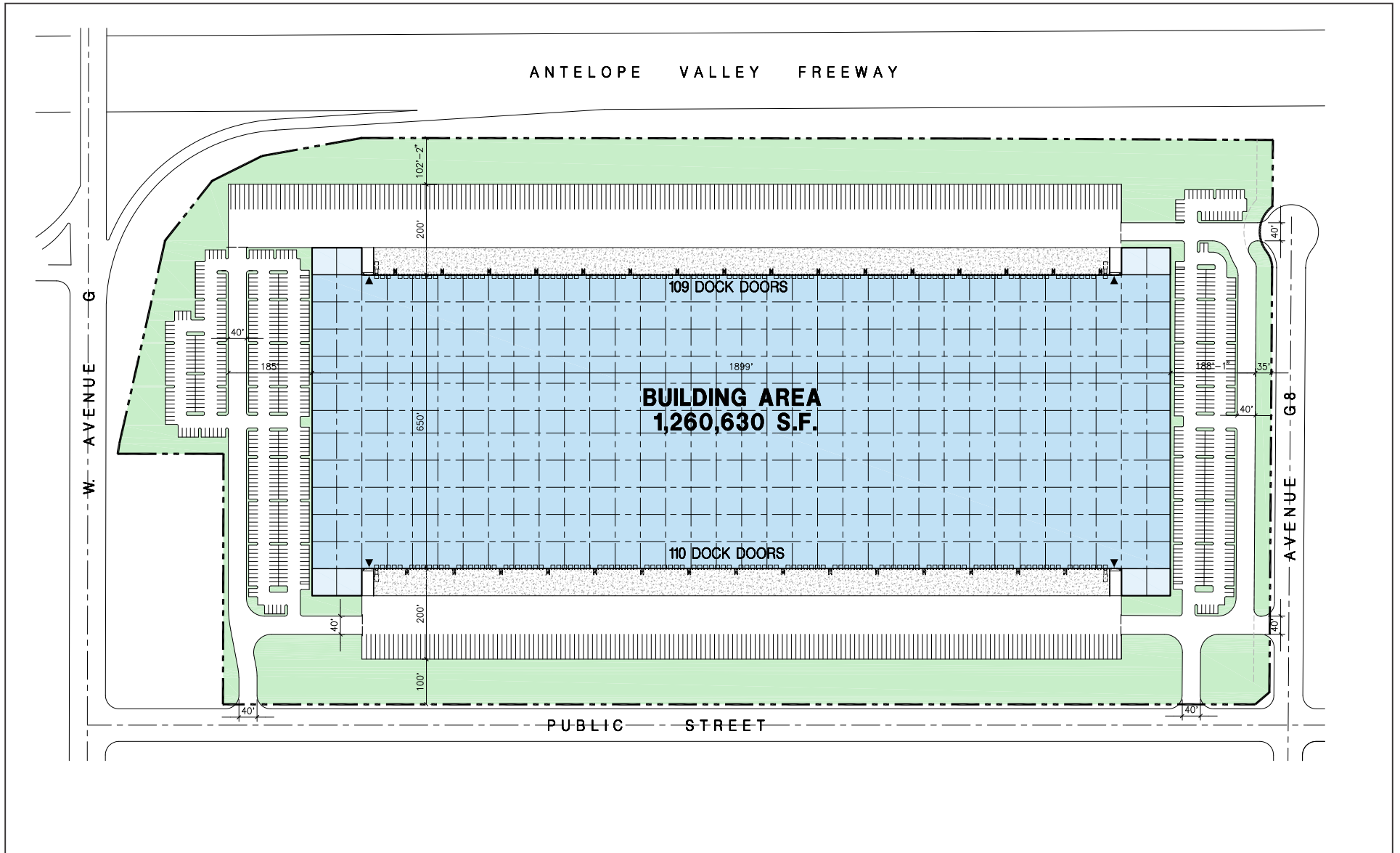


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SOURCE: ArcGIS Online Topographic Map (2020)

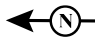
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Lancaster Avenue G Industrial Project  
Project Location and Sensitive Receptors



LSA

FIGURE 2



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SOURCE: HPA Architecture

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Lancaster Avenue G Industrial Project  
Site Plan



## PROJECT SETTING

### REGIONAL CLIMATE AND AIR QUALITY

The project site is in the high desert portion of Los Angeles County, California. This northern section of Los Angeles is part of the Mojave Desert Air Basin (Basin) and is under the jurisdiction of the AVAQMD. The Basin includes the parts of the mountainous and desert portions of Los Angeles County. Prevailing winds in the Basin are out of the west and southwest. These prevailing winds are due to the proximity of the Basin to coastal and central regions and the blocking nature of the Sierra Nevada mountains to the north; air masses pushed onshore in southern California by differential heating are channeled through the Basin.

The California Clean Air Act (CCAA) provides the AVAQMD 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. AVAQMD also regulates stationary sources of pollution throughout its jurisdictional area. The California Air Resources Board (CARB) regulates direct emissions from motor vehicles.

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. State AAQS are typically more stringent than federal AAQS. 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 2021a).

### Climate/Meteorology

Air quality in the project vicinity 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 arid and is characterized by hot summers, mild winters, infrequent seasonal rainfall, moderate daytime wind gusts, and low humidity. The air quality within the Basin is primarily influenced by a wide range of emissions sources such as dense population centers, desert sands, heavy vehicular traffic, heavy industry, and meteorology.

**Table A: Ambient Air Quality Standards**

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

Source: Ambient Air Quality Standards (CARB 2016).

Footnotes are provided on the following page.

- <sup>1</sup> California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, 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.
- <sup>2</sup> 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<sub>10</sub>, 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<sup>3</sup> is equal to or less than 1. For PM<sub>2.5</sub>, 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.
- <sup>3</sup> 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.
- <sup>4</sup> 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.
- <sup>5</sup> National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- <sup>6</sup> National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- <sup>7</sup> 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.
- <sup>8</sup> On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- <sup>9</sup> On December 14, 2012, the national annual PM<sub>2.5</sub> primary standard was lowered from 15 µg/m<sup>3</sup> to 12.0 µg/m<sup>3</sup>. The existing national 24-hour PM<sub>2.5</sub> standards (primary and secondary) were retained at 35 µg/m<sup>3</sup>, as was the annual secondary standard of 15 µg/m<sup>3</sup>. The existing 24-hour PM<sub>10</sub> standards (primary and secondary) of 150 µg/m<sup>3</sup> also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- <sup>10</sup> To attain the 1-hour standard, the 3-year average of the annual 98<sup>th</sup> 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.
- <sup>11</sup> On June 2, 2010, a new 1-hour SO<sub>2</sub> 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 99<sup>th</sup> percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO<sub>2</sub> 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.
- <sup>12</sup> 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.
- <sup>13</sup> 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<sup>3</sup> 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.
- <sup>14</sup> 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

µg/m<sup>3</sup> = micrograms per cubic meter

CARB = California Air Resources Board

EPA = United States Environmental Protection Agency

mg/m<sup>3</sup> = milligrams per cubic meter

ppb = parts per billion

ppm = parts per million



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

Pollutant	Health Effects	Examples of Sources
PM <sub>2.5</sub> and PM <sub>10</sub>	<ul style="list-style-type: none"> <li>Hospitalizations for worsened heart diseases</li> <li>Emergency room visits for asthma</li> <li>Premature death</li> </ul>	<ul style="list-style-type: none"> <li>Cars and trucks (especially diesels)</li> <li>Fireplaces and wood stoves</li> <li>Windblown dust from roadways, agriculture, and construction</li> </ul>
O <sub>3</sub>	<ul style="list-style-type: none"> <li>Cough, chest tightness</li> <li>Difficulty taking a deep breath</li> <li>Worsened asthma symptoms</li> <li>Lung inflammation</li> </ul>	<ul style="list-style-type: none"> <li>Precursor sources:<sup>1</sup> motor vehicles, industrial emissions, and consumer products</li> </ul>
CO	<ul style="list-style-type: none"> <li>Chest pain in heart patients<sup>2</sup></li> <li>Headaches, nausea<sup>2</sup></li> <li>Reduced mental alertness<sup>2</sup></li> <li>Death at very high levels<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>Any source that burns fuel, such as cars, trucks, construction and farming equipment, and residential heaters and stoves</li> </ul>
NO <sub>2</sub>	<ul style="list-style-type: none"> <li>Increased response to allergens</li> </ul>	<ul style="list-style-type: none"> <li>See CO sources</li> </ul>
TACs	<ul style="list-style-type: none"> <li>Cancer</li> <li>Chronic eye, lung, or skin irritation</li> <li>Neurological and reproductive disorders</li> </ul>	<ul style="list-style-type: none"> <li>Cars and trucks (especially diesels)</li> <li>Industrial sources such as chrome platers</li> <li>Neighborhood businesses such as dry cleaners and service stations</li> <li>Building materials and products</li> </ul>

Source: CARB. 2021a. Common Air Pollutants. Website: [www.arb.ca.gov/resources/common-air-pollutants](http://www.arb.ca.gov/resources/common-air-pollutants) (accessed June 2022).

<sup>1</sup> O<sub>3</sub> is not generated directly by these sources. Rather, chemicals emitted by these precursor sources react with sunlight to form O<sub>3</sub> in the atmosphere.

<sup>2</sup> Health effects from CO exposures occur at levels considerably higher than ambient conditions.

CARB = California Air Resources Board

PM<sub>2.5</sub> = particulate matter less than 2.5 microns in size

CO = carbon monoxide

PM<sub>10</sub> = particulate matter less than 10 microns in size

NO<sub>2</sub> = nitrogen dioxide

TACs = toxic air contaminants

O<sub>3</sub> = ozone

The annual average temperature varies greatly throughout the Basin, ranging from the average lows in the 50's to average highs in the 80's, measured in degrees Fahrenheit (°F). The nearest climatological station to the project site is the Lancaster Fox Field Monitoring Station (Western Regional Climate Center 2021). The monthly average maximum temperature recorded at this station ranged from 57.4°F in December to 96.5°F in July, with an annual average maximum of 75.9°F. The monthly average minimum temperature recorded at this station ranged from 29.1°F in December to 66.6°F in July, with an annual average minimum of 46.8°F. December 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 March. Summer rainfall is minimal and is generally limited to scattered thundershowers in heavier showers in the eastern portion of the Basin and mountains. The Lancaster Fox Field Monitoring Station precipitation shows that average monthly rainfall varied from 1.8 inches in January to 0.39 inch or less from April to October, with an annual total of 7.38 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<sub>x</sub>) 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<sub>x</sub> to form photochemical smog.

### Greenhouse Gases and Global Climate Change

Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. The Earth's average near-surface atmospheric temperature rose  $0.6 \pm 0.2^\circ$  Celsius ( $^\circ\text{C}$ ) or  $1.1 \pm 0.4^\circ$  Fahrenheit ( $^\circ\text{F}$ ) in the 20th century. The prevailing scientific opinion on climate change is that most of the warming observed over the last 50 years is attributable to human activities. The increased amounts of carbon dioxide (CO<sub>2</sub>) and other GHGs are the primary causes of the human-induced component of warming. GHGs are released by the burning of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect.

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

- Carbon dioxide (CO<sub>2</sub>)
- Methane (CH<sub>4</sub>)
- Nitrous oxide (N<sub>2</sub>O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF<sub>6</sub>)

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<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O), some gases (e.g., HFCs, PFCs, and SF<sub>6</sub>) 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<sub>2</sub>, 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<sub>2</sub> over a specified time period. For example, N<sub>2</sub>O is 265 times more potent at contributing to global warming than CO<sub>2</sub>. GHG emissions are typically measured in terms of metric tons<sup>1</sup> of “CO<sub>2</sub> equivalents” (MT CO<sub>2</sub>e). Table C identifies the GWP for each type of GHG analyzed in this report. The EPA uses GWP values from the IPCC Fourth Assessment Report (EPA 2021a). Additionally, CARB uses the same GWP from the Second Assessment Report and Fourth Assessment (CARB 2019). The IPCC has published the 2021 IPCC Sixth Assessment Report with updated GWP values.

**Table C: Global Warming Potential for Selected Greenhouse Gases**

Pollutant	Atmospheric Lifetime (Years)	Global Warming Potential (100-year) <sup>1</sup>
Carbon Dioxide (CO <sub>2</sub> )	~100 <sup>2</sup>	1 (by definition)
Methane (CH <sub>4</sub> )	12.4	29.8
Nitrous Oxide (N <sub>2</sub> O)	114–121	273

Sources: *California’s 2017 Climate Change Scoping Plan* (CARB 2017), EPA 2021a, AR4 (IPCC 2007), AR6 (IPCC 2021), and *Climate Change 2007: The Physical Science Basis* (IPCC 2007).

<sup>1</sup> The EPA and CARB use GWP values from AR4.

<sup>2</sup> CO<sub>2</sub> has a variable atmospheric lifetime and cannot be readily approximated as a single number.

AR4 = IPCC Fourth Assessment Report

EPA = United States Environmental Protection Agency

AR5 = IPCC Fifth Assessment Report

GWP = global warming potential

CARB = California Air Resources Board

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<sub>2</sub>. Natural sources of CO<sub>2</sub> 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<sub>2</sub> include the combustion of fossil fuels and wood, waste incineration, mineral production, and

<sup>1</sup> A metric ton is equivalent to approximately 1.1 tons.

deforestation. The Earth maintains a natural carbon balance, and when concentrations of CO<sub>2</sub> 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<sub>2</sub> 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<sub>2</sub>; consequently, the gas is building up in the atmosphere. The concentration of CO<sub>2</sub> in the atmosphere has risen from about 280 parts per million (ppm) prior to the Industrial Revolution to more than 400 ppm currently (NOAA 2016).

### *Methane*

CH<sub>4</sub> is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources of CH<sub>4</sub> include fires, geologic processes, and bacteria that produce CH<sub>4</sub> 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<sub>2</sub>, the major removal process of atmospheric CH<sub>4</sub>—a chemical breakdown in the atmosphere—cannot keep pace with source emissions, and CH<sub>4</sub> concentrations in the atmosphere are increasing.

### *Nitrous Oxide*

N<sub>2</sub>O 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<sub>2</sub>O is also a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion sources emit N<sub>2</sub>O. The quantity of N<sub>2</sub>O 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<sub>2</sub>O emissions in California.

### *Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride*

HFCs are primarily used as substitutes for O<sub>3</sub>-depleting substances regulated under the Montreal Protocol.<sup>1</sup> PFCs and SF<sub>6</sub> 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,

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<sup>1</sup> 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<sub>3</sub> depletion and that are also potent GHGs.

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 2019, the United States emitted approximately 6.6 billion MT CO<sub>2</sub>e. Total United States emissions increased by 1.8 percent from 1990 to 2019, down from a high of 15.6 percent above 1990 levels in 2007. Emissions decreased from 2018 to 2019 by 1.7 percent (113.1 million MT CO<sub>2</sub>e). Overall, net emissions decreased 1.7 percent from 2018 to 2019 and decreased 13.0 percent from 2005 levels. The decline reflects the combined impacts of many long-term trends, including population, economic growth, energy market trends, technological changes including energy efficiency, and carbon intensity of energy fuel choices. Between 2018 and 2019, the decrease in total greenhouse gas emissions was largely driven by the decrease in CO<sub>2</sub> emissions from fossil fuel combustion (EPA 2021b).

### *State of California Emissions*

According to CARB emission inventory estimates, the State emitted approximately 418 million MT of CO<sub>2</sub>e (MMT CO<sub>2</sub>e) emissions in 2019. This is a decrease of 1.7 MMT CO<sub>2</sub>e from 2018 and 13 MMT CO<sub>2</sub>e below the State's 2020 GHG target (CARB 2021b).

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 2021b).

### *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 3 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.

**Table D: Attainment Status of Criteria Pollutants in the Mojave Desert Air Basin**

Pollutant	State	Federal
O <sub>3</sub>	Nonattainment (1-hour) Nonattainment (8-hour)	Nonattainment (1-hour) Nonattainment (8-hour)
PM <sub>10</sub>	Nonattainment (24-hour) Nonattainment (Annual)	Unclassified/Attainment (24-hour) Nonattainment (Annual)
PM <sub>2.5</sub>	No Standard Nonattainment (Annual)	Unclassified/Attainment (24-Hour) Unclassified/Attainment (Annual)
CO	Attainment (1-hour) Attainment (8-hour)	Unclassified/Attainment (1-hour) Unclassified/Attainment (8-hour)
NO <sub>2</sub>	Attainment (1-hour) Attainment (Annual)	Unclassified/Attainment (1-hour) Unclassified/Attainment (Annual)
SO <sub>2</sub>	Attainment (1-hour) Attainment (24-hour)	Unclassified/Attainment (1-hour) Unclassified/Attainment (Annual)
Lead	Attainment <sup>1</sup> (30-day average)	Unclassified/Attainment
All Others	Attainment/Unclassified	N/A

Sources: National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for Mojave Desert Air Basin (AVAQMD 2017), and Nonattainment Areas for Criteria Pollutants (Green Book) (EPA Green Book).

Basin = Antelope Valley Air Basin

CO = carbon monoxide

N/A = not applicable

NO<sub>2</sub> = nitrogen dioxide

O<sub>3</sub> = ozone

PM<sub>2.5</sub> = particulate matter less than 2.5 microns in size

PM<sub>10</sub> = particulate matter less than 10 microns in size

SO<sub>2</sub> = sulfur dioxide

### Ozone

O<sub>3</sub> (smog) is formed by photochemical reactions between oxides of nitrogen and reactive organic gases (ROGs) rather than being directly emitted. O<sub>3</sub> is a pungent, colorless gas typical of Southern California smog. Elevated O<sub>3</sub> 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<sub>3</sub> levels peak during summer and early fall.

### 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<sub>2</sub>, 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<sub>x</sub>. NO<sub>x</sub> 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<sub>2</sub> decreases lung function and may reduce resistance to infection.

### *Sulfur Dioxide*

SO<sub>2</sub> is a colorless irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO<sub>2</sub> levels. SO<sub>2</sub> 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. Coarse particles (PM<sub>10</sub>) 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<sub>2.5</sub>) levels. Fine particles can also form in the atmosphere through chemical reactions. PM<sub>10</sub> can accumulate in the respiratory system and aggravate health problems (e.g., asthma). The EPA's scientific review concluded that PM<sub>2.5</sub> 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<sub>10</sub> 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<sub>2</sub> during the combustion process and subsequently is converted to sulfate compounds in the atmosphere. The conversion of SO<sub>2</sub> to



sulfates takes place comparatively rapidly and completely in urban areas of the State due to regional meteorological features.

#### *Hydrogen Sulfide*

H<sub>2</sub>S is a colorless gas with the odor of rotten eggs. H<sub>2</sub>S is formed during bacterial decomposition of sulfur-containing organic substances. In addition, H<sub>2</sub>S 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<sub>2</sub>S 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**

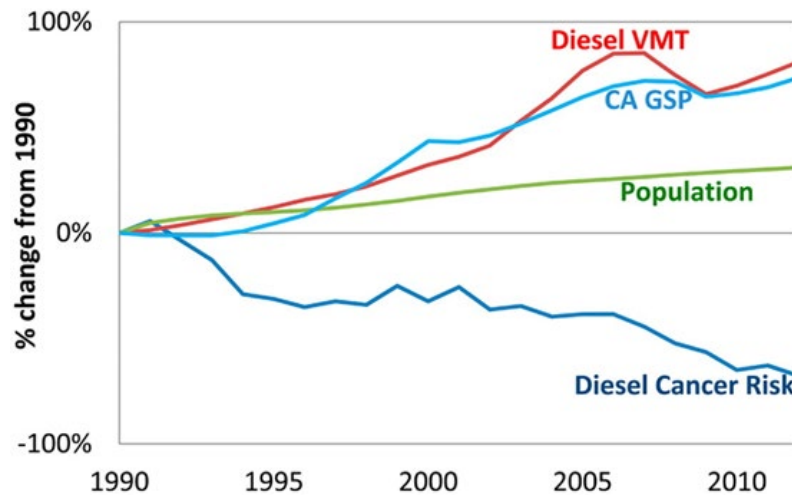
### **Criteria Pollutants**

As previously discussed, the project is under the jurisdiction of the AVAQMD, which is responsible for formulating and implementing the adopted a federal attainment plan for ozone pursuant to the CAA. This plan is designed to assist non-attainment areas into compliance with federal and State air quality standards. Air quality in the Basin has improved as a result of the development the AVAQMD's rules and control programs and the development and application of cleaner technology. O<sub>3</sub>, NO<sub>x</sub>, VOCs, and CO have been generally decreasing.

### **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 3. 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 3: California Population, Gross State Product, Diesel Cancer Risk, Diesel Vehicle Miles Traveled**

## LOCAL AIR QUALITY

The AVAQMD, 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 Lancaster Air Quality Monitoring Station at 43301 Division Street approximately 4.5 miles southwest of the project site. The air quality trends from this station are used to represent the ambient air quality in the project area. The ambient air quality data in Table E shows that NO<sub>2</sub> and CO levels are below the applicable State and federal standards. However, PM<sub>10</sub> and O<sub>3</sub> levels frequently exceed their respective standards and PM<sub>2.5</sub> levels occasionally exceed the federal 24-hour standards.

## REGULATORY SETTING

### 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<sub>2</sub> 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.

**Table E: Air Quality Concentrations in the Project Vicinity**

Pollutant	Standard	2018	2019	2020
<b>CO (Measured at the Lancaster Monitoring Station)<sup>1</sup></b>				
Maximum 1-hour concentration (ppm)		1.4	1.4	1.6
No. of days exceeded	State: 20 ppm	0	0	0
	Federal: 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		1.0	0.9	1.1
No. of days exceeded	State: 9 ppm	0	0	0
	Federal: 9 ppm	0	0	0
<b>O<sub>3</sub> (Measured at the Lancaster Monitoring Station)<sup>1</sup></b>				
Maximum 1-hour concentration (ppm)		0.125	0.096	0.099
No. of days exceeded	State: 0.09 ppm	5	1	4
Max 8-hr concentration (ppm)		0.104	0.081	0.083
No. of days exceeded	State: 0.07 ppm	49	14	8
	Federal: 0.07 ppm	48	13	8
<b>PM<sub>10</sub> (Measured at the Lancaster Monitoring Station)<sup>1</sup></b>				
Maximum 24-hour concentration (µg/m <sup>3</sup> )		89.3	165.1	192.3
No. of days exceeded	State: 50 µg/m <sup>3</sup>	ND	ND	ND
	Federal: 150 µg/m <sup>3</sup>	0	2	1
Annual avg. concentration (µg/m <sup>3</sup> )		25.2	22.5	30.6
Exceeds Standard?	State: 20 µg/m <sup>3</sup>	Yes	Yes	Yes
<b>PM<sub>2.5</sub> (Measured at the Lancaster Monitoring Station)<sup>1</sup></b>				
Maximum 24-hour concentration (µg/m <sup>3</sup> )		40.4	13.6	74.7
No. of days exceeded	Federal: 35 µg/m <sup>3</sup>	1	0	9
Annual avg. concentration (µg/m <sup>3</sup> )		7.2	6.1	9.2
Exceeds Standard?	State: 12 µg/m <sup>3</sup>	No	No	Yes
	Federal: 12 µg/m <sup>3</sup>	No	No	Yes
<b>NO<sub>2</sub> (Measured at the Lancaster Monitoring Station)<sup>1</sup></b>				
Maximum 1-hour concentration (ppb):		17.6	49.8	51.5
No. of days exceeded	State: 180 ppb	0	0	0
	Federal: 100 ppb	0	0	0
Annual avg. concentration (ppb):		8.0	8.0	8.0
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 2021c); and CARB's iADAM (CARB 2021c).

<sup>1</sup> The Antelope Valley Air Quality Monitoring Station is located at 43301 Division Street.

µg/m<sup>3</sup> = micrograms per cubic meter

CARB = California Air Resources Board

CO = carbon monoxide

EPA = United States Environmental Protection Agency

ND = No data available

NO<sub>2</sub> = nitrogen dioxide

O<sub>3</sub> = ozone

PM<sub>2.5</sub> = particulate matter smaller than 2.5 microns in size

PM<sub>10</sub> = particulate matter smaller than 10 microns in size

ppb = parts per billion

ppm = parts per million

On December 7, 2009, the EPA Administrator signed a final action under the CAA, finding that six GHGs (i.e., CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to GCC.

In 2012, EPA and the National Highway Traffic Safety Administration promulgated new rules to set GHG emission and fuel economy standards for new motor vehicles. The rules created requirements for model years 2017–2021 and 2022–2025, which would become more stringent each year, achieving greater GHG reductions over time. In 2018, the agencies issued a proposed rule, the Safer

Affordable Fuel-Efficient (SAFE) Vehicles Rule, to freeze the standards at 2020 levels through 2026, rather than tightening them each year. The final SAFE rule has not yet been published. However, the agencies have finalized a portion of the rule that revokes California's authority to set motor vehicle regulations that are more climate-protective than the federal requirements, including GHG emissions standards that 15 other states have adopted, and a zero-emission vehicle mandate embraced by 12 other states (United States Department of Transportation 2020).

### 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 six criteria pollutants designated by the CAA as well as four others: visibility-reducing particulates, H<sub>2</sub>S, 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 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<sub>2</sub>e 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), energy efficiency and water conservation policies, and waste diversion efforts.

#### *Senate Bill 97 and 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 *CEQA Guidelines* amendments were adopted on December 30, 2009, and became effective on March 18, 2010.

The *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 *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 *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 *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 2019 CALGreen Code was updated in 2019, became effective on January 1, 2020, and applies to non-residential and residential developments. The CALGreen Code 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.

### **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).

### *Antelope Valley Air Quality Management District*

The AVAQMD is the agency principally responsible for comprehensive air pollution control in the project area. The AVAQMD is a regional agency, working directly with SCAG, county transportation commissions and local governments, and cooperates actively with State and federal government agencies. The AVAQMD 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.

In 2016, the AVAQMD released the CEQA and Federal Conformity Guidelines intended to assist in preparing environmental analysis or reviewing documents for any project within the jurisdiction, by providing background information and guidance on the preferred analysis approach. The AVAQMD has established rules under Regulation IV – Prohibitions, designed as Standard Conditions to apply to existing and proposed projects in the District. The established rules include fugitive dust controls, nuisance, and visible emission criteria which were incorporated into the analysis.

The AVAPCD has dedicated resources to reviewing projects to ensure that they will not; cause or contribute to any new violation of any air quality standard; increase the frequency or severity of any existing violation of any air quality standard; or delay timely attainment of any air quality standard of any federal attainment plan. The AVAQMD has adopted a federal attainment plan for ozone pursuant to the Federal Clean Air Act.

## Local Regulations

### *City of Lancaster General Plan 2030*

Local jurisdictions have the authority and responsibility to reduce air pollution through their policies, codes, and land use planning. The City assesses air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts, and ensures implementation of such mitigation. The City's Municipal Codes contain provisions relevant to maintaining the quality of air for the area. There is a prohibition against disturbing surface or subsurface soils, such that the dust would contribute to dust emissions.

The City of Lancaster's General Plan 2030 includes a goal of protecting the valley's clean air, unique natural environment, and pristine mountain views. To protect air quality in Lancaster, the General Plan presents an Air Quality Program. The Air Quality program focuses to minimize vehicular travel through efficient land uses, implement energy conservation programs, reduce air pollution emissions to protect sensitive receptors, reduce fugitive dust from construction activities, and to increase public awareness of air quality issues. In addition to the above, the City's General Plan has the following objectives and policies related to air quality:

**Objective 3.3:** Preserve acceptable air quality by striving to attain and maintain national, state, and local air quality standards.

- **Policy 3.3.1:** Minimize the amount of vehicular miles traveled.
- **Policy 3.3.2:** Facilitate the development and use of public transportation and travel modes such as bicycle riding and walking.
- **Policy 3.3.3:** Minimize air pollutant emissions generated by new and existing development.
- **Policy 3.3.4:** Protect sensitive uses such as homes, schools and medical facilities, from the impacts of air pollution. Lancaster Energy Center Air Quality and Greenhouse Gases Draft EIR.
- **Policy 3.3.5:** Cooperate with the AVAQMD and other agencies to protect air quality in the Antelope Valley.

## THRESHOLDS OF SIGNIFICANCE

Certain air districts (e.g., AVAQMD) have created guidelines and requirements to conduct air quality and GHG analyses. The AVAQMD's CEQA and Federal Conformity Guidelines were followed in this assessment of air quality and GHG impacts for the proposed project (AVAQMD 2016).

### AIR QUALITY

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:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the region is in non-attainment under an applicable federal or State ambient air quality standard,
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as leading to odors) adversely affecting a substantial number of people.

### Pollutants with Regional Effects

The AVAQMD has established daily and annual emission thresholds for construction and operation of proposed projects located within the Basin. The emission thresholds were established based on the attainment status of the Basin with regards to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety, these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks (AVAQMD 2016). A project would be considered significant if it exceeds the established daily or annual criteria pollutant thresholds during construction or operation. Table F shows the AVAQMD's GHG and Criteria Pollutant Thresholds of Significance.

**Table F: AVAPCD Thresholds of Significance**

Criteria Pollutant	Annual Thresholds (tons)	Daily Thresholds (lbs)
Carbon Monoxide (CO)	100	548
Nitrous Oxides (NOx)	25	137
Volatile Organic Compound (VOC)	25	137
Sulfur Oxides (SOx)	25	137
Particulate Matter 10 microns in Diameter (PM <sub>10</sub> )	15	82
Particulate Matter 2.5 microns in Diameter (PM <sub>2.5</sub> )	12	54

Source: Antelope Valley Air Quality Management District (2016).  
lbs = pounds



Projects in the Basin with construction- or operation-related emissions that exceed any of their respective emission thresholds would be considered significant under AVAQMD guidelines. These thresholds, apply as both project level and cumulative level thresholds for projects throughout the Basin.

### 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 well 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

### GREENHOUSE GAS EMISSIONS

*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; and
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs

The AVAQMD’s CEQA and Federal Conformity Guidelines (2016) identifies both annual and daily construction significance thresholds for GHG emissions. The proposed project is compared to the AVAQMD’s annual emission threshold of 100,000 tons CO<sub>2</sub>e per year, as well as the AVAQMD’s daily emission threshold of 548,000 pounds of CO<sub>2</sub>e.



## IMPACT ANALYSIS

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 most recent version of 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, trip generation 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.

The construction analysis includes estimates of the construction equipment to be used during each phase of construction, 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). Project construction would begin in March 2023 and would be completed in March 2024, a duration of approximately 12 months. Table G shows the tentative schedule based on the anticipated construction schedule provided by the applicant. Table H lists the estimated construction equipment that would be used during project construction as estimated by CalEEMod default values.

**Table G: Project Construction Schedule**

Phase Name	Phase Start Date	Phase End Date	Number of Days/Week	Number of Days
Site Preparation	3/1/2023	3/21/2023	5	15
Grading	3/22/2023	6/13/2023	5	60
Building Construction	6/14/2023	10/31/2023	5	100
Paving	11/1/2023	12/26/2023	5	40
Architectural Coating	12/27/2023	3/5/2024	5	50

Source: Compiled by LSA Associates, Inc., using project specific construction schedule. (June 2022).

Note: Model is assuming a 2024 opening year.

CalEEMod = California emissions estimator model

**Table H: 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	0.40
	Tractors/Loaders/Backhoes	4	8	97	0.37
Grading	Excavators	2	8	158	0.38
	Graders	1	8	187	0.41
	Scrapers	2	8	367	0.48
	Rubber Tired Dozers	1	8	247	0.40
	Tractors/Loaders/Backhoes	2	8	97	0.37
Building Construction	Cranes	1	7	231	0.29
	Forklifts	3	8	89	0.20
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/Backhoes	2	8	97	0.37
	Welders	1	8	46	0.45
Paving	Pavers	2	8	130	0.42
	Paving Equipment	2	8	132	0.36
	Rollers	2	8	80	0.38
Architectural Coating	Air Compressors	1	6	78	0.48

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

As previously discussed in the Project Description, the project would develop a 1,260,630 square foot Hi-Cube warehouse with 20,000 square feet of office space included. The Hi-Cube warehouse would include 219 trailer loading docks, 732 standard automotive parking spaces, and 365 trailer parking spaces on a vacant 68.5-acre lot. Construction would require the import of approximately 135,250 cubic yards of soil during the site grading phase.

Daily construction emissions are shown in Table I. They are also the combination of the on- and off-site emissions and the greater of summer and winter emissions. The emissions rates shown in Table I are from the CalEEMod output tables listed as "Mitigated Construction," though the only measures that have been applied to the analysis are the required construction emissions control measures, or standard conditions. Table J shows the same annual construction emissions in tons per year to evaluate against AVAQMD annual thresholds.

As shown in Table I and Table J, construction of the project would not exceed VOC, NO<sub>x</sub>, CO, sulfur oxides (SO<sub>x</sub>), PM<sub>2.5</sub>, or PM<sub>10</sub> emissions. Therefore, construction of the proposed project would not result in emissions that would result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under an applicable federal or State ambient air quality standard. Standard measures are documented in the CalEEMod outputs included as Appendix A.

**Table I: Daily Short-Term Regional Construction Emissions**

Construction Phase	Total Regional Pollutant Emissions (lbs/day)							
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	Fugitive PM <sub>10</sub>	Exhaust PM <sub>10</sub>	Fugitive PM <sub>2.5</sub>	Exhaust PM <sub>2.5</sub>
Site Preparation	1.3	33.8	23.6	<0.1	9.0	0.9	4.6	0.9
Grading	2.5	86.8	47.0	0.2	9.4	1.6	3.1	1.6
Building Construction	6.0	44.9	69.3	0.2	17.2	1.0	4.6	1.0
Paving	1.6	20.1	17.8	<0.1	0.2	0.7	<0.1	0.7
Architectural Coating	44.3	2.9	10.7	<0.1	2.8	0.1	0.7	0.1
<b>Peak Daily Emissions</b>	<b>44.3</b>	<b>86.8</b>	<b>69.3</b>	<b>0.2</b>	<b>18.2</b>		<b>5.7</b>	
<b>AVAQMD Thresholds</b>	<b>137</b>	<b>137</b>	<b>548</b>	<b>137</b>	<b>82</b>		<b>65</b>	
<b>Exceeds Thresholds?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>		<b>No</b>	

Source: Compiled by LSA Associates, Inc. (June 2022).

Note: Some values may not appear to add up correctly due to rounding.

AVAQMD = Antelope Valley Air Quality Management District

CO = carbon monoxide

lbs/day = pounds per day

NO<sub>x</sub> = nitrogen oxides

PM<sub>2.5</sub> = particulate matter less than 2.5 microns in size

PM<sub>10</sub> = particulate matter less than 10 microns in size

SO<sub>x</sub> = sulfur oxides

VOC = volatile organic compounds

**Table J: Annual Regional Construction Emissions**

Construction Phase	Total Regional Pollutant Emissions (tons/yr)							
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	Fugitive PM <sub>10</sub>	Exhaust PM <sub>10</sub>	Fugitive PM <sub>2.5</sub>	Exhaust PM <sub>2.5</sub>
2023	0.5	5.5	5.3	<0.1	1.3		0.5	
2024	1.0	0.1	0.2	<0.1	0.1		<0.1	
<b>Peak Annual Emissions</b>	<b>1.0</b>	<b>5.5</b>	<b>5.3</b>	<b>&lt;0.1</b>	<b>1.3</b>		<b>0.5</b>	
<b>AVAQMD Thresholds</b>	<b>25</b>	<b>25</b>	<b>100</b>	<b>25</b>	<b>15</b>		<b>12</b>	
<b>Exceeds Thresholds?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>		<b>No</b>	

Source: Compiled by LSA Associates, Inc. (June 2022).

Note: Some values may not appear to add up correctly due to rounding.

AVAQMD = Antelope Valley Air Quality Management District

CO = carbon monoxide

NO<sub>x</sub> = nitrogen oxides

PM<sub>2.5</sub> = particulate matter less than 2.5 microns in size

PM<sub>10</sub> = particulate matter less than 10 microns in size

SO<sub>x</sub> = sulfur oxides

tons/year = tons per year

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 AVAQMD Rule 403 regarding the emission of fugitive dust. Table I and 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<sub>10</sub> emissions from earth moving and construction activities:

- Apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20 percent opacity
- Construct and maintain wind barriers sufficient to limit visible dust emissions (VDE) to 20 percent opacity. If utilizing wind barriers; or
- Restrict vehicle speed to 15 miles per hour or less
- Pave or apply and maintain gravel to limit VDE.

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<sub>3</sub> 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 44.3 pounds (lbs) per day of VOCs. The proposed project would be consistent with the AVAQMD's Rule 1113 for use of low VOC architectural coatings. Therefore, VOC emissions from architectural coating application would not exceed the AVAQMD's daily VOC threshold of 137 lbs.

## OPERATIONAL AIR QUALITY IMPACTS

### Operational Emissions

Long-term air pollutant emission impacts are those associated with area- and mobile-source 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.

CalEEMod was used to calculate the estimated operational emissions for the Hi-Cube warehouse and associated land uses. Project specific trip generation prepared for the project (Linscott, Law & Greenspan Engineers 2022) was used in the analysis. According to the project trip generation assessment, the project would generate 5,837 trips per day. Other assumptions in the model were based on defaults, where project specific information was not provided. Table K shows the calculated long-term operational emissions in pounds per day associated with the implementation of the proposed project. Table L shows the calculated long-term operational emissions in tons per year associated with the implementation of the proposed project.

Based on the results presented in Table K and Table L, the proposed project operational emissions would not exceed the AVAQMD's daily criteria pollutant emissions thresholds nor exceed the annual emissions thresholds. Therefore, operation of the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under an applicable federal or State ambient air quality standard. No mitigation is required.

**Table K: Opening Year Daily Operational Emissions**

Emission Category	Pollutant Emissions (lbs/day)					
	VOCs	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area Source	28.9	<0.1	0.2	<0.1	<0.1	<0.1
Energy Source	<0.1	0.3	0.2	<0.1	<0.1	<0.1
Mobile Source	19.3	23.5	210.0	0.5	52.0	14.1
<b>Total Daily Emissions</b>	<b>48.3</b>	<b>23.8</b>	<b>210.4</b>	<b>0.5</b>	<b>52.0</b>	<b>14.1</b>
<b>AVAQMD Daily Threshold</b>	<b>137</b>	<b>137</b>	<b>548</b>	<b>137</b>	<b>82</b>	<b>65</b>
<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Compiled by LSA Associates, Inc. (June 2022).

Note: Some values may not appear to add up correctly due to rounding.

AVAQMD = Antelope Valley Air Quality Management District

CO = carbon monoxide

lbs/day = pounds per day

NO<sub>x</sub> = nitrogen oxides

PM<sub>2.5</sub> = particulate matter less than 2.5 microns in size

PM<sub>10</sub> = particulate matter less than 10 microns in size

SO<sub>x</sub> = sulfur oxides

VOC = volatile organic compound

**Table L: Opening Year Annual Operational Emissions**

Emission Category	Pollutant Emissions (tons/yr)					
	VOCs	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area Source	5.3	<0.1	<0.1	0.0	<0.1	<0.1
Energy Source	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mobile Source	3.4	4.3	37.1	<0.1	9.3	2.5
<b>Total Annual Emissions</b>	<b>8.6</b>	<b>4.4</b>	<b>37.2</b>	<b>&lt;0.1</b>	<b>9.3</b>	<b>3.0</b>
<b>AVAQMD Annual Threshold</b>	<b>25</b>	<b>25</b>	<b>100</b>	<b>25</b>	<b>15</b>	<b>12</b>
<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Compiled by LSA Associates, Inc. (June 2022).

Note: Some values may not appear to add up correctly due to rounding.

AVAQMD = Antelope Valley Air Quality Management District

CO = carbon monoxide

NO<sub>x</sub> = nitrogen oxides

PM<sub>2.5</sub> = particulate matter less than 2.5 microns in size

PM<sub>10</sub> = particulate matter less than 10 microns in size

SO<sub>x</sub> = sulfur oxides

tons/yr = tons per year

VOC = volatile organic compound

## Sensitive Receptor Analysis

Sensitive receptors include residences, schools, hospitals, medical facilities, and similar uses that are sensitive to adverse air quality. The AVAQMD has established criteria for project types proposed for sites within the specified distance to an existing or planned (zoned) sensitive receptor land use must be evaluated using significance threshold criteria. The project is consistent with the City's Land Use designation, zoned Fox Field Industrial Corridor Specific Plan, consistent with the City's Zoning Map (City of Lancaster 2015). Newly proposed projects in the District are evaluated to determine whether sensitive receptors would be exposed to significant levels of pollutant concentrations. The District has established the following screening criteria for evaluating project related impacts on sensitive receptors:

- Any industrial project within 1,000 feet;
- A distribution center (40 or more trucks per day) within 1000 feet;
- A major transportation project (50,000 or more vehicles per day) within 1,000 feet;

- A dry cleaner using perchloroethylene within 500 feet; or
- A gasoline dispensing facility within 300 feet.

The closest sensitive receptors are identified as the single-family homes approximately 3,865 feet southwest (SW) of the proposed project site, along 20th Street SW across SR 14. Given the large distance between the project site and the sensitive receptors, any project emissions would significantly disperse prior to reaching nearby sensitive receptors. Additionally, the sensitive receptors are well beyond the screening distance of 1,000 feet established by the AVAQMD. Therefore, implementing the proposed project would not adversely affect nearby sensitive receptors.

### *Objectionable Odors*

The AVAQMD has not established a rule or standard regarding odor emissions, rather, the district has an adopted nuisance rule. Objectable odors can result from vehicle emissions, stationary sources, and are subject to varying lengths of time and emission source. Rule 402 states that: “

“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.”

During construction, heavy-duty equipment would be used during various construction phases that would generate objectionable emissions. Construction would be temporary over a period of 12 months, which would cease once the project is completed. During project operation, the project would be consistent with applicable AVAQMD rules on nuisance. As such, the project would not emit objectionable odors. Therefore, the proposed project would not generate objectionable odors during construction or once operational, that would be a nuisance or result in adverse health risks to nearby sensitive receptors.

### **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 Lancaster Air Monitoring Station on Division Street showed the highest recorded 1-hour concentration of 1.6 parts per million (ppm) and the highest 8-hour concentration of 1.1 ppm from 2018 to 2020. The State standard is 20 ppm and 9 ppm, respectively.

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 to result in the 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.

## GREENHOUSE GAS EMISSIONS

This section evaluates GHG emissions 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 emission of GHGs.

### Construction Greenhouse Gas Emissions

Construction activities associated with the proposed project would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O. Furthermore, CH<sub>4</sub> is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

Construction emissions were calculated using the same methodology as described for the criteria pollutants using CalEEMod, Version 2020.4.0. Table M shows the estimated GHG emissions associated with the proposed project's complete construction period.

**Table M: Construction Greenhouse Gas Emissions**

Construction Phase	Total Emissions per Phase (Tons)			Total Emissions per Phase in Tons of CO <sub>2</sub> e
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	
Site Preparation 2023	26.3	<0.1	<0.1	26.5
Grading 2023	651.0	<0.1	<0.1	675.8
Building Construction 2023	1,099.2	<0.1	<0.1	1,123.6
Paving 2023	42.7	<0.1	<0.1	43.0
Architectural Coating 2023	3.7	<0.1	<0.1	3.7
Architectural Coating 2024	56.2	<0.1	<0.1	56.6
<b>Total Construction Emissions</b>				<b>1,929.2</b>

Source: Compiled by LSA Associates, Inc. (June 2022).

CH<sub>4</sub> = methane

CO<sub>2</sub> = carbon dioxide

CO<sub>2</sub>e = carbon dioxide equivalent

N<sub>2</sub>O = nitrous oxide

Table M shows the potential overall construction GHG emissions generated would be 1,929.2 for the entire construction period, which would be below the AVAPCD's annual 100,000 tons of CO<sub>2</sub>e per year threshold. Therefore, implementation of the proposed project would not have a significant GHG emission during construction.

### Operational Greenhouse Gas Emissions

Long-term operational GHG emissions are typically associated with mobile, area, and stationary sources as well as indirect emissions from sources associated with energy consumption, waste sources, and water sources. Mobile source emissions would be associated with new vehicle traffic generated by the project. Area source emissions would be associated with activities such as landscaping and maintenance on the project site, and other sources. Energy source emissions would be generated at off-site utility providers as a result of increased electricity demand generated by the project. Waste source emissions generated by the proposed project include energy generated by land filling and other methods of disposal related to transporting and managing project generated waste. Water source emissions associated with the proposed project are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment.

Operational GHG emissions 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. GHG emission estimates presented in Table N are based on the estimated opening year.

**Table N: Long-Term Operational Greenhouse Gas Emissions**

Source	Pollutant Emissions (tons/year)					
	Bio-CO <sub>2</sub>	NBio-CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
<b>Operational Emissions</b>						
Area	0.0	<0.1	<0.1	<0.1	0.0	<0.1
Energy	0.0	941.4	941.4	<0.1	<0.1	946.3
Mobile	0.0	8,087.7	8,087.7	0.5	0.3	8,201.3
Waste	240.5	0.0	240.5	14.2	0.0	595.9
Water	92.5	673.2	765.7	9.6	0.2	1,073.5
<b>Total Operational Project Emissions</b>						<b>10,881.3</b>
<b>AVAQMD's CO<sub>2</sub>e Threshold (tons/year)</b>						<b>100,000</b>
<b>Would the Project Exceed the Threshold?</b>						<b>No</b>

Source: Compiled by LSA Associates, Inc. (June 2022).

Note: Some values may not appear to add up correctly due to rounding.

AVAQMD = Antelope Valley Air Quality Management District

Bio-CO<sub>2</sub> = biologically generated CO<sub>2</sub>

CH<sub>4</sub> = methane

CO<sub>2</sub> = carbon dioxide

CO<sub>2</sub>e = carbon dioxide equivalent

N<sub>2</sub>O = nitrous oxide

NBio-CO<sub>2</sub> = non-biologically generated CO<sub>2</sub>

tons/year = tons per year

As shown in Table N, operation of the proposed project would generate 10,881.3 tons of CO<sub>2</sub>e annually. This is less than AVAQMD's annual operational threshold of 100,000 tons CO<sub>2</sub>e per year. Implementation of the proposed project would not generate significant levels of GHG emissions once operational. Therefore, impacts related to the generation of GHG emissions would be less than significant.



## CONSISTENCY WITH GREENHOUSE GAS REDUCTION PLANS

The City does not have any formally adopted GHG reduction plan. As such, this report identifies strategies to reduce California's emissions to the levels proposed in EO S-3-05 and AB 32. CARB released a second update to the Scoping Plan, the Draft 2017 Scoping Plan, to reflect the target of 40 percent below 1990 levels by 2030, as set by EO B-30-15 and codified by SB 32. The project is consistent with the AVAQMD's Federal 8-Hour Ozone Attainment Plan. The proposed project was also analyzed for consistency with the CARB Scoping Plan measures, including the goals of AB 32, the AB 32 Scoping Plan, Executive Order B-30-15, SB 32, and AB 197.

AB 32 aimed at reducing GHG emissions to 1990 levels by 2020. AB 32 required CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The AB 32 Scoping Plan has a range of GHG reduction actions, which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 implementation fee to fund the program. The adopted Scoping Plan includes proposed GHG reductions from direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as cap-and-trade systems (CARB 2017).

EO B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. CARB released a second update to the Scoping Plan to reflect the 2030 target set by EO B-30-15 and codified by SB 32. 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 EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 intended to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

Energy efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. As previously identified, the proposed project would comply with the latest Title 24 standards of the California Code of Regulations, regarding energy conservation and green building standards. Therefore, the proposed project would comply with applicable energy measures.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, the project would be required to comply with the latest Title 24 standards of the California Code of Regulations, which includes a variety of different measures, including reduction of wastewater and water use. In addition, the proposed project would be required to comply with the California Model Water Efficient Landscape

Ordinance basins. Therefore, the proposed project would not conflict with any of the water conservation and efficiency measures.

The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. Specific regional emission targets for transportation emissions would not directly apply to the proposed project. However, vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all vehicles by 2020. Vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. Therefore, the proposed project would not conflict with the identified transportation and motor vehicle measures.

The proposed project would comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in AB 32, the AB 32 Scoping Plan, Executive Order B-30-15, SB 32, and AB 197 and would be consistent with applicable State plans and programs designed to reduce GHG emissions. Therefore, the proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

## STANDARD CONDITIONS

### Construction

The project is required to comply with regional rules that assist in reducing short-term air pollutant emissions. As previously discussed, the AVAQMD has established rules under Regulation IV that prohibit certain actions from potentially generating harmful or adverse air quality impacts to the region or on nearby sensitive receptors.

The project would be consistent with Rule 402 (Nuisance) requiring “that no person shall discharge from any source whatsoever such quantities of air contaminants or other material cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public.” (AVAQMD 1976).

The project would be consistent with Rule 403, which 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. 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<sub>10</sub> component). Compliance with these rules would reduce impacts on nearby sensitive receptors.

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.

The project would be consistent with Rule 1113 (Low VOC Architectural Coatings) which limits the VOC content of architectural coatings applied in the District (AVAQMD 2013).

## 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 AVAQMD thresholds based on project information and provided analysis. Therefore, the operational project would result in a less than significant impact. No mitigation is required.

## CUMULATIVE IMPACTS

The project would contribute criteria pollutants to the area during temporary 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 AVAQMD’s standard construction measures. The proposed project’s short-term construction emissions would not exceed the daily or annual AVAQMD 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 AVAQMD’s criteria pollutant thresholds nor exceed GHG significance thresholds. Therefore, the project would not result in a significant operational impact related to long-term air quality or GHG emissions.

## CONCLUSION

Based on the analysis presented above, construction of the proposed project would not result in the generation of criteria air pollutants that would exceed AVAQMD thresholds of significance. Implementation of AVAQMD Rule 403 would further reduce construction dust impacts. As discussed above, the proposed project's construction emissions of criteria pollutants are estimated to be well below the emissions threshold established for the region. Operational emissions associated with the proposed project would also not exceed AVAQMD'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. GHG emissions released during construction and operation would not be cumulatively considerable. Lastly, the project would not conflict with the goals and objectives of the AVAQMD or any other State or regional plan, policy or regulation of an agency adopted for the purpose of reducing GHG emissions. Therefore, the proposed project would have a less than significant impact. No mitigation is required.

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## **APPENDIX A**

### **CALEEMOD PRINTOUTS**

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Avenue G Industrial Project  
South Coast AQMD Air District, Annual****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	1,260.63	1000sqft	28.94	1,260,630.00	0
Other Non-Asphalt Surfaces	29.69	Acre	29.69	1,293,296.40	0
Parking Lot	1,097.00	Space	9.87	438,800.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	9			<b>Operational Year</b>	2024
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	390.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - EMFAC Off-Model Adjustment Factors - SAFE Vehicle Rule applied.

Land Use - 1,260,630 sf Warehouse building (20,000 sf office use and 1,240,630 sf warehouse), 1,097 parking spaces (732 standard auto and 365 trail parking stalls), and landscaping on 68.5 acres.

Construction Phase - Construction schedule shorted to 12 months period.

Off-road Equipment -

Trips and VMT -

On-road Fugitive Dust -

Grading - Importing 135,250 CY of soil during site grading.

Architectural Coating - Low VOC architectural coatings consistent with SCAQMD Rule 1113. Reduced interior non-residential surface area since warehouse open space for distribution center.

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Vehicle Trips - Based on a trip generation of 5,837 ADT

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Road Dust -

Consumer Products - Defaults.

Area Coating - Defaults.

Energy Use - Defaults.

Water And Wastewater - Defaults.

Solid Waste - Defaults.

Construction Off-road Equipment Mitigation - Construction equipment rated with 50 or more horsepower would utilize, at minium, Tier 2 engines. Water exposed soil areas at least twice daily.

Mobile Land Use Mitigation - Improved pedestrian network.

Water Mitigation -

Fleet Mix -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,890,945.00	200,000.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	75.00	50.00
tblConstructionPhase	NumDays	1,110.00	100.00
tblConstructionPhase	NumDays	110.00	60.00
tblConstructionPhase	NumDays	75.00	40.00
tblConstructionPhase	NumDays	40.00	15.00
tblGrading	MaterialImported	0.00	135,250.00
tblVehicleTrips	ST_TR	1.74	4.63
tblVehicleTrips	SU_TR	1.74	4.63
tblVehicleTrips	WD_TR	1.74	4.63

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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	0.5417	4.3294	4.8317	0.0193	1.4365	0.1145	1.5510	0.4584	0.1066	0.5650	0.0000	1,822.768 5	1,822.768 5	0.1572	0.1541	1,872.621 2
2024	1.0390	0.0413	0.2226	6.1000e-004	0.0647	1.7900e-003	0.0665	0.0172	1.7600e-003	0.0190	0.0000	56.1769	56.1769	1.5200e-003	1.2100e-003	56.5762
Maximum	1.0390	4.3294	4.8317	0.0193	1.4365	0.1145	1.5510	0.4584	0.1066	0.5650	0.0000	1,822.768 5	1,822.768 5	0.1572	0.1541	1,872.621 2

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.4662	5.5226	5.2720	0.0193	1.1994	0.1204	1.3197	0.3558	0.1195	0.4753	0.0000	1,822.768 1	1,822.768 1	0.1572	0.1541	1,872.620 8
2024	1.0375	0.0679	0.2232	6.1000e-004	0.0647	2.5900e-003	0.0673	0.0172	2.5600e-003	0.0198	0.0000	56.1769	56.1769	1.5200e-003	1.2100e-003	56.5761
Maximum	1.0375	5.5226	5.2720	0.0193	1.1994	0.1204	1.3197	0.3558	0.1195	0.4753	0.0000	1,822.768 1	1,822.768 1	0.1572	0.1541	1,872.620 8

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	4.88	-27.91	-8.72	0.00	15.80	-5.74	14.25	21.57	-12.69	15.22	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	2.0710	2.4923
2	6-1-2023	8-31-2023	1.4943	1.8064
3	9-1-2023	11-30-2023	1.0369	1.3285
4	12-1-2023	2-29-2024	1.1797	1.2955
5	3-1-2024	5-31-2024	0.0822	0.0841
		Highest	2.0710	2.4923

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.2785	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0593	0.0593	1.5000e-004	0.0000	0.0631
Energy	5.8500e-003	0.0531	0.0446	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	941.3527	941.3527	0.0757	0.0101	946.2543
Mobile	3.3997	4.4076	37.7333	0.0877	9.4170	0.0635	9.4805	2.5131	0.0590	2.5722	0.0000	8,249.8445	8,249.8445	0.4941	0.3463	8,365.3827
Waste						0.0000	0.0000		0.0000	0.0000	240.5423	0.0000	240.5423	14.2156	0.0000	595.9333
Water						0.0000	0.0000		0.0000	0.0000	92.4861	673.1843	765.6704	9.5560	0.2312	1,073.4638
Total	8.6840	4.4611	37.8083	0.0880	9.4170	0.0676	9.4846	2.5131	0.0632	2.5763	333.0283	9,864.4408	10,197.4691	24.3416	0.5875	10,981.0973

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

## EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

## 2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.2785	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0593	0.0593	1.5000e-004	0.0000	0.0631
Energy	5.8500e-003	0.0531	0.0446	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	941.3527	941.3527	0.0757	0.0101	946.2543
Mobile	3.3591	4.3335	37.0881	0.0860	9.2287	0.0623	9.2909	2.4629	0.0579	2.5208	0.0000	8,087.7152	8,087.7152	0.4865	0.3405	8,201.3305
Waste						0.0000	0.0000		0.0000	0.0000	240.5423	0.0000	240.5423	14.2156	0.0000	595.9333
Water						0.0000	0.0000		0.0000	0.0000	92.4861	673.1843	765.6704	9.5560	0.2312	1,073.4638
<b>Total</b>	<b>8.6434</b>	<b>4.3869</b>	<b>37.1632</b>	<b>0.0863</b>	<b>9.2287</b>	<b>0.0664</b>	<b>9.2951</b>	<b>2.4629</b>	<b>0.0621</b>	<b>2.5249</b>	<b>333.0283</b>	<b>9,702.3115</b>	<b>10,035.3398</b>	<b>24.3340</b>	<b>0.5817</b>	<b>10,817.0451</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.47</b>	<b>1.66</b>	<b>1.71</b>	<b>1.97</b>	<b>2.00</b>	<b>1.76</b>	<b>2.00</b>	<b>2.00</b>	<b>1.74</b>	<b>1.99</b>	<b>0.00</b>	<b>1.64</b>	<b>1.59</b>	<b>0.03</b>	<b>0.99</b>	<b>1.49</b>

## 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	3/21/2023	5	15	
2	Grading	Grading	3/22/2023	6/13/2023	5	60	
3	Building Construction	Building Construction	6/14/2023	10/31/2023	5	100	



## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

4	Paving	Paving	11/1/2023	12/26/2023	5	40
5	Architectural Coating	Architectural Coating	12/27/2023	3/5/2024	5	50

**Acres of Grading (Site Preparation Phase): 22.5****Acres of Grading (Grading Phase): 180****Acres of Paving: 39.56****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 200,000; Non-Residential Outdoor: 630,315; Striped Parking Area: 103,926 (Architectural Coating – sqft)****OffRoad Equipment**

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

**Trips and VMT**

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

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	16,906.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,257.00	491.00	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	251.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

**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					0.1474	0.0000	0.1474	0.0758	0.0000	0.0758	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0200	0.2064	0.1368	2.9000e-004		9.5000e-003	9.5000e-003		8.7400e-003	8.7400e-003	0.0000	25.0880	25.0880	8.1100e-003	0.0000	25.2909
<b>Total</b>	<b>0.0200</b>	<b>0.2064</b>	<b>0.1368</b>	<b>2.9000e-004</b>	<b>0.1474</b>	<b>9.5000e-003</b>	<b>0.1569</b>	<b>0.0758</b>	<b>8.7400e-003</b>	<b>0.0845</b>	<b>0.0000</b>	<b>25.0880</b>	<b>25.0880</b>	<b>8.1100e-003</b>	<b>0.0000</b>	<b>25.2909</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.2 Site Preparation - 2023****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-004	3.2000e-004	4.4200e-003	1.0000e-005	1.4800e-003	1.0000e-005	1.4900e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.1736	1.1736	3.0000e-005	3.0000e-005	1.1833
<b>Total</b>	<b>4.2000e-004</b>	<b>3.2000e-004</b>	<b>4.4200e-003</b>	<b>1.0000e-005</b>	<b>1.4800e-003</b>	<b>1.0000e-005</b>	<b>1.4900e-003</b>	<b>3.9000e-004</b>	<b>1.0000e-005</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>1.1736</b>	<b>1.1736</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>1.1833</b>

**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					0.0663	0.0000	0.0663	0.0341	0.0000	0.0341	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0700e-003	0.2529	0.1722	2.9000e-004		7.1000e-003	7.1000e-003		7.1000e-003	7.1000e-003	0.0000	25.0880	25.0880	8.1100e-003	0.0000	25.2908
<b>Total</b>	<b>9.0700e-003</b>	<b>0.2529</b>	<b>0.1722</b>	<b>2.9000e-004</b>	<b>0.0663</b>	<b>7.1000e-003</b>	<b>0.0734</b>	<b>0.0341</b>	<b>7.1000e-003</b>	<b>0.0412</b>	<b>0.0000</b>	<b>25.0880</b>	<b>25.0880</b>	<b>8.1100e-003</b>	<b>0.0000</b>	<b>25.2908</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.2 Site Preparation - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-004	3.2000e-004	4.4200e-003	1.0000e-005	1.4800e-003	1.0000e-005	1.4900e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.1736	1.1736	3.0000e-005	3.0000e-005	1.1833
<b>Total</b>	<b>4.2000e-004</b>	<b>3.2000e-004</b>	<b>4.4200e-003</b>	<b>1.0000e-005</b>	<b>1.4800e-003</b>	<b>1.0000e-005</b>	<b>1.4900e-003</b>	<b>3.9000e-004</b>	<b>1.0000e-005</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>1.1736</b>	<b>1.1736</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>1.1833</b>

**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					0.2838	0.0000	0.2838	0.1108	0.0000	0.1108	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0997	1.0355	0.8415	1.8600e-003		0.0427	0.0427		0.0393	0.0393	0.0000	163.6056	163.6056	0.0529	0.0000	164.9285
<b>Total</b>	<b>0.0997</b>	<b>1.0355</b>	<b>0.8415</b>	<b>1.8600e-003</b>	<b>0.2838</b>	<b>0.0427</b>	<b>0.3265</b>	<b>0.1108</b>	<b>0.0393</b>	<b>0.1501</b>	<b>0.0000</b>	<b>163.6056</b>	<b>163.6056</b>	<b>0.0529</b>	<b>0.0000</b>	<b>164.9285</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.3 Grading - 2023****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0177	1.0731	0.2880	4.8300e-003	0.1455	7.7200e-003	0.1532	0.0400	7.3900e-003	0.0473	0.0000	482.1586	482.1586	0.0268	0.0766	505.6555
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8700e-003	1.4400e-003	0.0196	6.0000e-005	6.5800e-003	4.0000e-005	6.6200e-003	1.7500e-003	3.0000e-005	1.7800e-003	0.0000	5.2161	5.2161	1.3000e-004	1.3000e-004	5.2589
<b>Total</b>	<b>0.0196</b>	<b>1.0746</b>	<b>0.3077</b>	<b>4.8900e-003</b>	<b>0.1521</b>	<b>7.7600e-003</b>	<b>0.1598</b>	<b>0.0417</b>	<b>7.4200e-003</b>	<b>0.0491</b>	<b>0.0000</b>	<b>487.3747</b>	<b>487.3747</b>	<b>0.0269</b>	<b>0.0767</b>	<b>510.9144</b>

**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					0.1277	0.0000	0.1277	0.0499	0.0000	0.0499	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0543	1.5372	1.1017	1.8600e-003		0.0400	0.0400		0.0400	0.0400	0.0000	163.6054	163.6054	0.0529	0.0000	164.9283
<b>Total</b>	<b>0.0543</b>	<b>1.5372</b>	<b>1.1017</b>	<b>1.8600e-003</b>	<b>0.1277</b>	<b>0.0400</b>	<b>0.1677</b>	<b>0.0499</b>	<b>0.0400</b>	<b>0.0899</b>	<b>0.0000</b>	<b>163.6054</b>	<b>163.6054</b>	<b>0.0529</b>	<b>0.0000</b>	<b>164.9283</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.3 Grading - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0177	1.0731	0.2880	4.8300e-003	0.1455	7.7200e-003	0.1532	0.0400	7.3900e-003	0.0473	0.0000	482.1586	482.1586	0.0268	0.0766	505.6555
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8700e-003	1.4400e-003	0.0196	6.0000e-005	6.5800e-003	4.0000e-005	6.6200e-003	1.7500e-003	3.0000e-005	1.7800e-003	0.0000	5.2161	5.2161	1.3000e-004	1.3000e-004	5.2589
<b>Total</b>	<b>0.0196</b>	<b>1.0746</b>	<b>0.3077</b>	<b>4.8900e-003</b>	<b>0.1521</b>	<b>7.7600e-003</b>	<b>0.1598</b>	<b>0.0417</b>	<b>7.4200e-003</b>	<b>0.0491</b>	<b>0.0000</b>	<b>487.3747</b>	<b>487.3747</b>	<b>0.0269</b>	<b>0.0767</b>	<b>510.9144</b>

**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	0.0786	0.7192	0.8122	1.3500e-003		0.0350	0.0350		0.0329	0.0329	0.0000	115.9024	115.9024	0.0276	0.0000	116.5917
<b>Total</b>	<b>0.0786</b>	<b>0.7192</b>	<b>0.8122</b>	<b>1.3500e-003</b>		<b>0.0350</b>	<b>0.0350</b>		<b>0.0329</b>	<b>0.0329</b>	<b>0.0000</b>	<b>115.9024</b>	<b>115.9024</b>	<b>0.0276</b>	<b>0.0000</b>	<b>116.5917</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.4 Building Construction - 2023****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0265	0.9353	0.3561	4.4700e-003	0.1548	5.2000e-003	0.1600	0.0447	4.9700e-003	0.0497	0.0000	436.9203	436.9203	0.0147	0.0633	456.1517
Worker	0.1960	0.1507	2.0564	5.8800e-003	0.6896	3.9600e-003	0.6935	0.1831	3.6400e-003	0.1868	0.0000	546.3860	546.3860	0.0139	0.0139	550.8703
<b>Total</b>	<b>0.2225</b>	<b>1.0860</b>	<b>2.4125</b>	<b>0.0104</b>	<b>0.8444</b>	<b>9.1600e-003</b>	<b>0.8535</b>	<b>0.2278</b>	<b>8.6100e-003</b>	<b>0.2364</b>	<b>0.0000</b>	<b>983.3064</b>	<b>983.3064</b>	<b>0.0285</b>	<b>0.0772</b>	<b>1,007.0220</b>

**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	0.0615	1.1642	0.9027	1.3500e-003		0.0428	0.0428		0.0428	0.0428	0.0000	115.9022	115.9022	0.0276	0.0000	116.5915
<b>Total</b>	<b>0.0615</b>	<b>1.1642</b>	<b>0.9027</b>	<b>1.3500e-003</b>		<b>0.0428</b>	<b>0.0428</b>		<b>0.0428</b>	<b>0.0428</b>	<b>0.0000</b>	<b>115.9022</b>	<b>115.9022</b>	<b>0.0276</b>	<b>0.0000</b>	<b>116.5915</b>



## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.4 Building Construction - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0265	0.9353	0.3561	4.4700e-003	0.1548	5.2000e-003	0.1600	0.0447	4.9700e-003	0.0497	0.0000	436.9203	436.9203	0.0147	0.0633	456.1517
Worker	0.1960	0.1507	2.0564	5.8800e-003	0.6896	3.9600e-003	0.6935	0.1831	3.6400e-003	0.1868	0.0000	546.3860	546.3860	0.0139	0.0139	550.8703
<b>Total</b>	<b>0.2225</b>	<b>1.0860</b>	<b>2.4125</b>	<b>0.0104</b>	<b>0.8444</b>	<b>9.1600e-003</b>	<b>0.8535</b>	<b>0.2278</b>	<b>8.6100e-003</b>	<b>0.2364</b>	<b>0.0000</b>	<b>983.3064</b>	<b>983.3064</b>	<b>0.0285</b>	<b>0.0772</b>	<b>1,007.0220</b>

**3.5 Paving - 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	0.0207	0.2038	0.2917	4.6000e-004		0.0102	0.0102		9.3900e-003	9.3900e-003	0.0000	40.0537	40.0537	0.0130	0.0000	40.3776
Paving	0.0129					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0336</b>	<b>0.2038</b>	<b>0.2917</b>	<b>4.6000e-004</b>		<b>0.0102</b>	<b>0.0102</b>		<b>9.3900e-003</b>	<b>9.3900e-003</b>	<b>0.0000</b>	<b>40.0537</b>	<b>40.0537</b>	<b>0.0130</b>	<b>0.0000</b>	<b>40.3776</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

## EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

## 3.5 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	9.4000e-004	7.2000e-004	9.8200e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	8.9000e-004	0.0000	2.6081	2.6081	7.0000e-005	7.0000e-005	2.6295
<b>Total</b>	<b>9.4000e-004</b>	<b>7.2000e-004</b>	<b>9.8200e-003</b>	<b>3.0000e-005</b>	<b>3.2900e-003</b>	<b>2.0000e-005</b>	<b>3.3100e-003</b>	<b>8.7000e-004</b>	<b>2.0000e-005</b>	<b>8.9000e-004</b>	<b>0.0000</b>	<b>2.6081</b>	<b>2.6081</b>	<b>7.0000e-005</b>	<b>7.0000e-005</b>	<b>2.6295</b>

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	0.0186	0.4023	0.3459	4.6000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	40.0537	40.0537	0.0130	0.0000	40.3775
Paving	0.0129					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0316</b>	<b>0.4023</b>	<b>0.3459</b>	<b>4.6000e-004</b>		<b>0.0133</b>	<b>0.0133</b>		<b>0.0133</b>	<b>0.0133</b>	<b>0.0000</b>	<b>40.0537</b>	<b>40.0537</b>	<b>0.0130</b>	<b>0.0000</b>	<b>40.3775</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.5 Paving - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	9.4000e-004	7.2000e-004	9.8200e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	8.9000e-004	0.0000	2.6081	2.6081	7.0000e-005	7.0000e-005	2.6295
<b>Total</b>	<b>9.4000e-004</b>	<b>7.2000e-004</b>	<b>9.8200e-003</b>	<b>3.0000e-005</b>	<b>3.2900e-003</b>	<b>2.0000e-005</b>	<b>3.3100e-003</b>	<b>8.7000e-004</b>	<b>2.0000e-005</b>	<b>8.9000e-004</b>	<b>0.0000</b>	<b>2.6081</b>	<b>2.6081</b>	<b>7.0000e-005</b>	<b>7.0000e-005</b>	<b>2.6295</b>

**3.6 Architectural Coating - 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					
Archit. Coating	0.0650					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-004	1.9500e-003	2.7200e-003	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.3830	0.3830	2.0000e-005	0.0000	0.3836
<b>Total</b>	<b>0.0652</b>	<b>1.9500e-003</b>	<b>2.7200e-003</b>	<b>0.0000</b>		<b>1.1000e-004</b>	<b>1.1000e-004</b>		<b>1.1000e-004</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.3830</b>	<b>0.3830</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.3836</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

## EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

## 3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1700e-003	9.0000e-004	0.0123	4.0000e-005	4.1300e-003	2.0000e-005	4.1500e-003	1.1000e-003	2.0000e-005	1.1200e-003	0.0000	3.2731	3.2731	8.0000e-005	8.0000e-005	3.3000
<b>Total</b>	<b>1.1700e-003</b>	<b>9.0000e-004</b>	<b>0.0123</b>	<b>4.0000e-005</b>	<b>4.1300e-003</b>	<b>2.0000e-005</b>	<b>4.1500e-003</b>	<b>1.1000e-003</b>	<b>2.0000e-005</b>	<b>1.1200e-003</b>	<b>0.0000</b>	<b>3.2731</b>	<b>3.2731</b>	<b>8.0000e-005</b>	<b>8.0000e-005</b>	<b>3.3000</b>

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	0.0650					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7000e-004	3.5300e-003	2.7500e-003	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.3830	0.3830	2.0000e-005	0.0000	0.3836
<b>Total</b>	<b>0.0651</b>	<b>3.5300e-003</b>	<b>2.7500e-003</b>	<b>0.0000</b>		<b>1.4000e-004</b>	<b>1.4000e-004</b>		<b>1.4000e-004</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.3830</b>	<b>0.3830</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.3836</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

## EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

## 3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1700e-003	9.0000e-004	0.0123	4.0000e-005	4.1300e-003	2.0000e-005	4.1500e-003	1.1000e-003	2.0000e-005	1.1200e-003	0.0000	3.2731	3.2731	8.0000e-005	8.0000e-005	3.3000
<b>Total</b>	<b>1.1700e-003</b>	<b>9.0000e-004</b>	<b>0.0123</b>	<b>4.0000e-005</b>	<b>4.1300e-003</b>	<b>2.0000e-005</b>	<b>4.1500e-003</b>	<b>1.1000e-003</b>	<b>2.0000e-005</b>	<b>1.1200e-003</b>	<b>0.0000</b>	<b>3.2731</b>	<b>3.2731</b>	<b>8.0000e-005</b>	<b>8.0000e-005</b>	<b>3.3000</b>

## 3.6 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	1.0176					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2500e-003	0.0286	0.0425	7.0000e-005		1.4300e-003	1.4300e-003		1.4300e-003	1.4300e-003	0.0000	6.0002	6.0002	3.4000e-004	0.0000	6.0086
<b>Total</b>	<b>1.0219</b>	<b>0.0286</b>	<b>0.0425</b>	<b>7.0000e-005</b>		<b>1.4300e-003</b>	<b>1.4300e-003</b>		<b>1.4300e-003</b>	<b>1.4300e-003</b>	<b>0.0000</b>	<b>6.0002</b>	<b>6.0002</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>6.0086</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 Architectural Coating - 2024****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0172	0.0126	0.1801	5.4000e-004	0.0647	3.6000e-004	0.0651	0.0172	3.3000e-004	0.0175	0.0000	50.1767	50.1767	1.1800e-003	1.2100e-003	50.5676
<b>Total</b>	<b>0.0172</b>	<b>0.0126</b>	<b>0.1801</b>	<b>5.4000e-004</b>	<b>0.0647</b>	<b>3.6000e-004</b>	<b>0.0651</b>	<b>0.0172</b>	<b>3.3000e-004</b>	<b>0.0175</b>	<b>0.0000</b>	<b>50.1767</b>	<b>50.1767</b>	<b>1.1800e-003</b>	<b>1.2100e-003</b>	<b>50.5676</b>

**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	1.0176					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6800e-003	0.0553	0.0431	7.0000e-005		2.2300e-003	2.2300e-003		2.2300e-003	2.2300e-003	0.0000	6.0001	6.0001	3.4000e-004	0.0000	6.0086
<b>Total</b>	<b>1.0203</b>	<b>0.0553</b>	<b>0.0431</b>	<b>7.0000e-005</b>		<b>2.2300e-003</b>	<b>2.2300e-003</b>		<b>2.2300e-003</b>	<b>2.2300e-003</b>	<b>0.0000</b>	<b>6.0001</b>	<b>6.0001</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>6.0086</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 Architectural Coating - 2024****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0172	0.0126	0.1801	5.4000e-004	0.0647	3.6000e-004	0.0651	0.0172	3.3000e-004	0.0175	0.0000	50.1767	50.1767	1.1800e-003	1.2100e-003	50.5676
<b>Total</b>	<b>0.0172</b>	<b>0.0126</b>	<b>0.1801</b>	<b>5.4000e-004</b>	<b>0.0647</b>	<b>3.6000e-004</b>	<b>0.0651</b>	<b>0.0172</b>	<b>3.3000e-004</b>	<b>0.0175</b>	<b>0.0000</b>	<b>50.1767</b>	<b>50.1767</b>	<b>1.1800e-003</b>	<b>1.2100e-003</b>	<b>50.5676</b>

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

Improve Pedestrian Network



## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.3591	4.3335	37.0881	0.0860	9.2287	0.0623	9.2909	2.4629	0.0579	2.5208	0.0000	8,087.715 2	8,087.715 2	0.4865	0.3405	8,201.330 5
Unmitigated	3.3997	4.4076	37.7333	0.0877	9.4170	0.0635	9.4805	2.5131	0.0590	2.5722	0.0000	8,249.844 5	8,249.844 5	0.4941	0.3463	8,365.382 7

**4.2 Trip Summary Information**

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	5,836.72	5,836.72	5,836.72	25,014,516	24,514,226
Total	5,836.72	5,836.72	5,836.72	25,014,516	24,514,226

**4.3 Trip Type Information**

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	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
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.542450	0.061470	0.185138	0.129299	0.023799	0.006448	0.011958	0.009209	0.000810	0.000503	0.024446	0.000751	0.003721
Parking Lot	0.542450	0.061470	0.185138	0.129299	0.023799	0.006448	0.011958	0.009209	0.000810	0.000503	0.024446	0.000751	0.003721

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

## EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unrefrigerated Warehouse-No Rail	0.542450	0.061470	0.185138	0.129299	0.023799	0.006448	0.011958	0.009209	0.000810	0.000503	0.024446	0.000751	0.003721
----------------------------------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

## 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	883.4988	883.4988	0.0746	9.0400e-003	888.0566
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	883.4988	883.4988	0.0746	9.0400e-003	888.0566
NaturalGas Mitigated	5.8500e-003	0.0531	0.0446	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	57.8539	57.8539	1.1100e-003	1.0600e-003	58.1977
NaturalGas Unmitigated	5.8500e-003	0.0531	0.0446	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	57.8539	57.8539	1.1100e-003	1.0600e-003	58.1977

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
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
Unrefrigerated Warehouse-No Rail	1.08414e+006	5.8500e-003	0.0531	0.0446	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	57.8539	57.8539	1.1100e-003	1.0600e-003	58.1977
<b>Total</b>		<b>5.8500e-003</b>	<b>0.0531</b>	<b>0.0446</b>	<b>3.2000e-004</b>		<b>4.0400e-003</b>	<b>4.0400e-003</b>		<b>4.0400e-003</b>	<b>4.0400e-003</b>	<b>0.0000</b>	<b>57.8539</b>	<b>57.8539</b>	<b>1.1100e-003</b>	<b>1.0600e-003</b>	<b>58.1977</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
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
Unrefrigerated Warehouse-No Rail	1.08414e+006	5.8500e-003	0.0531	0.0446	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	57.8539	57.8539	1.1100e-003	1.0600e-003	58.1977
<b>Total</b>		<b>5.8500e-003</b>	<b>0.0531</b>	<b>0.0446</b>	<b>3.2000e-004</b>		<b>4.0400e-003</b>	<b>4.0400e-003</b>		<b>4.0400e-003</b>	<b>4.0400e-003</b>	<b>0.0000</b>	<b>57.8539</b>	<b>57.8539</b>	<b>1.1100e-003</b>	<b>1.0600e-003</b>	<b>58.1977</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	153580	27.2367	2.3000e-003	2.8000e-004	27.3772
Unrefrigerated Warehouse-No Rail	4.82821e+006	856.2621	0.0723	8.7600e-003	860.6794
<b>Total</b>		<b>883.4988</b>	<b>0.0746</b>	<b>9.0400e-003</b>	<b>888.0566</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****5.3 Energy by Land Use - Electricity****Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	153580	27.2367	2.3000e-003	2.8000e-004	27.3772
Unrefrigerated Warehouse-No Rail	4.82821e+006	856.2621	0.0723	8.7600e-003	860.6794
<b>Total</b>		<b>883.4988</b>	<b>0.0746</b>	<b>9.0400e-003</b>	<b>888.0566</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.2785	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0593	0.0593	1.5000e-004	0.0000	0.0631
Unmitigated	5.2785	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0593	0.0593	1.5000e-004	0.0000	0.0631

**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	0.6084					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.6673					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.8100e-003	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0593	0.0593	1.5000e-004	0.0000	0.0631
<b>Total</b>	<b>5.2785</b>	<b>2.8000e-004</b>	<b>0.0304</b>	<b>0.0000</b>		<b>1.1000e-004</b>	<b>1.1000e-004</b>		<b>1.1000e-004</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.0593</b>	<b>0.0593</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>0.0631</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.6084					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.6673					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.8100e-003	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0593	0.0593	1.5000e-004	0.0000	0.0631
<b>Total</b>	<b>5.2785</b>	<b>2.8000e-004</b>	<b>0.0304</b>	<b>0.0000</b>		<b>1.1000e-004</b>	<b>1.1000e-004</b>		<b>1.1000e-004</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.0593</b>	<b>0.0593</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>0.0631</b>

**7.0 Water Detail****7.1 Mitigation Measures Water**



## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	765.6704	9.5560	0.2312	1,073.4638
Unmitigated	765.6704	9.5560	0.2312	1,073.4638

**7.2 Water by Land Use****Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	291.521 / 0	765.6704	9.5560	0.2312	1,073.4638
<b>Total</b>		<b>765.6704</b>	<b>9.5560</b>	<b>0.2312</b>	<b>1,073.4638</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	291.521 / 0	765.6704	9.5560	0.2312	1,073.4638
<b>Total</b>		<b>765.6704</b>	<b>9.5560</b>	<b>0.2312</b>	<b>1,073.4638</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	240.5423	14.2156	0.0000	595.9333
Unmitigated	240.5423	14.2156	0.0000	595.9333

**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1184.99	240.5423	14.2156	0.0000	595.9333
<b>Total</b>		<b>240.5423</b>	<b>14.2156</b>	<b>0.0000</b>	<b>595.9333</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****8.2 Waste by Land Use****Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1184.99	240.5423	14.2156	0.0000	595.9333
<b>Total</b>		<b>240.5423</b>	<b>14.2156</b>	<b>0.0000</b>	<b>595.9333</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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Avenue G Industrial Project - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## **11.0 Vegetation**

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## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**Avenue G Industrial Project**  
**South Coast AQMD Air District, Summer**

**1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	1,260.63	1000sqft	28.94	1,260,630.00	0
Other Non-Asphalt Surfaces	29.69	Acre	29.69	1,293,296.40	0
Parking Lot	1,097.00	Space	9.87	438,800.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	9			<b>Operational Year</b>	2024
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	390.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - EMFAC Off-Model Adjustment Factors - SAFE Vehicle Rule applied.

Land Use - 1,260,630 sf Warehouse building (20,000 sf office use and 1,240,630 sf warehouse), 1,097 parking spaces (732 standard auto and 365 trail parking stalls), and landscaping on 68.5 acres.

Construction Phase - Construction schedule shorted to 12 months period.

Off-road Equipment -

Trips and VMT -

On-road Fugitive Dust -

Grading - Importing 135,250 CY of soil during site grading.

Architectural Coating - Low VOC architectural coatings consistent with SCAQMD Rule 1113. Reduced interior non-residential surface area since warehouse open space for distribution center.

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Vehicle Trips - Based on a trip generation of 5,837 ADT

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Road Dust -

Consumer Products - Defaults.

Area Coating - Defaults.

Energy Use - Defaults.

Water And Wastewater - Defaults.

Solid Waste - Defaults.

Construction Off-road Equipment Mitigation - Construction equipment rated with 50 or more horsepower would utilize, at minium, Tier 2 engines. Water exposed soil areas at least twice daily.

Mobile Land Use Mitigation - Improved pedestrian network.

Water Mitigation -

Fleet Mix -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,890,945.00	200,000.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	75.00	50.00
tblConstructionPhase	NumDays	1,110.00	100.00
tblConstructionPhase	NumDays	110.00	60.00
tblConstructionPhase	NumDays	75.00	40.00
tblConstructionPhase	NumDays	40.00	15.00
tblGrading	MaterialImported	0.00	135,250.00
tblVehicleTrips	ST_TR	1.74	4.63
tblVehicleTrips	SU_TR	1.74	4.63
tblVehicleTrips	WD_TR	1.74	4.63



## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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	44.2955	68.4993	67.4738	0.2394	19.8582	1.6829	21.1254	10.1558	1.5577	11.3216	0.0000	24,775.45 76	24,775.45 76	2.9335	2.8178	25,306.18 43
2024	44.2315	1.6998	10.0460	0.0268	2.8056	0.0761	2.8817	0.7441	0.0749	0.8189	0.0000	2,742.365 8	2,742.365 8	0.0704	0.0528	2,759.865 3
Maximum	44.2955	68.4993	67.4738	0.2394	19.8582	1.6829	21.1254	10.1558	1.5577	11.3216	0.0000	24,775.45 76	24,775.45 76	2.9335	2.8178	25,306.18 43

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	44.2178	85.2223	69.2847	0.2394	17.1943	1.5917	18.2336	4.6314	1.5805	5.6600	0.0000	24,775.45 76	24,775.45 76	2.9335	2.8178	25,306.18 43
2024	44.1647	2.8334	10.0683	0.0268	2.8056	0.1102	2.9158	0.7441	0.1090	0.8531	0.0000	2,742.365 8	2,742.365 8	0.0704	0.0528	2,759.865 3
Maximum	44.2178	85.2223	69.2847	0.2394	17.1943	1.5917	18.2336	4.6314	1.5805	5.6600	0.0000	24,775.45 76	24,775.45 76	2.9335	2.8178	25,306.18 43

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.16	-25.44	-2.36	0.00	11.75	3.24	11.90	50.68	-3.49	46.35	0.00	0.00	0.00	0.00	0.00	0.00

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	28.9301	2.2100e-003	0.2434	2.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		0.5225	0.5225	1.3600e-003		0.5566
Energy	0.0320	0.2912	0.2446	1.7500e-003		0.0221	0.0221		0.0221	0.0221		349.4414	349.4414	6.7000e-003	6.4100e-003	351.5179
Mobile	19.5137	22.2209	213.7061	0.5002	52.7064	0.3490	53.0554	14.0452	0.3246	14.3698		51,850.0665	51,850.0665	2.9397	2.0056	52,521.2364
<b>Total</b>	<b>48.4758</b>	<b>22.5143</b>	<b>214.1941</b>	<b>0.5020</b>	<b>52.7064</b>	<b>0.3720</b>	<b>53.0784</b>	<b>14.0452</b>	<b>0.3476</b>	<b>14.3928</b>		<b>52,200.0303</b>	<b>52,200.0303</b>	<b>2.9477</b>	<b>2.0120</b>	<b>52,873.3109</b>

**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	28.9301	2.2100e-003	0.2434	2.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		0.5225	0.5225	1.3600e-003		0.5566
Energy	0.0320	0.2912	0.2446	1.7500e-003		0.0221	0.0221		0.0221	0.0221		349.4414	349.4414	6.7000e-003	6.4100e-003	351.5179
Mobile	19.2922	21.8496	209.9553	0.4904	51.6523	0.3425	51.9947	13.7643	0.3186	14.0829		50,830.2717	50,830.2717	2.8930	1.9720	51,490.2600
<b>Total</b>	<b>48.2543</b>	<b>22.1430</b>	<b>210.4432</b>	<b>0.4921</b>	<b>51.6523</b>	<b>0.3655</b>	<b>52.0177</b>	<b>13.7643</b>	<b>0.3416</b>	<b>14.1059</b>		<b>51,180.2355</b>	<b>51,180.2355</b>	<b>2.9011</b>	<b>1.9784</b>	<b>51,842.3345</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.46	1.65	1.75	1.96	2.00	1.76	2.00	2.00	1.75	1.99	0.00	1.95	1.95	1.58	1.67	1.95

**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	3/21/2023	5	15	
2	Grading	Grading	3/22/2023	6/13/2023	5	60	
3	Building Construction	Building Construction	6/14/2023	10/31/2023	5	100	
4	Paving	Paving	11/1/2023	12/26/2023	5	40	
5	Architectural Coating	Architectural Coating	12/27/2023	3/5/2024	5	50	

**Acres of Grading (Site Preparation Phase): 22.5****Acres of Grading (Grading Phase): 180****Acres of Paving: 39.56****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 200,000; Non-Residential Outdoor: 630,315; Striped Parking Area: 103,926 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

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	16,906.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,257.00	491.00	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	251.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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		3,687.308 1	3,687.308 1	1.1926		3,717.121 9
<b>Total</b>	<b>2.6595</b>	<b>27.5242</b>	<b>18.2443</b>	<b>0.0381</b>	<b>19.6570</b>	<b>1.2660</b>	<b>20.9230</b>	<b>10.1025</b>	<b>1.1647</b>	<b>11.2672</b>		<b>3,687.308 1</b>	<b>3,687.308 1</b>	<b>1.1926</b>		<b>3,717.121 9</b>

**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	0.0575	0.0386	0.6331	1.7600e-003	0.2012	1.1300e-003	0.2023	0.0534	1.0400e-003	0.0544		180.3599	180.3599	4.3200e-003	4.0700e-003	181.6802
<b>Total</b>	<b>0.0575</b>	<b>0.0386</b>	<b>0.6331</b>	<b>1.7600e-003</b>	<b>0.2012</b>	<b>1.1300e-003</b>	<b>0.2023</b>	<b>0.0534</b>	<b>1.0400e-003</b>	<b>0.0544</b>		<b>180.3599</b>	<b>180.3599</b>	<b>4.3200e-003</b>	<b>4.0700e-003</b>	<b>181.6802</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.2 Site Preparation - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	1.2097	33.7214	22.9600	0.0381		0.9462	0.9462		0.9462	0.9462	0.0000	3,687.308 1	3,687.308 1	1.1926		3,717.121 9
<b>Total</b>	<b>1.2097</b>	<b>33.7214</b>	<b>22.9600</b>	<b>0.0381</b>	<b>8.8457</b>	<b>0.9462</b>	<b>9.7918</b>	<b>4.5461</b>	<b>0.9462</b>	<b>5.4923</b>	<b>0.0000</b>	<b>3,687.308 1</b>	<b>3,687.308 1</b>	<b>1.1926</b>		<b>3,717.121 9</b>

**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	0.0575	0.0386	0.6331	1.7600e-003	0.2012	1.1300e-003	0.2023	0.0534	1.0400e-003	0.0544		180.3599	180.3599	4.3200e-003	4.0700e-003	181.6802
<b>Total</b>	<b>0.0575</b>	<b>0.0386</b>	<b>0.6331</b>	<b>1.7600e-003</b>	<b>0.2012</b>	<b>1.1300e-003</b>	<b>0.2023</b>	<b>0.0534</b>	<b>1.0400e-003</b>	<b>0.0544</b>		<b>180.3599</b>	<b>180.3599</b>	<b>4.3200e-003</b>	<b>4.0700e-003</b>	<b>181.6802</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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					9.4585	0.0000	9.4585	3.6924	0.0000	3.6924			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.477 7	6,011.477 7	1.9442		6,060.083 6
<b>Total</b>	<b>3.3217</b>	<b>34.5156</b>	<b>28.0512</b>	<b>0.0621</b>	<b>9.4585</b>	<b>1.4245</b>	<b>10.8830</b>	<b>3.6924</b>	<b>1.3105</b>	<b>5.0029</b>		<b>6,011.477 7</b>	<b>6,011.477 7</b>	<b>1.9442</b>		<b>6,060.083 6</b>

**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	0.6071	33.9408	9.5452	0.1610	4.9286	0.2572	5.1857	1.3510	0.2460	1.5970		17,707.92 13	17,707.92 13	0.9844	2.8133	18,570.88 75
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	0.0639	0.0429	0.7035	1.9600e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		200.3998	200.3998	4.8000e-003	4.5200e-003	201.8669
<b>Total</b>	<b>0.6710</b>	<b>33.9837</b>	<b>10.2487</b>	<b>0.1630</b>	<b>5.1521</b>	<b>0.2584</b>	<b>5.4105</b>	<b>1.4102</b>	<b>0.2472</b>	<b>1.6574</b>		<b>17,908.32 11</b>	<b>17,908.32 11</b>	<b>0.9892</b>	<b>2.8178</b>	<b>18,772.75 43</b>



## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.3 Grading - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.2563	0.0000	4.2563	1.6616	0.0000	1.6616			0.0000			0.0000
Off-Road	1.8106	51.2386	36.7226	0.0621		1.3333	1.3333		1.3333	1.3333	0.0000	6,011.477 7	6,011.477 7	1.9442		6,060.083 6
<b>Total</b>	<b>1.8106</b>	<b>51.2386</b>	<b>36.7226</b>	<b>0.0621</b>	<b>4.2563</b>	<b>1.3333</b>	<b>5.5896</b>	<b>1.6616</b>	<b>1.3333</b>	<b>2.9949</b>	<b>0.0000</b>	<b>6,011.477 7</b>	<b>6,011.477 7</b>	<b>1.9442</b>		<b>6,060.083 6</b>

**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	0.6071	33.9408	9.5452	0.1610	4.9286	0.2572	5.1857	1.3510	0.2460	1.5970		17,707.92 13	17,707.92 13	0.9844	2.8133	18,570.88 75
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	0.0639	0.0429	0.7035	1.9600e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		200.3998	200.3998	4.8000e-003	4.5200e-003	201.8669
<b>Total</b>	<b>0.6710</b>	<b>33.9837</b>	<b>10.2487</b>	<b>0.1630</b>	<b>5.1521</b>	<b>0.2584</b>	<b>5.4105</b>	<b>1.4102</b>	<b>0.2472</b>	<b>1.6574</b>		<b>17,908.32 11</b>	<b>17,908.32 11</b>	<b>0.9892</b>	<b>2.8178</b>	<b>18,772.75 43</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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
<b>Total</b>	<b>1.5728</b>	<b>14.3849</b>	<b>16.2440</b>	<b>0.0269</b>		<b>0.6997</b>	<b>0.6997</b>		<b>0.6584</b>	<b>0.6584</b>		<b>2,555.2099</b>	<b>2,555.2099</b>	<b>0.6079</b>		<b>2,570.4061</b>

**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	0.5430	17.8233	7.0170	0.0894	3.1440	0.1038	3.2478	0.9052	0.0993	1.0045		9,625.1183	9,625.1183	0.3235	1.3934	10,048.4447
Worker	4.0154	2.6949	44.2128	0.1231	14.0503	0.0791	14.1294	3.7262	0.0728	3.7990		12,595.1294	12,595.1294	0.3015	0.2841	12,687.3335
<b>Total</b>	<b>4.5584</b>	<b>20.5182</b>	<b>51.2298</b>	<b>0.2124</b>	<b>17.1943</b>	<b>0.1829</b>	<b>17.3772</b>	<b>4.6314</b>	<b>0.1721</b>	<b>4.8035</b>		<b>22,220.2476</b>	<b>22,220.2476</b>	<b>0.6250</b>	<b>1.6775</b>	<b>22,735.7783</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.4 Building Construction - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2295	23.2846	18.0549	0.0269		0.8565	0.8565		0.8565	0.8565	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
<b>Total</b>	<b>1.2295</b>	<b>23.2846</b>	<b>18.0549</b>	<b>0.0269</b>		<b>0.8565</b>	<b>0.8565</b>		<b>0.8565</b>	<b>0.8565</b>	<b>0.0000</b>	<b>2,555.2099</b>	<b>2,555.2099</b>	<b>0.6079</b>		<b>2,570.4061</b>

**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	0.5430	17.8233	7.0170	0.0894	3.1440	0.1038	3.2478	0.9052	0.0993	1.0045		9,625.1183	9,625.1183	0.3235	1.3934	10,048.4447
Worker	4.0154	2.6949	44.2128	0.1231	14.0503	0.0791	14.1294	3.7262	0.0728	3.7990		12,595.1294	12,595.1294	0.3015	0.2841	12,687.3335
<b>Total</b>	<b>4.5584</b>	<b>20.5182</b>	<b>51.2298</b>	<b>0.2124</b>	<b>17.1943</b>	<b>0.1829</b>	<b>17.3772</b>	<b>4.6314</b>	<b>0.1721</b>	<b>4.8035</b>		<b>22,220.2476</b>	<b>22,220.2476</b>	<b>0.6250</b>	<b>1.6775</b>	<b>22,735.7783</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.5 Paving - 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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.584 1	2,207.584 1	0.7140		2,225.433 6
Paving	0.6465					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.6792</b>	<b>10.1917</b>	<b>14.5842</b>	<b>0.0228</b>		<b>0.5102</b>	<b>0.5102</b>		<b>0.4694</b>	<b>0.4694</b>		<b>2,207.584 1</b>	<b>2,207.584 1</b>	<b>0.7140</b>		<b>2,225.433 6</b>

**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	0.0479	0.0322	0.5276	1.4700e-003	0.1677	9.4000e-004	0.1686	0.0445	8.7000e-004	0.0453		150.2999	150.2999	3.6000e-003	3.3900e-003	151.4002
<b>Total</b>	<b>0.0479</b>	<b>0.0322</b>	<b>0.5276</b>	<b>1.4700e-003</b>	<b>0.1677</b>	<b>9.4000e-004</b>	<b>0.1686</b>	<b>0.0445</b>	<b>8.7000e-004</b>	<b>0.0453</b>		<b>150.2999</b>	<b>150.2999</b>	<b>3.6000e-003</b>	<b>3.3900e-003</b>	<b>151.4002</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.5 Paving - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9311	20.1146	17.2957	0.0228		0.6670	0.6670		0.6670	0.6670	0.0000	2,207.584 1	2,207.584 1	0.7140		2,225.433 6
Paving	0.6465					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.5775</b>	<b>20.1146</b>	<b>17.2957</b>	<b>0.0228</b>		<b>0.6670</b>	<b>0.6670</b>		<b>0.6670</b>	<b>0.6670</b>	<b>0.0000</b>	<b>2,207.584 1</b>	<b>2,207.584 1</b>	<b>0.7140</b>		<b>2,225.433 6</b>

**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	0.0479	0.0322	0.5276	1.4700e-003	0.1677	9.4000e-004	0.1686	0.0445	8.7000e-004	0.0453		150.2999	150.2999	3.6000e-003	3.3900e-003	151.4002
<b>Total</b>	<b>0.0479</b>	<b>0.0322</b>	<b>0.5276</b>	<b>1.4700e-003</b>	<b>0.1677</b>	<b>9.4000e-004</b>	<b>0.1686</b>	<b>0.0445</b>	<b>8.7000e-004</b>	<b>0.0453</b>		<b>150.2999</b>	<b>150.2999</b>	<b>3.6000e-003</b>	<b>3.3900e-003</b>	<b>151.4002</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 Architectural Coating - 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					
Archit. Coating	43.3021					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>43.4937</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

**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	0.8018	0.5381	8.8285	0.0246	2.8056	0.0158	2.8214	0.7441	0.0145	0.7586		2,515.0179	2,515.0179	0.0602	0.0567	2,533.4294
<b>Total</b>	<b>0.8018</b>	<b>0.5381</b>	<b>8.8285</b>	<b>0.0246</b>	<b>2.8056</b>	<b>0.0158</b>	<b>2.8214</b>	<b>0.7441</b>	<b>0.0145</b>	<b>0.7586</b>		<b>2,515.0179</b>	<b>2,515.0179</b>	<b>0.0602</b>	<b>0.0567</b>	<b>2,533.4294</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 Architectural Coating - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	43.3021					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>43.4160</b>	<b>2.3524</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

**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	0.8018	0.5381	8.8285	0.0246	2.8056	0.0158	2.8214	0.7441	0.0145	0.7586		2,515.0179	2,515.0179	0.0602	0.0567	2,533.4294
<b>Total</b>	<b>0.8018</b>	<b>0.5381</b>	<b>8.8285</b>	<b>0.0246</b>	<b>2.8056</b>	<b>0.0158</b>	<b>2.8214</b>	<b>0.7441</b>	<b>0.0145</b>	<b>0.7586</b>		<b>2,515.0179</b>	<b>2,515.0179</b>	<b>0.0602</b>	<b>0.0567</b>	<b>2,533.4294</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 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	43.3021					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
<b>Total</b>	<b>43.4828</b>	<b>1.2188</b>	<b>1.8101</b>	<b>2.9700e-003</b>		<b>0.0609</b>	<b>0.0609</b>		<b>0.0609</b>	<b>0.0609</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0159</b>		<b>281.8443</b>

**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	0.7487	0.4810	8.2359	0.0239	2.8056	0.0151	2.8207	0.7441	0.0139	0.7580		2,460.9177	2,460.9177	0.0545	0.0528	2,478.0211
<b>Total</b>	<b>0.7487</b>	<b>0.4810</b>	<b>8.2359</b>	<b>0.0239</b>	<b>2.8056</b>	<b>0.0151</b>	<b>2.8207</b>	<b>0.7441</b>	<b>0.0139</b>	<b>0.7580</b>		<b>2,460.9177</b>	<b>2,460.9177</b>	<b>0.0545</b>	<b>0.0528</b>	<b>2,478.0211</b>



## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 Architectural Coating - 2024****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	43.3021					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0159		281.8443
<b>Total</b>	<b>43.4160</b>	<b>2.3524</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0159</b>		<b>281.8443</b>

**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	0.7487	0.4810	8.2359	0.0239	2.8056	0.0151	2.8207	0.7441	0.0139	0.7580		2,460.9177	2,460.9177	0.0545	0.0528	2,478.0211
<b>Total</b>	<b>0.7487</b>	<b>0.4810</b>	<b>8.2359</b>	<b>0.0239</b>	<b>2.8056</b>	<b>0.0151</b>	<b>2.8207</b>	<b>0.7441</b>	<b>0.0139</b>	<b>0.7580</b>		<b>2,460.9177</b>	<b>2,460.9177</b>	<b>0.0545</b>	<b>0.0528</b>	<b>2,478.0211</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	19.2922	21.8496	209.9553	0.4904	51.6523	0.3425	51.9947	13.7643	0.3186	14.0829		50,830.27 17	50,830.27 17	2.8930	1.9720	51,490.26 00
Unmitigated	19.5137	22.2209	213.7061	0.5002	52.7064	0.3490	53.0554	14.0452	0.3246	14.3698		51,850.06 65	51,850.06 65	2.9397	2.0056	52,521.23 64

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	5,836.72	5,836.72	5836.72	25,014,516	24,514,226
Total	5,836.72	5,836.72	5,836.72	25,014,516	24,514,226

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
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
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.542450	0.061470	0.185138	0.129299	0.023799	0.006448	0.011958	0.009209	0.000810	0.000503	0.024446	0.000751	0.003721
Parking Lot	0.542450	0.061470	0.185138	0.129299	0.023799	0.006448	0.011958	0.009209	0.000810	0.000503	0.024446	0.000751	0.003721
Unrefrigerated Warehouse-No Rail	0.542450	0.061470	0.185138	0.129299	0.023799	0.006448	0.011958	0.009209	0.000810	0.000503	0.024446	0.000751	0.003721

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0320	0.2912	0.2446	1.7500e-003		0.0221	0.0221		0.0221	0.0221		349.4414	349.4414	6.7000e-003	6.4100e-003	351.5179
NaturalGas Unmitigated	0.0320	0.2912	0.2446	1.7500e-003		0.0221	0.0221		0.0221	0.0221		349.4414	349.4414	6.7000e-003	6.4100e-003	351.5179

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
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
Unrefrigerated Warehouse-No Rail	2970.25	0.0320	0.2912	0.2446	1.7500e-003		0.0221	0.0221		0.0221	0.0221		349.4414	349.4414	6.7000e-003	6.4100e-003	351.5179
<b>Total</b>		<b>0.0320</b>	<b>0.2912</b>	<b>0.2446</b>	<b>1.7500e-003</b>		<b>0.0221</b>	<b>0.0221</b>		<b>0.0221</b>	<b>0.0221</b>		<b>349.4414</b>	<b>349.4414</b>	<b>6.7000e-003</b>	<b>6.4100e-003</b>	<b>351.5179</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Unrefrigerated Warehouse-No Rail	2.97025	0.0320	0.2912	0.2446	1.7500e-003		0.0221	0.0221		0.0221	0.0221		349.4414	349.4414	6.7000e-003	6.4100e-003	351.5179
<b>Total</b>		<b>0.0320</b>	<b>0.2912</b>	<b>0.2446</b>	<b>1.7500e-003</b>		<b>0.0221</b>	<b>0.0221</b>		<b>0.0221</b>	<b>0.0221</b>		<b>349.4414</b>	<b>349.4414</b>	<b>6.7000e-003</b>	<b>6.4100e-003</b>	<b>351.5179</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	28.9301	2.2100e-003	0.2434	2.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		0.5225	0.5225	1.3600e-003		0.5566
Unmitigated	28.9301	2.2100e-003	0.2434	2.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		0.5225	0.5225	1.3600e-003		0.5566

**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	3.3336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	25.5740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0225	2.2100e-003	0.2434	2.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		0.5225	0.5225	1.3600e-003		0.5566
<b>Total</b>	<b>28.9301</b>	<b>2.2100e-003</b>	<b>0.2434</b>	<b>2.0000e-005</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>		<b>0.5225</b>	<b>0.5225</b>	<b>1.3600e-003</b>		<b>0.5566</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

## EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

## 6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.3336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	25.5740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0225	2.2100e-003	0.2434	2.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		0.5225	0.5225	1.3600e-003		0.5566
<b>Total</b>	<b>28.9301</b>	<b>2.2100e-003</b>	<b>0.2434</b>	<b>2.0000e-005</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>		<b>0.5225</b>	<b>0.5225</b>	<b>1.3600e-003</b>		<b>0.5566</b>

## 7.0 Water Detail

## 7.1 Mitigation Measures Water

## Avenue G Industrial Project - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****8.0 Waste Detail**

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**8.1 Mitigation Measures Waste****9.0 Operational Offroad**

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

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**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Avenue G Industrial Project**  
**South Coast AQMD Air District, Winter****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	1,260.63	1000sqft	28.94	1,260,630.00	0
Other Non-Asphalt Surfaces	29.69	Acre	29.69	1,293,296.40	0
Parking Lot	1,097.00	Space	9.87	438,800.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	9			<b>Operational Year</b>	2024
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	390.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - EMFAC Off-Model Adjustment Factors - SAFE Vehicle Rule applied.

Land Use - 1,260,630 sf Warehouse building (20,000 sf office use and 1,240,630 sf warehouse), 1,097 parking spaces (732 standard auto and 365 trail parking stalls), and landscaping on 68.5 acres.

Construction Phase - Construction schedule shorted to 12 months period.

Off-road Equipment -

Trips and VMT -

On-road Fugitive Dust -

Grading - Importing 135,250 CY of soil during site grading.

Architectural Coating - Low VOC architectural coatings consistent with SCAQMD Rule 1113. Reduced interior non-residential surface area since warehouse open space for distribution center.

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Vehicle Trips - Based on a trip generation of 5,837 ADT

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Road Dust -

Consumer Products - Defaults.

Area Coating - Defaults.

Energy Use - Defaults.

Water And Wastewater - Defaults.

Solid Waste - Defaults.

Construction Off-road Equipment Mitigation - Construction equipment rated with 50 or more horsepower would utilize, at minium, Tier 2 engines. Water exposed soil areas at least twice daily.

Mobile Land Use Mitigation - Improved pedestrian network.

Water Mitigation -

Fleet Mix -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,890,945.00	200,000.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	75.00	50.00
tblConstructionPhase	NumDays	1,110.00	100.00
tblConstructionPhase	NumDays	110.00	60.00
tblConstructionPhase	NumDays	75.00	40.00
tblConstructionPhase	NumDays	40.00	15.00
tblGrading	MaterialImported	0.00	135,250.00
tblVehicleTrips	ST_TR	1.74	4.63
tblVehicleTrips	SU_TR	1.74	4.63
tblVehicleTrips	WD_TR	1.74	4.63

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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	44.3401	70.1211	63.4988	0.2324	19.8582	1.6835	21.1254	10.1558	1.5583	11.3216	0.0000	24,061.91 22	24,061.91 22	2.9314	2.8213	24,842.14 04
2024	44.2756	1.7446	9.2667	0.0254	2.8056	0.0761	2.8817	0.7441	0.0749	0.8189	0.0000	2,599.635 3	2,599.635 3	0.0712	0.0560	2,618.103 9
Maximum	44.3401	70.1211	63.4988	0.2324	19.8582	1.6835	21.1254	10.1558	1.5583	11.3216	0.0000	24,061.91 22	24,061.91 22	2.9314	2.8213	24,842.14 04

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	44.2623	86.8441	65.3096	0.2324	17.1943	1.5923	18.2342	4.6314	1.5810	5.6605	0.0000	24,061.91 22	24,061.91 22	2.9314	2.8213	24,842.14 04
2024	44.2087	2.8782	9.2890	0.0254	2.8056	0.1102	2.9158	0.7441	0.1090	0.8531	0.0000	2,599.635 3	2,599.635 3	0.0712	0.0560	2,618.103 9
Maximum	44.2623	86.8441	65.3096	0.2324	17.1943	1.5923	18.2342	4.6314	1.5810	5.6605	0.0000	24,061.91 22	24,061.91 22	2.9314	2.8213	24,842.14 04

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.16	-24.85	-2.52	0.00	11.75	3.24	11.90	50.68	-3.49	46.35	0.00	0.00	0.00	0.00	0.00	0.00

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	28.9301	2.2100e-003	0.2434	2.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		0.5225	0.5225	1.3600e-003		0.5566
Energy	0.0320	0.2912	0.2446	1.7500e-003		0.0221	0.0221		0.0221	0.0221		349.4414	349.4414	6.7000e-003	6.4100e-003	351.5179
Mobile	18.9117	23.8745	204.6162	0.4767	52.7064	0.3491	53.0555	14.0452	0.3248	14.3700		49,427.2246	49,427.2246	3.0037	2.0825	50,122.9034
<b>Total</b>	<b>47.8738</b>	<b>24.1679</b>	<b>205.1042</b>	<b>0.4785</b>	<b>52.7064</b>	<b>0.3721</b>	<b>53.0785</b>	<b>14.0452</b>	<b>0.3478</b>	<b>14.3930</b>		<b>49,777.1884</b>	<b>49,777.1884</b>	<b>3.0117</b>	<b>2.0889</b>	<b>50,474.9779</b>

**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	28.9301	2.2100e-003	0.2434	2.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		0.5225	0.5225	1.3600e-003		0.5566
Energy	0.0320	0.2912	0.2446	1.7500e-003		0.0221	0.0221		0.0221	0.0221		349.4414	349.4414	6.7000e-003	6.4100e-003	351.5179
Mobile	18.6888	23.4757	201.1429	0.4674	51.6523	0.3426	51.9949	13.7643	0.3187	14.0830		48,456.1418	48,456.1418	2.9574	2.0477	49,140.2984
<b>Total</b>	<b>47.6510</b>	<b>23.7691</b>	<b>201.6309</b>	<b>0.4691</b>	<b>51.6523</b>	<b>0.3656</b>	<b>52.0179</b>	<b>13.7643</b>	<b>0.3417</b>	<b>14.1060</b>		<b>48,806.1056</b>	<b>48,806.1056</b>	<b>2.9655</b>	<b>2.0541</b>	<b>49,492.3729</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.47	1.65	1.69	1.96	2.00	1.75	2.00	2.00	1.75	1.99	0.00	1.95	1.95	1.54	1.67	1.95

**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	3/21/2023	5	15	
2	Grading	Grading	3/22/2023	6/13/2023	5	60	
3	Building Construction	Building Construction	6/14/2023	10/31/2023	5	100	
4	Paving	Paving	11/1/2023	12/26/2023	5	40	
5	Architectural Coating	Architectural Coating	12/27/2023	3/5/2024	5	50	

**Acres of Grading (Site Preparation Phase): 22.5****Acres of Grading (Grading Phase): 180****Acres of Paving: 39.56****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 200,000; Non-Residential Outdoor: 630,315; Striped Parking Area: 103,926 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

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	16,906.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,257.00	491.00	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	251.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads



## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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		3,687.308 1	3,687.308 1	1.1926		3,717.121 9
<b>Total</b>	<b>2.6595</b>	<b>27.5242</b>	<b>18.2443</b>	<b>0.0381</b>	<b>19.6570</b>	<b>1.2660</b>	<b>20.9230</b>	<b>10.1025</b>	<b>1.1647</b>	<b>11.2672</b>		<b>3,687.308 1</b>	<b>3,687.308 1</b>	<b>1.1926</b>		<b>3,717.121 9</b>

**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	0.0607	0.0422	0.5730	1.6600e-003	0.2012	1.1300e-003	0.2023	0.0534	1.0400e-003	0.0544		169.8928	169.8928	4.3800e-003	4.3200e-003	171.2882
<b>Total</b>	<b>0.0607</b>	<b>0.0422</b>	<b>0.5730</b>	<b>1.6600e-003</b>	<b>0.2012</b>	<b>1.1300e-003</b>	<b>0.2023</b>	<b>0.0534</b>	<b>1.0400e-003</b>	<b>0.0544</b>		<b>169.8928</b>	<b>169.8928</b>	<b>4.3800e-003</b>	<b>4.3200e-003</b>	<b>171.2882</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.2 Site Preparation - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	1.2097	33.7214	22.9600	0.0381		0.9462	0.9462		0.9462	0.9462	0.0000	3,687.308 1	3,687.308 1	1.1926		3,717.121 9
<b>Total</b>	<b>1.2097</b>	<b>33.7214</b>	<b>22.9600</b>	<b>0.0381</b>	<b>8.8457</b>	<b>0.9462</b>	<b>9.7918</b>	<b>4.5461</b>	<b>0.9462</b>	<b>5.4923</b>	<b>0.0000</b>	<b>3,687.308 1</b>	<b>3,687.308 1</b>	<b>1.1926</b>		<b>3,717.121 9</b>

**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	0.0607	0.0422	0.5730	1.6600e-003	0.2012	1.1300e-003	0.2023	0.0534	1.0400e-003	0.0544		169.8928	169.8928	4.3800e-003	4.3200e-003	171.2882
<b>Total</b>	<b>0.0607</b>	<b>0.0422</b>	<b>0.5730</b>	<b>1.6600e-003</b>	<b>0.2012</b>	<b>1.1300e-003</b>	<b>0.2023</b>	<b>0.0534</b>	<b>1.0400e-003</b>	<b>0.0544</b>		<b>169.8928</b>	<b>169.8928</b>	<b>4.3800e-003</b>	<b>4.3200e-003</b>	<b>171.2882</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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					9.4585	0.0000	9.4585	3.6924	0.0000	3.6924			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.477 7	6,011.477 7	1.9442		6,060.083 6
<b>Total</b>	<b>3.3217</b>	<b>34.5156</b>	<b>28.0512</b>	<b>0.0621</b>	<b>9.4585</b>	<b>1.4245</b>	<b>10.8830</b>	<b>3.6924</b>	<b>1.3105</b>	<b>5.0029</b>		<b>6,011.477 7</b>	<b>6,011.477 7</b>	<b>1.9442</b>		<b>6,060.083 6</b>

**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	0.5666	35.5586	9.6846	0.1612	4.9286	0.2577	5.1863	1.3510	0.2466	1.5975		17,727.86 74	17,727.86 74	0.9823	2.8165	18,591.73 66
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	0.0674	0.0469	0.6366	1.8400e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		188.7698	188.7698	4.8600e-003	4.7900e-003	190.3203
<b>Total</b>	<b>0.6340</b>	<b>35.6055</b>	<b>10.3213</b>	<b>0.1630</b>	<b>5.1521</b>	<b>0.2590</b>	<b>5.4111</b>	<b>1.4102</b>	<b>0.2477</b>	<b>1.6580</b>		<b>17,916.63 72</b>	<b>17,916.63 72</b>	<b>0.9871</b>	<b>2.8213</b>	<b>18,782.05 68</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.3 Grading - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.2563	0.0000	4.2563	1.6616	0.0000	1.6616			0.0000			0.0000
Off-Road	1.8106	51.2386	36.7226	0.0621		1.3333	1.3333		1.3333	1.3333	0.0000	6,011.477 7	6,011.477 7	1.9442		6,060.083 6
<b>Total</b>	<b>1.8106</b>	<b>51.2386</b>	<b>36.7226</b>	<b>0.0621</b>	<b>4.2563</b>	<b>1.3333</b>	<b>5.5896</b>	<b>1.6616</b>	<b>1.3333</b>	<b>2.9949</b>	<b>0.0000</b>	<b>6,011.477 7</b>	<b>6,011.477 7</b>	<b>1.9442</b>		<b>6,060.083 6</b>

**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	0.5666	35.5586	9.6846	0.1612	4.9286	0.2577	5.1863	1.3510	0.2466	1.5975		17,727.86 74	17,727.86 74	0.9823	2.8165	18,591.73 66
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	0.0674	0.0469	0.6366	1.8400e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		188.7698	188.7698	4.8600e-003	4.7900e-003	190.3203
<b>Total</b>	<b>0.6340</b>	<b>35.6055</b>	<b>10.3213</b>	<b>0.1630</b>	<b>5.1521</b>	<b>0.2590</b>	<b>5.4111</b>	<b>1.4102</b>	<b>0.2477</b>	<b>1.6580</b>		<b>17,916.63 72</b>	<b>17,916.63 72</b>	<b>0.9871</b>	<b>2.8213</b>	<b>18,782.05 68</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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
<b>Total</b>	<b>1.5728</b>	<b>14.3849</b>	<b>16.2440</b>	<b>0.0269</b>		<b>0.6997</b>	<b>0.6997</b>		<b>0.6584</b>	<b>0.6584</b>		<b>2,555.2099</b>	<b>2,555.2099</b>	<b>0.6079</b>		<b>2,570.4061</b>

**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	0.5196	18.7073	7.2433	0.0895	3.1440	0.1043	3.2483	0.9052	0.0998	1.0050		9,642.5207	9,642.5207	0.3220	1.3972	10,066.9219
Worker	4.2386	2.9471	40.0115	0.1159	14.0503	0.0791	14.1294	3.7262	0.0728	3.7990		11,864.1816	11,864.1816	0.3057	0.3014	11,961.6287
<b>Total</b>	<b>4.7582</b>	<b>21.6543</b>	<b>47.2548</b>	<b>0.2055</b>	<b>17.1943</b>	<b>0.1835</b>	<b>17.3777</b>	<b>4.6314</b>	<b>0.1726</b>	<b>4.8040</b>		<b>21,506.7023</b>	<b>21,506.7023</b>	<b>0.6277</b>	<b>1.6985</b>	<b>22,028.5507</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

## EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

## 3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2295	23.2846	18.0549	0.0269		0.8565	0.8565		0.8565	0.8565	0.0000	2,555.209 9	2,555.209 9	0.6079		2,570.406 1
<b>Total</b>	<b>1.2295</b>	<b>23.2846</b>	<b>18.0549</b>	<b>0.0269</b>		<b>0.8565</b>	<b>0.8565</b>		<b>0.8565</b>	<b>0.8565</b>	<b>0.0000</b>	<b>2,555.209 9</b>	<b>2,555.209 9</b>	<b>0.6079</b>		<b>2,570.406 1</b>

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	0.5196	18.7073	7.2433	0.0895	3.1440	0.1043	3.2483	0.9052	0.0998	1.0050		9,642.520 7	9,642.520 7	0.3220	1.3972	10,066.92 19
Worker	4.2386	2.9471	40.0115	0.1159	14.0503	0.0791	14.1294	3.7262	0.0728	3.7990		11,864.18 16	11,864.18 16	0.3057	0.3014	11,961.62 87
<b>Total</b>	<b>4.7582</b>	<b>21.6543</b>	<b>47.2548</b>	<b>0.2055</b>	<b>17.1943</b>	<b>0.1835</b>	<b>17.3777</b>	<b>4.6314</b>	<b>0.1726</b>	<b>4.8040</b>		<b>21,506.70 23</b>	<b>21,506.70 23</b>	<b>0.6277</b>	<b>1.6985</b>	<b>22,028.55 07</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.5 Paving - 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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.584 1	2,207.584 1	0.7140		2,225.433 6
Paving	0.6465					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.6792</b>	<b>10.1917</b>	<b>14.5842</b>	<b>0.0228</b>		<b>0.5102</b>	<b>0.5102</b>		<b>0.4694</b>	<b>0.4694</b>		<b>2,207.584 1</b>	<b>2,207.584 1</b>	<b>0.7140</b>		<b>2,225.433 6</b>

**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	0.0506	0.0352	0.4775	1.3800e-003	0.1677	9.4000e-004	0.1686	0.0445	8.7000e-004	0.0453		141.5774	141.5774	3.6500e-003	3.6000e-003	142.7402
<b>Total</b>	<b>0.0506</b>	<b>0.0352</b>	<b>0.4775</b>	<b>1.3800e-003</b>	<b>0.1677</b>	<b>9.4000e-004</b>	<b>0.1686</b>	<b>0.0445</b>	<b>8.7000e-004</b>	<b>0.0453</b>		<b>141.5774</b>	<b>141.5774</b>	<b>3.6500e-003</b>	<b>3.6000e-003</b>	<b>142.7402</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.5 Paving - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9311	20.1146	17.2957	0.0228		0.6670	0.6670		0.6670	0.6670	0.0000	2,207.584 1	2,207.584 1	0.7140		2,225.433 6
Paving	0.6465					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.5775</b>	<b>20.1146</b>	<b>17.2957</b>	<b>0.0228</b>		<b>0.6670</b>	<b>0.6670</b>		<b>0.6670</b>	<b>0.6670</b>	<b>0.0000</b>	<b>2,207.584 1</b>	<b>2,207.584 1</b>	<b>0.7140</b>		<b>2,225.433 6</b>

**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	0.0506	0.0352	0.4775	1.3800e-003	0.1677	9.4000e-004	0.1686	0.0445	8.7000e-004	0.0453		141.5774	141.5774	3.6500e-003	3.6000e-003	142.7402
<b>Total</b>	<b>0.0506</b>	<b>0.0352</b>	<b>0.4775</b>	<b>1.3800e-003</b>	<b>0.1677</b>	<b>9.4000e-004</b>	<b>0.1686</b>	<b>0.0445</b>	<b>8.7000e-004</b>	<b>0.0453</b>		<b>141.5774</b>	<b>141.5774</b>	<b>3.6500e-003</b>	<b>3.6000e-003</b>	<b>142.7402</b>



## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 Architectural Coating - 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					
Archit. Coating	43.3021					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>43.4937</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

**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	0.8464	0.5885	7.9896	0.0232	2.8056	0.0158	2.8214	0.7441	0.0145	0.7586		2,369.0609	2,369.0609	0.0610	0.0602	2,388.5193
<b>Total</b>	<b>0.8464</b>	<b>0.5885</b>	<b>7.9896</b>	<b>0.0232</b>	<b>2.8056</b>	<b>0.0158</b>	<b>2.8214</b>	<b>0.7441</b>	<b>0.0145</b>	<b>0.7586</b>		<b>2,369.0609</b>	<b>2,369.0609</b>	<b>0.0610</b>	<b>0.0602</b>	<b>2,388.5193</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 Architectural Coating - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	43.3021					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>43.4160</b>	<b>2.3524</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

**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	0.8464	0.5885	7.9896	0.0232	2.8056	0.0158	2.8214	0.7441	0.0145	0.7586		2,369.0609	2,369.0609	0.0610	0.0602	2,388.5193
<b>Total</b>	<b>0.8464</b>	<b>0.5885</b>	<b>7.9896</b>	<b>0.0232</b>	<b>2.8056</b>	<b>0.0158</b>	<b>2.8214</b>	<b>0.7441</b>	<b>0.0145</b>	<b>0.7586</b>		<b>2,369.0609</b>	<b>2,369.0609</b>	<b>0.0610</b>	<b>0.0602</b>	<b>2,388.5193</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 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	43.3021					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
<b>Total</b>	<b>43.4828</b>	<b>1.2188</b>	<b>1.8101</b>	<b>2.9700e-003</b>		<b>0.0609</b>	<b>0.0609</b>		<b>0.0609</b>	<b>0.0609</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0159</b>		<b>281.8443</b>

**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	0.7927	0.5258	7.4566	0.0225	2.8056	0.0151	2.8207	0.7441	0.0139	0.7580		2,318.1873	2,318.1873	0.0554	0.0560	2,336.2597
<b>Total</b>	<b>0.7927</b>	<b>0.5258</b>	<b>7.4566</b>	<b>0.0225</b>	<b>2.8056</b>	<b>0.0151</b>	<b>2.8207</b>	<b>0.7441</b>	<b>0.0139</b>	<b>0.7580</b>		<b>2,318.1873</b>	<b>2,318.1873</b>	<b>0.0554</b>	<b>0.0560</b>	<b>2,336.2597</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 Architectural Coating - 2024****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	43.3021					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0159		281.8443
<b>Total</b>	<b>43.4160</b>	<b>2.3524</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0159</b>		<b>281.8443</b>

**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	0.7927	0.5258	7.4566	0.0225	2.8056	0.0151	2.8207	0.7441	0.0139	0.7580		2,318.1873	2,318.1873	0.0554	0.0560	2,336.2597
<b>Total</b>	<b>0.7927</b>	<b>0.5258</b>	<b>7.4566</b>	<b>0.0225</b>	<b>2.8056</b>	<b>0.0151</b>	<b>2.8207</b>	<b>0.7441</b>	<b>0.0139</b>	<b>0.7580</b>		<b>2,318.1873</b>	<b>2,318.1873</b>	<b>0.0554</b>	<b>0.0560</b>	<b>2,336.2597</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

## EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

## 4.0 Operational Detail - Mobile

## 4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	18.6888	23.4757	201.1429	0.4674	51.6523	0.3426	51.9949	13.7643	0.3187	14.0830		48,456.14 18	48,456.14 18	2.9574	2.0477	49,140.29 84
Unmitigated	18.9117	23.8745	204.6162	0.4767	52.7064	0.3491	53.0555	14.0452	0.3248	14.3700		49,427.22 46	49,427.22 46	3.0037	2.0825	50,122.90 34

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	5,836.72	5,836.72	5836.72	25,014,516	24,514,226
Total	5,836.72	5,836.72	5,836.72	25,014,516	24,514,226

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
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
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.542450	0.061470	0.185138	0.129299	0.023799	0.006448	0.011958	0.009209	0.000810	0.000503	0.024446	0.000751	0.003721
Parking Lot	0.542450	0.061470	0.185138	0.129299	0.023799	0.006448	0.011958	0.009209	0.000810	0.000503	0.024446	0.000751	0.003721
Unrefrigerated Warehouse-No Rail	0.542450	0.061470	0.185138	0.129299	0.023799	0.006448	0.011958	0.009209	0.000810	0.000503	0.024446	0.000751	0.003721

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0320	0.2912	0.2446	1.7500e-003		0.0221	0.0221		0.0221	0.0221		349.4414	349.4414	6.7000e-003	6.4100e-003	351.5179
NaturalGas Unmitigated	0.0320	0.2912	0.2446	1.7500e-003		0.0221	0.0221		0.0221	0.0221		349.4414	349.4414	6.7000e-003	6.4100e-003	351.5179

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
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
Unrefrigerated Warehouse-No Rail	2970.25	0.0320	0.2912	0.2446	1.7500e-003		0.0221	0.0221		0.0221	0.0221		349.4414	349.4414	6.7000e-003	6.4100e-003	351.5179
<b>Total</b>		<b>0.0320</b>	<b>0.2912</b>	<b>0.2446</b>	<b>1.7500e-003</b>		<b>0.0221</b>	<b>0.0221</b>		<b>0.0221</b>	<b>0.0221</b>		<b>349.4414</b>	<b>349.4414</b>	<b>6.7000e-003</b>	<b>6.4100e-003</b>	<b>351.5179</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Unrefrigerated Warehouse-No Rail	2.97025	0.0320	0.2912	0.2446	1.7500e-003		0.0221	0.0221		0.0221	0.0221		349.4414	349.4414	6.7000e-003	6.4100e-003	351.5179
<b>Total</b>		<b>0.0320</b>	<b>0.2912</b>	<b>0.2446</b>	<b>1.7500e-003</b>		<b>0.0221</b>	<b>0.0221</b>		<b>0.0221</b>	<b>0.0221</b>		<b>349.4414</b>	<b>349.4414</b>	<b>6.7000e-003</b>	<b>6.4100e-003</b>	<b>351.5179</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**



## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	28.9301	2.2100e-003	0.2434	2.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		0.5225	0.5225	1.3600e-003		0.5566
Unmitigated	28.9301	2.2100e-003	0.2434	2.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		0.5225	0.5225	1.3600e-003		0.5566

**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	3.3336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	25.5740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0225	2.2100e-003	0.2434	2.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		0.5225	0.5225	1.3600e-003		0.5566
<b>Total</b>	<b>28.9301</b>	<b>2.2100e-003</b>	<b>0.2434</b>	<b>2.0000e-005</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>		<b>0.5225</b>	<b>0.5225</b>	<b>1.3600e-003</b>		<b>0.5566</b>

## Avenue G Industrial Project - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.3336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	25.5740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0225	2.2100e-003	0.2434	2.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		0.5225	0.5225	1.3600e-003		0.5566
<b>Total</b>	<b>28.9301</b>	<b>2.2100e-003</b>	<b>0.2434</b>	<b>2.0000e-005</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>		<b>0.5225</b>	<b>0.5225</b>	<b>1.3600e-003</b>		<b>0.5566</b>

**7.0 Water Detail****7.1 Mitigation Measures Water**

Avenue G Industrial Project - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

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8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

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