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Air Quality Analysis for the Granada Hills Home Depot Project Los Angeles, California

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# Acronyms and Abbreviations

°F	degrees Fahrenheit
µg/m³	micrograms per cubic meter
2016 AQMP	South Coast Air Quality Management District's 2016 Air Quality Management Plan
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
City	City of Los Angeles
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
COMU	Corridor Mixed Use
DPM	diesel particulate matter
HQ	hazard quotient
LST	Localized Significance Threshold
mg/kg/d	milligrams per kilogram body weight per day
NAAQS	National Ambient Air Quality Standards
NO <sub>2</sub>	nitrogen dioxide
NO <sub>X</sub>	oxides of nitrogen
O <sub>3</sub>	ozone
Pb	lead
PM <sub>10</sub>	particulate matter less than 10 microns in diameter
PM <sub>2.5</sub>	particulate matter less than 2.5 microns in diameter
project	Granada Hills Home Depot Project
ROG	reactive organic gases
Scaqmd	South Coast Air Quality Management District
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
SoCAB	South Coast Air Basin
SO <sub>X</sub>	oxides of sulfur
SRA	Source Receptor Areas
TAC	toxic air contaminant
U.S. EPA	U.S. Environmental Protection Agency
USC	United States Code
VOC	volatile organic compounds

# **Executive Summary**

The Granada Hills Home Depot (project) is located at 16830 Devonshire Street in Granada Hills within the city of Los Angeles, California. The project site is situated on a developed commercial lot within the North Hills Plaza at the southeast corner of Balboa Boulevard and Devonshire Street. The 8.97-acre project site is currently occupied by a movie theater and retail uses and associated asphalt concrete parking lots. The project would demolish the entire theatre building and partially demolish the adjoining shopping mall building and construct a new 107,560-square-foot Home Depot Store with a 28,420-square-foot Garden Center. Other improvements would include vehicular pavements for drive aisles and parking lots, a pylon sign, surface concrete flatwork, and underground utilities.

This analysis evaluates the significance of potential air quality impacts that may be generated by the project in accordance with the California Environmental Quality Act, and guidance from the South Coast Air Quality Management District (SCAQMD). The project was evaluated to determine if it would (1) be inconsistent with the applicable air quality plan, (2) result in cumulative impacts to air quality, (3) impact sensitive receptors, or (4) expose a substantial number of people to objectionable odors.

The SCAQMD prepared the 2016 Air Quality Management Plan (2016 AQMP), which represents its contribution to the State Implementation Plan, to outline the district's strategy for achieving attainment of federal and state Ambient Air Quality Standards (AAQS). The 2016 AQMP provides an overview of air quality and sources of air pollution, and identifies the pollution-control measures needed to meet clean air standards. The project site is designated as Community Commercial in the City of Los Angeles' (City's) General Plan and is zoned C2-1VL. The project would be consistent with these designations. Therefore, the project would not result in an exceedance of the growth forecasting used to develop the 2016 AQMP. Further, the project would result in a decrease in emissions compared to the existing land use. This is due to the decrease in project-generated trips. Additionally, the project would not result in an air quality violation. Therefore, the project would not conflict with or obstruct the implementation of the 2016 AQMP or applicable portions of the State Implementation Plan, and impacts would be less than significant.

As calculated in this analysis, project construction and operation would not exceed the SCAQMD's thresholds of significance. Therefore, the project would not result in regional emissions that would exceed the National AAQS or California AAQS or contribute to existing violations, and impacts would be less than significant.

On-site emissions during construction and operation would be less than the SCAQMD localized significance thresholds. Project construction would not result in the exposure of sensitive receptors to significant levels of diesel particulate matter that could result in excess cancer risks. The project would not result in the creation of a carbon monoxide (CO) hot spot. Therefore, construction and operation of the project would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

During construction, potential odor sources would be associated with construction equipment; however, exposure to odors associated with project construction would be short term and temporary in nature. Operation of the project would not include any uses that would generate substantial odors. Therefore, the project would not generate odors adversely affecting a substantial number of people, and impacts would be less than significant.

# 1.0 Introduction

This report evaluates the significance of potential air quality impacts that may be generated by the proposed Granada Hills Home Depot Project (project). This report characterizes existing conditions at the project site and in the region, identifies applicable rules and regulations, and assesses impacts to air quality from construction and operation of the project. The significance of potential air quality impacts is assessed based on the air quality thresholds defined by the regional air quality management district, the South Coast Air Quality Management District (SCAQMD).

Air pollution affects all southern Californians. Effects can include increased respiratory infections, increased discomfort, missed days from work and school, and increased mortality. Polluted air also damages agriculture and our natural environment.

The state of California is divided geographically into 15 air basins for managing the air resources of the state on a regional basis. Areas within each air basin are considered to share the same air masses and therefore are expected to have similar ambient air quality. The project site is located within the South Coast Air Basin (SoCAB). The portion of the SoCAB covering the project site is currently classified as a federal non-attainment area for ozone (O<sub>3</sub>) and particulate matter less than 2.5 microns (PM<sub>2.5</sub>), and a state non-attainment area for ozone, particulate matter less than 10 microns (PM<sub>10</sub>) and PM<sub>2.5</sub>.

Air quality impacts can result from the construction and operation of the project. Construction impacts are short term and result from fugitive dust, equipment exhaust, and indirect effects associated with construction workers and deliveries. Operational impacts can occur on two levels: regional impacts resulting from growth-inducing development, or local hot spot effects stemming from sensitive receivers being placed close to highly congested roadways. In the case of this project, operational impacts would be primarily due to emissions to the SoCAB from mobile sources associated with vehicular travel along the roadways surrounding the project site.

The analysis of impacts is based on federal and state Ambient Air Quality Standards (AAQS) and is assessed in accordance with the guidelines, policies, and standards established by the SCAQMD. Project compatibility with the adopted air quality plan for the area is also assessed. Measures are recommended, as required, to reduce potentially significant impacts.

# 2.0 Project Description

The project is located at 16830 Devonshire Street in Granada Hills within the city of Los Angeles, California. The project site is situated on a developed commercial lot within the North Hills Plaza at the southeast corner of Balboa Boulevard and Devonshire Street. The 8.97-acre project site is currently occupied by a movie theater and retail uses and associated asphalt concrete parking lots. The project site fronts on Devonshire Street to the north and is bounded by commercial buildings and associated parking lots to the west, by single-family residential properties and a commercial building to the east, and single-family residential properties to the south. Figure 1 shows the regional location of the project. Figure 2 shows an aerial photograph of the project site and vicinity.





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Project Boundary

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FIGURE 2 Project Location on Aerial Photograph

Feet

300

The project would demolish the existing theatre building and partially demolish the existing shopping mall building and construct a new 107,560-square-foot Home Depot Store with a 28,420-square-foot Garden Center. Other improvements would include vehicular pavements for drive aisles and parking lots, a pylon sign, surface concrete flatwork, and underground utilities. Figure 3 shows the proposed site plan.

# 3.0 Regulatory Framework

### 3.1 Federal Regulations

AAQS represent the maximum levels of background pollution considered safe, with an adequate margin of safety, to protect the public health and welfare. The federal Clean Air Act (CAA) was enacted in 1970 and amended in 1977 and 1990 [42 United States Code (USC) 7401] for the purposes of protecting and enhancing the quality of the nation's air resources to benefit public health, welfare, and productivity. In 1971, in order to achieve the purposes of Section 109 of the CAA [42 USC 7409], the U.S. Environmental Protection Agency (U.S. EPA) developed primary and secondary National Ambient Air Quality Standards (NAAQS).

Six criteria pollutants of primary concern have been designated: ozone, carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), lead (Pb), and respirable particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). The primary NAAQS "... in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health ... " and the secondary standards "... protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air" [42 USC 7409(b)(2)]. The primary NAAQS were established, with a margin of safety, considering long-term exposure for the most sensitive groups in the general population (i.e., children, senior citizens, and people with breathing difficulties). The NAAQS are presented in Table 1 (California Air Resources Board [CARB] 2016).

An air basin is designated as either attainment or non-attainment for a particular pollutant. Once a non-attainment area has achieved the AAQS for a particular pollutant, it is redesignated as an attainment area for that pollutant. To be redesignated, the area must meet air quality standards for three consecutive years. After redesignation to attainment, the area is known as a maintenance area and must develop a 10-year plan for continuing to meet and maintain air quality standards, as well as satisfy other requirements of the federal CAA. The SoCAB is designated as in attainment or unclassifiable attainment (expected to be meeting the standard despite a lack of monitoring data) for all federal air quality standards except for the 8-hour ozone and PM<sub>2.5</sub> standards.



Map Source: Lars Andersen & Associates

FIGURE 3 Site Plan

Table 1 Ambient Air Quality Standards								
Averaging		California Standards <sup>1</sup>		National Standards <sup>2</sup>		rds <sup>2</sup>		
Pollutant	Time	Concentration <sup>3</sup>	Method <sup>4</sup>	Primary <sup>3,5</sup>	Secondary <sup>3,6</sup>	Method <sup>7</sup>		
Ozone <sup>8</sup>	1 Hour 8 Hour	0.09 ppm (180 µg/m <sup>3</sup> ) 0.07 ppm (137 µg/m <sup>3</sup> )	Ultraviolet Photometry	– 0.070 ppm (137 µg/m <sup>3</sup> )	Same as Primary Standard	Ultraviolet Photometry		
Respirable Particulate Matter (PM <sub>10</sub> ) <sup>9</sup>	24 Hour Annual Arithmetic Mean	50 μg/m <sup>3</sup> 20 μg/m <sup>3</sup>	Gravimetric or Beta Attenuation	150 μg/m <sup>3</sup>	Same as Primary Standard	Inertial Separation and Gravimetric Analysis		
Fine Particulate	24 Hour	No Separate State	e Standard	35 µg/m³	Same as Primary Standard	Inertial Separation and		
Matter (PM <sub>2.5</sub> ) <sup>9</sup>	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12 μg/m³	15 µg/m³	Gravimetric Analysis		
	1 Hour	20 ppm (23 mg/m <sup>3</sup> )		35 ppm (40 mg/m <sup>3</sup> )	_			
Carbon Monoxide	8 Hour	9.0 ppm (10 mg/m <sup>3</sup> )	Non-dispersive Infrared	9 ppm (10 mg/m <sup>3</sup> )	_	Non-dispersive Infrared		
(CO)	8 Hour (Lake Tahoe)	6 ppm (7 mg/m <sup>3</sup> )	Photometry	_	_	Photometry		
Nitrogen	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase	100 ppb (188 µg/m³)	_	Gas Phase		
Dioxide (NO <sub>2</sub> ) <sup>10</sup>	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)	Chemi- luminescence	0.053 ppm (100 μg/m <sup>3</sup> )	Same as Primary Standard	Chemi- luminescence		
	1 Hour	0.25 ppm (655 μg/m <sup>3</sup> )		75 ppb (196 µg/m <sup>3</sup> )	-			
Cultur	3 Hour	_		-	0.5 ppm (1,300 μg/m <sup>3</sup> )	Ultraviolet Fluorescence;		
Dioxide (SO <sub>2</sub> ) <sup>11</sup>	24 Hour	0.04 ppm (105 μg/m³)	Ultraviolet Fluorescence	0.14 ppm (for certain areas) <sup>11</sup>	_	Spectro- photometry (Pararosaniline		
	Annual Arithmetic Mean	_		0.030 ppm (for certain areas) <sup>11</sup>	_	Method)		
	30 Day Average	1.5 µg/m³		-	_			
Lead <sup>12,13</sup>	Calendar Quarter	-	Atomic Absorption	1.5 μg/m <sup>3</sup> (for certain areas) <sup>12</sup>	Same as	High Volume Sampler and Atomic		
	Rolling 3-Month Average	-		0.15 µg/m <sup>3</sup>	Standard	Absorption		
Visibility Reducing Particles <sup>14</sup>	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape					
Sulfates	24 Hour	25 µg/m³	lon Chroma- tography	No National Standards				
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/m³)	Gas Chroma- tography					
See tootnotes	on next paae.							

#### Table 1 Ambient Air Quality Standards ppm = parts per million; ppb = parts per billion; $\mu g/m^3$ = micrograms per cubic meter; - = not applicable. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, 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. 2 National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For 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 one. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies. 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. Any equivalent measurement method which can be shown to the satisfaction of the Air Resources Board to give equivalent results at or near the level of the air quality standard may be used. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health. 6 National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. 7 Reference method as described by the U.S. 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 U.S. EPA. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. 9 On December 14, 2012, the national annual PM<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 standards 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. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of ppb. California standards are in units of ppm. To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm. 11 On June 2, 2010, a new 1-hour SO<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 99th 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 one year after an area is designated for the 2010 standard, except that in areas designated non-attainment 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 ppb. California standards are in units of ppm. To directly compare the 1hour 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. The Air Resources Board 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. 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 one year after an area is designated for the 2008 standard, except that in areas designated non-attainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively. SOURCE: CARB 2016.

### 3.2 State Regulations

#### 3.2.1 Criteria Pollutants

The CARB has developed the California Ambient Air Quality Standards (CAAQS) and generally has set more stringent limits on the criteria pollutants than the NAAQS (see Table 1). In addition to the federal criteria pollutants, the CAAQS also specify standards for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride (see Table 1).

Similar to the federal CAA, the state classifies as either "attainment" or "non-attainment" areas for each pollutant based on the comparison of measured data with the CAAQS. The portion of the SoCAB covering the project site is a non-attainment area for the state 8-hour ozone, PM<sub>10</sub>, and PM<sub>2.5</sub> standards.

#### 3.2.2 Toxic Air Contaminants

The public's exposure to toxic air contaminants (TACs) is a significant public health issue in California. Diesel-exhaust particulate matter emissions have been established as TACs. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health (Assembly Bill [AB] 1807: Health and Safety Code Sections 39650–39674). The Legislature established a two-step process to address the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process.

The California Air Toxics Program establishes the process for the identification and control of TACs and includes provisions to make the public aware of significant toxic exposures and for reducing risk. Additionally, the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly Bill) was enacted in 1987 and requires stationary sources to report the types and quantities of certain substances routinely released into the air.

The goals of the Air Toxics "Hot Spots" Act are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce those significant risks to acceptable levels.

The Children's Environmental Health Protection Act, California Senate Bill 25 (Chapter 731, Escutia, Statutes of 1999), focuses on children's exposure to air pollutants. The act requires CARB to review its air quality standards from a children's health perspective, evaluate the statewide air monitoring network, and develop any additional air toxic control measures needed to protect children's health. Locally, toxic air pollutants are regulated through the SDAPCD's Regulation XII. Of particular concern statewide are diesel-exhaust particulate matter emissions. Diesel-exhaust particulate matter was established as a TAC in 1998, and is estimated to represent a majority of the cancer risk from TACs statewide (based on the statewide average). Diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have

been previously identified as TACs by the CARB and are listed as carcinogens either under the state's Proposition 65 or under the federal Hazardous Air Pollutants program.

Following the identification of diesel particulate matter (DPM) as a TAC in 1998, CARB has worked on developing strategies and regulations aimed at reducing the risk from DPM. The overall strategy for achieving these reductions is found in the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (CARB 2000). To monitor the effectiveness of the efforts to reduce DPM, CARB has supported field campaigns that measure real-world emissions from heavy-duty vehicles, and results indicate that regulations aimed at reducing emissions of DPM have been successful.

CARB published the *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB 2005). The handbook makes recommendations directed at protecting sensitive land uses from air pollutant emissions while balancing a myriad of other land use issues (e.g., housing, transportation needs, economics, etc.). It notes that the handbook is not regulatory or binding on local agencies and recognizes that application takes a qualitative approach. As reflected in the CARB Handbook, there is currently no adopted standard for the significance of health effects from mobile sources. Therefore, the CARB has provided guidelines for the siting of land uses near heavily traveled roadways. Of pertinence to this study, the CARB guidelines indicate that siting new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 or more vehicles/day should be avoided when possible.

As an ongoing process, CARB will continue to establish new programs and regulations for the control of diesel particulate and other air-toxics emissions as appropriate. The continued development and implementation of these programs and policies will ensure that the public's exposure to DPM will continue to decline.

#### 3.2.3 State Implementation Plan

The State Implementation Plan (SIP) is a collection of documents that set forth the state's strategies for achieving the NAAQS. In California, the SIP is a compilation of new and previously submitted plans, programs (such as air quality management plans, monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. The CARB is the lead agency for all purposes related to the SIP under state law. Local air districts and other agencies, such as the Department of Pesticide Regulation and the Bureau of Automotive Repair, prepare SIP elements and submit them to CARB for review and approval. The CARB then forwards SIP revisions to the U.S. EPA for approval and publication in the Federal Register. All of the items included in the California SIP are listed in the Code of Federal Regulations (CFR) at 40 CFR 52.220.

#### 3.2.4 The California Environmental Quality Act

Section 15125(d) of the California Environmental Quality Act (CEQA) Guidelines requires discussion of any inconsistencies between the project and applicable general plans and regional plans, including the applicable air quality attainment or maintenance plan (or SIP).

### 3.3 Local Regulations

#### 3.3.1 South Coast Air Quality Management District

The SCAQMD is the air pollution control agency in the SoCAB. The role of the local SCAQMD is to protect the people and the environment of the SoCAB from the effects of air pollution. As the SCAQMD is designated as a nonattainment area for state air quality standards for 8-hour ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>, SCAQMD periodically prepares air quality management plans outlining measures to reduce these pollutants. The most recent AQMP is the 2016 Air Quality Management Plan (2016 AQMP).

Emissions that would result from mobile, area, and stationary sources during construction and operation of the project are subject to the rules and regulations of SCAQMD. The SCAQMD rules applicable to the project may include the following:

- Rule 401, Visible Emissions. This rule establishes the limit for visible emissions from stationary sources.
- **Rule 402, Nuisance.** This rule prohibits the discharge of air pollutants from a facility that cause injury, detriment, nuisance, or annoyance to the public or damage to business or property.
- Rule 403, Fugitive Dust. This rule requires fugitive dust sources to implement best available control measures for all sources and prohibits all forms of visible particulate matter from crossing any property line. SCAQMD Rule 403 is intended to reduce PM<sub>10</sub> emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust.
- Rule 431.2, Sulfur Content of Liquid Fuels. The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose of reducing the formation of oxides of sulfur (SO<sub>x</sub>) and particulates during combustion and of enabling the use of add-on control devices for diesel-fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers such as distributors, marketers, and retailers, as well as to users of diesel, low-sulfur diesel, and other liquid fuels for stationary-source applications in the SCAQMD. The rule also affects diesel fuel supplied for mobile sources.
- Rule 1110.2, Emissions from Gaseous- and Liquid-Fueled Engines. This rule applies to stationary and portable engines rated at greater than 50 horsepower. The purpose of Rule 1110.2 is to reduce oxides of nitrogen (NO<sub>X</sub>), volatile organic compounds (VOC), and CO emissions from engines. Emergency engines, including those powering standby generators, are generally exempt from the emissions and monitoring requirements of this rule because they have permit conditions that limit operation to 200 hours or less per year as determined by an elapsed operating time meter.
- Rule 1113, Architectural Coatings. This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

#### 3.3.2 Southern California Association of Governments

In September 2020, SCAG adopted Connect SoCal, the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy. The Connect SoCal plan identifies that land use strategies that focus on new housing and job growth in areas with a variety of destinations and mobility options would support and complement the proposed transportation network. The overarching strategy in Connect SoCal is to provide for a plan that allows the southern California region to grow in more compact communities in transit priority areas and priority growth areas; provide neighborhoods with efficient and plentiful public transit; establish abundant and safe opportunities to walk, bike, and pursue other forms of active transportation; and preserve more of the region's remaining natural lands and farmlands (SCAG 2020). The Connect SoCal plan contains transportation projects to help more efficiently distribute population, housing, and employment growth as well as projected development that promotes active transport and reduces GHG emissions.

#### 3.3.3 City of Los Angeles

The City's General Plan contains an Air Quality Element that provides goals, objectives, and policies that guide the City in implementation of its air quality improvement programs and strategies. The Air Quality Element contains the following goals and objects, and provides policies to support each of the objectives.

Goal 1: Good air quality and mobility in an environment of continued population growth and health economic structure.

- Objective 1.1: It is the objective of the City of Los Angeles to reduce air pollutants consistent with the Regional Air Quality Management Plan (AQMP), increase traffic mobility, and sustain economic growth citywide.
- Objective 1.2: It is the objective of the City of Los Angeles to demonstrate the City's commitment to air quality improvement through the development and revision of the City's General Plan Elements as appropriate, and to work cooperatively with federal, state, regional, and other local jurisdictions in attaining clean air.
- Objective 1.3: It is the objective of the City of Los Angeles to reduce particulate air pollutants emanating from unpaved areas, parking lots, and construction sites.

Goal 2: Less reliance on single-occupant vehicles with fewer commute and non-work trips.

- Objective 2.1: It is the objective of the City of Los Angeles to reduce work trips as a step towards attaining trip reduction objectives necessary to achieve regional air quality goals.
- Objective 2.2: It is the objective of the City of Los Angeles to increase vehicle occupancy for non-work trips by creating disincentives for single passenger vehicles, and incentives for high occupancy vehicles.

Goal 3: Efficient management of transportation facilities and system infrastructure using costeffective system management and innovative demand-management techniques.

- Objective 3.1: It is the objective of the City of Los Angeles to increase the portion of work trips made by transit to levels that are consistent with the goals of the AQMP and the Congestion Management Plan.
- Objective 3.2: It is the objective of the City of Los Angeles to reduce vehicular traffic during peak periods.

Goal 4: Minimal impact of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality.

- Objective 4.1: It is the objective of the City of Los Angeles to include the regional attainment of ambient air quality standards as a primary consideration in land use planning.
- Objective 4.2: It is the objective of the City of Los Angeles to reduce vehicle trips and vehicle miles traveled associated with land use patterns.
- Objective 4.3: It is the objective of the City of Los Angeles to ensure that land use plans separate major sources of air pollution from sensitive receptors such as schools, hospitals, and parks.

Goal 5: Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels, and the implementation of conservation measures including passive methods such as site orientation and tree planting.

- Objective 5.1: It is the objective of the City of Los Angeles to increase energy efficiency of City facilities and private developments.
- Objective 5.2: It is the objective of the City of Los Angeles to have a portion of the City's service fleet be comprised of alternative fuel powered vehicles, subject to availability of funding, and practical feasibility.
- Objective 5.3: It is the objective of the City of Los Angeles to reduce the use of polluting fuels in stationary sources.

Goal 6: Citizen awareness of the linkages between personal behavior and air pollution, and participation in efforts to reduce air pollution.

• Objective 6.1: It is the objective of the City of Los Angeles to make air quality education and citizen participation a priority in the City's effort to achieve clean air standards.

The General Plan Mobility Element also contains goals, objectives, and policies for achieving a transportation system that balances the needs of all road users and includes goals to target GHG emissions reductions through a more sustainable transportation system. These goals also serve to reduce air pollution from mobile sources.

# 4.0 Environmental Setting

### 4.1 Site Conditions

The project site is situated on a developed commercial lot within the North Hills Plaza. The project site is currently occupied by a movie theater and retail uses and associated asphalt concrete parking lots. The project site fronts on Devonshire Street to the north and is bounded by commercial buildings and associated parking lots to the west, by single-family residential properties and a commercial building to the east, and single-family residential properties to the south. The nearest sensitive receptors are the residential uses located immediately adjacent to the eastern and southern project boundaries.

### 4.2 Regional Setting and Climate

The project is located approximately 15 miles north of the Pacific Ocean, within the city of Los Angeles in the SoCAB. The SoCAB is bounded by the Pacific Ocean to the west, the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and San Diego County to the south. Air quality in the county is influenced by both topographical and meteorological conditions.

The project area, like other inland valley areas in southern California, has a Mediterranean climate characterized by warm, dry summers and mild, wet winters. The Los Angeles International Airport climate monitoring station (ID 045114) is located approximately 20 miles south of the project site. Based on measurements taken at this climate monitoring station, the average annual precipitation is 12 inches, falling primarily from November to April (Western Regional Climate Center 2022). Overall annual temperatures in the project area average about 63 degrees Fahrenheit (°F), winter low temperatures average about 48°F, and summer high temperatures average about 74°F.

The dominant meteorological feature affecting the region is the Pacific High Pressure Zone, which produces the prevailing westerly to northwesterly winds. These winds tend to blow pollutants away from the coast toward the inland areas. Consequently, air quality near the coast is generally better than that which occurs at the base of the coastal mountain range.

The prevailing westerly wind pattern is sometimes interrupted by regional "Santa Ana" conditions. A Santa Ana occurs when a strong high pressure develops over the Nevada–Utah area and overcomes the prevailing westerly coastal winds, sending strong, steady, hot, dry northeasterly winds over the mountains and out to sea.

### 4.3 Existing Air Quality

As discussed in Section 1.0 above, the State of California is divided geographically into 15 air basins for managing the air resources of the state on a regional basis. The project is located in the SoCAB, which includes Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The SoCAB is designated as in attainment or unclassifiable attainment (expected to be meeting the standard despite a lack of monitoring data) for all federal air quality

standards except 8-hour ozone and PM<sub>2.5</sub> standards. The SoCAB is designated as in nonattainment for state air quality standards for 8-hour ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>.

Air quality is commonly expressed as the number of days in which air pollution levels exceed state standards set by CARB or federal standards set by the U.S. EPA. SCAQMD has divided its jurisdictional territory of the SoCAB into 38 Source Receptor Areas (SRAs), most of which have monitoring stations that collect air quality data. These SRAs are designated to provide a general representation of the local meteorological, terrain, and air quality conditions within the particular geographical area. These geographical areas include urbanized regions, interior valleys, coastal areas, and mountains. The project site is located within West San Fernando Valley SRA 6. The SCAQMD maintains 41 active air quality monitoring sites located throughout the SoCAB. Air pollutant concentrations and meteorological information are continuously recorded at these stations. Measurements are then used by scientists to help forecast daily air pollution levels.

The nearest monitoring stations include the Reseda monitoring station, located approximately four miles southwest of the project site at 18330 Gault Street. The Reseda monitoring station measures ozone, NO<sub>2</sub>, and PM<sub>2.5</sub>. Table 2 provides a summary of measurements collected at the Reseda monitoring station for the years 2018 through 2020.

Table 2           Summary of Air Quality Measurements Recorded at the Reserve Air Quality Monitoring Station					
Pollutant/Standard	2018	2019	2020		
Ozone					
Federal Max 8-hr (ppm)	0.101	0.094	0.115		
Days 2015 Federal 8-hour Standard Exceeded (0.07 ppm)	49	34	62		
Days 2008 Federal 8-hour Standard Exceeded (0.075 ppm)	23	20	45		
State Max 8-hr (ppm)	0.101	0.094	0.116		
Days State 8-hour Standard Exceeded (0.07 ppm)	50	37	65		
Max. 1-hour (ppm)	0.120	0.122	0.142		
Days State 1-hour Standard Exceeded (0.09 ppm)	0	0	4		
Nitrogen Dioxide					
Max 1-hour (ppm)	0.0572	0.0644	0.0499		
Days State 1-hour Standard Exceeded (0.18 ppm)	0	0	0		
Days Federal 1-hour Standard Exceeded (0.100 ppm)	0	0	0		
Annual Average (ppm)	0.012	0.010	0.010		
PM <sub>2.5</sub> *					
Federal Max. Daily (µg/m³)	38.9	30.0	73.8		
Measured Days Federal 24-hour Standard Exceeded (35 $\mu$ g/m <sup>3</sup> )	1	0	3		
Calculated Days Federal 24-hour Standard Exceeded (35 µg/m <sup>3</sup> )		0.0	8.9		
Federal Annual Average (µg/m <sup>3</sup> )		9.1	11.0		
State Max. Daily ( $\mu$ g/m <sup>3</sup> )	15.8	11.9	11.0		

SOURCE: CARB 2022.

ppm = parts per million;  $\mu$ g/m<sup>3</sup> = micrograms per cubic meter; -- = Not available.

Calculated days value. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

# 5.0 Significance Criteria

The significance thresholds used in this analysis were based on Appendix G of the CEQA Guidelines as well as guidance from the SCAQMD for assessing air quality impacts. The following thresholds

were used to determine significance of air quality impacts associated with the project. Adverse air quality impacts would occur if implementation of the project would:

- Obstruct or conflict with the implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standards (including the release of emissions which exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentration including air toxics.
- Create objectionable odors affecting a substantial number of people.

### 5.1 Regional Significance Thresholds

The SCAQMD has established significance thresholds to assess the regional and localized impacts of project-related air pollutant emissions. These significance thresholds are updated as needed to appropriately represent the most current technical information and attainment status in the SoCAB. The City uses the current SCAQMD thresholds to determine whether a project would have a significant impact. SCAQMD's significance thresholds for impacts to regional air quality are shown in Table 3.

Table 3						
SCAQMD Air Quality Significance Thresholds – Mass Daily Thresholds						
Pollutant Emissions (pounds)						
	Construction	Operational				
Oxides of Nitrogen (NO <sub>X</sub> )	100	55				
Volatile Organic Compounds (VOC)	75	55				
Coarse Particulate Matter (PM <sub>10</sub> )	150	150				
Fine Particulate Matter (PM <sub>2.5</sub> )	55	55				
Oxides of Sulfur (SO <sub>X</sub> )	150	150				
Carbon Monoxide (CO)	550	550				
Lead (Pb) 3 3						
SOURCE: SCAQMD CEQA Air Quality Handbook (SCAQMD 1993); SCAQMD Air Quality						
Significance Thresholds (SCAQMD 2015)						

## 5.2 Localized Significance Thresholds

The SCAQMD's Final Localized Significance Threshold (LST) Methodology was developed as a tool to assist lead agencies to analyze localized air quality impacts to sensitive receptors in the vicinity of the project (SCAQMD 2008). The LST Methodology outlines how to analyze localized impacts from common pollutants of concern including NO<sub>2</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. Localized air quality impacts would occur if pollutant concentrations at sensitive receptors exceeded applicable NAAQS or CAAQS.

LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses. The significance of localized emissions impacts depends on whether ambient levels in the vicinity of any given project are above or below State standards. In the case of CO and NO<sub>2</sub>, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a state or federal standard, then project emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM<sub>10</sub> and PM<sub>2.5</sub>, both of which are non-attainment pollutants.

# 6.0 Air Quality Calculations

Construction impacts are short term and result from fugitive dust, equipment exhaust, and indirect effects associated with construction workers and deliveries. Operational impacts can occur on two levels: regional or local. In the case of this project, operational impacts are primarily due to emissions from project-related mobile sources associated with vehicular travel along the roadways. Operational emissions also consist of area sources that are direct sources of emissions located at the project site.

Construction and operation air emissions were calculated using California Emissions Estimator Model (CalEEMod) 2020.4.0 (California Air Pollution Control Officers Association 2021). The CalEEMod program is a tool used to estimate air emissions resulting from land development projects based on California-specific emission factors. The model estimates mass emissions from two basics sources: construction sources and operational sources (i.e., area and mobile sources).

Inputs to CalEEMod include such items as the air basin containing the project, land uses, trip generation rates, trip lengths, vehicle fleet mix (percentage of autos, medium truck, etc.), trip destination (i.e., percent of trips from home to work, etc.), duration of construction phases, construction equipment usage, grading areas, season, and ambient temperature, as well as other parameters. The CalEEMod output files presented in Attachment 1 indicate the specific outputs for each model run. Emissions of NO<sub>X</sub>, CO, SO<sub>X</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and reactive organic gases (ROG) are calculated. Emission factors are not available for lead and consequently lead emissions are not calculated. The SoCAB is currently in attainment of the federal and state lead standards. Furthermore, fuel used in construction equipment and most other vehicles is not leaded.

### 6.1 Construction Regional Emissions

Construction-related activities are temporary, short-term sources of emissions. Sources of construction-related emissions include the following:

- Fugitive dust from grading activities;
- Construction equipment exhaust; and
- Construction-related trips by workers, delivery trucks, and material-hauling trucks.

Construction-related emissions include emissions from dust raised during grading, exhaust from construction vehicles, and chemicals used during construction. Fugitive dust emissions vary greatly during construction and are dependent on the amount and type of activity, silt content of the soil, and the weather. Vehicles moving over paved and unpaved surfaces, excavation, earth movement, grading, and wind erosion from exposed surfaces are all sources of fugitive dust. Construction operations are subject to the requirements established by the SCAQMD including Rule 403, Fugitive Dust. Rule 403 requires the use of best available control measures for fugitive dust. This analysis assumes that standard dust and emission control during grading operations would be implemented to reduce potential nuisance impacts and to ensure compliance with SCAQMD Rule 403, which is estimated to result in a 61 percent reduction in fugitive dust from watering three times per day. The project would also be required to comply with SCAQMD Rule 1113, which places VOC content limits on architectural coatings. Criteria pollutant emissions were calculated using the default VOC content values of 50 and 100 grams per liter which was provided by the SCAQMD.

Heavy-duty construction equipment is usually diesel-powered. Standard construction equipment includes dozers, rollers, scrapers, dewatering pumps, backhoes, loaders, paving equipment, delivery/haul trucks, jacking equipment, welding machines, pile drivers, and so on. Specific construction phasing and equipment parameters are not available at this time. However, CalEEMod can estimate the required construction equipment when project-specific information is unavailable. The estimates are based on surveys, performed by the SCAQMD and the Sacramento Metropolitan Air Quality Management District, of typical construction projects that provide a basis for scaling equipment needs and schedule with a project's size. Air emission estimates in CalEEMod are based on the duration of construction phases; construction equipment type, quantity, and usage; grading area; season; and ambient temperature, among other parameters. The construction schedule is based on the default construction phases, which include demolition, site preparation, grading, building construction, paving, and architectural coatings. Construction is anticipated to last for two years, and the project is anticipated to be operational in 2025. The CalEEMod default construction phase lengths were adjusted proportionately to reflect a two-year construction period. Default construction equipment for the demolition, building construction, paving, and architectural coatings phases of construction were modeled. Because the project site is currently a graded and paved shopping center, the site preparation and grading equipment required for the project would be less than that compared to an undeveloped site that would require grubbing and mass grading. Therefore, the amount of construction equipment modeled was reduced to one dozer and two tractors/loaders/backhoes during the site preparation phase and one excavator, one dozer, and two tractors/loaders/backhoes during the grading phase.

Table 4 summarizes the anticipated construction phases, duration, and equipment for total project construction. Table 5 shows the total projected construction maximum daily emission levels for each criteria pollutant and compares emissions to the SCAQMD regional significance thresholds. The CalEEMod output files for construction emissions are presented in Attachment 1.

Table 4							
Construction Phases and Equipment							
		Daily Operation Time					
Equipment	Quantity	(Hours)					
Demolition (33 days)							
Concrete/Industrial Saws	1	8					
Excavators	3	8					
Rubber Tired Dozers	2	8					
Site	Preparation (16 days)						
Rubber Tired Dozers	1	8					
Tractors/Loaders/Backhoes	2	8					
	Grading (33 days)						
Excavators	1	8					
Rubber Tired Dozers	1	8					
Tractors/Loaders/Backhoes	2	8					
Building	Construction (374 day	s)					
Cranes	1	7					
Forklifts	3	8					
Generator Sets	1	8					
Tractors/Loaders/Backhoes	3	7					
Welders	1	8					
	Paving (33 days)						
Pavers	2	8					
Paving Equipment	2	8					
Rollers	2	8					
Architectural Coatings (33 days)							
Air Compressor	1	6					
NOTE: Each phase would also include vehicles associated with work commutes,							
dump trucks for hauling, and trucks for deliveries.							

Table 5								
Maximum Daily Construction Emissions								
		Emissions (pounds per day)						
Construction	ROG	NOx	CO	SO <sub>2</sub>	PM10	PM <sub>2.5</sub>		
Demolition	2	23	21	<1	3	1		
Site Preparation	1	10	8	<1	3	2		
Grading	1	12	11	<1	3	2		
Building Construction	2	17	22	<1	3	1		
Paving	1	10	15	<1	1	<1		
Architectural Coatings	40	1	3	<1	<1	<1		
Maximum Daily Emissions <sup>1</sup>	40	23	22	<1	3	2		
SCAQMD Significance Threshold	75	100	550	150	150	55		
Exceeds Threshold?	No	No	No	No	No	No		
<sup>1</sup> Emissions were rounded to the nearest whole number. Emissions reported as <1 indicate								
that emissions were calculated to be less than 0.5 pound per day.								

As shown in Table 5, maximum daily construction emissions for each separate phase of construction of the project would be less than the daily SCAQMD regional thresholds for all criteria pollutants.

### 6.2 Operational Regional Emissions

Mobile source emissions would originate from traffic generated by the project. Area source emissions would result from the use of natural gas, consumer products, as well as applying architectural coatings and landscaping activities.

#### 6.2.1 Mobile Sources

Mobile source operational emissions are based on the trip rate, trip length, and vehicle mix. Trip generation rates for the existing and proposed land uses are based on the ITE Trip Generation Manual, 11<sup>th</sup> Edition, for Home Improvement Store (ITE Land Use Code 862), Shopping Center (ITE Land Use Code 860), and Movie Theater (ITE Land Use Code 444). Weekday trip generation for the existing and proposed uses are summarized in Table 6. Weekend trip generation rates were calculated by proportionately adjusting the default CalEEMod trip rates. CalEEMod default trip lengths were modeled utilizing default vehicle emission factors based on CARB's 2017 EMissions FACtor model. Mobile emissions were calculated based on the total gross project trip generation. Trips associated with the existing land uses that would be demolished as part of the project are provided for informational purposes. As shown in Table 6, the project would result in fewer trips than the existing land uses.

Table 6							
Project Trip Generation							
Land Use	Land Use Land Use Code Size Daily Trip Rate						
	Proposed Land Use						
Home Depot	862: Home Improvement Superstore	107,560 sf	30.74 per 1,000 sf	3,306			
Less 20% Pass-by				-661			
Shopping Center	920: Chapping Captor	10.000 of	27.75 mar 1.000 of	270			
(Portion to Remain)	820. Shopping Center	10,000 SI	37.75 per 1,000 si	378			
Less 50% Pass-by							
Proposed Land Use Total T	rips			2,834			
	Existing Land Use						
Movie Theater	444: Movie Theater	2,400 seats	1.76 per seat	4,224			
Less 10% Pass-by				-422			
Shopping Center	920: Chapping Captor		27.75 mar 1.000 of	2,000			
(Portion to be Demolished)	820. Shopping Center	55,600 SI	37.75 per 1,000 si	2,099			
Less 50% Pass-by							
Existing Land Use to be Demolished Total Trips							
sf = square feet.							
SOURCE: Linscott, Law & Greenspan Engineers 2022.							

#### 6.2.2 Area Sources

Area sources are defined as direct sources of operational emissions located at the project site. Area source emissions associated with the project include consumer products, architectural coatings, and landscaping equipment. Hearths (fireplaces) and woodstoves are also a source of area emissions;

however, the project would not include hearths or woodstoves. Consumer products are chemically formulated products used by household and institutional consumers, including, but not limited to, detergents, cleaning compounds, polishes, floor finishes, disinfectants, sanitizers, and aerosol paints but not including other paint products, furniture coatings, or architectural coatings. Emissions due to consumer products are calculated using total building area and product emission factors.

For architectural coatings, emissions result from evaporation of solvents contained in surface coatings such as in paints and primers. Emissions are based on the building surface area, architectural coating emission factors, and a reapplication rate of 10 percent of area per year. Landscaping maintenance includes fuel combustion emission from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers as well as air compressors, generators, and pumps. Emission calculations take into account building area, equipment emission factors, and the number of operational days (summer days).

#### 6.2.3 Energy Sources

Energy source emissions associated with the project include natural gas used in space and water heating. Emissions are generated from the combustion of natural gas used in space and water heating. Emissions are based on the Residential Appliance Saturation Survey which is a comprehensive energy use assessment that includes the end use for various climate zones in California.

#### 6.2.4 Total Operational Emissions

Table 7 provides a summary of the operational emissions generated by the project. CalEEMod output files are presented in Attachment 1. As shown in Table 7, project-generated emissions are projected to be less than the SCAQMD's significance thresholds for all criteria pollutants.

Table 7 Summary of Project Operational Emissions								
(pounds per day)								
			Emis	sions				
Source	ROG	NOx	CO	SOx	PM10	PM <sub>2.5</sub>		
Area Sources	3	<1	<1	<1	<1	<1		
Energy Sources	<1	<1	<1	<1	<1	<1		
Mobile Sources	14	17	149	<1	38	10		
Total	18	17	149	<1	38	10		
SCAQMD Significance Threshold	55	55	550	150	150	55		
Exceeds Threshold?	No	No	No	No	No	No		
NOTE: Totals may vary due to independent rounding.								

### 6.3 Localized Significance Thresholds

#### 6.3.1 Construction Localized Significance Thresholds Calculations

The project site is located within Moreno Valley Source Receptor Area 24. LSTs apply to on-site air emissions of CO, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. Based on the SCAQMD's Fact Sheet for Applying CalEEMod to Localized Significance Thresholds (Fact Sheet), the appropriate methodology for determining localized impacts that could occur as a result of project-related construction, should follow these steps:

- Use CalEEMod to determine the maximum daily on-site emissions that will occur during construction activity.
- The SCAQMD's Fact Sheet is used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod.
- If the total calculated acreage is less than or equal to five acres, then the SCAQMD's screening look-up tables may be utilized to determine the potential for significant impacts. The look-up tables establish a maximum daily emissions threshold in pounds per day to be directly compared to CalEEMod emission results.
- If the total acreage disturbed is greater than five acres per day, then the SCAQMD recommends dispersion modeling to be conducted to determine the actual pollutant concentrations for applicable LSTs.

Additionally, the LST Methodology (SCAQMD 2008) states that only on-site emissions should be compared to LSTs. Therefore, off-site emissions associated with worker travel, materials deliveries, and other mobiles sources are not evaluated against LSTs.

The maximum on-site daily construction emissions for CO, NO<sub>X</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are compared to the applicable screening thresholds based on construction site acreage and the distance to the closest sensitive receptor. The nearest sensitive receptors are the residential uses located approximately 40 feet south of the southern project boundary and the church located approximately 20 feet west of the western project boundary. To determine the maximum daily disturbed acreage for use in the SCAQMD's LST look-up tables, the maximum acres per day were developed from the CalEEMod Users Guide. Based on the CalEEMod Users Guide, the project is anticipated to disturb approximately 1.5 acres per day during the site preparation phase and 2.0 acres per day during the grading phase (Table 8). The SCAQMD's LST look-up tables provide LSTs for one, two, and five acre sites. Using the guidance provided in the LST Methodology, LSTs for 1.5 acres were developed using ratios of the known acreages and corresponding LSTs using the methodology provided in Appendix K of the SCAQMD's *Sample Construction Scenarios for Projects Less than Five Acres in Size* (SCAQMD 2005). The closest receptor distance in LST look-up tables is 25 meters. Receptors are located closer than 25 meters from the project site. SCAQMD's guidance indicates that projects with sensitive receptors located closer than 25 meters should use the LSTs for receptors located at 25 meters.

Table 8 Maximum Disturbed Acres						
Phase	Equipment	Pieces	Acres/Piece	Total Daily Acres		
Site Preparation	Rubber Tired Dozers	1	0.5	0.5.		
	Tractors/Loaders/Backhoes	2	0.5	1.0		
	Total Acres			1.5		
Grading	Excavators	1	0.5	0.5		
	Rubber Tired Dozers	1	0.5	0.5		
	Tractors/Loaders/Backhoes	2	0.5	1.0		
	Total Acres			2.0		
SOURCE: California Air Pollution Control Officers Association 2021.						

The maximum daily localized emissions from project construction and LSTs are presented in Table 9. As shown in Table 9, the maximum localized construction emissions would not exceed any of the SCAQMD recommended localized screening thresholds.

Table 9					
Localized Construction Emissions					
	NO <sub>X</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>	
Site Preparation (1.5 acres per day)					
Maximum On-Site Daily Emission	10.2	7.6	3.0	1.8	
LST Threshold	123.9	532.3	5.0	3.5	
Exceeds Threshold?	No	No	No	No	
Grading (2.0 acres per day)					
Maximum On-Site Daily Emission	11.7	10.8	3.1	1.8	
LST Threshold	147.0	644.0	6.0	4.0	
Exceeds Threshold?	No	No	No	No	

#### 6.3.2 Operational Localized Significance Thresholds Calculations

Project operations impacts were also assessed used SCAQMD LSTs. Table 10 presents the maximum on-site emissions and applicable LSTs. As a conservative assessment, on-site emissions were evaluated against the most restrictive LSTs for a 1-acre project site with a sensitive receptor located 25 meters from the project boundary. As shown in Table 10, the maximum localized operational emissions would not exceed any of the SCAQMD recommended localized screening thresholds.

Table 10					
Localized Operations Emissions					
	Pollutant (pounds per day)				
Operations	NO <sub>X</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>	
Area Sources	0.00	0.01	0.00	0.00	
Energy Sources	0.06	0.05	0.00	0.00	
Maximum On-Site Emissions	0.06	0.06	0.00	0.00	
Operations LST Threshold <sup>1</sup>	103	426	1	1	
Exceeds Threshold?	No	No	No	No	
<sup>1</sup> Emissions are assessed against the threshold for 1-acre project sites with sensitive					
receptors within 25 meters of the project site boundary.					

#### 6.4 Impact Analysis

#### 1. Would the project obstruct or conflict with the implementation of the applicable air quality plan?

As described in Section 3.0 above, the SoCAB is designated as in attainment or unclassifiable attainment (expected to be meeting the standard despite a lack of monitoring data) for all federal air quality standards except for the 8-hour ozone and PM<sub>2.5</sub> standards. The SoCAB is also designated as in nonattainment for state air quality standards for 8-hour ozone and PM<sub>2.5</sub>, and additionally is in nonattainment of state PM<sub>10</sub> standards. The regional air quality plan, the 2016 AQMP, outlines measures to reduce emissions of ozone and PM<sub>2.5</sub>. Whereas reducing PM concentrations is achieved by reducing emissions of PM<sub>2.5</sub> to the atmosphere, reducing ozone concentrations is achieved by reducing the precursors of photochemical formation of ozone, VOC, and NO<sub>x</sub>.

The growth forecasting for the 2016 AQMP is based in part on the land uses established by local general plans. Thus, if a project is consistent with land use as designated in the local general plan, it can normally be considered consistent with the 2016 AQMP. Projects that propose a different land use than is identified in the local general plan may also be considered consistent with the 2016 AQMP if the proposed land use is less intensive than buildout under the current designation. For projects that propose a land use that is more intensive than the current designation, analysis that is more detailed is required to assess conformance with the 2016 AQMP.

The project site is designated as Community Commercial in the City's General Plan and is zoned C2-1VL. The project would be consistent with these designations, and therefore would not result in an exceedance of the growth forecasting used to develop the 2016 AQMP. Further, the project would result in a decrease in emissions compared to the existing land use. This is due to the decrease in project-generated trips.

Another factor used to determine if a project would conflict with implementation of the 2016 AQMP is determining if the project would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards (NAAQS and CAAQS) or interim emissions reductions specified in the 2016 AQMP. NAAQS and CAAQS violations could occur if project emissions would exceed regional significance thresholds or LSTs. As shown in Tables 5 and 7 above, construction and operational emissions would not exceed the regional significance thresholds. Additionally, as shown in Tables 9 and 10 above, construction

and operational emissions would not exceed the LSTs. Therefore, the project would not conflict with or obstruct the implementation of the 2016 AQMP or applicable portions of the SIP, and impacts would be less than significant.

2. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

As discussed in Section 3.0 above, the SoCAB is classified as in attainment for all criterion pollutants except for ozone,  $PM_{10}$ , and  $PM_{2.5}$ . The SoCAB is designated as a nonattainment area for federal AAQS for the 8-hour ozone and  $PM_{2.5}$  standards, and is in nonattainment area under state  $PM_{10}$  standards. Ozone is not emitted directly, but is a result of atmospheric activity on precursors.  $NO_X$  and ROG are known as the chief "precursors" of ozone. These compounds react in the presence of sunlight to produce ozone.

Based on SCAQMD cumulative significance methodologies, the emissions-based thresholds shown in Table 3 are used to determine if a project's contribution to regional cumulative emissions is cumulatively considerable. These thresholds were used to assess the significance of the project-specific and cumulative air quality impacts. Air quality impacts are basin-wide, and air quality is affected by all pollutant sources in the SoCAB. As the individual project thresholds are designed to help achieve attainment with cumulative basin-wide standards, they are also appropriate for assessing the project's contribution to cumulative impacts.

As shown in Tables 5 and 7 above, emissions of ozone precursors (ROG and NO<sub>x</sub>), PM<sub>10</sub>, and PM<sub>2.5</sub> from construction and operation would be below the SCAQMD's thresholds of significance. These thresholds are designed to provide limits below which project emissions from an individual project would not significantly affect regional air quality or the timely attainment of the NAAQS and CAAQS. Therefore, the project would not result in a cumulatively considerable net increase in emissions of ozone, PM<sub>10</sub>, or PM<sub>2.5</sub>, and impacts would be less than significant.

*3.* Would the project expose sensitive receptors to substantial pollutant concentration including air toxics such as diesel particulates?

A sensitive receptor is a person in the population who is more susceptible to health effects due to exposure to an air contaminant than is the population at large. Examples of sensitive receptor locations in the community include residences, schools, playgrounds, childcare centers, churches, athletic facilities, retirement homes, and long-term health care facilities. The nearest sensitive receptors are the residential uses located adjacent to the eastern and southern project boundaries.

#### Diesel Particulate Matter – Construction

Construction of the project would result in short-term diesel exhaust emissions from on-site heavy-duty equipment. Other construction-related sources of DPM include material delivery trucks and construction worker vehicles; however, these sources are minimal relative to construction equipment. Not all construction worker vehicles would be diesel-fueled and most DPM emissions associated with material delivery trucks and construction worker vehicles would occur off-site.

For purposes of analyzing construction-related toxic air contaminant emissions and their impact on sensitive receptors, the maximum annual PM<sub>10</sub> emissions from equipment exhaust were used to develop an average daily emission rate. The exhaust emissions were calculated by CalEEMod, and the maximum annual DPM concentration was calculated using AERSCREEN. AERSCREEN calculates a worst-case maximum 1-hour concentration at a specific distance and specific angle from the source. The maximum 1-hour concentration is then converted to an annual concentration using a 0.08 conversion factor (U.S. Environmental Protection Agency [U.S. EPA] 1992).

Once the dispersed concentrations of diesel particulates are estimated in the surrounding air, they are used to evaluate estimated exposure to people. Exposure is evaluated by calculating the dose in milligrams per kilogram body weight per day (mg/kg/d). For residential exposure, the breathing rates are determined for specific age groups, so inhalation dose (Dose-air) is calculated for each of these age groups: third trimester of pregnancy, 0<2, 2<9, 2<16, 16<30 and 16–70 years. The equation for dose through inhalation (Dose-air) is as follows:

Dose-air = ( $C_{air} \times DBR \times A \times EF \times 10^{-6}$ ); Where:

Dose-air	=	Chronic daily intake, mg/kg/d
$C_{air}$	=	Ground-level concentration of toxic air contaminants to which the receptor is
		exposed, micrograms/cubic meter
DBR	=	Daily breathing rate, normalized to body weight (liters per kilogram body
		weight per day (Office of Environmental Health Hazard Assessment [OEHHA]
		2015)
А	=	Inhalation absorption factor (OEHHA recommended factor of 1)
EF	=	Exposure frequency, days/year (OEHHA recommended factor of 0.96 for
		resident and 0.68 for workers)

Cancer risk is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor, the frequency of time spent at home and the exposure duration divided by averaging time, to yield the excess cancer risk. The excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk for any given location. The worst-case cancer risk is calculated as follows:

Excess Cancer Risk = Dose-air  $\times$  CPF  $\times$  ASF  $\times$  ED/AT  $\times$  FAH; Where:

Dose-air	=	Chronic daily intake, mg/kg body weight per day
CPF	=	Cancer potency factor (mg/kg/d)
ASF	=	Age sensitivity factor
ED	=	Exposure duration (years)
AT	=	Averaging time for lifetime cancer risk (years)
FAH	=	Fraction of time at home

Non-cancer risks are defined as chronic or acute. With respect to DPM only chronic risks are calculated and are determined by the hazard index. To calculate hazard index, DPM concentration is divided by its chronic Reference Exposure Levels. Where the total equals or exceeds one, a health hazard is presumed to exist.

In this analysis, non-carcinogenic impacts are evaluated for chronic exposure inhalation exposure. Estimates of health impacts from non-carcinogenic concentrations are expressed as a hazard quotient (HQ) for individual substances, such as diesel particulate. An HQ of one or less indicates that adverse health effects are not expected to result from exposure to emissions of that substance. Reference Exposure Levels are defined as the concentration at which no adverse health effects are anticipated. Generally, the inhalation pathway is the largest contributor to the total dose. The HQ is calculated with the flowing equation:

HQ = Ground-Level Concentration ( $\mu$ g/m<sup>3</sup>)/Reference Exposure Level ( $\mu$ g/m<sup>3</sup>)

It should also be noted that all construction equipment is subject to the CARB In-Use Off-Road Diesel-Fueled Fleets Regulation. This regulation, which applies to all off-road diesel vehicles 25 horsepower or greater, limits unnecessary idling to five minutes, requires all construction fleets to be labeled and reported to CARB, bans Tier 0 equipment and phases out Tier 1 and 2 equipment (thereby replacing fleets with cleaner equipment), and requires that fleets comply with Best Available Control Technology requirements.

Based on the CalEEMod calculations for project construction, the project would result in on-site maximum annual emissions of 0.0938 ton of  $PM_{10}$  exhaust. This maximum annual emissions rate was modeled over the entire two-year construction period, and therefore is a conservative assessment. Based on AERSCREEN modeling results, the maximum 1-hour ground-level DPM concentration from construction activities would be 0.0304 micrograms per cubic meter ( $\mu g/m^3$ ). This was converted to an annual average concentration of 0.0243  $\mu g/m^3$  using a conversion factor of 0.08 (U.S. EPA 1992). The resulting annual concentration was used in the equations discussed above. Using this methodology, it was calculated that the excess cancer risk would be 0.84 in a million. AERSCREEN and cancer risk calculations are provided in Attachment 2. DPM generated by project construction is not expected to create conditions where the probability is greater than 10 in 1 million of contracting cancer. Additionally, the HQ would be 0.0005, which is less than one. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations associated with diesel particulate matter during construction that could result in excess cancer risks, and impacts would be less than significant.

#### Carbon Monoxide Hot Spots

A CO hot spot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near congested intersections where idling and queuing occurs. Due to increased requirements for cleaner vehicles, equipment, and fuels, CO levels in the state have dropped substantially. All air basins are attainment or maintenance areas for CO. Therefore, more recent screening procedures based on more current methodologies have been developed. The Sacramento Metropolitan Air Quality Management District developed a screening threshold in 2011, which states that any project involving an intersection experiencing 31,600 vehicles per hour or more will require detailed analysis. In addition, the Bay Area Air Quality Management District developed a

screening threshold in 2010 which states that any project involving an intersection experiencing 44,000 vehicles per hour would require detailed analysis. This analysis conservatively assesses potential CO hot spots using the Sacramento Metropolitan Air Quality Management District screening threshold of 31,600 vehicles per hour.

Table 11 Intersection Turning Volumes					
Intersection	AM Peak Hour Volume	PM Peak Hour Volume			
Devonshire Street and Balboa Boulevard	5,539	5,637			
Devonshire Street and Petit Avenue	1,707	2,382			
Devonshire Street and Hayvenhurst Avenue	2,307	3,073			
Balboa Boulevard and Lassen Street	5,992	4,976			
SOURCE: Linscott, Law & Greenspan Engineers 2022.					

The AM and PM peak hour turning volumes at the study area intersections were obtained from the Transportation Assessment Report prepared for the project. The volumes are summarized in Table 11.

As determined in the Transportation Assessment Report, the project would generate a net increase of 113 AM peak hour trips and a net decrease of 81 PM peak hour trips. Based on this, the hourly turning volumes at nearby intersections are projected to be well less than 31,600 vehicles per hour. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations associated with a CO hot spot, and impacts would be less than significant.

# Would the project result in other emissions, such as those leading to odors adversely affecting a substantial number of people?

The potential for an odor impact is dependent on a number of variables, including the nature of the odor source, distance between the receptor and odor source, and local meteorological conditions. During construction, construction equipment may generate some nuisance odors. Sensitive receptors near the project site include residential uses; however, exposure to odors associated with project construction would be short term and temporary in nature. Further, per CARB's Airborne Toxic Control Measures 13 (California Code of Regulations Chapter 10 Section 2485), the applicant shall not allow idling time to exceed 5 minutes unless more time is required per engine manufacturers' specifications or for safety reasons. Therefore, project construction would be less than significant.

The following list provides some common types of facilities that are known producers of objectionable odors (Bay Area Air Quality Management District 2017). This list of facilities is not meant to be all-inclusive.

- Wastewater Treatment Plant
- Wastewater Pumping Facilities
- Sanitary Landfill
- Transfer Station
- Composting Facility

- Petroleum Refinery
- Asphalt Batch Plant
- Chemical Manufacturing
- Fiberglass Manufacturing
- Painting/Coating Operations
- Rendering Plant
- Coffee Roaster
- Food Processing Facility
- Confined Animal Facility/Feed Lot/Dairy
- Green Waste and Recycling Operations
- Metal Smelting Plants

The project does not include any of these uses that are typically associated with odor complaints. The project does not propose any uses or activities that would result in potentially significant operational-source odor impacts. Additionally, SCAQMD Rule 402 acts to prevent occurrences of odor nuisances. Therefore, project operation would not generate odors adversely affecting a substantial number of people, and impacts would be less than significant.

# 7.0 Conclusions

The project's potential to result in impacts to air quality was assessed in accordance with the guidelines, policies, and standards established by the City and the SCAQMD. The SCAQMD prepared the 2016 AQMP, which represents its contribution to the SIP, to outline the district's strategy for achieving attainment of federal and state AAQS. The 2016 AQMP provides an overview of air quality and sources of air pollution, and identifies the pollution-control measures needed to meet clean air standards. The project site is designated as COMU in the City's 2040 General Plan. The project would be consistent with the COMU land use designation. The project would, therefore, not result in an exceedance of the growth forecasting used to develop the 2016 AQMP. Further, the project would result in a decrease in emissions compared to the existing land use. This is due to the decrease in project-generated trips Additionally, the project would not result in an air quality violation. Therefore, the project would not conflict with or obstruct the implementation of the 2016 AQMP or applicable portions of the SIP, and impacts would be less than significant.

As shown in Tables 5 and 7 above, project construction and operation would not exceed the SCAQMD's thresholds of significance. Therefore, the project would not result in regional emissions that would exceed the NAAQS or CAAQS or contribute to existing violations, and impacts would be less than significant.

On-site emissions during construction and operation would be less than the SCAQMD LSTs. Project construction would not result in the exposure of sensitive receptors to significant levels of DPM that could result in excess cancer risks. The project would not result in the creation of a CO hot spot. Therefore, construction and operation of the project would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

During construction, potential odor sources would be associated with construction equipment; however, exposure to odors associated with project construction would be short term and temporary in nature. Operation of the project would not include any uses that would generate substantial odors. Therefore, the project would not generate odors adversely affecting a substantial number of people, and impacts would be less than significant.

# 8.0 References Cited

Bay Area Air Quality Management District

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- 2015 Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments (Guidance Manual), February.
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  - 1993 SCAQMD CEQA Air Handbook. November.
  - 2005 Sample Construction Scenarios for Projects Less Than Five Acres in Size. February 2005.
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2022 Western U.S. Climate Historical Summaries. https://wrcc.dri.edu/cgibin/cliMAIN.pl?ca5114. Accessed June 14.

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1992 Screening Procedures for Estimating the Air Quality Impact of Stationary Sources.

# ATTACHMENTS
# ATTACHMENT 1

CalEEMod Output

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

# 10064 Home Depot South Coast AQMD Air District, Winter

# **1.0 Project Characteristics**

#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	5.52	Acre	5.52	240,451.20	0
Home Improvement Superstore	135.98	1000sqft	3.12	135,980.00	0

# **1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	12			Operational Year	2025
Utility Company	Los Angeles Department of	Water & Power			
CO2 Intensity (Ib/MWhr)	691.98	CH4 Intensity (Ib/MWhr)	0.033	N2O Intensity 0 (Ib/MWhr)	.004

# 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Phase length proportionately adjusted to reflect 2 year construction period

Demolition - 55,600 square feet retail 40,000 square foot movie theater

Grading -

Vehicle Trips - Adjusted to reflect 2,645 weekday trips Weekend defaults proportnately adjusted Energy Use -

Construction Off-road Equipment Mitigation -

Off-road Equipment - Equipment reduced becuase minimal site preparation required

Off-road Equipment - Equipment reduced becuase no mass grading required

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

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	33.00
tblConstructionPhase	NumDays	230.00	374.00
tblConstructionPhase	NumDays	20.00	33.00
tblConstructionPhase	NumDays	20.00	33.00
tblConstructionPhase	NumDays	20.00	33.00
tblConstructionPhase	NumDays	10.00	16.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblVehicleTrips	DV_TP	20.00	0.00
tblVehicleTrips	PB_TP	48.00	0.00
tblVehicleTrips	PR_TP	32.00	100.00
tblVehicleTrips	ST_TR	56.72	35.89
tblVehicleTrips	SU_TR	55.80	35.31
tblVehicleTrips	WD_TR	30.74	19.45

# 2.0 Emissions Summary

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

# 2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	СО	SO2	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/e	day							lb/c	lay		
2023	2.3461	23.1831	21.7617	0.0516	6.6641	1.0105	7.2131	3.3971	0.9404	3.9022	0.0000	5,124.439 7	5,124.439 7	1.0990	0.2112	5,204.467 2
2024	40.4966	16.1202	21.3552	0.0511	2.0178	0.6352	2.6530	0.5441	0.5975	1.1417	0.0000	5,067.987 6	5,067.987 6	0.7173	0.2065	5,146.445 3
Maximum	40.4966	23.1831	21.7617	0.0516	6.6641	1.0105	7.2131	3.3971	0.9404	3.9022	0.0000	5,124.439 7	5,124.439 7	1.0990	0.2112	5,204.467 2

# Mitigated Construction

	ROG	NOx	СО	SO2	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/d	day							lb/c	day		
2023	2.3461	23.1831	21.7617	0.0516	2.6672	1.0105	3.2162	1.3430	0.9404	1.8480	0.0000	5,124.439 7	5,124.439 7	1.0990	0.2112	5,204.467 1
2024	40.4966	16.1202	21.3552	0.0511	2.0178	0.6352	2.6530	0.5441	0.5975	1.1417	0.0000	5,067.987 6	5,067.987 6	0.7173	0.2065	5,146.445 3
Maximum	40.4966	23.1831	21.7617	0.0516	2.6672	1.0105	3.2162	1.3430	0.9404	1.8480	0.0000	5,124.439 7	5,124.439 7	1.0990	0.2112	5,204.467 1

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

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	46.04	0.00	40.51	52.12	0.00	40.73	0.00	0.00	0.00	0.00	0.00	0.00

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

# 2.2 Overall Operational

# Unmitigated Operational

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Area	3.1426	1.3000e- 004	0.0144	0.0000		5.0000e- 005	5.0000e- 005		5.0000e- 005	5.0000e- 005		0.0310	0.0310	8.0000e- 005		0.0330
Energy	6.5500e- 003	0.0595	0.0500	3.6000e- 004		4.5200e- 003	4.5200e- 003		4.5200e- 003	4.5200e- 003		71.4416	71.4416	1.3700e- 003	1.3100e- 003	71.8661
Mobile	13.9665	16.5900	143.2321	0.3298	37.5581	0.2419	37.8000	10.0087	0.2250	10.2337		33,645.81 23	33,645.81 23	2.1548	1.4748	34,139.15 67
Total	17.1156	16.6497	143.2966	0.3302	37.5581	0.2465	37.8046	10.0087	0.2296	10.2383		33,717.28 48	33,717.28 48	2.1563	1.4761	34,211.05 57

#### Mitigated Operational

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
Area	3.1426	1.3000e- 004	0.0144	0.0000		5.0000e- 005	5.0000e- 005		5.0000e- 005	5.0000e- 005		0.0310	0.0310	8.0000e- 005		0.0330
Energy	6.5500e- 003	0.0595	0.0500	3.6000e- 004		4.5200e- 003	4.5200e- 003		4.5200e- 003	4.5200e- 003		71.4416	71.4416	1.3700e- 003	1.3100e- 003	71.8661
Mobile	13.9665	16.5900	143.2321	0.3298	37.5581	0.2419	37.8000	10.0087	0.2250	10.2337		33,645.81 23	33,645.81 23	2.1548	1.4748	34,139.15 67
Total	17.1156	16.6497	143.2966	0.3302	37.5581	0.2465	37.8046	10.0087	0.2296	10.2383		33,717.28 48	33,717.28 48	2.1563	1.4761	34,211.05 57

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

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

# **3.0 Construction Detail**

#### **Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2023	2/15/2023	5	33	
2	Site Preparation	Site Preparation	2/16/2023	3/9/2023	5	16	
3	Grading	Grading	3/10/2023	4/25/2023	5	33	
4	Building Construction	Building Construction	4/26/2023	9/30/2024	5	374	
5	Paving	Paving	10/1/2024	11/14/2024	5	33	
6	Architectural Coating	Architectural Coating	11/15/2024	12/31/2024	5	33	

Acres of Grading (Site Preparation Phase): 8

Acres of Grading (Grading Phase): 16.5

Acres of Paving: 5.52

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 203,970; Non-Residential Outdoor: 67,990; Striped Parking Area: 14,427 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37

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

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
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
Demolition	6	15.00	0.00	435.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	145.00	62.00	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	29.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

# **3.1 Mitigation Measures Construction**

Water Exposed Area

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

# 3.2 Demolition - 2023

# **Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Fugitive Dust		1 1 1			2.8516	0.0000	2.8516	0.4318	0.0000	0.4318			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.984 0	3,746.984 0	1.0494		3,773.218 3
Total	2.2691	21.4844	19.6434	0.0388	2.8516	0.9975	3.8492	0.4318	0.9280	1.3598		3,746.984 0	3,746.984 0	1.0494		3,773.218 3

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	day		
Hauling	0.0265	1.6635	0.4531	7.5400e- 003	0.2306	0.0121	0.2426	0.0632	0.0115	0.0747		829.3583	829.3583	0.0460	0.1318	869.7725
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	0.0351	0.4762	1.3800e- 003	0.1677	9.4000e- 004	0.1686	0.0445	8.7000e- 004	0.0453		139.8249	139.8249	3.6500e- 003	3.6000e- 003	140.9878
Total	0.0771	1.6987	0.9293	8.9200e- 003	0.3982	0.0130	0.4112	0.1077	0.0124	0.1201		969.1832	969.1832	0.0496	0.1354	1,010.760 2

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

# 3.2 Demolition - 2023

### **Mitigated Construction On-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
Fugitive Dust		, , ,			1.1121	0.0000	1.1121	0.1684	0.0000	0.1684			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280	0.0000	3,746.984 0	3,746.984 0	1.0494		3,773.218 3
Total	2.2691	21.4844	19.6434	0.0388	1.1121	0.9975	2.1097	0.1684	0.9280	1.0964	0.0000	3,746.984 0	3,746.984 0	1.0494		3,773.218 3

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	day		
Hauling	0.0265	1.6635	0.4531	7.5400e- 003	0.2306	0.0121	0.2426	0.0632	0.0115	0.0747		829.3583	829.3583	0.0460	0.1318	869.7725
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	0.0351	0.4762	1.3800e- 003	0.1677	9.4000e- 004	0.1686	0.0445	8.7000e- 004	0.0453		139.8249	139.8249	3.6500e- 003	3.6000e- 003	140.9878
Total	0.0771	1.6987	0.9293	8.9200e- 003	0.3982	0.0130	0.4112	0.1077	0.0124	0.1201		969.1832	969.1832	0.0496	0.1354	1,010.760 2

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

# 3.3 Site Preparation - 2023

# **Unmitigated Construction On-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Fugitive Dust		1 1 1			6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	0.9874	10.1985	7.5690	0.0148		0.4726	0.4726		0.4348	0.4348		1,430.153 7	1,430.153 7	0.4625		1,441.717 2
Total	0.9874	10.1985	7.5690	0.0148	6.5523	0.4726	7.0249	3.3675	0.4348	3.8022		1,430.153 7	1,430.153 7	0.4625		1,441.717 2

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	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	0.0270	0.0187	0.2540	7.4000e- 004	0.0894	5.0000e- 004	0.0899	0.0237	4.6000e- 004	0.0242		74.5733	74.5733	1.9500e- 003	1.9200e- 003	75.1935
Total	0.0270	0.0187	0.2540	7.4000e- 004	0.0894	5.0000e- 004	0.0899	0.0237	4.6000e- 004	0.0242		74.5733	74.5733	1.9500e- 003	1.9200e- 003	75.1935

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

# 3.3 Site Preparation - 2023

# **Mitigated Construction On-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	day		
Fugitive Dust		1 1 1			2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	0.9874	10.1985	7.5690	0.0148		0.4726	0.4726	1 1 1	0.4348	0.4348	0.0000	1,430.153 7	1,430.153 7	0.4625		1,441.717 2
Total	0.9874	10.1985	7.5690	0.0148	2.5554	0.4726	3.0280	1.3133	0.4348	1.7481	0.0000	1,430.153 7	1,430.153 7	0.4625		1,441.717 2

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	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	0.0270	0.0187	0.2540	7.4000e- 004	0.0894	5.0000e- 004	0.0899	0.0237	4.6000e- 004	0.0242		74.5733	74.5733	1.9500e- 003	1.9200e- 003	75.1935
Total	0.0270	0.0187	0.2540	7.4000e- 004	0.0894	5.0000e- 004	0.0899	0.0237	4.6000e- 004	0.0242		74.5733	74.5733	1.9500e- 003	1.9200e- 003	75.1935

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

# 3.4 Grading - 2023

# **Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	day		
Fugitive Dust			1 1 1		6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.1761	11.7471	10.8268	0.0199		0.5484	0.5484		0.5045	0.5045		1,930.259 3	1,930.259 3	0.6243		1,945.866 5
Total	1.1761	11.7471	10.8268	0.0199	6.5523	0.5484	7.1007	3.3675	0.5045	3.8720		1,930.259 3	1,930.259 3	0.6243		1,945.866 5

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	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	0.0337	0.0234	0.3175	9.2000e- 004	0.1118	6.3000e- 004	0.1124	0.0296	5.8000e- 004	0.0302		93.2166	93.2166	2.4300e- 003	2.4000e- 003	93.9918
Total	0.0337	0.0234	0.3175	9.2000e- 004	0.1118	6.3000e- 004	0.1124	0.0296	5.8000e- 004	0.0302		93.2166	93.2166	2.4300e- 003	2.4000e- 003	93.9918

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

# 3.4 Grading - 2023

# **Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Fugitive Dust			1 1 1		2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	1.1761	11.7471	10.8268	0.0199		0.5484	0.5484		0.5045	0.5045	0.0000	1,930.259 3	1,930.259 3	0.6243		1,945.866 5
Total	1.1761	11.7471	10.8268	0.0199	2.5554	0.5484	3.1038	1.3133	0.5045	1.8178	0.0000	1,930.259 3	1,930.259 3	0.6243		1,945.866 5

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	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	0.0337	0.0234	0.3175	9.2000e- 004	0.1118	6.3000e- 004	0.1124	0.0296	5.8000e- 004	0.0302		93.2166	93.2166	2.4300e- 003	2.4000e- 003	93.9918
Total	0.0337	0.0234	0.3175	9.2000e- 004	0.1118	6.3000e- 004	0.1124	0.0296	5.8000e- 004	0.0302		93.2166	93.2166	2.4300e- 003	2.4000e- 003	93.9918

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

# 3.5 Building Construction - 2023

# Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997	1 1 1	0.6584	0.6584		2,555.209 9	2,555.209 9	0.6079		2,570.406 1
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.209 9	2,555.209 9	0.6079		2,570.406 1

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
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	0.0656	2.3622	0.9146	0.0113	0.3970	0.0132	0.4102	0.1143	0.0126	0.1269		1,217.589 2	1,217.589 2	0.0407	0.1764	1,271.179 6
Worker	0.4886	0.3397	4.6031	0.0134	1.6208	9.1000e- 003	1.6299	0.4298	8.3800e- 003	0.4382		1,351.640 6	1,351.640 6	0.0353	0.0348	1,362.881 5
Total	0.5543	2.7019	5.5177	0.0247	2.0178	0.0223	2.0400	0.5441	0.0210	0.5651		2,569.229 8	2,569.229 8	0.0759	0.2112	2,634.061 1

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

# 3.5 Building Construction - 2023

# **Mitigated Construction On-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.209 9	2,555.209 9	0.6079		2,570.406 1
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.209 9	2,555.209 9	0.6079		2,570.406 1

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
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	0.0656	2.3622	0.9146	0.0113	0.3970	0.0132	0.4102	0.1143	0.0126	0.1269		1,217.589 2	1,217.589 2	0.0407	0.1764	1,271.179 6
Worker	0.4886	0.3397	4.6031	0.0134	1.6208	9.1000e- 003	1.6299	0.4298	8.3800e- 003	0.4382		1,351.640 6	1,351.640 6	0.0353	0.0348	1,362.881 5
Total	0.5543	2.7019	5.5177	0.0247	2.0178	0.0223	2.0400	0.5441	0.0210	0.5651		2,569.229 8	2,569.229 8	0.0759	0.2112	2,634.061 1

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

# 3.5 Building Construction - 2024

# **Unmitigated Construction On-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	day		
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133	1 1 1	0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
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	0.0639	2.3730	0.8997	0.0111	0.3970	0.0132	0.4102	0.1143	0.0126	0.1269		1,200.108 7	1,200.108 7	0.0407	0.1741	1,253.017 4
Worker	0.4575	0.3034	4.2887	0.0130	1.6208	8.7000e- 003	1.6295	0.4298	8.0100e- 003	0.4378		1,312.180 0	1,312.180 0	0.0320	0.0324	1,322.620 2
Total	0.5214	2.6764	5.1884	0.0241	2.0178	0.0219	2.0397	0.5441	0.0206	0.5648		2,512.288 7	2,512.288 7	0.0726	0.2065	2,575.637 6

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

# 3.5 Building Construction - 2024

# **Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	day		
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133	- - - -	0.5769	0.5769	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
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	0.0639	2.3730	0.8997	0.0111	0.3970	0.0132	0.4102	0.1143	0.0126	0.1269		1,200.108 7	1,200.108 7	0.0407	0.1741	1,253.017 4
Worker	0.4575	0.3034	4.2887	0.0130	1.6208	8.7000e- 003	1.6295	0.4298	8.0100e- 003	0.4378		1,312.180 0	1,312.180 0	0.0320	0.0324	1,322.620 2
Total	0.5214	2.6764	5.1884	0.0241	2.0178	0.0219	2.0397	0.5441	0.0206	0.5648		2,512.288 7	2,512.288 7	0.0726	0.2065	2,575.637 6

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

# 3.6 Paving - 2024

# **Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	lay		
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.547 2	2,207.547 2	0.7140		2,225.396 3
Paving	0.4383					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4264	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.547 2	2,207.547 2	0.7140		2,225.396 3

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	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	0.0473	0.0314	0.4437	1.3400e- 003	0.1677	9.0000e- 004	0.1686	0.0445	8.3000e- 004	0.0453		135.7428	135.7428	3.3100e- 003	3.3500e- 003	136.8228
Total	0.0473	0.0314	0.4437	1.3400e- 003	0.1677	9.0000e- 004	0.1686	0.0445	8.3000e- 004	0.0453		135.7428	135.7428	3.3100e- 003	3.3500e- 003	136.8228

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

# 3.6 Paving - 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/e	day							lb/d	lay		
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.547 2	2,207.547 2	0.7140		2,225.396 3
Paving	0.4383					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4264	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.547 2	2,207.547 2	0.7140		2,225.396 3

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	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	0.0473	0.0314	0.4437	1.3400e- 003	0.1677	9.0000e- 004	0.1686	0.0445	8.3000e- 004	0.0453		135.7428	135.7428	3.3100e- 003	3.3500e- 003	136.8228
Total	0.0473	0.0314	0.4437	1.3400e- 003	0.1677	9.0000e- 004	0.1686	0.0445	8.3000e- 004	0.0453		135.7428	135.7428	3.3100e- 003	3.3500e- 003	136.8228

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

# 3.7 Architectural Coating - 2024

# **Unmitigated Construction On-Site**

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Archit. Coating	40.2244					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e- 003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	40.4051	1.2188	1.8101	2.9700e- 003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	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	0.0915	0.0607	0.8578	2.6000e- 003	0.3242	1.7400e- 003	0.3259	0.0860	1.6000e- 003	0.0876		262.4360	262.4360	6.4000e- 003	6.4700e- 003	264.5240
Total	0.0915	0.0607	0.8578	2.6000e- 003	0.3242	1.7400e- 003	0.3259	0.0860	1.6000e- 003	0.0876		262.4360	262.4360	6.4000e- 003	6.4700e- 003	264.5240

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

# 3.7 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/o	day							lb/c	lay		
Archit. Coating	40.2244	, , ,				0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e- 003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	40.4051	1.2188	1.8101	2.9700e- 003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	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	0.0915	0.0607	0.8578	2.6000e- 003	0.3242	1.7400e- 003	0.3259	0.0860	1.6000e- 003	0.0876		262.4360	262.4360	6.4000e- 003	6.4700e- 003	264.5240
Total	0.0915	0.0607	0.8578	2.6000e- 003	0.3242	1.7400e- 003	0.3259	0.0860	1.6000e- 003	0.0876		262.4360	262.4360	6.4000e- 003	6.4700e- 003	264.5240

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

# 4.0 Operational Detail - Mobile

# 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
Mitigated	13.9665	16.5900	143.2321	0.3298	37.5581	0.2419	37.8000	10.0087	0.2250	10.2337		33,645.81 23	33,645.81 23	2.1548	1.4748	34,139.15 67
Unmitigated	13.9665	16.5900	143.2321	0.3298	37.5581	0.2419	37.8000	10.0087	0.2250	10.2337		33,645.81 23	33,645.81 23	2.1548	1.4748	34,139.15 67

# 4.2 Trip Summary Information

	Aver	age Daily Trip Ra	ite	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Home Improvement Superstore	2,644.81	4,880.32	4801.45	11,951,291	11,951,291
Parking Lot	0.00	0.00	0.00		
Total	2,644.81	4,880.32	4,801.45	11,951,291	11,951,291

# 4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
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
Home Improvement Superstore	16.60	8.40	6.90	23.40	57.60	19.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Home Improvement Superstore	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Parking Lot	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657

# 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/c	lay		
NaturalGas Mitigated	6.5500e- 003	0.0595	0.0500	3.6000e- 004		4.5200e- 003	4.5200e- 003		4.5200e- 003	4.5200e- 003		71.4416	71.4416	1.3700e- 003	1.3100e- 003	71.8661
NaturalGas Unmitigated	6.5500e- 003	0.0595	0.0500	3.6000e- 004		4.5200e- 003	4.5200e- 003		4.5200e- 003	4.5200e- 003		71.4416	71.4416	1.3700e- 003	1.3100e- 003	71.8661

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

# 5.2 Energy by Land Use - NaturalGas

# **Unmitigated**

	NaturalGa s Use	ROG	NOx	СО	SO2	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/c	lay		
Home Improvement Superstore	607.253	6.5500e- 003	0.0595	0.0500	3.6000e- 004		4.5200e- 003	4.5200e- 003		4.5200e- 003	4.5200e- 003		71.4416	71.4416	1.3700e- 003	1.3100e- 003	71.8661
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
Total		6.5500e- 003	0.0595	0.0500	3.6000e- 004		4.5200e- 003	4.5200e- 003		4.5200e- 003	4.5200e- 003		71.4416	71.4416	1.3700e- 003	1.3100e- 003	71.8661

#### Mitigated

	NaturalGa 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/e	day							lb/c	lay		
Home Improvement Superstore	0.607253	6.5500e- 003	0.0595	0.0500	3.6000e- 004		4.5200e- 003	4.5200e- 003		4.5200e- 003	4.5200e- 003		71.4416	71.4416	1.3700e- 003	1.3100e- 003	71.8661
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
Total		6.5500e- 003	0.0595	0.0500	3.6000e- 004		4.5200e- 003	4.5200e- 003		4.5200e- 003	4.5200e- 003		71.4416	71.4416	1.3700e- 003	1.3100e- 003	71.8661

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

# 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	lay		
Mitigated	3.1426	1.3000e- 004	0.0144	0.0000		5.0000e- 005	5.0000e- 005		5.0000e- 005	5.0000e- 005		0.0310	0.0310	8.0000e- 005		0.0330
Unmitigated	3.1426	1.3000e- 004	0.0144	0.0000		5.0000e- 005	5.0000e- 005		5.0000e- 005	5.0000e- 005		0.0310	0.0310	8.0000e- 005		0.0330

# 6.2 Area by SubCategory

<u>Unmitigated</u>

	ROG	NOx	со	SO2	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/d	day							lb/d	day		
Architectural Coating	0.3637					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.7776					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3300e- 003	1.3000e- 004	0.0144	0.0000		5.0000e- 005	5.0000e- 005		5.0000e- 005	5.0000e- 005		0.0310	0.0310	8.0000e- 005		0.0330
Total	3.1426	1.3000e- 004	0.0144	0.0000		5.0000e- 005	5.0000e- 005		5.0000e- 005	5.0000e- 005		0.0310	0.0310	8.0000e- 005		0.0330

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

# 6.2 Area by SubCategory

# Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					lb/e	day							lb/d	day		
Architectural Coating	0.3637	1 1 1				0.0000	0.0000		0.0000	0.0000		1 1 1	0.0000			0.0000
Consumer Products	2.7776					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3300e- 003	1.3000e- 004	0.0144	0.0000		5.0000e- 005	5.0000e- 005		5.0000e- 005	5.0000e- 005		0.0310	0.0310	8.0000e- 005		0.0330
Total	3.1426	1.3000e- 004	0.0144	0.0000		5.0000e- 005	5.0000e- 005		5.0000e- 005	5.0000e- 005		0.0310	0.0310	8.0000e- 005		0.0330

# 7.0 Water Detail

7.1 Mitigation Measures Water

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

# 8.0 Waste Detail

8.1 Mitigation Measures Waste

# 9.0 Operational Offroad

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

# **10.0 Stationary Equipment**

# Fire Pumps and Emergency Generators

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

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

# User Defined Equipment

Equipment Type

Number

# **11.0 Vegetation**

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

# 10064 Home Depot

South Coast AQMD Air District, Summer

# **1.0 Project Characteristics**

#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	5.52	Acre	5.52	240,451.20	0
Home Improvement Superstore	135.98	1000sqft	3.12	135,980.00	0

#### **1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	12			Operational Year	2025
Utility Company	Los Angeles Department of	Water & Power			
CO2 Intensity (Ib/MWhr)	691.98	CH4 Intensity (Ib/MWhr)	0.033	N2O Intensity (Ib/MWhr)	).004

# 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Phase length proportionately adjusted to reflect 2 year construction period

Demolition - 55,600 square feet retail 40,000 square foot movie theater

Grading -

Vehicle Trips - Adjusted to reflect 2,645 weekday trips Weekend defaults proportnately adjusted Energy Use -

Construction Off-road Equipment Mitigation -

Off-road Equipment - Equipment reduced becuase minimal site preparation required

Off-road Equipment - Equipment reduced becuase no mass grading required

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

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	33.00
tblConstructionPhase	NumDays	10.00	16.00
tblConstructionPhase	NumDays	20.00	33.00
tblConstructionPhase	NumDays	230.00	374.00
tblConstructionPhase	NumDays	20.00	33.00
tblConstructionPhase	NumDays	20.00	33.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblVehicleTrips	DV_TP	20.00	0.00
tblVehicleTrips	PB_TP	48.00	0.00
tblVehicleTrips	PR_TP	32.00	100.00
tblVehicleTrips	ST_TR	56.72	35.89
tblVehicleTrips	SU_TR	55.80	35.31
tblVehicleTrips	WD_TR	30.74	19.45

# 2.0 Emissions Summary

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

# 2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year					lb/e	day							lb/d	day		
2023	2.3454	23.1044	22.2165	0.0524	6.6641	1.0105	7.2131	3.3971	0.9404	3.9022	0.0000	5,205.510 8	5,205.510 8	1.0990	0.2087	5,284.797 8
2024	40.4915	15.9821	21.7753	0.0518	2.0178	0.6352	2.6529	0.5441	0.5975	1.1416	0.0000	5,146.567 7	5,146.567 7	0.7172	0.2042	5,224.333 5
Maximum	40.4915	23.1044	22.2165	0.0524	6.6641	1.0105	7.2131	3.3971	0.9404	3.9022	0.0000	5,205.510 8	5,205.510 8	1.0990	0.2087	5,28 <mark>4.797</mark> 8

# Mitigated Construction

	ROG	NOx	СО	SO2	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/d	day							lb/c	day		
2023	2.3454	23.1044	22.2165	0.0524	2.6672	1.0105	3.2162	1.3430	0.9404	1.8480	0.0000	5,205.510 8	5,205.510 8	1.0990	0.2087	5,284.797 8
2024	40.4915	15.9821	21.7753	0.0518	2.0178	0.6352	2.6529	0.5441	0.5975	1.1416	0.0000	5,146.567 7	5,146.567 7	0.7172	0.2042	5,224.333 5
Maximum	40.4915	23.1044	22.2165	0.0524	2.6672	1.0105	3.2162	1.3430	0.9404	1.8480	0.0000	5,205.510 8	5,205.510 8	1.0990	0.2087	5,284.797 8

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

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	46.04	0.00	40.51	52.12	0.00	40.73	0.00	0.00	0.00	0.00	0.00	0.00

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

# 2.2 Overall Operational

# Unmitigated Operational

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day												lb/c	lay		
Area	3.1426	1.3000e- 004	0.0144	0.0000		5.0000e- 005	5.0000e- 005		5.0000e- 005	5.0000e- 005		0.0310	0.0310	8.0000e- 005		0.0330
Energy	6.5500e- 003	0.0595	0.0500	3.6000e- 004		4.5200e- 003	4.5200e- 003		4.5200e- 003	4.5200e- 003		71.4416	71.4416	1.3700e- 003	1.3100e- 003	71.8661
Mobile	14.4666	15.4443	148.5542	0.3460	37.5581	0.2418	37.7999	10.0087	0.2249	10.2336		35,271.95 11	35,271.95 11	2.1014	1.4207	35,747.84 50
Total	17.6157	15.5040	148.6186	0.3463	37.5581	0.2464	37.8045	10.0087	0.2295	10.2382		35,343.42 36	35,343.42 36	2.1029	1.4220	35,819.74 41

### Mitigated Operational

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day												lb/c	lay		
Area	3.1426	1.3000e- 004	0.0144	0.0000		5.0000e- 005	5.0000e- 005		5.0000e- 005	5.0000e- 005		0.0310	0.0310	8.0000e- 005		0.0330
Energy	6.5500e- 003	0.0595	0.0500	3.6000e- 004		4.5200e- 003	4.5200e- 003		4.5200e- 003	4.5200e- 003		71.4416	71.4416	1.3700e- 003	1.3100e- 003	71.8661
Mobile	14.4666	15.4443	148.5542	0.3460	37.5581	0.2418	37.7999	10.0087	0.2249	10.2336		35,271.95 11	35,271.95 11	2.1014	1.4207	35,747.84 50
Total	17.6157	15.5040	148.6186	0.3463	37.5581	0.2464	37.8045	10.0087	0.2295	10.2382		35,343.42 36	35,343.42 36	2.1029	1.4220	35,819.74 41

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

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

# **3.0 Construction Detail**

#### **Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2023	2/15/2023	5	33	
2	Site Preparation	Site Preparation	2/16/2023	3/9/2023	5	16	
3	Grading	Grading	3/10/2023	4/25/2023	5	33	
4	Building Construction	Building Construction	4/26/2023	9/30/2024	5	374	
5	Paving	Paving	10/1/2024	11/14/2024	5	33	
6	Architectural Coating	Architectural Coating	11/15/2024	12/31/2024	5	33	

Acres of Grading (Site Preparation Phase): 8

Acres of Grading (Grading Phase): 16.5

Acres of Paving: 5.52

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 203,970; Non-Residential Outdoor: 67,990; Striped Parking Area: 14,427 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37

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

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
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
Demolition	6	15.00	0.00	435.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	145.00	62.00	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	29.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

# **3.1 Mitigation Measures Construction**

Water Exposed Area

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

# 3.2 Demolition - 2023

# **Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e		
Category	lb/day											lb/day						
Fugitive Dust			1 1 1		2.8516	0.0000	2.8516	0.4318	0.0000	0.4318			0.0000			0.0000		
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.984 0	3,746.984 0	1.0494		3,773.218 3		
Total	2.2691	21.4844	19.6434	0.0388	2.8516	0.9975	3.8492	0.4318	0.9280	1.3598		3,746.984 0	3,746.984 0	1.0494		3,773.218 3		

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day												lb/d	day		
Hauling	0.0284	1.5878	0.4466	7.5300e- 003	0.2306	0.0120	0.2426	0.0632	0.0115	0.0747		828.4252	828.4252	0.0461	0.1316	868.7971
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	0.0321	0.5262	1.4700e- 003	0.1677	9.4000e- 004	0.1686	0.0445	8.7000e- 004	0.0453		148.4389	148.4389	3.6000e- 003	3.3900e- 003	149.5392
Total	0.0763	1.6200	0.9727	9.0000e- 003	0.3982	0.0130	0.4112	0.1077	0.0124	0.1200		976.8641	976.8641	0.0497	0.1350	1,018.336 3
### EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

### 3.2 Demolition - 2023

### **Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	day		
Fugitive Dust			1 1 1		1.1121	0.0000	1.1121	0.1684	0.0000	0.1684			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280	0.0000	3,746.984 0	3,746.984 0	1.0494		3,773.218 3
Total	2.2691	21.4844	19.6434	0.0388	1.1121	0.9975	2.1097	0.1684	0.9280	1.0964	0.0000	3,746.984 0	3,746.984 0	1.0494		3,773.218 3

#### **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/d	day		
Hauling	0.0284	1.5878	0.4466	7.5300e- 003	0.2306	0.0120	0.2426	0.0632	0.0115	0.0747		828.4252	828.4252	0.0461	0.1316	868.7971
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	0.0321	0.5262	1.4700e- 003	0.1677	9.4000e- 004	0.1686	0.0445	8.7000e- 004	0.0453		148.4389	148.4389	3.6000e- 003	3.3900e- 003	149.5392
Total	0.0763	1.6200	0.9727	9.0000e- 003	0.3982	0.0130	0.4112	0.1077	0.0124	0.1200		976.8641	976.8641	0.0497	0.1350	1,018.336 3

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

## 3.3 Site Preparation - 2023

### **Unmitigated Construction On-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Fugitive Dust		1 1 1			6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	0.9874	10.1985	7.5690	0.0148		0.4726	0.4726		0.4348	0.4348		1,430.153 7	1,430.153 7	0.4625		1,441.717 2
Total	0.9874	10.1985	7.5690	0.0148	6.5523	0.4726	7.0249	3.3675	0.4348	3.8022		1,430.153 7	1,430.153 7	0.4625		1,441.717 2

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	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	0.0255	0.0171	0.2806	7.8000e- 004	0.0894	5.0000e- 004	0.0899	0.0237	4.6000e- 004	0.0242		79.1674	79.1674	1.9200e- 003	1.8100e- 003	79.7542
Total	0.0255	0.0171	0.2806	7.8000e- 004	0.0894	5.0000e- 004	0.0899	0.0237	4.6000e- 004	0.0242		79.1674	79.1674	1.9200e- 003	1.8100e- 003	79.7542

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

## 3.3 Site Preparation - 2023

### **Mitigated Construction On-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	day		
Fugitive Dust		1 1 1			2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	0.9874	10.1985	7.5690	0.0148		0.4726	0.4726	1 1 1	0.4348	0.4348	0.0000	1,430.153 7	1,430.153 7	0.4625		1,441.717 2
Total	0.9874	10.1985	7.5690	0.0148	2.5554	0.4726	3.0280	1.3133	0.4348	1.7481	0.0000	1,430.153 7	1,430.153 7	0.4625		1,441.717 2

#### **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	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	0.0255	0.0171	0.2806	7.8000e- 004	0.0894	5.0000e- 004	0.0899	0.0237	4.6000e- 004	0.0242		79.1674	79.1674	1.9200e- 003	1.8100e- 003	79.7542
Total	0.0255	0.0171	0.2806	7.8000e- 004	0.0894	5.0000e- 004	0.0899	0.0237	4.6000e- 004	0.0242		79.1674	79.1674	1.9200e- 003	1.8100e- 003	79.7542

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

## 3.4 Grading - 2023

### **Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	lay		
Fugitive Dust		1 1 1	1 1 1		6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.1761	11.7471	10.8268	0.0199		0.5484	0.5484		0.5045	0.5045		1,930.259 3	1,930.259 3	0.6243		1,945.866 5
Total	1.1761	11.7471	10.8268	0.0199	6.5523	0.5484	7.1007	3.3675	0.5045	3.8720		1,930.259 3	1,930.259 3	0.6243		1,945.866 5

#### 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/e	day							lb/d	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	0.0319	0.0214	0.3508	9.8000e- 004	0.1118	6.3000e- 004	0.1124	0.0296	5.8000e- 004	0.0302		98.9593	98.9593	2.4000e- 003	2.2600e- 003	99.6928
Total	0.0319	0.0214	0.3508	9.8000e- 004	0.1118	6.3000e- 004	0.1124	0.0296	5.8000e- 004	0.0302		98.9593	98.9593	2.4000e- 003	2.2600e- 003	99.6928

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

## 3.4 Grading - 2023

### **Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Fugitive Dust			1 1 1		2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	1.1761	11.7471	10.8268	0.0199		0.5484	0.5484	1 1 1	0.5045	0.5045	0.0000	1,930.259 3	1,930.259 3	0.6243		1,945.866 5
Total	1.1761	11.7471	10.8268	0.0199	2.5554	0.5484	3.1038	1.3133	0.5045	1.8178	0.0000	1,930.259 3	1,930.259 3	0.6243		1,945.866 5

#### **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/e	day							lb/d	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	0.0319	0.0214	0.3508	9.8000e- 004	0.1118	6.3000e- 004	0.1124	0.0296	5.8000e- 004	0.0302		98.9593	98.9593	2.4000e- 003	2.2600e- 003	99.6928
Total	0.0319	0.0214	0.3508	9.8000e- 004	0.1118	6.3000e- 004	0.1124	0.0296	5.8000e- 004	0.0302		98.9593	98.9593	2.4000e- 003	2.2600e- 003	99.6928

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

# 3.5 Building Construction - 2023

### **Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997	1 1 1	0.6584	0.6584		2,555.209 9	2,555.209 9	0.6079		2,570.406 1
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.209 9	2,555.209 9	0.6079		2,570.406 1

#### **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/e	day							lb/c	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	0.0686	2.2506	0.8861	0.0113	0.3970	0.0131	0.4101	0.1143	0.0125	0.1268		1,215.391 7	1,215.391 7	0.0409	0.1760	1,268.846 4
Worker	0.4629	0.3107	5.0864	0.0142	1.6208	9.1000e- 003	1.6299	0.4298	8.3800e- 003	0.4382		1,434.909 2	1,434.909 2	0.0348	0.0328	1,445.545 3
Total	0.5315	2.5613	5.9725	0.0255	2.0178	0.0222	2.0400	0.5441	0.0209	0.5651		2,650.300 9	2,650.300 9	0.0756	0.2087	2,714.391 7

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

# 3.5 Building Construction - 2023

### **Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	day		
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.209 9	2,555.209 9	0.6079		2,570.406 1
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.209 9	2,555.209 9	0.6079		2,570.406 1

## 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/d	day							lb/c	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	0.0686	2.2506	0.8861	0.0113	0.3970	0.0131	0.4101	0.1143	0.0125	0.1268		1,215.391 7	1,215.391 7	0.0409	0.1760	1,268.846 4
Worker	0.4629	0.3107	5.0864	0.0142	1.6208	9.1000e- 003	1.6299	0.4298	8.3800e- 003	0.4382		1,434.909 2	1,434.909 2	0.0348	0.0328	1,445.545 3
Total	0.5315	2.5613	5.9725	0.0255	2.0178	0.0222	2.0400	0.5441	0.0209	0.5651		2,650.300 9	2,650.300 9	0.0756	0.2087	2,714.391 7

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

# 3.5 Building Construction - 2024

### **Unmitigated Construction On-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/d	day		
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133	1 1 1	0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7

### 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/e	day							lb/c	lay		
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	0.0669	2.2608	0.8715	0.0111	0.3970	0.0131	0.4101	0.1143	0.0126	0.1269		1,197.907 2	1,197.907 2	0.0409	0.1737	1,250.683 8
Worker	0.4321	0.2775	4.7370	0.0138	1.6208	8.7000e- 003	1.6295	0.4298	8.0100e- 003	0.4378		1,392.961 6	1,392.961 6	0.0315	0.0305	1,402.842 1
Total	0.4990	2.5384	5.6084	0.0249	2.0178	0.0218	2.0396	0.5441	0.0206	0.5647		2,590.868 8	2,590.868 8	0.0724	0.2042	2,653.525 9

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

# 3.5 Building Construction - 2024

### **Mitigated Construction On-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133	- 	0.5769	0.5769	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7

## 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/e	day							lb/c	lay		
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	0.0669	2.2608	0.8715	0.0111	0.3970	0.0131	0.4101	0.1143	0.0126	0.1269		1,197.907 2	1,197.907 2	0.0409	0.1737	1,250.683 8
Worker	0.4321	0.2775	4.7370	0.0138	1.6208	8.7000e- 003	1.6295	0.4298	8.0100e- 003	0.4378		1,392.961 6	1,392.961 6	0.0315	0.0305	1,402.842 1
Total	0.4990	2.5384	5.6084	0.0249	2.0178	0.0218	2.0396	0.5441	0.0206	0.5647		2,590.868 8	2,590.868 8	0.0724	0.2042	2,653.525 9

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

## 3.6 Paving - 2024

### **Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	lay		
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.547 2	2,207.547 2	0.7140		2,225.396 3
Paving	0.4383					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4264	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.547 2	2,207.547 2	0.7140		2,225.396 3

#### Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	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	0.0447	0.0287	0.4900	1.4300e- 003	0.1677	9.0000e- 004	0.1686	0.0445	8.3000e- 004	0.0453		144.0995	144.0995	3.2600e- 003	3.1600e- 003	145.1216
Total	0.0447	0.0287	0.4900	1.4300e- 003	0.1677	9.0000e- 004	0.1686	0.0445	8.3000e- 004	0.0453		144.0995	144.0995	3.2600e- 003	3.1600e- 003	145.1216

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

## 3.6 Paving - 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/e	day							lb/d	lay		
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.547 2	2,207.547 2	0.7140		2,225.396 3
Paving	0.4383					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4264	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.547 2	2,207.547 2	0.7140		2,225.396 3

#### **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/e	day							lb/d	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	0.0447	0.0287	0.4900	1.4300e- 003	0.1677	9.0000e- 004	0.1686	0.0445	8.3000e- 004	0.0453		144.0995	144.0995	3.2600e- 003	3.1600e- 003	145.1216
Total	0.0447	0.0287	0.4900	1.4300e- 003	0.1677	9.0000e- 004	0.1686	0.0445	8.3000e- 004	0.0453		144.0995	144.0995	3.2600e- 003	3.1600e- 003	145.1216

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

# 3.7 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/o	day							lb/d	day		
Archit. Coating	40.2244	1 1 1				0.0000	0.0000	, , ,	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e- 003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	40.4051	1.2188	1.8101	2.9700e- 003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443

### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	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	0.0864	0.0555	0.9474	2.7600e- 003	0.3242	1.7400e- 003	0.3259	0.0860	1.6000e- 003	0.0876		278.5923	278.5923	6.3000e- 003	6.1000e- 003	280.5684
Total	0.0864	0.0555	0.9474	2.7600e- 003	0.3242	1.7400e- 003	0.3259	0.0860	1.6000e- 003	0.0876		278.5923	278.5923	6.3000e- 003	6.1000e- 003	280.5684

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

# 3.7 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/o	day							lb/c	lay		
Archit. Coating	40.2244	, , ,				0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e- 003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	40.4051	1.2188	1.8101	2.9700e- 003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443

#### **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	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	0.0864	0.0555	0.9474	2.7600e- 003	0.3242	1.7400e- 003	0.3259	0.0860	1.6000e- 003	0.0876		278.5923	278.5923	6.3000e- 003	6.1000e- 003	280.5684
Total	0.0864	0.0555	0.9474	2.7600e- 003	0.3242	1.7400e- 003	0.3259	0.0860	1.6000e- 003	0.0876		278.5923	278.5923	6.3000e- 003	6.1000e- 003	280.5684

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

# 4.0 Operational Detail - Mobile

# 4.1 Mitigation Measures Mobile

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/o	day							lb/c	lay		
Mitigated	14.4666	15.4443	148.5542	0.3460	37.5581	0.2418	37.7999	10.0087	0.2249	10.2336		35,271.95 11	35,271.95 11	2.1014	1.4207	35,747.84 50
Unmitigated	14.4666	15.4443	148.5542	0.3460	37.5581	0.2418	37.7999	10.0087	0.2249	10.2336		35,271.95 11	35,271.95 11	2.1014	1.4207	35,747.84 50

### 4.2 Trip Summary Information

	Aver	age Daily Trip Ra	ite	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Home Improvement Superstore	2,644.81	4,880.32	4801.45	11,951,291	11,951,291
Parking Lot	0.00	0.00	0.00		
Total	2,644.81	4,880.32	4,801.45	11,951,291	11,951,291

## 4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	se %
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
Home Improvement Superstore	16.60	8.40	6.90	23.40	57.60	19.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Home Improvement Superstore	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Parking Lot	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657

# 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/c	lay		
NaturalGas Mitigated	6.5500e- 003	0.0595	0.0500	3.6000e- 004		4.5200e- 003	4.5200e- 003		4.5200e- 003	4.5200e- 003		71.4416	71.4416	1.3700e- 003	1.3100e- 003	71.8661
NaturalGas Unmitigated	6.5500e- 003	0.0595	0.0500	3.6000e- 004		4.5200e- 003	4.5200e- 003		4.5200e- 003	4.5200e- 003		71.4416	71.4416	1.3700e- 003	1.3100e- 003	71.8661

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

## 5.2 Energy by Land Use - NaturalGas

### **Unmitigated**

	NaturalGa s Use	ROG	NOx	СО	SO2	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/c	lay		
Home Improvement Superstore	607.253	6.5500e- 003	0.0595	0.0500	3.6000e- 004		4.5200e- 003	4.5200e- 003		4.5200e- 003	4.5200e- 003		71.4416	71.4416	1.3700e- 003	1.3100e- 003	71.8661
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
Total		6.5500e- 003	0.0595	0.0500	3.6000e- 004		4.5200e- 003	4.5200e- 003		4.5200e- 003	4.5200e- 003		71.4416	71.4416	1.3700e- 003	1.3100e- 003	71.8661

#### Mitigated

	NaturalGa 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/e	day							lb/c	lay		
Home Improvement Superstore	0.607253	6.5500e- 003	0.0595	0.0500	3.6000e- 004		4.5200e- 003	4.5200e- 003		4.5200e- 003	4.5200e- 003		71.4416	71.4416	1.3700e- 003	1.3100e- 003	71.8661
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
Total		6.5500e- 003	0.0595	0.0500	3.6000e- 004		4.5200e- 003	4.5200e- 003		4.5200e- 003	4.5200e- 003		71.4416	71.4416	1.3700e- 003	1.3100e- 003	71.8661

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

### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/d	Jay		
Mitigated	3.1426	1.3000e- 004	0.0144	0.0000		5.0000e- 005	5.0000e- 005		5.0000e- 005	5.0000e- 005		0.0310	0.0310	8.0000e- 005		0.0330
Unmitigated	3.1426	1.3000e- 004	0.0144	0.0000		5.0000e- 005	5.0000e- 005		5.0000e- 005	5.0000e- 005		0.0310	0.0310	8.0000e- 005		0.0330

## 6.2 Area by SubCategory

### <u>Unmitigated</u>

	ROG	NOx	со	SO2	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/c	day							lb/o	lay		
Architectural Coating	0.3637		1			0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.7776		J (			0.0000	0.0000		0.0000	0.0000		,	0.0000			0.0000
Landscaping	1.3300e- 003	1.3000e- 004	0.0144	0.0000		5.0000e- 005	5.0000e- 005	,	5.0000e- 005	5.0000e- 005		0.0310	0.0310	8.0000e- 005		0.0330
Total	3.1426	1.3000e- 004	0.0144	0.0000		5.0000e- 005	5.0000e- 005		5.0000e- 005	5.0000e- 005		0.0310	0.0310	8.0000e- 005		0.0330

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

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					lb/e	day							lb/d	day		
Architectural Coating	0.3637	1 1 1				0.0000	0.0000		0.0000	0.0000		1 1 1	0.0000			0.0000
Consumer Products	2.7776					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3300e- 003	1.3000e- 004	0.0144	0.0000		5.0000e- 005	5.0000e- 005		5.0000e- 005	5.0000e- 005		0.0310	0.0310	8.0000e- 005		0.0330
Total	3.1426	1.3000e- 004	0.0144	0.0000		5.0000e- 005	5.0000e- 005		5.0000e- 005	5.0000e- 005		0.0310	0.0310	8.0000e- 005		0.0330

# 7.0 Water Detail

7.1 Mitigation Measures Water

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

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

### 9.0 Operational Offroad

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

# **10.0 Stationary Equipment**

### Fire Pumps and Emergency Generators

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

### **Boilers**

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

### User Defined Equipment

Equipment Type

Number

## **11.0 Vegetation**

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

# 10064 Home Depot

South Coast AQMD Air District, Annual

# **1.0 Project Characteristics**

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	5.52	Acre	5.52	240,451.20	0
Home Improvement Superstore	135.98	1000sqft	3.12	135,980.00	0

### **1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	12			Operational Year	2025
Utility Company	Los Angeles Department of	Water & Power			
CO2 Intensity (Ib/MWhr)	691.98	CH4 Intensity (Ib/MWhr)	0.033	N2O Intensity 0 (Ib/MWhr)	.004

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

Project Characteristics -

Land Use -

Construction Phase - Phase length proportionately adjusted to reflect 2 year construction period

Demolition - 55,600 square feet retail 40,000 square foot movie theater

Grading -

Vehicle Trips - Adjusted to reflect 2,645 weekday trips Weekend defaults proportnately adjusted Energy Use -

Construction Off-road Equipment Mitigation -

Off-road Equipment - Equipment reduced becuase minimal site preparation required

Off-road Equipment - Equipment reduced becuase no mass grading required

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

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	33.00
tblConstructionPhase	NumDays	10.00	16.00
tblConstructionPhase	NumDays	20.00	33.00
tblConstructionPhase	NumDays	230.00	374.00
tblConstructionPhase	NumDays	20.00	33.00
tblConstructionPhase	NumDays	20.00	33.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblVehicleTrips	DV_TP	20.00	0.00
tblVehicleTrips	PB_TP	48.00	0.00
tblVehicleTrips	PR_TP	32.00	100.00
tblVehicleTrips	ST_TR	56.72	35.89
tblVehicleTrips	SU_TR	55.80	35.31
tblVehicleTrips	WD_TR	30.74	19.45

# 2.0 Emissions Summary

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

### 2.1 Overall Construction

### **Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year					ton	s/yr							MT	/yr		
2023	0.2529	2.1801	2.5331	5.8700e- 003	0.3929	0.0938	0.4867	0.1397	0.0878	0.2275	0.0000	527.1685	527.1685	0.0844	0.0192	534.9875
2024	0.8843	1.7592	2.3963	5.5100e- 003	0.2022	0.0710	0.2732	0.0546	0.0667	0.1213	0.0000	495.5430	495.5430	0.0713	0.0185	502.8480
Maximum	0.8843	2.1801	2.5331	5.8700e- 003	0.3929	0.0938	0.4867	0.1397	0.0878	0.2275	0.0000	527.1685	527.1685	0.0844	0.0192	534.9875

## 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					ton	s/yr							МТ	/yr		
2023	0.2529	2.1801	2.5331	5.8700e- 003	0.2663	0.0938	0.3601	0.0850	0.0878	0.1728	0.0000	527.1681	527.1681	0.0844	0.0192	534.9871
2024	0.8843	1.7592	2.3963	5.5100e- 003	0.2022	0.0710	0.2732	0.0546	0.0667	0.1213	0.0000	495.5427	495.5427	0.0713	0.0185	502.8477
Maximum	0.8843	2.1801	2.5331	5.8700e- 003	0.2663	0.0938	0.3601	0.0850	0.0878	0.1728	0.0000	527.1681	527.1681	0.0844	0.0192	534.9871

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

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	21.28	0.00	16.66	28.15	0.00	15.68	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	1-2-2023	4-1-2023	0.6052	0.6052
2	4-2-2023	7-1-2023	0.5671	0.5671
3	7-2-2023	10-1-2023	0.6260	0.6260
4	10-2-2023	1-1-2024	0.6309	0.6309
5	1-2-2024	4-1-2024	0.5886	0.5886
6	4-2-2024	7-1-2024	0.5835	0.5835
7	7-2-2024	9-30-2024	0.5835	0.5835
		Highest	0.6309	0.6309

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

## 2.2 Overall Operational

### Unmitigated Operational

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e			
Category		tons/yr											MT/yr						
Area	0.5734	2.0000e- 005	1.8000e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	3.5100e- 003	3.5100e- 003	1.0000e- 005	0.0000	3.7400e- 003			
Energy	1.2000e- 003	0.0109	9.1300e- 003	7.0000e- 005		8.3000e- 004	8.3000e- 004		8.3000e- 004	8.3000e- 004	0.0000	596.0835	596.0835	0.0281	3.5900e- 003	597.8568			
Mobile	1.6815	2.0510	17.6829	0.0407	4.4994	0.0295	4.5289	1.2008	0.0274	1.2282	0.0000	3,764.720 2	3,764.720 2	0.2375	0.1643	3,819.610 3			
Waste	n					0.0000	0.0000		0.0000	0.0000	306.0901	0.0000	306.0901	18.0894	0.0000	758.3252			
Water						0.0000	0.0000		0.0000	0.0000	3.1955	62.6934	65.8889	0.3312	8.1100e- 003	76.5863			
Total	2.2562	2.0619	17.6938	0.0408	4.4994	0.0303	4.5297	1.2008	0.0283	1.2290	309.2856	4,423.500 7	4,732.786 2	18.6862	0.1760	5,252.382 3			

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

## 2.2 Overall Operational

### Mitigated Operational

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton		MT/yr									
Area	0.5734	2.0000e- 005	1.8000e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	3.5100e- 003	3.5100e- 003	1.0000e- 005	0.0000	3.7400e- 003
Energy	1.2000e- 003	0.0109	9.1300e- 003	7.0000e- 005		8.3000e- 004	8.3000e- 004		8.3000e- 004	8.3000e- 004	0.0000	596.0835	596.0835	0.0281	3.5900e- 003	597.8568
Mobile	1.6815	2.0510	17.6829	0.0407	4.4994	0.0295	4.5289	1.2008	0.0274	1.2282	0.0000	3,764.720 2	3,764.720 2	0.2375	0.1643	3,819.610 3
Waste	n					0.0000	0.0000		0.0000	0.0000	306.0901	0.0000	306.0901	18.0894	0.0000	758.3252
Water	n					0.0000	0.0000		0.0000	0.0000	3.1955	62.6934	65.8889	0.3312	8.1100e- 003	76.5863
Total	2.2562	2.0619	17.6938	0.0408	4.4994	0.0303	4.5297	1.2008	0.0283	1.2290	309.2856	4,423.500 7	4,732.786 2	18.6862	0.1760	5,252.382 3

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

# **3.0 Construction Detail**

### **Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2023	2/15/2023	5	33	
2	Site Preparation	Site Preparation	2/16/2023	3/9/2023	5	16	
3	Grading	Grading	3/10/2023	4/25/2023	5	33	

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

4	Building Construction	Building Construction	4/26/2023	9/30/2024	5	374	
5	Paving	Paving	10/1/2024	11/14/2024	5	33	
6	Architectural Coating	Architectural Coating	11/15/2024	12/31/2024	5	33	

Acres of Grading (Site Preparation Phase): 8

Acres of Grading (Grading Phase): 16.5

#### Acres of Paving: 5.52

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 203,970; Non-Residential Outdoor: 67,990; Striped Parking Area: 14,427 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
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

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

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
Demolition	6	15.00	0.00	435.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	145.00	62.00	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	29.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

## 3.1 Mitigation Measures Construction

Water Exposed Area

### 3.2 Demolition - 2023

### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Fugitive Dust		1 1 1			0.0471	0.0000	0.0471	7.1200e- 003	0.0000	7.1200e- 003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0374	0.3545	0.3241	6.4000e- 004		0.0165	0.0165		0.0153	0.0153	0.0000	56.0869	56.0869	0.0157	0.0000	56.4796
Total	0.0374	0.3545	0.3241	6.4000e- 004	0.0471	0.0165	0.0635	7.1200e- 003	0.0153	0.0224	0.0000	56.0869	56.0869	0.0157	0.0000	56.4796

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

### 3.2 Demolition - 2023

### Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	4.6000e- 004	0.0276	7.4100e- 003	1.2000e- 004	3.7400e- 003	2.0000e- 004	3.9400e- 003	1.0300e- 003	1.9000e- 004	1.2200e- 003	0.0000	12.4062	12.4062	6.9000e- 004	1.9700e- 003	13.0108
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e- 004	5.9000e- 004	8.0800e- 003	2.0000e- 005	2.7200e- 003	2.0000e- 005	2.7300e- 003	7.2000e- 004	1.0000e- 005	7.4000e- 004	0.0000	2.1250	2.1250	5.0000e- 005	5.0000e- 005	2.1427
Total	1.2300e- 003	0.0282	0.0155	1.4000e- 004	6.4600e- 003	2.2000e- 004	6.6700e- 003	1.7500e- 003	2.0000e- 004	1.9600e- 003	0.0000	14.5312	14.5312	7.4000e- 004	2.0200e- 003	15.1534

### 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					ton	s/yr							МТ	/yr		
Fugitive Dust					0.0184	0.0000	0.0184	2.7800e- 003	0.0000	2.7800e- 003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0374	0.3545	0.3241	6.4000e- 004		0.0165	0.0165		0.0153	0.0153	0.0000	56.0868	56.0868	0.0157	0.0000	56.4795
Total	0.0374	0.3545	0.3241	6.4000e- 004	0.0184	0.0165	0.0348	2.7800e- 003	0.0153	0.0181	0.0000	56.0868	56.0868	0.0157	0.0000	56.4795

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

### 3.2 Demolition - 2023

### **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	7/yr		
Hauling	4.6000e- 004	0.0276	7.4100e- 003	1.2000e- 004	3.7400e- 003	2.0000e- 004	3.9400e- 003	1.0300e- 003	1.9000e- 004	1.2200e- 003	0.0000	12.4062	12.4062	6.9000e- 004	1.9700e- 003	13.0108
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e- 004	5.9000e- 004	8.0800e- 003	2.0000e- 005	2.7200e- 003	2.0000e- 005	2.7300e- 003	7.2000e- 004	1.0000e- 005	7.4000e- 004	0.0000	2.1250	2.1250	5.0000e- 005	5.0000e- 005	2.1427
Total	1.2300e- 003	0.0282	0.0155	1.4000e- 004	6.4600e- 003	2.2000e- 004	6.6700e- 003	1.7500e- 003	2.0000e- 004	1.9600e- 003	0.0000	14.5312	14.5312	7.4000e- 004	2.0200e- 003	15.1534

### 3.3 Site Preparation - 2023

# Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Fugitive Dust					0.0524	0.0000	0.0524	0.0269	0.0000	0.0269	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9000e- 003	0.0816	0.0606	1.2000e- 004		3.7800e- 003	3.7800e- 003		3.4800e- 003	3.4800e- 003	0.0000	10.3793	10.3793	3.3600e- 003	0.0000	10.4632
Total	7.9000e- 003	0.0816	0.0606	1.2000e- 004	0.0524	3.7800e- 003	0.0562	0.0269	3.4800e- 003	0.0304	0.0000	10.3793	10.3793	3.3600e- 003	0.0000	10.4632

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

## 3.3 Site Preparation - 2023

### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e- 004	1.5000e- 004	2.0900e- 003	1.0000e- 005	7.0000e- 004	0.0000	7.1000e- 004	1.9000e- 004	0.0000	1.9000e- 004	0.0000	0.5495	0.5495	1.0000e- 005	1.0000e- 005	0.5541
Total	2.0000e- 004	1.5000e- 004	2.0900e- 003	1.0000e- 005	7.0000e- 004	0.0000	7.1000e- 004	1.9000e- 004	0.0000	1.9000e- 004	0.0000	0.5495	0.5495	1.0000e- 005	1.0000e- 005	0.5541

### 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					ton	s/yr							МТ	/yr		
Fugitive Dust					0.0204	0.0000	0.0204	0.0105	0.0000	0.0105	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9000e- 003	0.0816	0.0606	1.2000e- 004		3.7800e- 003	3.7800e- 003		3.4800e- 003	3.4800e- 003	0.0000	10.3793	10.3793	3.3600e- 003	0.0000	10.4632
Total	7.9000e- 003	0.0816	0.0606	1.2000e- 004	0.0204	3.7800e- 003	0.0242	0.0105	3.4800e- 003	0.0140	0.0000	10.3793	10.3793	3.3600e- 003	0.0000	10.4632

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

## 3.3 Site Preparation - 2023

### **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	7/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e- 004	1.5000e- 004	2.0900e- 003	1.0000e- 005	7.0000e- 004	0.0000	7.1000e- 004	1.9000e- 004	0.0000	1.9000e- 004	0.0000	0.5495	0.5495	1.0000e- 005	1.0000e- 005	0.5541
Total	2.0000e- 004	1.5000e- 004	2.0900e- 003	1.0000e- 005	7.0000e- 004	0.0000	7.1000e- 004	1.9000e- 004	0.0000	1.9000e- 004	0.0000	0.5495	0.5495	1.0000e- 005	1.0000e- 005	0.5541

### 3.4 Grading - 2023

### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Fugitive Dust					0.1081	0.0000	0.1081	0.0556	0.0000	0.0556	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.1938	0.1786	3.3000e- 004		9.0500e- 003	9.0500e- 003		8.3200e- 003	8.3200e- 003	0.0000	28.8932	28.8932	9.3400e- 003	0.0000	29.1268
Total	0.0194	0.1938	0.1786	3.3000e- 004	0.1081	9.0500e- 003	0.1172	0.0556	8.3200e- 003	0.0639	0.0000	28.8932	28.8932	9.3400e- 003	0.0000	29.1268

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

## 3.4 Grading - 2023

### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e- 004	4.0000e- 004	5.3800e- 003	2.0000e- 005	1.8100e- 003	1.0000e- 005	1.8200e- 003	4.8000e- 004	1.0000e- 005	4.9000e- 004	0.0000	1.4167	1.4167	4.0000e- 005	4.0000e- 005	1.4284
Total	5.1000e- 004	4.0000e- 004	5.3800e- 003	2.0000e- 005	1.8100e- 003	1.0000e- 005	1.8200e- 003	4.8000e- 004	1.0000e- 005	4.9000e- 004	0.0000	1.4167	1.4167	4.0000e- 005	4.0000e- 005	1.4284

#### 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					ton	s/yr							МТ	'/yr		
Fugitive Dust					0.0422	0.0000	0.0422	0.0217	0.0000	0.0217	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.1938	0.1786	3.3000e- 004		9.0500e- 003	9.0500e- 003		8.3200e- 003	8.3200e- 003	0.0000	28.8932	28.8932	9.3400e- 003	0.0000	29.1268
Total	0.0194	0.1938	0.1786	3.3000e- 004	0.0422	9.0500e- 003	0.0512	0.0217	8.3200e- 003	0.0300	0.0000	28.8932	28.8932	9.3400e- 003	0.0000	29.1268

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

## 3.4 Grading - 2023

### **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e- 004	4.0000e- 004	5.3800e- 003	2.0000e- 005	1.8100e- 003	1.0000e- 005	1.8200e- 003	4.8000e- 004	1.0000e- 005	4.9000e- 004	0.0000	1.4167	1.4167	4.0000e- 005	4.0000e- 005	1.4284
Total	5.1000e- 004	4.0000e- 004	5.3800e- 003	2.0000e- 005	1.8100e- 003	1.0000e- 005	1.8200e- 003	4.8000e- 004	1.0000e- 005	4.9000e- 004	0.0000	1.4167	1.4167	4.0000e- 005	4.0000e- 005	1.4284

### 3.5 Building Construction - 2023

### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	0.1400	1.2803	1.4457	2.4000e- 003		0.0623	0.0623	- 	0.0586	0.0586	0.0000	206.3062	206.3062	0.0491	0.0000	207.5332
Total	0.1400	1.2803	1.4457	2.4000e- 003		0.0623	0.0623		0.0586	0.0586	0.0000	206.3062	206.3062	0.0491	0.0000	207.5332

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

# 3.5 Building Construction - 2023

### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.9600e- 003	0.2102	0.0800	1.0100e- 003	0.0348	1.1700e- 003	0.0360	0.0100	1.1200e- 003	0.0112	0.0000	98.2047	98.2047	3.2900e- 003	0.0142	102.5273
Worker	0.0402	0.0309	0.4211	1.2100e- 003	0.1416	8.1000e- 004	0.1424	0.0376	7.5000e- 004	0.0384	0.0000	110.8007	110.8007	2.8500e- 003	2.8500e- 003	111.7215
Total	0.0462	0.2411	0.5011	2.2200e- 003	0.1764	1.9800e- 003	0.1784	0.0476	1.8700e- 003	0.0495	0.0000	209.0055	209.0055	6.1400e- 003	0.0171	214.2488

### 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					ton	s/yr							МТ	/yr		
Off-Road	0.1400	1.2803	1.4457	2.4000e- 003		0.0623	0.0623	1 1 1	0.0586	0.0586	0.0000	206.3060	206.3060	0.0491	0.0000	207.5329
Total	0.1400	1.2803	1.4457	2.4000e- 003		0.0623	0.0623		0.0586	0.0586	0.0000	206.3060	206.3060	0.0491	0.0000	207.5329

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

# 3.5 Building Construction - 2023

### **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	7/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.9600e- 003	0.2102	0.0800	1.0100e- 003	0.0348	1.1700e- 003	0.0360	0.0100	1.1200e- 003	0.0112	0.0000	98.2047	98.2047	3.2900e- 003	0.0142	102.5273
Worker	0.0402	0.0309	0.4211	1.2100e- 003	0.1416	8.1000e- 004	0.1424	0.0376	7.5000e- 004	0.0384	0.0000	110.8007	110.8007	2.8500e- 003	2.8500e- 003	111.7215
Total	0.0462	0.2411	0.5011	2.2200e- 003	0.1764	1.9800e- 003	0.1784	0.0476	1.8700e- 003	0.0495	0.0000	209.0055	209.0055	6.1400e- 003	0.0171	214.2488

### 3.5 Building Construction - 2024

### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	0.1442	1.3175	1.5844	2.6400e- 003		0.0601	0.0601	1 1 1	0.0565	0.0565	0.0000	227.2121	227.2121	0.0537	0.0000	228.5554
Total	0.1442	1.3175	1.5844	2.6400e- 003		0.0601	0.0601		0.0565	0.0565	0.0000	227.2121	227.2121	0.0537	0.0000	228.5554

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

# 3.5 Building Construction - 2024

### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.4100e- 003	0.2325	0.0867	1.0900e- 003	0.0383	1.2900e- 003	0.0396	0.0111	1.2300e- 003	0.0123	0.0000	106.5813	106.5813	3.6300e- 003	0.0155	111.2803
Worker	0.0414	0.0304	0.4320	1.2900e- 003	0.1559	8.5000e- 004	0.1568	0.0414	7.9000e- 004	0.0422	0.0000	118.4417	118.4417	2.8400e- 003	2.9200e- 003	119.3833
Total	0.0478	0.2629	0.5187	2.3800e- 003	0.1942	2.1400e- 003	0.1964	0.0525	2.0200e- 003	0.0545	0.0000	225.0230	225.0230	6.4700e- 003	0.0184	230.6635

### 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	0.1442	1.3175	1.5844	2.6400e- 003		0.0601	0.0601	1 1 1	0.0565	0.0565	0.0000	227.2119	227.2119	0.0537	0.0000	228.5551
Total	0.1442	1.3175	1.5844	2.6400e- 003		0.0601	0.0601		0.0565	0.0565	0.0000	227.2119	227.2119	0.0537	0.0000	228.5551
#### EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

## 3.5 Building Construction - 2024

#### **Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.4100e- 003	0.2325	0.0867	1.0900e- 003	0.0383	1.2900e- 003	0.0396	0.0111	1.2300e- 003	0.0123	0.0000	106.5813	106.5813	3.6300e- 003	0.0155	111.2803
Worker	0.0414	0.0304	0.4320	1.2900e- 003	0.1559	8.5000e- 004	0.1568	0.0414	7.9000e- 004	0.0422	0.0000	118.4417	118.4417	2.8400e- 003	2.9200e- 003	119.3833
Total	0.0478	0.2629	0.5187	2.3800e- 003	0.1942	2.1400e- 003	0.1964	0.0525	2.0200e- 003	0.0545	0.0000	225.0230	225.0230	6.4700e- 003	0.0184	230.6635

#### 3.6 Paving - 2024

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	0.0163	0.1572	0.2413	3.8000e- 004		7.7300e- 003	7.7300e- 003		7.1100e- 003	7.1100e- 003	0.0000	33.0438	33.0438	0.0107	0.0000	33.3110
Paving	7.2300e- 003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0235	0.1572	0.2413	3.8000e- 004		7.7300e- 003	7.7300e- 003		7.1100e- 003	7.1100e- 003	0.0000	33.0438	33.0438	0.0107	0.0000	33.3110

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

### 3.6 Paving - 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					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e- 004	5.3000e- 004	7.5200e- 003	2.0000e- 005	2.7200e- 003	1.0000e- 005	2.7300e- 003	7.2000e- 004	1.0000e- 005	7.3000e- 004	0.0000	2.0629	2.0629	5.0000e- 005	5.0000e- 005	2.0793
Total	7.2000e- 004	5.3000e- 004	7.5200e- 003	2.0000e- 005	2.7200e- 003	1.0000e- 005	2.7300e- 003	7.2000e- 004	1.0000e- 005	7.3000e- 004	0.0000	2.0629	2.0629	5.0000e- 005	5.0000e- 005	2.0793

#### 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					ton	s/yr							МТ	/yr		
Off-Road	0.0163	0.1572	0.2413	3.8000e- 004		7.7300e- 003	7.7300e- 003		7.1100e- 003	7.1100e- 003	0.0000	33.0437	33.0437	0.0107	0.0000	33.3109
Paving	7.2300e- 003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0235	0.1572	0.2413	3.8000e- 004		7.7300e- 003	7.7300e- 003		7.1100e- 003	7.1100e- 003	0.0000	33.0437	33.0437	0.0107	0.0000	33.3109

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

### 3.6 Paving - 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					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e- 004	5.3000e- 004	7.5200e- 003	2.0000e- 005	2.7200e- 003	1.0000e- 005	2.7300e- 003	7.2000e- 004	1.0000e- 005	7.3000e- 004	0.0000	2.0629	2.0629	5.0000e- 005	5.0000e- 005	2.0793
Total	7.2000e- 004	5.3000e- 004	7.5200e- 003	2.0000e- 005	2.7200e- 003	1.0000e- 005	2.7300e- 003	7.2000e- 004	1.0000e- 005	7.3000e- 004	0.0000	2.0629	2.0629	5.0000e- 005	5.0000e- 005	2.0793

#### 3.7 Architectural Coating - 2024

#### **Unmitigated Construction On-Site**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Archit. Coating	0.6637					0.0000	0.0000	1 1 1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9800e- 003	0.0201	0.0299	5.0000e- 005		1.0100e- 003	1.0100e- 003		1.0100e- 003	1.0100e- 003	0.0000	4.2129	4.2129	2.4000e- 004	0.0000	4.2188
Total	0.6667	0.0201	0.0299	5.0000e- 005		1.0100e- 003	1.0100e- 003		1.0100e- 003	1.0100e- 003	0.0000	4.2129	4.2129	2.4000e- 004	0.0000	4.2188

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

## 3.7 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					ton	s/yr							MT	ſ/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	1.3900e- 003	1.0200e- 003	0.0146	4.0000e- 005	5.2500e- 003	3.0000e- 005	5.2800e- 003	1.3900e- 003	3.0000e- 005	1.4200e- 003	0.0000	3.9883	3.9883	1.0000e- 004	1.0000e- 004	4.0201
Total	1.3900e- 003	1.0200e- 003	0.0146	4.0000e- 005	5.2500e- 003	3.0000e- 005	5.2800e- 003	1.3900e- 003	3.0000e- 005	1.4200e- 003	0.0000	3.9883	3.9883	1.0000e- 004	1.0000e- 004	4.0201

#### 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					ton	s/yr							МТ	/yr		
Archit. Coating	0.6637					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9800e- 003	0.0201	0.0299	5.0000e- 005		1.0100e- 003	1.0100e- 003		1.0100e- 003	1.0100e- 003	0.0000	4.2129	4.2129	2.4000e- 004	0.0000	4.2188
Total	0.6667	0.0201	0.0299	5.0000e- 005		1.0100e- 003	1.0100e- 003		1.0100e- 003	1.0100e- 003	0.0000	4.2129	4.2129	2.4000e- 004	0.0000	4.2188

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

## 3.7 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					ton	s/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	1.3900e- 003	1.0200e- 003	0.0146	4.0000e- 005	5.2500e- 003	3.0000e- 005	5.2800e- 003	1.3900e- 003	3.0000e- 005	1.4200e- 003	0.0000	3.9883	3.9883	1.0000e- 004	1.0000e- 004	4.0201
Total	1.3900e- 003	1.0200e- 003	0.0146	4.0000e- 005	5.2500e- 003	3.0000e- 005	5.2800e- 003	1.3900e- 003	3.0000e- 005	1.4200e- 003	0.0000	3.9883	3.9883	1.0000e- 004	1.0000e- 004	4.0201

## 4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Mitigated	1.6815	2.0510	17.6829	0.0407	4.4994	0.0295	4.5289	1.2008	0.0274	1.2282	0.0000	3,764.720 2	3,764.720 2	0.2375	0.1643	3,819.610 3
Unmitigated	1.6815	2.0510	17.6829	0.0407	4.4994	0.0295	4.5289	1.2008	0.0274	1.2282	0.0000	3,764.720 2	3,764.720 2	0.2375	0.1643	3,819.610 3

## 4.2 Trip Summary Information

	Aver	age Daily Trip Ra	ite	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Home Improvement Superstore	2,644.81	4,880.32	4801.45	11,951,291	11,951,291
Parking Lot	0.00	0.00	0.00		
Total	2,644.81	4,880.32	4,801.45	11,951,291	11,951,291

#### 4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
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
Home Improvement Superstore	16.60	8.40	6.90	23.40	57.60	19.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Home Improvement Superstore	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Parking Lot	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657

## 5.0 Energy Detail

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

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 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	584.2556	584.2556	0.0279	3.3800e- 003	585.9586
Electricity Unmitigated	//************************************	,	,		,	0.0000	0.0000	,,	0.0000	0.0000	0.0000	584.2556	584.2556	0.0279	3.3800e- 003	585.9586
NaturalGas Mitigated	1.2000e- 003	0.0109	9.1300e- 003	7.0000e- 005	,	8.3000e- 004	8.3000e- 004	,,	8.3000e- 004	8.3000e- 004	0.0000	11.8280	11.8280	2.3000e- 004	2.2000e- 004	11.8982
NaturalGas Unmitigated	1.2000e- 003	0.0109	9.1300e- 003	7.0000e- 005	;	8.3000e- 004	8.3000e- 004		8.3000e- 004	8.3000e- 004	0.0000	11.8280	11.8280	2.3000e- 004	2.2000e- 004	11.8982

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

### 5.2 Energy by Land Use - NaturalGas

#### **Unmitigated**

	NaturalGa s Use	ROG	NOx	СО	SO2	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					
Home Improvement Superstore	221647	1.2000e- 003	0.0109	9.1300e- 003	7.0000e- 005		8.3000e- 004	8.3000e- 004		8.3000e- 004	8.3000e- 004	0.0000	11.8280	11.8280	2.3000e- 004	2.2000e- 004	11.8982
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
Total		1.2000e- 003	0.0109	9.1300e- 003	7.0000e- 005		8.3000e- 004	8.3000e- 004		8.3000e- 004	8.3000e- 004	0.0000	11.8280	11.8280	2.3000e- 004	2.2000e- 004	11.8982

#### Mitigated

	NaturalGa s Use	ROG	NOx	СО	SO2	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					ton	s/yr							MT	/yr		
Home Improvement Superstore	221647	1.2000e- 003	0.0109	9.1300e- 003	7.0000e- 005		8.3000e- 004	8.3000e- 004		8.3000e- 004	8.3000e- 004	0.0000	11.8280	11.8280	2.3000e- 004	2.2000e- 004	11.8982
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
Total		1.2000e- 003	0.0109	9.1300e- 003	7.0000e- 005		8.3000e- 004	8.3000e- 004		8.3000e- 004	8.3000e- 004	0.0000	11.8280	11.8280	2.3000e- 004	2.2000e- 004	11.8982

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

## 5.3 Energy by Land Use - Electricity

#### **Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e				
Land Use	kWh/yr	MT/yr							
Home Improvement Superstore	1.77726e +006	557.8403	0.0266	3.2200e- 003	559.4663				
Parking Lot	84157.9	26.4152	1.2600e- 003	1.5000e- 004	26.4922				
Total		584.2556	0.0279	3.3700e- 003	585.9586				

#### **Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		MT	/yr	
Home Improvement Superstore	1.77726e +006	557.8403	0.0266	3.2200e- 003	559.4663
Parking Lot	84157.9	26.4152	1.2600e- 003	1.5000e- 004	26.4922
Total		584.2556	0.0279	3.3700e- 003	585.9586

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

### 6.1 Mitigation Measures Area

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr												MT	/yr		
Mitigated	0.5734	2.0000e- 005	1.8000e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	3.5100e- 003	3.5100e- 003	1.0000e- 005	0.0000	3.7400e- 003
Unmitigated	0.5734	2.0000e- 005	1.8000e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	3.5100e- 003	3.5100e- 003	1.0000e- 005	0.0000	3.7400e- 003

## 6.2 Area by SubCategory

<u>Unmitigated</u>

	ROG	NOx	со	SO2	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	0.0664					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7000e- 004	2.0000e- 005	1.8000e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	3.5100e- 003	3.5100e- 003	1.0000e- 005	0.0000	3.7400e- 003
Total	0.5735	2.0000e- 005	1.8000e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	3.5100e- 003	3.5100e- 003	1.0000e- 005	0.0000	3.7400e- 003

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

### 6.2 Area by SubCategory

#### Mitigated

	ROG	NOx	СО	SO2	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											МТ	'/yr		
Architectural Coating	0.0664					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7000e- 004	2.0000e- 005	1.8000e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	3.5100e- 003	3.5100e- 003	1.0000e- 005	0.0000	3.7400e- 003
Total	0.5735	2.0000e- 005	1.8000e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	3.5100e- 003	3.5100e- 003	1.0000e- 005	0.0000	3.7400e- 003

## 7.0 Water Detail

7.1 Mitigation Measures Water

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

	Total CO2	CH4	N2O	CO2e				
Category	MT/yr							
Mitigated	65.8889	0.3312	8.1100e- 003	76.5863				
Unmitigated	65.8889	0.3312	8.1100e- 003	76.5863				

# 7.2 Water by Land Use <u>Unmitigated</u>

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		MT	/yr	
Home Improvement Superstore	10.0724 / 6.1734	65.8889	0.3312	8.1100e- 003	76.5863
Parking Lot	0/0	0.0000	0.0000	0.0000	0.0000
Total		65.8889	0.3312	8.1100e- 003	76.5863

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

#### 7.2 Water by Land Use

**Mitigated** 

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		MT	/yr	
Home Improvement Superstore	10.0724 / 6.1734	65.8889	0.3312	8.1100e- 003	76.5863
Parking Lot	0/0	0.0000	0.0000	0.0000	0.0000
Total		65.8889	0.3312	8.1100e- 003	76.5863

## 8.0 Waste Detail

## 8.1 Mitigation Measures Waste

#### Category/Year

	Total CO2	CH4	N2O	CO2e
		Π	/yr	
Mitigated	306.0901	18.0894	0.0000	758.3252
Unmitigated	306.0901	18.0894	0.0000	758.3252

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

### 8.2 Waste by Land Use

**Unmitigated** 

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		MT	/yr	
Home Improvement Superstore	1507.9	306.0901	18.0894	0.0000	758.3252
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		306.0901	18.0894	0.0000	758.3252

#### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		MT	/yr	
Home Improvement Superstore	1507.9	306.0901	18.0894	0.0000	758.3252
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		306.0901	18.0894	0.0000	758.3252

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

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

#### **Boilers**

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

#### **User Defined Equipment**

Equipment Type Number

## 11.0 Vegetation

## ATTACHMENT 2

## Construction HRA/AERSCREEN Output

#### 10064 Granada Hills Home Depot Construction DPM HRA

### Construction Health Risk Calculations

Annual PM Exhaust Generation Annual Tons/Year	Pounds/year	lbs/day	lbs/hr	g/day	sec/day	g/sec
0.0938	187.6	5.14E-01	2.14E-02	233	86,400	2.70E-03
Max 1-hour concentration Annualized average concentration (0.08)	3.04E-02 μg 2.43E-03 μg	g/m <sup>3</sup> g/m <sup>3</sup>				
Onsite Maximum Exposure	3rd Trimester	0<2	2<9	2<16	16<30	16-70
Cair	2.43E-03	2.43E-03	2.43E-03	2.43E-03	2.43E-03	2.43E-03
DBR	361	1090	861	745	335	290
A	1	1	1	1	1	1
EF	0.96	0.96	0.96	0.96	0.96	0.96
Dose-air	8.43E-07	2.54E-06	2.01E-06	1.74E-06	7.82E-07	6.77E-07
CPF	1.10	1.10	1.10	1.10	1.10	1.10
ASF	10	10	3	3	1	1
ED (years of construction = 2)	0.25	2.000	2.000	2.000	2.000	2.000
AT	70	70	70	70	70	70
FAH	0.85	0.85	0.72	0.72	0.73	0.73
Risk in 1 mill	0.03	0.68	0.14	0.12	0.02	0.02
	5.00	5.00	5.00	5.00	5.00	5.00
Chronic Exposure	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
0-9	0.84	4.25				
0-30	0.84	6.25				
0-70	0.84	6.25				

Construction HRA

#### 10064 Granada Hills Home Depot Construction DPM HRA

AERSCREEN 11126 / AERMOD 1206 06/14/22 14:56:49 TITLE: Granada Hills Home Depot -----\* VOLUME PARAMETERS \* SOURCE EMISSION RATE:0.270E-02 g/s0.214E-01 lb/hrVOLUME HEIGHT:5.00 meters16.40 feet INITIAL LATERAL DIMENSION:195.00 meters639.76 feetINITIAL VERTICAL DIMENSION:190.00 meters623.36 feet RURAL OR URBAN:URBANPOPULATION:50000 FLAGPOLE RECEPTOR HEIGHT: 1.50 meters 4.92 feet INITIAL PROBE DISTANCE = 5000. meters 16404. feet -----BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES 25 meter receptor spacing: 420. meters - 5000. meters

Zo ROUGHNESS 1-HR CONC DIST TEMPORAL

SECTOR LENGTH (ug/m3) (m) PERIOD

\_\_\_\_\_

1\* 1.000 0.3040E-01 420.2 WIN

\* = worst case flow sector

MIN/MAX TEMPERATURE: 250.0 / 310.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

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

ALBEDO: 0.35 BOWEN RATIO: 1.50 ROUGHNESS LENGTH: 1.000 (meters)

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

\_\_\_\_\_

YR MO DY JDY HR

10 01 16 16 01

-- -- -- --- --

H0 U\* W\* DT/DZ ZICNV ZIMCH M-O LEN Z0 BOWEN ALBEDO REF WS -0.41 0.043 -9.000 0.020 -999. 21. 19.3 1.000 1.50 0.35 0.50 HT REF TA HT

10.0 310.0 2.0

#### METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT

YR MO DY JDY HR

\_\_\_\_\_

\_\_\_\_\_

10 01 16 16 01

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H0 U\* W\* DT/DZ ZICNV ZIMCH M-O LEN Z0 BOWEN ALBEDO REF WS -0.41 0.043 -9.000 0.020 -999. 21. 19.3 1.000 1.50 0.35 0.50

HT REF TA HT

10.0 310.0 2.0

#### 

Ν	<b>MAXIMUM</b>	MAXIMUM
DIST	1-HR CONC	DIST 1-HR CONC
(m)	(ug/m3)	(m) (ug/m3)
420.25	0.3040E-01	2725.00 0.1408E-01
425.00	0.3022E-01	2750.00 0.1401E-01
450.00	0.2932E-01	2775.00 0.1394E-01
475.00	0.2851E-01	2800.00 0.1387E-01
500.00	0.2776E-01	2825.00 0.1379E-01
525.00	0.2709E-01	2850.00 0.1373E-01
550.00	0.2646E-01	2875.00 0.1366E-01
575.00	0.2588E-01	2900.00 0.1359E-01
600.00	0.2549E-01	2925.00 0.1352E-01
625.00	0.2521E-01	2950.00 0.1345E-01
650.00	0.2495E-01	2975.00 0.1339E-01
675.00	0.2469E-01	3000.00 0.1332E-01
700.00	0.2444E-01	3025.00 0.1326E-01
725.00	0.2421E-01	3050.00 0.1319E-01
750.00	0.2400E-01	3075.00 0.1313E-01
775.00	0.2379E-01	3100.00 0.1306E-01
800.00	0.2359E-01	3125.00 0.1300E-01
825.00	0.2338E-01	3150.00 0.1294E-01
850.00	0.2319E-01	3175.00 0.1288E-01
875.00	0.2299E-01	3200.00 0.1282E-01
900.00	0.2280E-01	3225.00 0.1276E-01
925.00	0.2261E-01	3250.00 0.1270E-01
950.00	0.2242E-01	3275.00 0.1264E-01
975.00	0.2224E-01	3300.00 0.1258E-01
1000.00	0.2206E-01	3325.00 0.1252E-01
1025.00	0.2188E-01	3350.00 0.1247E-01
1050.00	0.2170E-01	3375.00 0.1241E-01
1075.00	0.2153E-01	3400.00 0.1235E-01
1100.00	0.2136E-01	3425.00 0.1230E-01
1125.00	0.2119E-01	3450.00 0.1224E-01
1150.00	0.2103E-01	3475.00 0.1219E-01
1175.00	0.2087E-01	3500.00 0.1214E-01
1200.00	0.2071E-01	3525.00 0.1208E-01
1225.00	0.2055E-01	3550.00 0.1203E-01
1250.00	0.2039E-01	3575.00 0.1198E-01
1275.00	0.2024E-01	3600.00 0.1192E-01
1300.00	0.2009E-01	3625.00 0.1187E-01
1325.00	0.1994E-01	3650.00 0.1182E-01
1350.00	0.1979E-01	3675.00 0.1177E-01
13/5.00	0.1965E-01	3/00.00 0.1172E-01
1400.00	0.1951E-01	3725.00 0.1167E-01

DISTANCE FROM SOURCE 420.25 meters

IMPACT AT THE AMBIENT BOUNDARY 0.3040E-01 0.3040E-01 0.2736E-01 0.1824E-01 0.3040E-02

CALCULATION	MAXIMUM 1-HOUR CONC	SCALED 3-HOUR CONC	SCALED 8-HOUR CONC	SCALED 24-HOUR CONC	SCALED ANNUAL CONC	
	(ug/m3) 	(ug/m3) 	(ug/m3) 	(ug/m3) 	(ug/m3)	
DISTANCE FROM	3.04E-02	3.04E-02 420.25 m	2.74E-02	1.82E-02	3.04E-03	

			a a . =
1425.00	0.1936E-01	3750.00	0.1162E-01
1450.00	0.1923E-01	3775.00	0.1157E-01
1475.00	0.1909E-01	3800.00	0.1152E-01
1500.00	0.1895E-01	3825.00	0.1148E-01
1525.00	0.1882E-01	3850.00	0.1143E-01
1550.00	0.1869E-01	3875.00	0.1138E-01
1575.00	0.1856E-01	3900.00	0.1133E-01
1600.00	0.1843E-01	3925.00	0.1129E-01
1625.00	0.1831E-01	3950.00	0.1124E-01
1650.00	0.1818E-01	3975.00	0.1120E-01
1675.00	0.1806E-01	4000.00	0.1115E-01
1700.00	0.1794E-01	4025.00	0.1111E-01
1725.00	0.1782E-01	4050.00	0.1106E-01
1750.00	0.1770E-01	4075.00	0.1102E-01
1775.00	0.1758E-01	4100.00	0.1097E-01
1800.00	0.1747E-01	4125.00	0.1093E-01
1825.00	0.1736E-01	4150.00	0.1089E-01
1850.00	0 1724E-01	4175.00	0 1085E-01
1875.00	0 1713E-01	4200.00	0 1080E-01
1900.00	0.1703E-01	4225.00	0.1076E-01
1925.00	0.1692E-01	4250.00	0.1072E-01
1950.00	0.1681E-01	4275.00	0.1068E-01
1975.00	0.1671E-01	4300.00	0.1064E-01
2000.00	0.1660E-01	4325.00	0.1004E 01
2000.00	0.1650E-01	4323.00	0.1000E-01
2023.00	0.1640E-01	4330.00	0.1050E-01
2030.00	0.1040E-01	4373.00	0.1032E-01
2075.00	0.1630E-01	4400.00	0.1046E-01
2100.00	0.1620E-01	4425.00	0.1044E-01
2125.00		4430.00	0.1040E-01
2150.00	0.1601E-01	4475.00	0.1030E-01
2175.00	0.1591E-01	4500.00	0.1032E-01
2200.00	0.1562E-01	4525.00	0.1026E-01
2225.00	0.1573E-01	4550.00	0.1024E-01
2250.00	0.1563E-01	4575.00	0.1021E-01
2275.00	0.1554E-01	4600.00	0.1017E-01
2300.00	0.1546E-01	4625.00	0.1013E-01
2325.00	0.1537E-01	4650.00	0.1010E-01
2350.00	0.1528E-01	4675.00	0.1006E-01
2375.00	0.1519E-01	4700.00	0.1002E-01
2400.00	0.1511E-01	4725.00	0.9987E-02
2425.00	0.1502E-01	4750.00	0.9952E-02
2450.00	0.1494E-01	4775.00	0.9916E-02
2475.00	0.1486E-01	4800.00	0.9881E-02
2500.00	0.1478E-01	4825.00	0.9846E-02
2525.00	0.1470E-01	4850.00	0.9812E-02
2550.00	0.1462E-01	4875.00	0.9778E-02
2575.00	0.1454E-01	4900.00	0.9743E-02
2600.00	0.1446E-01	4925.00	0.9710E-02
2625.00	0.1438E-01	4950.00	0.9676E-02
2650.00	0.1431E-01	4975.00	0.9643E-02
2675.00	0.1423E-01	5000.00	0.9609E-02
2700.00	0.1416E-01		