AIR QUALITY AND GREENHOUSE GAS ANALYSIS

CENTRAL PLAZA PROJECT

CITY OF LAKE ELSINORE

COUNTY OF RIVERSIDE, CALIFORNIA

LSA

November 2016

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CITY OF LAKE ELSINORE

COUNTY OF RIVERSIDE, CALIFORNIA

Submitted to:

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Project No. PRP1601

LSA

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EXECUTIVE SUMMARY

LSA Associates, Inc. was retained by Peninsula Retail Partners to prepare an air quality and greenhouse gas (GHG) impact study for the proposed Central Plaza Project (proposed project) to be located in the City of Lake Elsinore (City) in the County of Riverside, California. The proposed project would develop approximately 53,469 square feet (sf) of retail stores and 12,334 sf of restaurant uses on a 7.25-acre project site.

The air quality study provides a discussion of the proposed project, the physical setting of the project area, and the regulatory framework for air quality. The report provides data on existing air quality and evaluates potential air quality impacts associated with the proposed project. Modeled air quality levels are based on trip generations identified in the *Traffic Impact Analysis* prepared for the proposed project (RK Engineering Group, Inc. 2016).

Emissions with regional effects during project construction, calculated with the California Emissions Estimator Model (CalEEMod) Version 2016.3.1, would not exceed criteria pollutant thresholds established by the South Coast Air Quality Management District (SCAQMD). Compliance with SCAQMD rules and regulations during construction will reduce construction-related air quality impacts from fugitive dust emissions and construction equipment emissions. Standard dust suppression measures recommended by the SCAQMD have been identified. The proposed project would not exceed the localized significance thresholds.

The proposed project is located in the County of Riverside, which does not have serpentine and ultramafic rock in its soil. Therefore, the potential risk for naturally occurring asbestos during project construction would be less than significant.

Operational emissions for the entire project would not exceed the daily screening level thresholds for any of the criteria pollutants. The proposed project, with implementation of traffic mitigation measures, would not result in the degradation of signalized roadway intersections to level of service (LOS) E or worse, and under cumulative conditions emissions of carbon monoxide (CO) would not exceed state or federal standards. Therefore, CO "hotspot" modeling was not performed and no significant long-term air quality impact is anticipated to local air quality with the implementation of the proposed project. An evaluation of potential odors from construction activities and project operation indicate that the proposed project would not expose substantial numbers of people to objectionable odors.

Qualitative screening-level health risk assessments were conducted to assess impacts to sensitive receptors (i.e., residences) from toxic air contaminants (TACs) during construction activities as well as operation of the proposed project. Both construction and operational TAC impacts were found to be less than significant.

The potential of the project to affect global climate change (GCC) was also addressed. Construction and operational emissions of the principal GHGs, including carbon dioxide (CO_2) and methane (CH_4),

are quantified, and their significance relative to the California Air Resources Board (ARB) Scoping Plan and the City's Climate Action Plan are discussed.

Construction sources of GHG emissions would include the use of heavy construction equipment and vehicle trips by the construction crew. Operational sources of GHG emissions would include energy use, landscaping, vehicular traffic, solid waste disposal, and water usage.

Under the Adopted Climate Action Plan (CAP), the City has established the compliance and performance standards that a proposed project is to meet in order to satisfy State AB 32 mandates. A project-level CAP consistency analysis was performed to determine the project's consistency with the CAP's GHG reduction measures.

Project design features are included as part of the project description. Project features related to construction equipment, green building features, pedestrian and bicycle infrastructure, landscaping, and waste diversion have been included in the CalEEMod modeling analysis.

Projects that are in compliance with the CAP GHG reduction measures would result in a decrease of GHG emissions. Three measures—T-2.1 fuel-efficient vehicles, E-3.2 energy-efficient streetlights, and E-3.2 traffic signal lights—are not applicable to the project development site. The choice, use, and operations of fuel-efficient vehicles are under the control of patrons, not property owners or tenants. Patrons arrive at and leave the shopping center and fast-food restaurants within very short periods of time. Energy-efficient streetlights and traffic signals are under the control of the City. The streetlights and traffic signals are not part of the proposed project. Therefore, these three measures are not feasible for the proposed project. The other nine CAP measures are considered as part of the project design features in the CAP consistency analysis.

The results of the consistency analysis show that the project would not exceed efficiency metric targets pertaining to either project-level or cumulative GHG impacts, and impacts associated with GHG emissions would be less than significant. No project-level or cumulative significant air quality impacts are anticipated for the proposed project; therefore, no mitigation measures are required.

The proposed uses are consistent with the City General Plan designations for the project site. The City General Plan is consistent with the 2016 Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategies (SCAG RTP/SCS) and the SCAQMD 2012 Air Quality Management Plan (AQMP). Therefore, the proposed project is consistent with the City General Plan and the regional AQMP.

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

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LIST OF ABBREVIATIONS AND ACRONYMS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AAQS	ambient air quality standards
AB	Assembly Bill
ac	acres
AQMP	Air Quality Management Plan
ARB	(California) Air Resources Board
Basin	South Coast Air Basin
CAA	(Federal) Clean Air Act
CAAQS	California ambient air quality standards
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CalGreen	California Green Building Code
CAP	Climate Action Plan
CAT	Climate Action Team
CCAA	California Clean Air Act
CEC	California Energy Commission
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CH_4	methane
City	Lake Elsinore
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CO_2e/yr	carbon dioxide equivalent per year
County	Riverside County
DPM	diesel particulate matter
EMS	energy management system
EO	Executive Order
EPA	United States Environmental Protection Agency
FRP	Fiber Reinforced Plastic
ft	feet/foot
GCC	global climate change
GHG	greenhouse gas

GWP	global warming potential
H_2S	hydrogen sulfide
HFCs	hydrofluorocarbons
HVAC	heating, ventilating, and air conditioning
I-15	Interstate 15
kWh	kilowatt-hour
lbs/day	pounds per day
LED	light emitting diode
LOS	level of service
LST	localized significance threshold
m	meters
MATES	Multiple Air Toxics Exposure Study
mg/m^3	milligrams per cubic meter
MMT	million metric tons
MMT CO_2e	million metric tons of carbon dioxide equivalent
mph	miles per hour
MPO	Metropolitan Planning Organization
MT	metric tons
MT/yr CO_2e	metric tons per year of carbon dioxide equivalent
N_2O	nitrous oxide
NAAQS	national ambient air quality standards
NAST	National Assessment Synthesis Team
NEPA	National Environmental Policy Act
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NRP	Non-Reinforced Thermoplastic Panel
O_3	ozone (or smog)
OEHHA	Office of Environmental Health Hazard Assessment
OPR	Governor's Office of Planning and Research
PFCs	perfluorocarbons
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in size
$PM_{2.5}$	particulate matter less than 2.5 microns in size
ppb	parts per billion
ppm	parts per million
REL	reference exposure level

ROCs	reactive organic compounds
ROGs	reactive organic gases
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
sf	square feet
SF_6	sulfur hexafluoride
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_X	sulfur oxides
SRA	Source Receptor Area
TACs	toxic air contaminants
T-BACT	toxics best available control technology
TRU	transport refrigeration units
UNFCCC	United Nations Framework Convention on Climate Change
Update	First Update to the Scoping Plan
VOCs	volatile organic compounds
Working Group	GHG CEQA Significance Threshold Working Group

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INTRODUCTION

This air quality and greenhouse gas (GHG) analysis has been prepared to evaluate the potential air quality impacts and mitigation measures associated with the proposed Central Plaza Project (proposed project) to be located in the City of Lake Elsinore (City) in the County of Riverside (County), California. This report provides a project-specific air quality and GHG analysis by examining the impacts of the proposed uses on adjacent sensitive uses as well as the impacts on the proposed uses on the project site, and by evaluating the mitigation measures required as part of the project design. Guidelines identified by the South Coast Air Quality Management District (SCAQMD) in its *CEQA Air Quality Handbook* (SCAQMD 1993) and associated updates are followed in this air quality impact analysis.

PROJECT LOCATION AND DESCRIPTION

The project site is located at the southeast corner of Central Avenue and Collier Avenue in the City of Lake Elsinore, County of Riverside, California, as shown in Figure 1. As shown in Figures 2 and 3, regional access to the project site is provided by Central Avenue-State Route 74 to the north of the project site and Interstate 15 (I-15) to the east of the project site. The proposed project consists of the following land uses:

- 53,469 square feet (sf) of retail stores (i.e., Marshalls, Skechers, Five Below, and Ultra Beauty);
- 3,530 sf of one detached fast-food restaurant without drive-through;
- 4,500 sf total for two detached fast-food restaurants with drive-through; and
- 4,304 sf total for high turnover sit-down restaurant.

The approximately 7.25-acre (ac) project site currently consists of five parcels (Assessor's Parcel Numbers 377-080-014, -031, -032, -033, and -034). The topography of the project site consists of generally level land that slopes gently in a northeast-to-southwest direction. The elevation on site is approximately 1,280 feet (ft) above mean sea level.

Existing Land Uses on the Project Site

The project site is currently vacant with an existing single-story vacant house to be demolished.

Sensitive Land Uses in the Project Vicinity

The project site is bounded by Central Avenue to the northwest, Collier Avenue to the southwest, I-15 to the northeast, and open space to the southeast. The nearest single-family homes are located approximately 1,200 ft (366 meters) southeast, 2,000 ft east, and 3,000 ft west of the project site.

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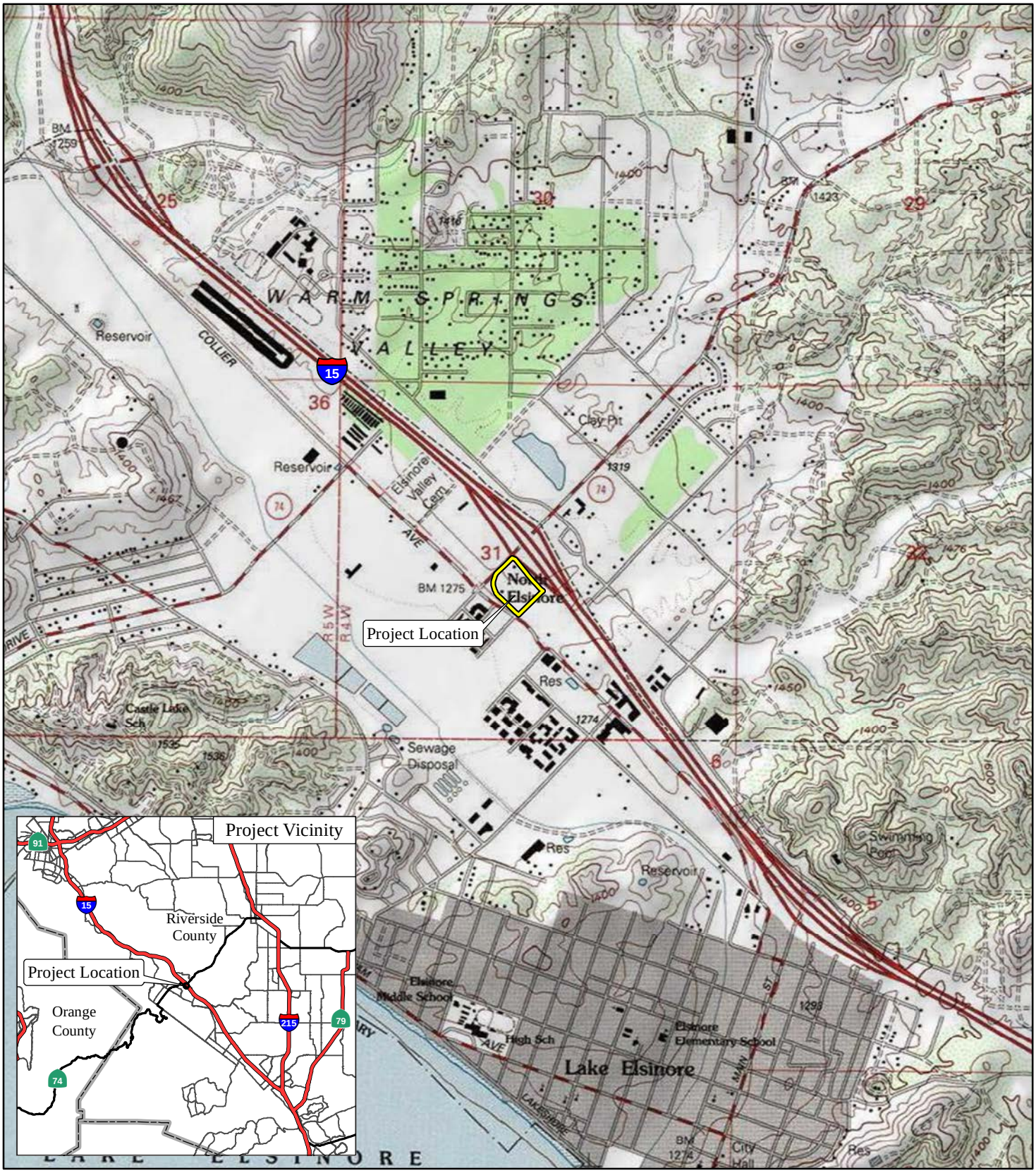

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LEGEND

Project Location

FIGURE 1

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Lake Elsinore Central Plaza
Air Quality and Greenhouse Gas Analysis Report

Project Location Map

SOURCE: USGS 7.5' Quad - Lake Elsinore (1988), CA

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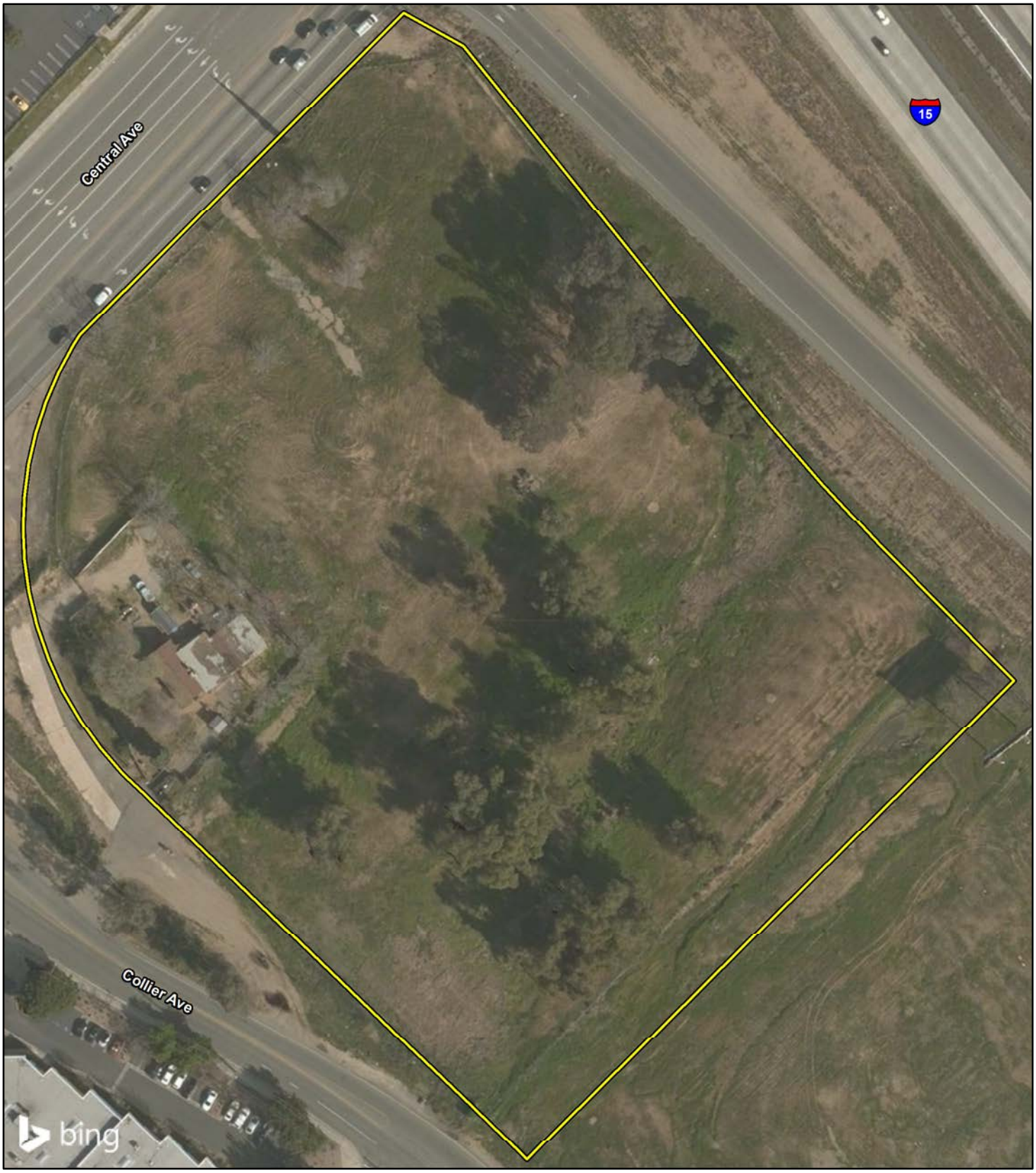

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LEGEND

Project Location

FIGURE 2

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0 50 100

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SOURCE: Bing Maps (2014)

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Lake Elsinore Central Plaza
Air Quality and Greenhouse Gas Analysis Report

Project Study Area

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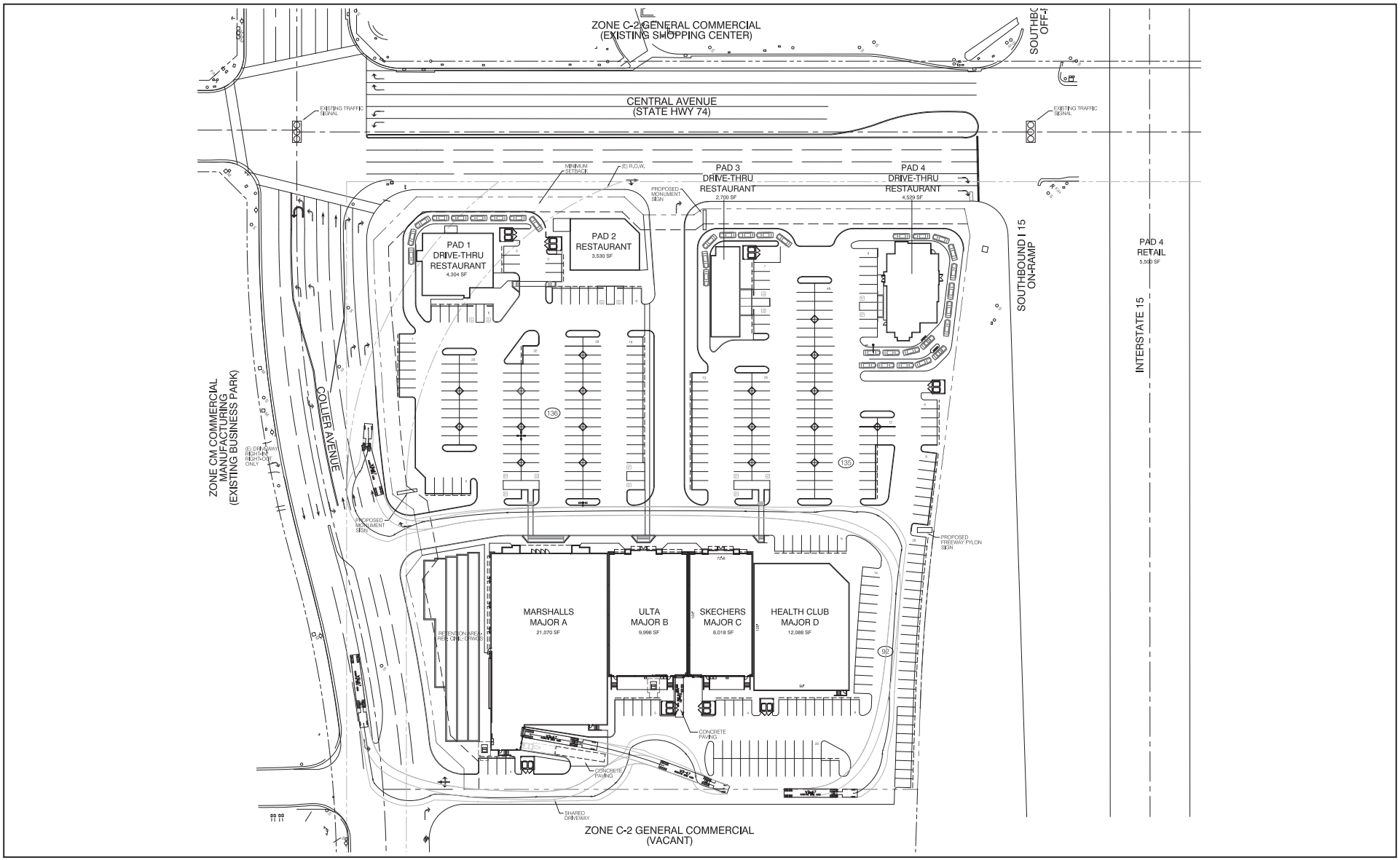

FIGURE 3

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SOURCE: GK Pierce Architects

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Lake Elsinore Central Plaza
Air Quality and Greenhouse Gas Analysis Report

Project Site Plan

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Commercial and industrial facilities surround the project site to the north, northwest, west, south, and southeast, which creates a buffer between the single-family homes and the project site.

Project Schedule

Based on the California Emissions Estimator Model (CalEEMod) default construction schedule estimates, project construction is anticipated to occur over a 10-month period. All construction equipment, including construction worker vehicles, would be staged on the project site for the duration of the construction period.

Project Design Features

Although not required by the City, the Project Applicant will implement the following building sustainability features into the proposed project. The features listed below are not emission reduction option selections in the CalEEMod; therefore, emission calculations did not include all of these measures.

- **Materials and Finishes**
    - The stores would use Non-Reinforced Thermoplastic Panel (NRP) in lieu of Fiber Reinforced Plastic (FRP) sheets on the walls in areas where plastic sheeting is appropriate, including food preparation areas, utility and janitorial areas, and associate break rooms. NRP can be recycled, has better impact resistance, and (like FRP) is easy to keep clean.
    - The stores would use plant-based oil extracted from a renewable resource as a concrete form release agent (i.e., a product sprayed on concrete forms to allow ease of removal after the concrete has set). This release agent is nonpetroleum-based, nontoxic, and biodegradable.
    - For the exterior and interior field paint coatings of the stores and restaurants, building contractors would use low volatile organic compound (VOC) paint.
    - Paint products required for the project would be primarily purchased in 55-gallon drums and 275-gallon totes, reducing the number of 1-gallon and 5-gallon buckets needed. These plastic buckets are filled from the drums and totes and then returned to the paint supplier for cleaning and reuse.
    - Exposed concrete stores are used “to reduce surface applied flooring materials,” eliminating the need for most chemical cleaners, wax strippers, and propane-powered buffing.
- **Recycled Building Materials**
    - Construction of the stores and fast-food restaurants would use steel containing approximately 90–98 percent recycled structural steel, which utilizes less energy in the mining and manufacturing process than new steel.
    - All of the plastic baseboards and much of the plastic shelving included in the stores and restaurants would be composed of recycled plastic.
- **Bicycle Infrastructure**
    - Class 2 bike lanes on Central Avenue and Collier Avenue would be adjacent to the project site.

- **Pedestrian Infrastructure**
    - The proposed project would provide concrete sidewalks for greater pedestrian mobility within and around the project area.
- **Tree Planting**
    - Trees would be planted in strategic locations around buildings or to shade pavement in parking lots, walkways, and sidewalks.
- **Lighting and Energy Efficiency**
    - The stores and restaurants would include occupancy sensors in areas of infrequent use, including restrooms, break rooms, and offices. The sensors automatically turn off lights when the space is unoccupied.
    - All lighting in the stores and restaurants would consist of T-8 fluorescent lamps and electronic ballasts, resulting in an up to 15–20 percent reduction in energy load.
    - All exterior building signage and many refrigerated food cases would be illuminated with light emitting diodes (LEDs). LEDs perform well in refrigerated food cases and produce less heat than fluorescent bulbs—heat which must be compensated for by the refrigeration equipment. LEDs also contain no mercury or lead.
    - LED technology is up to 52 percent more energy efficient than fluorescent lights.
    - The total estimated energy savings for LED lighting in stores and restaurants would be approximately 60,000 kilowatt-hours (kWh) per year, enough energy to power five single-family homes.
    - The stores and restaurants would include a daylight harvesting system, which incorporates more efficient lighting, electronic continuous dimming ballasts, skylights, and computer-controlled daylight sensors that monitor the amount of natural light available. During periods of higher natural daylight, the system dims or turns off lights in the stores and restaurants if they are not needed, thereby reducing energy usage.
    - This program would help the stores and restaurants save a substantial amount of energy. Dimming and turning off building lights also helps eliminate unnecessary heat in the building.
    - The Project Applicant would employ a centralized energy management system (EMS) for each tenant to monitor and control the heating, air conditioning, refrigeration, and lighting systems for all stores and restaurants. The EMS enables the tenants to constantly monitor and control the stores' energy usage, analyze refrigeration temperatures, observe heating, ventilating, and air conditioning (HVAC) and lighting performance, and adjust system levels. Energy usage for the stores and/or restaurants would be monitored and controlled in this manner.
- **Heating, Ventilating, and Air Conditioning**
    - The stores and restaurants would employ one of the industry's most efficient HVAC units available.

- **Dehumidification**
    - Each building would include a dehumidifying system that allows tenants to operate the stores and restaurants at a higher temperature, use less energy, and allow the refrigeration system to operate more efficiently.
- **White Roofs**
    - All stores and restaurants would utilize a white membrane roof instead of the typical darker-colored roof materials employed in commercial construction. The white membrane roof's higher reflectivity helps reduce building energy consumption and reduces the heat island effect, compared to buildings utilizing darker roofing colors.
- **Refrigeration**
    - All stores and restaurants would use refrigerants that would not deplete the ozone (i.e., R407a) for the refrigeration equipment. For air conditioning, tenants would convert to R410a refrigerant.
    - Refrigeration equipment is typically roof-mounted near the refrigerated cases. This reduces the amount of copper refrigerant piping, insulation, and refrigerant charge, and potential for leaks.
- **Heat Reclamation**
    - All stores and restaurants would reclaim waste heat from on-site refrigeration equipment to supply approximately 70 percent of their hot water needs.
- **Water Conservation**
    - All stores and restaurants would install high-efficiency urinals that use 0.125 gallon (1 pint) of water per flush. This fixture reduces water use by 87 percent compared to the conventional 1 gallon per flush urinal.
    - The 0.125-gallon urinal requires less maintenance than waterless urinals, making this the better option for tenants.
    - All restroom sinks would use sensor-activated 0.5 gallon per minute high-efficiency faucets. These faucets reduce water usage by approximately 75 percent compared to mandated 1992 United States Environmental Protection Agency (EPA) Standards.
    - During use, water flows through turbines built into the faucets to generate the electricity needed to operate the motion sensors.
    - All restroom toilets would be highly efficient and reduce water use.
    - The fixtures would use 20 percent less water compared to mandated EPA Standards of 1.6 gallons per flush.
    - The toilets would utilize built-in water turbines to generate the power required to activate the flush mechanism.
    - The turbines save energy and material by eliminating electrical conduits required to power automatic flush valve sensors.
    - The Project Applicant's water conservation measures are estimated to save up to 300,000 gallons of water annually at the project site.

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PROJECT SETTING

REGIONAL AIR QUALITY

The proposed project is located within the South Coast Air Basin (Basin), an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The terrain and geographical location determine the distinctive climate of the Basin, because the Basin is a coastal plain with connecting broad valleys and low hills.

The Southern California region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the Basin is a function of the area's natural physical characteristics (i.e., weather and topography), as well as manmade influences (i.e., development patterns and lifestyle). Factors including wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and dispersion of pollutants throughout the Basin, making it an area of high pollution potential.

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

Table B summarizes the primary health effects and sources of common air pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety, these health effects will not occur unless the standards are exceeded by a large margin or for a prolonged period of time. State AAQS are more stringent than federal AAQS. Among the pollutants, O_3 and particulate matter ($PM_{2.5}$ and PM_{10}) are considered pollutants with regional effects, while the others have more localized effects.

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

Table A: Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone[8] (O_3)	1-Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.07 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM_{10})[9]	24-Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		–		
Fine Particulate Matter ($PM_{2.5}$)[9]	24-Hour	–	–	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1-Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	–	Non-Dispersive Infrared Photometry (NDIR)
	8-Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	–	
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		–	–	
Nitrogen Dioxide (NO_2)[10]	1-Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	–	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.03 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1-Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	–	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)
	3-Hour	–		–	0.5 ppm (1300 µg/m^3)	
	24-Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[11]	–	
Lead (Pb)[12,13]	30-Day Average	1.5 µg/m^3	Atomic Absorption	–	–	High Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m^3 (for certain areas)[13]	Same as Primary Standard	
	Rolling 3-Month Average	–		0.15 µg/m^3		
Visibility-Reducing Particles[14]	8-Hour	See footnote 14.	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24-Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24-Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

Source: Ambient Air Quality Standards (ARB 2016a). Website: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, accessed June 2016.
Footnotes are provided on the following page.

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

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

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

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

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

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

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

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

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

[10] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 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_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

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

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

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

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

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

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

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

Source: California Air Resources Board. ARB Fact Sheet: Air Pollution and Health. Reviewed December 2, 2009. Website: http://www.arb.ca.gov/research/health/fs/fs1/fs1.htm, accessed June 2016.

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

2 Health effects from carbon monoxide exposures occur at levels considerably higher than ambient.

Climate/Meteorology

Air quality in the Basin is affected by various emission sources (e.g., mobile and industry) as well as atmospheric conditions (e.g., wind speed, wind direction, temperature, and rainfall). The combination of topography, low mixing height, abundant sunshine, and emissions from the second-largest urban area in the United States gives the Basin some of the highest pollutant concentrations in the country.

The annual average temperature various throughout the Basin, ranging from the low- to middle-60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, inland areas, including the City, show more variability in annual minimum and maximum temperatures than coastal areas. The monthly average maximum temperature at Lake Elsinore ranges from 65.4°F in January to 98.1°F in August. The monthly average minimum temperature ranges from 36.4°F in January to 59.8°F in August (Western Regional Climate Center 2016). January is typically the coldest month, and July and August are typically the warmest months in this area of the Basin.

The majority of annual rainfall in the Basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thunderstorms in inland regions and slightly heavier

showers in the eastern portion of the Basin and along the coastal side of the mountains. The monthly average rainfall at Lake Elsinore typically varies from 2.47 inches in January to 0.02 inch in June with an annual total of 12.01 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific High, which is the semi-permanent high pressure area of the north Pacific Ocean and the dominating factor in California weather. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in midafternoon to late afternoon on hot summer days, when the smog appears to clear up suddenly. Winter inversions frequently break by midmorning.

Winds at March Air Reserve Base (approximately 15 miles northeast of Lake Elsinore) blow predominantly from the west-northwest, with relatively low velocities (Western Regional Climate Center 2016). Wind speeds in Lake Elsinore average between 5 and 6 miles per hour (mph). Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the Basin. Strong, dry, north or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months and disperse air contaminants. The Santa Ana wind conditions tend to last for several days at a time (Western Regional Climate Center 2016).

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollution concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are CO and nitrogen oxides (NO_X) because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog or O_3.

Description of Global Climate Change and its Sources

Global climate change (GCC) is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other significant changes in climate (e.g., precipitation or wind) that last for an extended period of time. The term "global climate change" is often used interchangeably with the term "global warming," but "global climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures.

Climate change refers to any change in measures of weather (e.g., temperature, precipitation, or wind) lasting for an extended period (i.e., decades or longer). Climate change may result from natural factors (e.g., changes in the sun's intensity), natural processes within the climate system (e.g., changes in ocean circulation), or human activities (e.g., the burning of fossil fuels, land clearing, or

agriculture). The primary observed effect of GCC has been a rise in the average global tropospheric[1] temperature of 0.36°F per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling shows that further warming may occur, which may induce additional changes in the global climate system during the current century. Changes to the global climate system, ecosystems, and the environment of the state could include higher sea levels, drier or wetter weather, changes in ocean salinity, changes in wind patterns, or more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and increased intensity of tropical cyclones. Specific effects in the state might include a decline in the Sierra Nevada snowpack, erosion of the state's coastline, and seawater intrusion in the San Joaquin Delta.

Global surface temperatures have risen by 1.33°F ± 0.32°F over the last 100 years (1906 to 2005). The rate of warming over the last 50 years is almost double that over the last 100 years (IPCC 2013). The latest projections, based on state-of-the-art climate models, indicate that temperatures in the state are expected to rise by 3–10.5°F by the end of the century (State of California 2013). The prevailing scientific opinion on climate change is that "most of the warming observed over the last 60 years is attributable to human activities" (IPCC 2013). Increased amounts of carbon dioxide (CO_2) and other GHGs are the primary causes of the human-induced component of warming. The observed warming effect associated with the presence of GHGs in the atmosphere (from either natural or human sources) is often referred to as the greenhouse effect.[2]

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced GCC are:[3]

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

Over the last 200 years, human activities have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which some scientists believe is causing global warming. While GHGs produced by human activities include naturally occurring GHGs (e.g., CO_2, CH_4, and

1 The troposphere is the zone of the atmosphere characterized by water vapor, weather, winds, and decreasing temperature with increasing altitude.

2 The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse allows heat from sunlight in and reduces the amount of heat that escapes, GHGs (e.g., CO_2, CH_4, and N_2O) in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, the *naturally occurring* greenhouse effect is necessary to keep our planet at a comfortable temperature.

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

N_2O), some gases (e.g., HFCs, PFCs, and SF_6) are completely new to the atmosphere. Certain other gases (e.g., water vapor) are short-lived in the atmosphere compared to these GHGs that remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is generally excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes (e.g., oceanic evaporation). For the purposes of this air quality study, the term "GHGs" will refer collectively to the six gases identified in the bulleted list above.

These gases vary considerably in terms of global warming potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. GWP is based on several factors, including the relative effectiveness of a gas in absorbing infrared radiation and the length of time the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of metric tons (MT)[4] of "CO_2 equivalents" (MT CO_2e). For example, N_2O is 298 times more potent at contributing to global warming than CO_2. Table C identifies the GWP for each type of GHG analyzed in this report. As discussed later in this section, activities associated with the proposed project are not expected to result in the emissions of HFCs, PFCs, or SF_6; therefore, these substances are not included in Table C and are not analyzed further in this report.

Table C: Global Warming Potential of Greenhouse Gases

Pollutant	Atmospheric Lifetime (Years)	Global Warming Potential (100-year Time Horizon)
Carbon Dioxide (CO_2)	~100[1]	1
Methane (CH_4)	12	28
Nitrous Oxide (N_2O)	121	265

Source: First Update to the Climate Change Scoping Plan: Building on the Framework (ARB 2014). Website: http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf, accessed June 2016.

[1] CO_2 has a variable atmospheric lifetime and cannot be readily approximated as a single number.

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

Carbon Dioxide. In the atmosphere, carbon generally exists in its oxidized form as CO_2. Natural sources of CO_2 include the respiration (breathing) of humans, animals, and plants; volcanic outgassing; decomposition of organic matter; and evaporation from the oceans. Human-caused sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. The Earth maintains a natural carbon balance, and when concentrations of CO_2 are upset, the system gradually returns to its natural state through natural processes. Natural changes to the carbon cycle work slowly, especially compared to the rapid rate at which humans are adding CO_2 to the atmosphere. Natural removal processes (e.g., photosynthesis by land- and ocean-

[4] A metric ton is equivalent to approximately 1.1 tons.

dwelling plant species) cannot keep pace with this extra input of human-made CO_2, and consequently the gas is building up in the atmosphere. The concentration of CO_2 in the atmosphere has risen approximately 30 percent since the late 1800s (NAST 2001).

The transportation sector remains the largest source of GHG emissions, with 36 percent of the state's 2012 GHG emissions inventory. The largest emissions category within the transportation sector is on-road, which consists of passenger vehicles (i.e., cars, motorcycles, and light-duty trucks) and heavy-duty trucks and buses. Emissions from on-road constitute over 92 percent of the transportation sector total. Industry and electricity generation were the state's second- and third-largest categories of GHG emissions, respectively.

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

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

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride. HFCs are primarily used as substitutes for O_3-depleting substances regulated under the Montreal Protocol.[5] PFCs and SF_6 are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in the state; however, the rapid growth in the semiconductor industry, which is active in the state, has led to greater use of PFCs. Activities associated with the project are not expected to result in the emissions of these three GHGs; therefore, these substances are not discussed further in this analysis.

Emissions Sources and Inventories

An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, national, state, and local GHG emission inventories. However,

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

because GHGs persist for a long time in the atmosphere (previously referenced Table C), accumulate over time, and are generally well mixed, their impact on the atmosphere and climate cannot be tied to a specific point of emission.

Global Emissions. Worldwide emissions of GHGs in 2012 totaled 29 billion MT of CO_2e per year (CO_2e/yr) (UNFCCC 2015). Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change (UNFCCC).

United States Emissions. In 2013, the United States emitted approximately 6.7 billion MT of CO_2e, down from 7.3 billion MT of CO_2e in 2007. Of the six major sectors nationwide (i.e., the electric power industry, transportation, industry, agriculture, commercial, and residential), the electric power industry and transportation sectors combined account for approximately 70 percent of the GHG emissions; the majority of the electric power industry and all of the transportation emissions are generated from direct fossil fuel combustion. In 2013, the total United States GHG emissions were approximately 9 percent less than 2005 levels (EPA 2015).

State of California Emissions. According to ARB emission inventory estimates, the state emitted approximately 441.5 million metric tons (MMT) of CO_2e (MMT CO_2e) emissions in 2013, which is a decrease of 2.8 MMT CO_2e from 2013 and a 9.4 percent decrease since 2004 (ARB 2016b).

The ARB estimates that transportation was the source of approximately 37 percent of the state's GHG emissions in 2013, followed by electricity generation (both in-state and out-of-state) at 20 percent and industrial sources at 20 percent. The remaining sources of GHG emissions were residential and commercial activities at 9 percent, agriculture at 8 percent, high-GWP gases at 4 percent, and recycling and waste at 2 percent (ARB 2016b).

The ARB is responsible for developing the State GHG Emission Inventory. This inventory estimates the amount of GHGs emitted to and removed from the atmosphere by human activities within the state and supports the Assembly Bill (AB) 32 Climate Change Program. The ARB's current GHG emission inventory covers the years 1990–2013 and is based on fuel use, equipment activity, industrial processes, and other relevant data (e.g., housing, landfill activity, and agricultural lands).

The ARB staff has projected statewide unregulated GHG emissions for 2020 at 509 MMT CO_2e, which represents the emissions that would be expected to occur in the absence of any GHG reduction actions. GHG emissions from the transportation and electricity sectors as a whole are expected to increase but remain at approximately 30 percent and 32 percent of total CO_2e emissions, respectively (ARB 2014).

Air Pollution Constituents and Attainment Status

The ARB coordinates and oversees both state and federal air pollution control programs in the state. The ARB oversees the activities of local air quality management agencies and maintains air quality monitoring stations throughout the state in conjunction with the EPA and local air districts. The ARB has divided the state into 15 air basins based on meteorological and topographical factors of air pollution. Data collected at these stations are used by the ARB and the EPA to classify air basins as attainment, nonattainment, nonattainment-transitional, or unclassified, based on air quality data for the most recent three calendar years compared with the AAQS.

Attainment areas may be:

- Attainment/Unclassified ("Unclassifiable" in some lists), which have never violated the air quality standard of interest or do not have enough monitoring data to establish attainment or nonattainment status; or
- Attainment-Maintenance (national ambient air quality standards [NAAQS] only), which violated a NAAQS that is currently in use (was nonattainment) in or after 1990, but now attains the standard and is officially redesignated to attainment by the EPA with a Maintenance State Implementation Plan (SIP); or
- Attainment (usually only for California ambient air quality standards [CAAQS], but sometimes for NAAQS), which have adequate monitoring data to show attainment, have never been nonattainment, or, for NAAQS, have completed the official maintenance period.

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

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

Pollutant	State	Federal
O_3 1-hour	Nonattainment	N/A
O_3 8-hour	Nonattainment	Extreme Nonattainment
PM_{10}	Nonattainment	Attainment/Maintenance
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Attainment	Attainment
All others	Attainment/Unclassified	Attainment/Unclassified

Source: California Air Resources Board (ARB). Air Quality Standards and Area Designations. Website: http://www.arb.ca.gov/desig/desig.htm, accessed May 2016.

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

Ozone. O_3 (smog) is formed by photochemical reactions between oxides of nitrogen and reactive organic gases (ROGs) rather than being directly emitted. O_3 is a pungent colorless gas typical of Southern California smog. Elevated O_3 concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors (e.g., the sick, the elderly, and young children). O_3 levels peak during summer and early fall. The entire Basin is designated as a nonattainment area for the state 1-hour and 8-hour O_3 standards. The EPA has officially designated the status for most of the Basin regarding the 8-hour O_3 standard as extreme nonattainment, which means the Basin has until 2024 to attain the federal 8-hour O_3 standard.

Carbon Monoxide. CO is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. CO is a colorless odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions. The entire Basin is in attainment for the state standards for CO. The Basin is designated as an attainment/maintenance area under the federal CO standards.

Nitrogen Oxides. NO_2, a reddish-brown gas, and nitric oxide (NO), a colorless odorless gas, are formed from fuel combustion under high temperature or pressure. These compounds are referred to as nitrogen oxides, or NO_X. NO_X is a primary component of the photochemical smog reaction. NO_X also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition (i.e., acid rain). NO_2 decreases lung function and may reduce resistance to infection. The entire Basin is designated as nonattainment for the state NO_2 standard and as an attainment/maintenance area under the federal NO_2 standard.

Sulfur Dioxide. SO_2 is a colorless irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight. The entire Basin is in attainment with both federal and state SO_2 standards.

Lead. Lead is found in old paints and coatings, plumbing, and a variety of other materials. Once in the blood stream, lead can cause damage to the brain, nervous system, and other body systems. Children are highly susceptible to the effects of lead. The Los Angeles County portion of the Basin was redesignated as nonattainment for the state and federal standards for lead in 2010.

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

Volatile Organic Compounds. VOCs (also known as ROGs) and reactive organic compounds (ROCs) are formed from the combustion of fuels and the evaporation of organic solvents. VOCs are not defined as criteria pollutants; however, because VOCs accumulate in the atmosphere more

quickly during the winter when sunlight is limited and photochemical reactions are slower, they are a prime component of the photochemical smog reaction. There are no attainment designations for VOCs.

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

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

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

Hazardous Air Pollutants

The public's exposure to toxic air contaminants (TACs) is a significant environmental health issue in the state. In 1983, the State Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The State Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the Federal Act (42 United States Code Section 7412[b]) is a TAC. Under State law, the California Environmental Protection Agency (CalEPA), acting through the ARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health.

The state regulates TACs primarily through AB 1807 (the Tanner Air Toxics Act) and AB 2588 (the Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for ARB to designate substances as TACs. Once a TAC is identified, the ARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce

exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology (T-BACT) to minimize emissions.

Air toxics from stationary sources are also regulated in the state under the Air Toxics "Hot Spot" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

To date, the ARB has designated nearly 200 compounds as TACs. Additionally, the ARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines (DPM).

LOCAL AIR QUALITY

The SCAQMD, together with the ARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring station closest to the site is the Lake Elsinore Flint Street station, which monitors most air pollutant data, except for PM_{10} and $PM_{2.5}$, which were obtained from the Perris Valley station. The air quality trends from these two stations are used to represent the ambient air quality in the project area. The pollutants monitored are O_3, CO, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ (EPA 2013–2015, ARB 2013–2015). The ambient air quality data in Table E show that NO_2, SO_2, federal annual average $PM_{2.5}$ standards, and CO levels are below the applicable state and federal standards.

The state 1-hour O_3 standard was exceeded up to 28 times per year in the past 3 years. The federal 8-hour O_3 standard was exceeded 37 days in the past 3 years, and the state 8-hour O_3 standard was exceeded 73 times in the past 3 years. The state 24-hour and annual PM_{10} standards were exceeded each year in the past 3 years. The federal 24-hour $PM_{2.5}$ standard was exceeded 3 times in the past 3 years.

Multiple Air Toxics Exposure Study IV

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study on ambient concentrations of TACs that has estimated the potential health risks from air toxics in the Basin. MATES was aimed at estimating the cancer risk from toxic air pollutant emissions throughout the Basin by conducting a comprehensive monitoring program, an updated emissions inventory of TACs, and a modeling effort to fully characterize health risks for those living in the Basin. In 2008, SCAQMD conducted its third update to MATES (MATES III). The study concluded that the average carcinogenic risk from air pollution in the Basin is approximately 1,200 in one million. Mobile sources (e.g., cars, trucks, trains, ships, and aircraft) represent the greatest contributors. Approximately 85 percent of the risk is attributed to diesel particulate emissions, approximately 10 percent to other toxics associated with mobile sources (including benzene, butadiene, and formaldehyde), and approximately 5 percent of all carcinogenic risk is attributed to stationary sources (which include industries and other businesses [e.g., dry cleaners and chrome plating operations]).

Table E: Ambient Air Quality Monitored in the Project Vicinity

Pollutant	Standard	2013	2014	2015
Ozone (O_3)				
Maximum 1-hr concentration (ppm)		0.102	0.104	0.131
Number of days exceeded:	State: > 0.09 ppm	6	4	18
Maximum 8-hr concentration (ppm)		0.090	0.087	0.099
Number of days exceeded:	State: > 0.070 ppm	25	13	35
	Federal: > 0.075 ppm[1]	12	6	19
Carbon Monoxide (CO)				
Maximum 1-hr concentration (ppm)		1.5	1.2	1.3
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hr concentration (ppm)		1.2	0.7	0.6
Number of days exceeded:	State: ≥ 9 ppm	0	0	0
	Federal: ≥ 9 ppm	0	0	0
Nitrogen Dioxide (NO_2)				
Maximum 1-hr concentration (ppm)		0.046	0.045	0.047
Number of days exceeded:	State: > 0.18 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.008	0.008	0.008
Exceeded for the year:	State: > 0.030 ppm	0	0	0
	Federal: > 0.053 ppm	0	0	0
Sulfur Dioxide (SO_2)				
Maximum 24-hr concentration (ppm)		0.012	0.014	0.004
Number of days exceeded:	State: > 0.04 ppm	0	0	0
	Federal: > 0.14 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.0022	0.0031	0.0006
Exceeded for the year:	Federal: > 0.030 ppm	0	0	0
Coarse Particulates (PM_{10})				
Maximum 24-hr concentration (µg/m3)		112.3	86.8	62.4
Number of days exceeded:	State: > 50 µg/m^3	1	1	1
	Federal: > 150 µg/m^3	0	0	0
Annual arithmetic average concentration (µg/m^3)		25.0	26.0	19.6
Exceeded for the year:	State: > 20 µg/m^3	Yes	Yes	No
Fine Particulates ($PM_{2.5}$)				
Maximum 24-hr concentration (µg/m^3)		37.4	33.7	42.2
Number of days exceeded:	Federal: > 35 µg/m^3	1	0	2
Annual arithmetic average concentration (µg/m^3)		8.0	11.8	7.1
Exceeded for the year:	State: > 12 µg/m^3	0	0	0
	Federal: > 15 µg/m^3	0	0	0

Source 1: United States Environmental Protection Agency (EPA). AirData Monitor Value Reports 2016. Website: https://www3.epa.gov/airdata/ad_rep_mon.html, accessed May 2016.
Source 2: California Air Resources Board (ARB). iADAM: Air Quality Data Statistics. Website: http://www.arb.ca.gov/adam/welcome.html, accessed May 2016.

[1] The exceedances of the federal 8-hr O_3 standard are based on the old 0.075 ppm standard. In October 2015, the EPA revised the standard to 0.070 ppm.

µg/m^3 = micrograms per cubic meter
hr = hour
PM_{10} = particulate matter less than 10 microns in size
ppm = parts per million
EPA = United States Environmental Protection Agency
ND = No data available.
$PM_{2.5}$ = particulate matter less than 2.5 microns in size

In May 2015, SCAQMD released the final report of the fourth update (MATES IV). The results show that the overall monitored risk for excess cancer from lifetime exposure to ambient levels of air toxics decreased to approximately 418 in one million. Compared to the previous update released in 2008 (MATES III), monitored excess cancer risks decreased by approximately 65 percent. Approximately 90 percent of the risk is attributed to mobile sources, while 10 percent is attributed to TACs from stationary sources (e.g., refineries, metal processing facilities, gas stations, and chrome plating facilities). The largest contributor to this risk was diesel exhaust, accounting for approximately 68 percent of the air toxics risk. Compared to MATES III, MATES IV found substantial improvement in air quality and an associated decrease in air toxics exposure. As a result, the estimated Basin-wide population-weighted risk decreased by approximately 57 percent compared to the analysis done for the MATES III time period.

In the vicinity of Lake Elsinore, MATES III's estimated population-weighted average risk was 382 per million (SCAQMD 2008) while MATES IV's estimated population-weighted average risk was 422 per million (SCAQMD 2015).

The Office of Environmental Health Hazard Assessment (OEHHA) has updated the methods for estimating cancer risks. The new methods include utilizing higher estimates of cancer potency during early life exposures as well as differences in the assumptions on breathing rates and length of residential exposures. When these two assumptions are combined, SCAQMD estimates that risks for a given inhalation exposure level will be about 2.7 times higher using the proposed updated methods identified in MATES IV (SCAQMD 2008).

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases.

Residential areas are also considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, because the majority of the workers tend to stay indoors most of the time. In addition, the workforce is generally the healthiest segment of the population.

REGULATORY SETTINGS

Federal Regulations/Standards

The EPA established the NAAQS pursuant to the Clean Air Act (CAA) of 1970. The NAAQS were established for six major pollutants, termed "criteria" pollutants. Criteria pollutants are defined as

those pollutants for which the federal and state governments have established AAQS, or criteria, for outdoor concentrations in order to protect public health.

Data collected at permanent monitoring stations are used by the EPA to classify regions as "attainment" or "nonattainment," depending on whether the regions met the requirements stated in the primary NAAQS. Nonattainment areas are imposed with additional restrictions as required by the EPA. The EPA has designated the Southern California Association of Governments (SCAG) as the Metropolitan Planning Organization (MPO) responsible for ensuring compliance with the requirements of the CAA for the Basin.

In an effort to help federal agencies ensure the integrity of their environmental reviews and promote sound governmental decision making, the Council on Environmental Quality (CEQ) on January 14, 2011, issued final guidance on the "Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact." This guidance was developed as part of CEQ's effort to modernize and reinvigorate federal agency implementation of the National Environmental Policy Act (NEPA). The EPA established new national air quality standards for ground-level O_3 and fine particulate matter in 1997. On May 14, 1999, the Court of Appeals for the District of Columbia Circuit issued a ruling that the CAA, as applied in setting the new public health standards for O_3 and particulate matter, was unconstitutional as an improper delegation of legislative authority to the EPA. On February 27, 2001, the United States Supreme Court upheld the way the government sets air quality standards under the CAA. The court unanimously rejected industry arguments that the EPA must consider financial cost, as well as health benefits, in writing standards. The justices also rejected arguments that the EPA took too much lawmaking power from Congress when it set tougher standards for O_3 and soot in 1997. Nevertheless, the court threw out the EPA's policy for implementing new O_3 rules, saying that the agency ignored a section of the law that restricts its authority to enforce such rules.

In April 2003, the EPA was cleared by the White House Office of Management and Budget to implement the 8-hour ground-level O_3 standard. The EPA issued the proposed rule implementing the 8-hour O_3 standard in April 2003 and completed final 8-hour nonattainment status on April 15, 2004. The EPA revoked the 1-hour O_3 standard on June 15, 2005, and lowered the 8-hour O_3 standard from 0.08 ppm to 0.075 ppm on April 1, 2008.

The EPA issued the final $PM_{2.5}$ implementation rule in the fall of 2004. On December 17, 2006, the EPA lowered the 24-hour $PM_{2.5}$ standard from 65 to 35 $\mu g/m^3$ (micrograms per cubic meter) and revoked the annual PM_{10} standard. The EPA issued final designations for the 2006 24-hour $PM_{2.5}$ standard on December 12, 2008.

The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled that the EPA has the authority to regulate CO_2 emissions under the CAA. While there currently are no adopted federal regulations for the control or reduction of GHG emissions, the EPA commenced several actions in 2009 that are required to implement a regulatory approach to GCC.

On September 30, 2009, the EPA announced a proposal that focuses on large facilities emitting over 25,000 tons of GHG emissions per year. These facilities would be required to obtain permits that would demonstrate they are using the best practices and technologies to minimize GHG emissions.

On December 7, 2009, the EPA Administrator signed a final action under the CAA, finding that six GHGs (i.e., CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to GCC. This EPA action does not impose any requirements on industry or other entities. However, the findings are a prerequisite to finalizing the GHG emission standards for light-duty vehicles, as described below.

On April 1, 2010, the EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a final joint rule to establish a national program consisting of new standards for model year 2012 through 2016 light-duty vehicles that will reduce GHG emissions and improve fuel economy (EPA 2010). The EPA is finalizing the first-ever national GHG emissions standards under the CAA, and the NHTSA is finalizing Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act. The EPA GHG standards require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile in model year 2016, which is equivalent to 35.5 miles per gallon.

State Regulations and Standards

In 1967, the State Legislature passed the Mulford-Carrell Act, which combined two Department of Health bureaus, the Bureau of Air Sanitation and the Motor Vehicle Pollution Control Board, to establish the ARB. Since its formation, the ARB has worked with the public, the business sector, and local governments to find solutions to the state's air pollution problems.

California adopted the CCAA in 1988. The ARB administers CAAQS for the 10 air pollutants designated in the CCAA. The 10 state air pollutants are the six criteria pollutants designated by the CAA plus visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride.

The ARB identified DPM as a TAC in August 1998. Following the identification process, the ARB was required by law to determine whether there was a need for further control. In September 2000, the ARB adopted the Diesel Risk Reduction Plan, which recommends many control measures to reduce the risks associated with DPM and to achieve goals of 75 percent DPM reduction by 2010 and 85 percent by 2020.

The public's exposure to TACs is a significant environmental health issue in California. 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. Under state law, the CalEPA, acting through the ARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health.

- **Cancer Risk:** One of the primary health risks of concern due to exposure to TACs is the risk of contracting cancer. The carcinogenic potential of TACs is a particular public health concern because it is currently believed by many scientists that there is no "safe" level of exposure to carcinogens; that is, any exposure to a carcinogen poses some risk of causing cancer. Health statistics show that 1 in 4 people will contract cancer over their lifetime, or 250,000 in 1 million, from all causes, including diet, genetic factors, and lifestyle choices.
- **Non-Cancer Health Risks:** Unlike carcinogens, it is believed there is a threshold level of exposure to most noncarcinogens below which they will not pose a health risk. CalEPA and the

OEHHA have developed reference exposure levels (RELs) for noncarcinogenic TACs that are health-conservative estimates of the levels of exposure at or below which health effects are not expected. The non-cancer health risk due to exposure to a TAC is assessed by comparing the estimated level of exposure to the REL. The comparison is expressed as the ratio of the estimated exposure level to the REL, called the hazard index.

From the 2010 Climate Action Team Report: California Climate Action Milestones. In 1988, AB 4420 directed the California Energy Commission (CEC) to report on "how global warming trends may affect the state's energy supply and demand, economy, environment, agriculture, and water supplies" and offer "recommendations for avoiding, reducing and addressing the impacts." This marked the first statutory direction to a state agency to address climate change.

The California Climate Action Registry was created to encourage voluntary reporting and early reductions of GHG emissions with the adoption of Senate Bill (SB) 1771 in 2000. The CEC was directed to assist by developing metrics and identifying and qualifying third-party organizations to provide technical assistance and advice to GHG emission reporters. The next year, SB 527 amended SB 1771 to emphasize third-party verification.

SB 1711 also contained several additional requirements for the CEC. These included updating the state's GHG inventory from an existing 1998 report and continuing to update the inventory every five years; acquiring, developing, and distributing information on GCC to agencies and businesses; establishing a state interagency taskforce to ensure policy coordination; and establishing a climate change advisory committee to make recommendations on the most equitable and efficient ways to implement climate change requirements. In 2006, AB 1803 transferred preparation of the inventory from the CEC to the ARB. The ARB updates the inventory annually.

AB 1493, authored by Assembly Member Fran Pavley in 2002, directed the ARB to adopt regulations to achieve the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles. The so-called "Pavley" regulations, or clean car regulations, were approved by the ARB in 2004. The ARB submitted a request to the EPA to implement the regulations in December 2005. After several years of requests to the federal government, and accompanying litigation, this waiver request was granted on June 30, 2009. The ARB has since combined the control of smog-causing pollutants and GHG emissions to develop a single coordinated package of standards known as Low Emission Vehicles III. These regulations were expected to reduce GHG emissions from state passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016, all while improving fuel efficiency and reducing motorists' costs. AB 1493 also directed the California Climate Action Registry to adopt protocols for reporting reductions in greenhouse emissions from mobile sources prior to the operative date of the regulations.

SB 812 added forest management practices to the California Climate Action Registry members' reportable emissions actions. SB 812 also directed the California Climate Action Registry to adopt forestry procedures and protocols to monitor, estimate, calculate, report, and certify CO stores and CO_2 emissions that resulted from the conservation and conservation-based management of forests in the state.

The California Renewable Portfolio Standard Program, which requires electric utilities and other entities under the jurisdiction of the California Public Utilities Commission to meet 20 percent of

their retail sales with renewable power by 2017, was established by SB 1078 in 2002. The renewable portfolio standard was accelerated to 20 percent by 2010 by SB 107 in 2006. The program was subsequently expanded by the renewable electricity standard approved by the ARB in September 2010, requiring all utilities to meet a 33 percent target by 2020. The renewable electricity standard is projected to reduce GHG emissions from the electricity sector by at least 12 MMT CO_2e in 2020.

In December 2004, Governor Arnold Schwarzenegger signed Executive Order (EO) S-20-04, which set a goal of reducing energy use in state-owned buildings by 20 percent by 2015 (from a 2003 baseline) and encouraged cities, counties, schools, and the private sector to take all cost-effective measures to reduce building electricity use. This action built upon the state's strong history of energy efficiency efforts that have saved Californians and the state businesses energy and money for decades. These efforts are a cornerstone of GHG reduction efforts.

EO S-3-05 (June 2005) established GHG targets for the state, including returning to year 2000 emission levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050. EO S-3-05 directed the CalEPA Secretary to coordinate efforts with the heads of other state agencies to meet the targets. This group became the Climate Action Team (CAT).

The California Global Warming Solutions Act of 2006, best known as AB 32, created a first-in-the-country comprehensive program to achieve real, quantifiable, and cost-effective reductions in GHGs. The law set an economy-wide cap on the state's GHG emissions at 1990 levels by 2020. AB 32 directed the ARB to prepare, approve, and implement a Scoping Plan for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions. EO S-20-06, signed in October 2006, directed the Secretary for Environmental Protection to establish a Market Advisory Committee of national and international experts. The committee made recommendations to the ARB on the design of a market-based program for GHG emissions reduction. The ARB adopted the first Scoping Plan in December 2008, describing a portfolio of measures to achieve the target. All of the major regulatory measures necessary for meeting the 2020 emissions target were adopted by December 2010.

The ARB approved the First Update to the Scoping Plan (Update) on May 22, 2014. The Update identifies the next steps for California's climate change strategy and shows how California continues on its path to meet the near-term 2020 GHG limit, but also sets a path toward long-term, deep GHG emission reductions. The report establishes a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050. The Update identifies progress made to meet the near-term objectives of AB 32 and defines California's climate change priorities and activities for the next several years. The Update does not set new targets for the state, but describes a path that would achieve the long-term 2050 goal of EO S-05-03 for emissions to decline to 80 percent below 1990 levels by 2050.

The governors of California, Arizona, New Mexico, Oregon, and Washington entered into a memorandum of understanding in February 2007, establishing the Western Climate Initiative. The governors agreed to set a regional goal for emissions reductions consistent with state-by-state goals; develop a design for a regional market-based multisector mechanism to achieve that goal; and to participate in a multistate GHG registry. The Western Climate Initiative has since grown to include Montana, Utah, and the Canadian provinces of British Columbia, Manitoba, Ontario, and Québec.

California is implementing the world's first Low Carbon Fuel Standard for transportation fuels, pursuant to both EO S-01-07, signed January 2007, and AB 32. The standard requires a reduction of at least 10 percent in the CO intensity of the state's transportation fuels by 2020. This reduction is expected to reduce GHG emissions in 2020 by 17.6 MMT CO_2e. Also in 2007, AB 118 created the Alternative and Renewable Fuel and Vehicle Technology Program. The CEC and the ARB administer the program. This program provides funding for alternative fuel and vehicle technology research, development, and deployment in order to attain the state's climate change goals, achieve the state's petroleum reduction objectives and clean air and GHG emission reduction standards, develop public-private partnerships, and ensure a secure and reliable fuel supply.

In addition to vehicle emissions regulations and the low carbon fuel standard, the third effort reducing GHG emissions from transportation is the reduction in the demand for personal vehicle travel (i.e., vehicle miles traveled). This measure was addressed in September 2008, through the Sustainable Communities and Climate Protection Act of 2008, or SB 375. The enactment of SB 375 initiated an important new regional land use planning process to mitigate GHG emissions by integrating and aligning planning for housing, land use, and transportation for California's 18 MPOs. The bill directed the ARB to set regional GHG emission reduction targets for most areas of the state. The bill also contained important elements related to federally mandated regional transportation plans and the alignment of state transportation and housing planning processes.

Also codified in 2008, SB 97 required the Governor's Office of Planning and Research (OPR) to develop GHG emissions criteria to be used in determining project impacts under the California Environmental Quality Act (CEQA). These criteria were developed in 2009 and went into effect in 2010.

EO S-13-08 launched a major initiative for improving the state's adaptation to climate impacts from sea level rise, increased temperatures, shifting precipitation, and extreme weather events. EO S-13-08 ordered a California Sea Level Rise Assessment Report to be requested from the National Academy of Sciences. EO S-13-08 also ordered the development of a Climate Adaptation Strategy. The strategy, published in December 2009, assesses the state's vulnerability to climate change impacts and outlines possible solutions that can be implemented within and across state agencies to promote resiliency. The Strategy focused on seven areas: public health, biodiversity and habitat, ocean and coastal resources, water management, agriculture, forestry, and transportation and energy infrastructure.

Executive Order B-30-15. On April 29, 2015, Governor Edmund G. Brown, Jr. issued an EO to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris in late 2015. The EO sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050, and directs the ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of MMT CO_2e. The EO also requires the state's climate adaptation plan to be updated every three years and the state to continue its climate change research program, among other provisions. As with EO S-3-05, this EO is not legally enforceable against local governments and the private sector. Legislation that would update AB 32 to make post-2020 targets and requirements a mandate is in process in the State Legislature.

The initiatives, EOs, and statutes outlined above comprise the major milestones in California's efforts to address climate change through coordinated action on climate research, GHG mitigation, and climate change adaptation. Numerous other related efforts have been undertaken by state agencies and departments to address specific questions and programmatic needs. The CAT coordinates these efforts and others, which comprise the state's climate program. The rest of the report describes these efforts.

Regional Air Quality Planning Framework

The 1976 Lewis Air Quality Management Act established the SCAQMD and other air districts throughout the state. The CAA Amendments of 1977 required that each state adopt an implementation plan outlining pollution control measures to attain the federal standards in nonattainment areas.

The ARB is responsible for incorporating Air Quality Management Plans (AQMPs) for local air basins into an SIP for EPA approval. Significant authority for air quality control within the Basin has been given to local air districts that regulate stationary-source emissions and develop local nonattainment plans.

Regional Air Quality Management Plan

The SCAQMD and SCAG are responsible for formulating and implementing the AQMP for the Basin. The main purpose of an AQMP is to bring the area into compliance with federal and state air quality standards. Every three years, the SCAQMD is required to prepare an AQMP that updates the previous AQMP and includes an emission forecast out to a 20-year horizon. The SCAQMD adopted the 2012 AQMP in December 2012 and the ARB approved it on January 23, 2013, and sent it to the EPA. The SCAQMD is currently drafting the 2016 AQMP.

The 2012 AQMP incorporates the latest scientific and technological information and planning assumptions, including the 2012 Regional Transportation Plan/Sustainable Communities Strategy and updated emission inventory methodologies for various source categories. The 2012 AQMP included the new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound flexible compliance approaches.

Local Regulations and Standards

The City has adopted goals and policies in its General Plan addressing climate change issues. One of the major issues is air quality and GCC. The City General Plan states the following:

- Improving local and regional air quality and addressing global climate change by reducing emissions and promoting energy efficiency.

Air quality in the City, as part of the larger Basin, currently does not meet state and/or federal standards. The City is committed to improving air quality and addressing climate change to the degree feasible at the local level by creating policies and supporting programs that reduce air quality

emissions and enable residents, business owners, and visitors to employ sustainable and energy efficient practices. The City General Plan includes the following:

- **Goal 1:** Continue to coordinate with the Air Quality Management District and the City's Building Department to reduce the amount of fugitive dust that is emitted into the atmosphere from unpaved areas, parking lots, and construction sites.
- **Implementation 1:** The City shall continue to condition projects to comply with SCAQMD rules and regulations.
- **Goal 2:** Work with regional and state governments to develop effective mitigation measures to improve air quality.
- **Policy 2:** Support the SCAQMD in its development of improved ambient air quality monitoring capabilities and establishment of standards, thresholds, and rules to address, and where necessary mitigate, the air quality impacts of new development.
- **Implementation 2:** The City shall coordinate with the South Coast Air Quality Management District regarding effective methods for improving local air quality.
- **Goal 14:** Reduce greenhouse gas emissions from all activities within the City boundaries to support the State's efforts under AB-32 and to mitigate the impact of climate change on the City, State and world.
- **Policy 14.1:** By 2020, the City will reduce greenhouse gas emissions from within its boundaries to 1990 levels consistent with AB 32.
- **Policy 14.2:** Measures shall be established that aim to reduce emissions generated from City uses, community uses (community actions), and new development (City discretionary actions).
- **Policy 14.3:** The City shall strive to increase public awareness of climate change and climate protection challenges.
- **Policy 14.4:** The City will participate in the Sustainable Communities Strategy/Regional Blueprint Planning effort to ensure that local plans are consistent with the Regional Plan.[6]
- **Implementation Program 14:** The City shall prepare, adopt, and implement a Climate Action Plan that provides a baseline greenhouse gas emissions inventory for municipal facilities and operations and community-wide activities, analyzes the cost and benefit of methodologies for reduction, and establishes measures to meet statewide reduction goals.

[6] The Regional Plan refers to the SCAG Regional Comprehensive Plan.

THRESHOLDS OF SIGNIFICANCE

A number of modeling tools are available to assess the air quality impacts of projects. In addition, certain air districts (e.g., SCAQMD) have created guidelines and requirements to conduct air quality analysis. SCAQMD's current guidelines, the *CEQA Air Quality Handbook* (SCAQMD 1993) with associated updates, and the City General Plan were followed in the assessment of air quality impacts for the proposed project. The current air quality model (CalEEMod Version 2013.2.2) was used to estimate project-related mobile- and stationary-source emissions in this analysis.

This air quality and GHG analysis includes estimated emissions associated with short-term construction and long-term operation of the proposed project. Criteria pollutants with regional impacts would be emitted by project-related vehicular trips, as well as by emissions associated with stationary sources used on site. Localized air quality impacts (i.e., higher CO concentrations [CO hotspots] near intersections or roadway segments in the project vicinity) would be small and less than significant due to the generally low ambient CO concentrations in the project area.

The net increase in pollutant emissions determines the significance and impact on regional air quality as a result of the proposed project. The results also allow the local government to determine whether the proposed project would deter the region from achieving the goal of reducing pollutants in accordance with the AQMP in order to comply with the NAAQS and CAAQS.

STATE GUIDELINES

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

THRESHOLDS OF SIGNIFICANCE FOR POLLUTANTS WITH REGIONAL EFFECTS

The SCAQMD has established daily emissions thresholds for construction and operation for the evaluation of the proposed project in the Basin. The emissions thresholds were established based on the attainment status of the Basin in regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (ARB 2016a), these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

Table F: SCAQMD Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase
VOCs	75 lbs/day	55 lbs/day
CO	550 lbs/day	550 lbs/day
NO_X	100 lbs/day	55 lbs/day
SO_X	150 lbs/day	150 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day

Source: South Coast Air Quality Management District (2016).

CO = carbon monoxide
lbs = pounds
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
VOCs = volatile organic compounds
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides

Projects in the Basin with operational emissions that exceed any of these emission thresholds are considered to be significant under SCAQMD guidelines.

THRESHOLDS FOR LOCALIZED IMPACTS

The SCAQMD published its *Final Localized Significance Threshold Methodology* in July 2008, recommending that all air quality analyses include an assessment of both construction and operational impacts on the air quality of nearby sensitive receptors. Localized significance thresholds (LSTs) represent the maximum emissions from a project site that is not expected to result in an exceedance of the NAAQS or CAAQS. LSTs are based on the ambient concentrations of that pollutant within the project Source Receptor Area (SRA) and the distance to the nearest sensitive receptor. For the proposed project, the appropriate SRA for the LST is the Lake Elsinore area (SRA 25).

In the case of CO and NO_2, 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_{10} and $PM_{2.5}$, both of which are nonattainment pollutants. For these two, the significance criteria are the pollutant concentration thresholds presented in SCAQMD Rules 403 and 1301. The Rule 403 concentration of 10.4 $\mu g/m^3$ applies to construction emissions. The Rule 1301 concentration of 2.5 $\mu g/m^3$ applies to operational activities.

LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

Use of an LST analysis for a project is optional. For the proposed project, the primary source of possible LST impact would be during construction. LSTs are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours such as a residence, hospital, or convalescent facility.

LST screening tables are available for 25, 50, 100, 200, and 500-meter source-receptor distances. For the project, the nearest sensitive use would be the residences adjacent to the project site such that the

366-meter distance thresholds were utilized by using the interpolated data between the 200- and 500-meter distances.

LSTs are only applicable to the following criteria pollutants: NOx, CO, and PM_{10} and $PM_{2.5}$. LSTs represent the maximum emissions from a project that are not expected to cause or contribute measurably to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

To avoid the need for every air quality analysis to perform air dispersion modeling, the SCAQMD performed air dispersion modeling for a range of construction sites less than or equal to 5 ac and created look-up tables that correlate pollutant emissions rates with project size to screen out projects that are unlikely to generate enough emissions to result in a locally significant concentration of any criteria pollutant. These look-up tables can also be used as screening criteria for larger projects to determine whether dispersion modeling may be required. The SCAQMD has issued guidance on applying CalEEMod to LSTs. LST pollutant screening level concentration data are currently published for 1, 2, and 5-acre disturbance sites for varying distances. Since the CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, the following tables should be used to determine the maximum daily disturbed-acreage for comparison to LSTs.

For construction and operational emissions, the LST for a project smaller than 5 ac can be determined by performing the screening-level analysis before using dispersion modeling because the screening-level analysis is more conservative, and if no exceedance of the screening-level thresholds is identified, then the chance of operational LST exceeding concentration standards is small. The total gross property area for the project site is larger than 5 ac; however, the total number of acres for the project building square footages and required parking spaces is 4.79 ac. Thus, LST screening thresholds for the 5 ac tables were used in this analysis. Because the project is not an aggregate handling facility, operational LSTs are assessed with SCAQMD screening thresholds.

Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. The existing sensitive receivers nearest the project site are approximately 1,200 ft, or approximately 366 meters (m), from the project site. Using the operational LST thresholds for receptors 366 m from a 5 ac site for this project would result in a conservative analysis. Therefore, Table G presents the emissions thresholds apply during project construction and operations.

Table G: SCAQMD LST Thresholds (lbs/day)

	NOx	**CO**	**PM_{10}**	**$PM_{2.5}$**
Construction	893	20,006	157	72
Operations	893	20,006	38	18

Source: SCAQMD 2008.

THRESHOLDS FOR TOXIC AIR CONTAMINANTS

The ARB *Air Quality and Land Use Handbook* (ARB 2005) is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. According to the ARB *Air Quality and Land Use Handbook*, "recent air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high-traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals" emitted from diesel-powered construction equipment, automobiles, trailer trucks, marine vessels, and locomotives "are responsible for much of the overall cancer risk from airborne toxics in California." The ARB *Air Quality and Land Use Handbook* recommends planning agencies strongly consider proximity to these sources when finding new locations for "sensitive" land uses (e.g., homes, medical facilities, daycare centers, schools, and playgrounds).

Air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the ARB *Air Quality and Land Use Handbook* include taking steps to avoid siting new sensitive land uses, including the following:

- Within 500 ft of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles/day;
- Within 1,000 ft of a major service and maintenance rail yard;
- Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries;
- Within 300 ft of any dry cleaning operation (for operations with two or more machines, provide 500 ft); or
- Within 300 ft of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

The ARB *Air Quality and Land Use Handbook* specifically states that its recommendations are advisory and acknowledges that land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

THRESHOLDS FOR POLLUTANTS THAT AFFECT GLOBAL CLIMATE CHANGE

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

The thresholds for GHG emission impact analysis are consistent with Appendix G of the *State CEQA Guidelines*. A project would normally have a significant effect on the environment if the project would:

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

On December 30, 2009, the Natural Resources Agency adopted amendments to the *State CEQA Guidelines* that became effective on March 18, 2010. The amendments to the *State CEQA Guidelines* include new requirements for evaluating GHG emissions. Pursuant to the amended *State CEQA Guidelines*, a lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase (or reduce) GHG emissions compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and/or
3. The extent to which the project complies with regulations or requirements adopted to implement an adopted statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The City as a lead agency may assess the significance of GHG emissions by determining a project's consistency with a local GHG reduction plan or Climate Action Plan (CAP) that qualifies under Section 15183.5 of the CEQA Guidelines. The City has prepared and adopted the CAP that is a long-range plan to reduce community-wide GHG emissions from activities within the City limits.

The City's CAP has a GHG emissions target that is specifically intended for use in evaluating the significance of GHG emissions from community-wide emissions. The City selected efficiency-based targets for the years governed by the General Plan to reduce community-wide emissions to 6.6 MT CO_2e per service population per year by 2020 (a 22.3% reduction from the 2008 rate of 8.5 MT CO_2e/SP) and to 4.4 MT CO_2e per service population per year by 2030 (a 48.2% reduction from the 2008 rate of 8.5 MT CO_2e/SP). These efficiency-based targets (the "governing threshold of significance") represent the AB 32 and Executive Order S-3-05 targeted emissions levels for 2020 and 2030 on a per service population basis and they were derived by dividing the statewide AB 32 targeted emissions level for 2020 and statewide Executive Order S-3-05 targeted emissions level for 2030 by the 2020 and 2030 statewide service population, respectively. Therefore, these targets represent the maximum quantity of emissions each resident and employee in the State of California could emit in 2020 and 2030 based on emissions levels necessary to achieve the statewide AB 32 and Executive Order S-3-05 GHG emissions reduction goals.

The CAP identifies strategies for reducing GHG emissions and prioritizes the implementation of policies that enables the City to fulfill the requirements of AB 32. The ARB adopted the state's strategy for achieving AB 32 targets in its Scoping Plan in 2008. The Scoping Plan GHG reduction goal is to reduce statewide emissions to 1990 levels by 2020. The CAP includes strategies that will achieve this target. The strategy will continue to provide reductions past 2020 and includes a roadmap for the City to achieve GHG emissions reductions through the year 2030. Specifically, the CAP is designed to:

- Benchmark Lake Elsinore's existing (2008) GHG emissions and projected emissions relative to statewide emissions targets;
- Establish GHG emissions reduction strategies and measures to reduce the City's proportionate share of emissions to meet the statewide targets identified in Assembly Bill (AB) 32 and Executive Order S-3-05;
- Set forth procedures to monitor and verify the effectiveness of the CAP and require amendment if the CAP is not achieving targeted levels of emissions;
- Mitigate Lake Elsinore's GHG emissions (by reducing GHG emissions consistent with the State of California via the *California Environmental Quality Act [CEQA] Guidelines*, AB 32, and Executive Order S-3-05). The *CEQA Guidelines* encourage the adoption of plans or mitigation programs as a means of comprehensively addressing the cumulative impacts of projects (See *CEQA Guidelines*, Sections 15064(h)(3), 15130(c)); and
- Serve as the programmatic tiering document for the purposes of CEQA within the City of Lake Elsinore for GHG emissions, from what the applicable projects will be reviewed. If a proposed development project can demonstrate it is consistent with the applicable emissions reduction measures included in the CAP, the programs and standards that would be implemented as a result of the CAP, and the General Plan Update growth projections, the project's environmental review pertaining to GHG impacts may be streamlined as allowed by *CEQA Guidelines* Sections 15152 and 15183.5.

Since the adoption of the CAP, subsequent CEQA discretionary projects consistent with the General Plan growth potential and CAP may tier from and/or incorporate the CAP by reference in their cumulative GHG impact analyses.

Appendix D of the CAP contains a project-level worksheet that an applicant may use to demonstrate consistency with the General Plan growth potential and the CAP. The following are the criteria for determining consistency with the CAP:

1. Is the project consistent with the General Plan land use designation?
2. Is the project consistent with the General Plan population and employment projections for the site, upon which the CAP modeling is based?
3. Does the project incorporate the following CAP measures as binding and enforceable components of the project? Until these measures have been formally adopted by the City and incorporated in to applicable codes, the requirements must be incorporated as mitigation measures applicable to the project (*CEQA Guidelines*, Section 15183.5(b)(2)).

The CAP is not intended to limit future development or economic growth within Lake Elsinore; rather, by adopting a CAP, the City has established the compliance and performance standards that a project is to meet in order to satisfy state mandates. Discussions of the project's consistency with the CAP's GHG reduction measures are provided in the next section.

IMPACTS AND MITIGATION

Air pollutant emissions associated with the proposed project would occur over the short term from construction activities (e.g., fugitive dust from site preparation and grading, and emissions from equipment exhaust). Long-term regional emissions would be associated with project-related vehicular trips and would be due to energy consumption (e.g., electricity usage) by the proposed land uses.

CONSTRUCTION IMPACTS

Equipment Exhausts and Related Construction Activities

Construction activities produce combustion emissions from various sources (e.g., grading, site preparation, utility engines, tenant improvements, and motor vehicles transporting the construction crew). Exhaust emissions from construction activities would vary daily as construction activity levels change. The use of construction equipment on site would result in localized exhaust emissions. Table H lists the tentative project construction schedule for the proposed project based on a probable start date, a planned opening in summer 2019, and the assumption that the architectural coatings would be applied during the latter portion of the building construction phase. Table I lists the potential construction equipment to be used during project construction during each project phase.

The most recent version of CalEEMod (Version 2016.3.1) was used to calculate the construction emissions. Results from the model are shown in Appendix A. Table J shows the construction emissions from CalEEMod output tables listed as "Mitigated Construction," even though the only measures that have been applied to the analysis are SCAQMD-required construction emissions control measures, or standard conditions. The results in Table J show the combination of the on- and off-site emissions.

Table H: Tentative Project Construction Schedule

Task	Phase Name	Phase Start Date	Phase End Date	Number of Days/Week	Number of Days
1	Demolition	10/1/2017	10/27/2017	5	20
2	Site Preparation	10/28/2017	11/10/2017	5	10
3	Grading	11/11/2017	4/27/2018	5	120
4	Building Construction	4/28/2018	3/15/2019	5	230
5	Architectural Coating	4/27/2019	5/24/2019	5	20
6	Paving	5/25/2019	6/21/2019	5	20

Sources: CalEEMod defaults for phasing, assuming Summer 2019 opening.

Table I: Diesel Construction Equipment Utilized by Construction Phase

Construction Phase	Off-Road Equipment Type	Off-Road Equipment Unit Amount	Hours Used per Day	Horse-power	Load Factor
Demolition	Excavators	3	8	158	0.38
	Concrete/Industrial Saws	1	8	81	0.73
	Rubber-Tired Dozers	2	8	247	0.40
Site Preparation	Rubber-Tired Dozers	3	8	247	0.40
	Tractors/Loaders/Backhoes	4	8	97	0.37
Grading	Excavators	1	8	158	0.38
	Graders	1	8	187	0.41
	Rubber-Tired Dozers	1	8	247	0.40
	Tractors/Loaders/Backhoes	3	8	97	0.37
Building Construction	Cranes	1	7	231	0.29
	Forklifts	3	8	89	0.20
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/Backhoes	3	7	97	0.37
	Welders	1	8	46	0.45
Paving	Cement and Mortar Mixers	2	6	9	0.56
	Pavers	1	8	130	0.42
	Paving Equipment	2	6	132	0.36
	Rollers	2	6	80	0.38
	Tractors/Loaders/Backhoes	1	8	97	0.37
Architectural Coating	Air Compressors	1	6	78	0.48

Source: Compiled by LSA Associates, Inc. using CalEEMod defaults (November 2016).

Table J: Estimated Construction Emissions

	Total Daily Maximum Pollutant Emissions (lbs/day)							
Construction Phase	**VOC**	**NO_X**	**CO**	**SO_X**	**Fugitive PM_{10}**	**Exhaust PM_{10}**	**Fugitive $PM_{2.5}$**	**Exhaust $PM_{2.5}$**
2017 Construction Phase								
Demolition	1.26	32.66	24.67	0.04	0.01	0.46	0.01	0.46
Site Preparation	1.21	33.72	22.96	0.04	7.05	0.47	3.87	0.47
Grading	1.01	26.88	18.99	0.03	2.39	0.39	1.30	0.39
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peak Daily	**1.26**	**33.72**	**24.67**	**0.04**	**7.52**		**3.94**	
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**		**55**	
Significant Emissions?	**No**	**No**	**No**	**No**	**No**		**No**	

Table J: Estimated Construction Emissions

Construction Phase	Total Daily Maximum Pollutant Emissions (lbs/day)							
	VOC	NO_X	CO	SO_X	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
2018 Construction Phase								
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	1.01	26.88	18.99	0.03	2.39	0.39	1.30	0.39
Building Construction	1.08	23.55	17.87	0.03	0.00	0.45	0.00	0.45
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peak Daily	**1.08**	**26.88**	**18.99**	**0.03**	**2.78**		**1.69**	
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**		**55**	
Significant Emissions?	**No**	**No**	**No**	**No**	**No**		**No**	
2019 Construction Phase								
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	1.08	23.55	17.87	0.03	0.00	0.45	0.00	0.45
Paving	1.68	20.11	17.30	0.02	0.00	0.33	0.00	0.33
Architectural Coating	32.63	2.35	1.83	0.00	0.00	0.05	0.00	0.05
Peak Daily	**32.63**	**23.55**	**17.87**	**0.03**	**0.45**		**0.45**	
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**		**55**	
Significant Emissions?	**No**	**No**	**No**	**No**	**No**		**No**	

Source: Compiled by LSA Associates, Inc. (November 2016).
Note: Peak daily emissions are based on the daily maximum.

CO = carbon monoxide
CO_2e = carbon dioxide equivalent
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOC = volatile organic compounds

Because no exceedances of any threshold for criteria pollutants are expected, no significant impacts would occur for project construction. The required SCAQMD construction emissions control measures are discussed in this section. Details of the emission factors and other assumptions are included in Appendix A.

Fugitive Dust

Fugitive dust emissions are generally associated with land clearing and exposure of soils to the air and wind, as well as cut-and-fill grading operations. Dust generated during construction varies substantially on a project-by-project basis, depending on the level of activity, the specific operations, and weather conditions at the time of construction. The proposed project would be required to comply with SCAQMD Rules 402 and 403 to avoid nuisance and control fugitive dust.

As discussed, Table J lists total construction emissions (i.e., fugitive dust emissions and construction equipment exhausts) that have incorporated a number of feasible control measures. The Off-Road Diesel Equipment regulation was amended in 2010 to delay the original timeline of the Tier 2

performance requirement making the first compliance deadline January 1, 2014, for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501–5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less). Currently, no commercial operation in California may add any equipment to its fleet that has a Tier 0 engine and medium and large fleets are restricted from adding Tier 1 engines. As of January 1, 2016, all fleets are also restricted from adding Tier 1 engines to their fleets. These measures, which include using minimum Tier 2 equipment engines standard with particulate control devices and on-site watering at least three times daily, are required by the SCAQMD and can be reasonably implemented to significantly reduce PM_{10} emissions from construction.

Architectural Coatings

Architectural coatings contain VOCs that are similar to ROCs and are part of the O_3 precursors. As previously referenced Table J shows, application of the architectural coatings for the proposed peak construction day is estimated to result in 33 lbs/day of VOC. Therefore, this VOC emission would not exceed the SCAQMD VOC threshold of 75 lbs/day.

Localized Impacts Analysis

The SCAQMD has issued guidance on applying CalEEMod results to localized impacts analyses.[7] Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. Several existing sensitive receptors are near the project site, the closest of which is approximately 1,200 ft (366 m) from the site. The 366-meter distance thresholds were utilized by using the interpolated data between the 200- and 500-meter distance tables from the SCAQMD LST guidance. Table K shows that pollutant emissions on the peak day of construction would result in concentrations of pollutants at the nearest residences are all below SCAQMD thresholds of significance.

Table K: Construction Localized Impacts Analysis

Emissions Sources	NO_X	CO	PM_{10}	$PM_{2.5}$
On-Site Emissions (lbs/day)	34	25	7.5	4.4
LST Thresholds (lbs/day)	**893**	**20,006**	**157**	**72**
Significant Emissions?	**No**	**No**	**No**	**No**

Source: Compiled by LSA Associates, Inc. (November 2016).

Note: Source Receptor Area 25 is Lake Elsinore (5 acres, 366-meter distance).

CO = carbon monoxide
lbs/day = pounds per day
LST = local significance threshold
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size

Toxic Air Contaminants

Mobile source TAC emissions would be generated by heavy-duty equipment during construction. DPM is known to contain high concentrations of carcinogenic compounds from diesel-fueled equipment. The

[7] SCAQMD. Fact Sheet for Applying CalEEMod to Localized Significance Thresholds, Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2, accessed June 2016.

risks associated with exposure to substances with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure, which is defined in the CAPCOA Air Toxics "Hot Spots" Program Risk Assessment Guidelines (CAPCOA 1993). The risks associated with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure (i.e., 24 hours per day, 7 days per week, 365 days per year for 30 years). Because the construction-related emissions of diesel exhaust would occur for up to 10 months and sensitive receptors (i.e., single-family homes) are located more than 1,000 ft from the project site, construction activities would not result in long-term chronic lifetime exposure to diesel exhaust from heavy-duty diesel equipment. Therefore, air quality impacts related to exposure of sensitive receptors to substantial TAC concentrations would be less than adverse.

Therefore, construction of the proposed project is not anticipated to result in an elevated health risk to exposed persons given the short-term and transitory nature of construction-related diesel exposure. The proposed project may create a nuisance for residents during hours of construction, but this impact is considered minimal because of the short-term and transitory nature of the construction period. Consequently, the human health impact of DPM risks associated with construction activities would be considered less than significant.

Odors

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

SCAQMD Rule 402 regarding nuisances states: "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property." The proposed uses are not anticipated to emit any objectionable odors. Therefore, objectionable odors posing a health risk to potential on-site and existing off-site uses would not occur as a result of the construction of proposed project.

Naturally Occurring Asbestos

Prolonged exposure to asbestos fibers can lead to lung disease. When disturbed, tiny abrasive asbestos fibers are easily inhaled, which damages the lung tissue and can cause cancer.The proposed project is located in the County of Riverside, which is not among the counties found to have serpentine and ultramafic rock in their soils.[8] Therefore, the potential risk for naturally occurring asbestos during project construction is less than significant.

[8] California Department of Conservation. California Geological Survey. Asbestos. Website: http://www.conservation.ca.gov/cgs/minerals/hazardous_minerals/asbestos/Pages/index.aspx, accessed May 2016.

Building Asbestos

In homes built prior to 1975, asbestos is most commonly found as thermal insulation on basement boilers and pipes. It can also be found in a myriad of other household materials including blown-in attic insulation, vinyl floor tiles, glue that attaches floor tiles to concrete or wood, some forms of linoleum, window caulking and glazing, and roofing material. The mere presence of asbestos in the old house is not hazardous. Generally, material in good condition will not release asbestos fibers and disturbing it may create a health hazard where none existed before. The danger comes from asbestos material that has been damaged over time. Asbestos that crumbles easily if handled, or that has been sawed, scraped, or sanded into a powder is likely to release asbestos fibers and create a health hazard. Demolition of the existing vacant house would be done in accordance with the SCAQMD Rule 1403 – Asbestos Removal and Demolition regulations and would therefore not result in the exposure of sensitive receptors to substantial pollutant concentrations.

Construction Emissions Summary

Previously referenced Table J shows that daily regional construction emissions would not exceed the daily thresholds of any criteria pollutant emission thresholds established by SCAQMD, and there would be no locally significant impacts during construction. Additionally, as shown in Table K, project construction would not expose sensitive receptors to substantial pollutant concentrations related to localized impacts or DPM emissions during construction.

REGIONAL AIR QUALITY IMPACTS

Project Operational Emissions

Operational air pollutant emission impacts are those associated with stationary sources and mobile sources involving any project-related changes. The proposed project would result in net increases in area-source and mobile-source emissions. The area-source emissions would come from natural gas appliances, consumer products, landscaping equipment, and solid waste disposal. Mobile source emissions would come from patron and employee vehicles and supply and delivery trucks. The project's trip generation rates were obtained from RK Engineering Group, Inc. (2016). The primary trips and pass-by trips percentages were used in the CalEEMod to match the Traffic Impact Analysis. Since the Traffic Impact Analysis did not provide the weekend trip generation rates, CalEEMod defaults were used.

Area Sources. Area sources of air pollutant emissions include indirect emissions associated with fuel combustion used to generate electricity and provide space and water heating; from the embodied energy required to supply, treat, and distribute water and treat the resulting wastewater; from combustion emissions from landscaping equipment; and from the use of architectural coatings. Landscaping equipment powered by fossil fuels is also a source of emissions.

Mobile Sources. Based on trip generation estimates provided in the *Traffic Impact Study* prepared for the proposed project (RK Engineering Group, Inc. 2016), the projected 7,269 weekday daily trips (after pass-by adjustment) were used as input in CalEEMod. Table L shows the estimated operational emissions associated with the existing site and the proposed project.

Table L: Estimated Operational Emissions

Source	Pollutant Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Proposed Project						
Area Sources	1.54	<0.01	0.04	0	<0.01	<0.01
Energy Sources	0.10	0.94	0.79	<0.01	0.07	0.07
Mobile Sources	19.66	38.74	255.24	0.60	58.22	15.79
Total Project Emissions	**21.30**	**39.68**	**226.08**	**0.60**	**58.22**	**15.86**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA Associates, Inc. (November 2016).

CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOC = volatile organic compounds

Results from the CalEEMod analysis, shown in Table L, indicate that no criteria pollutants resulting from the proposed project would exceed the corresponding SCAQMD daily emission thresholds for any criteria pollutants. Therefore, project-related operational air quality impacts would be less than significant.

Localized Impacts Analysis

Table M shows the calculated emissions for the proposed operational activities compared with the appropriate LSTs. By design, the localized impacts analysis only includes on-site sources; however, CalEEMod outputs do not separate on-site and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions shown in Table M include all on-site project-related stationary sources and 5 percent of the project-related new mobile sources, which is an estimate of the amount of project-related new vehicle traffic that would occur on site. A total of 5 percent is considered conservative because the average trip lengths assumed are 14.7 miles for home to work, 5.9 miles for home to shopping, and 8.7 miles for other types of trips. The average on-site distance driven is unlikely to be more than 1,000 ft, which is approximately 2.2 percent of the total miles traveled. Considering the total trip length included in CalEEMod, the 5 percent assumption is conservative.

Table M: Estimated Operational Localized Impacts Analysis

Emissions Sources	NO_X	CO	PM_{10}	$PM_{2.5}$
On-Site Emissions[1]	1.94	11.31	2.91	0.97
LST Thresholds	**893**	**20,006**	**38**	**18**
Significant Emissions?	**No**	**No**	**No**	**No**

Source: Compiled by LSA Associates, Inc. (November 2016).

Note: Source Receptor Area 25 is Lake Elsinore (5 acres, 366 meter distance); on-site traffic is 5 percent of total mobile source trips within the project area (i.e., driveways and parking lots).

[1] CalEEMod clearly delineates the on-site and off-site emissions; thus, this includes all on-site emissions without having to include a percentage of the mobile source emissions.

CalEEMod = California Emissions Estimator Model
CO = carbon monoxide
LST = Local Significance Thresholds
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size

Table M shows that the estimated operational emission rates would not exceed the LSTs for receptors located at 1,200 ft (366 m) from the project site. The 366-meter distance thresholds were utilized by using the interpolated data between the 200- and 500-meter distance tables from the SCAQMD LST guidance. Therefore, the proposed operational activities would not result in a locally significant air quality impact.

OPERATIONAL TOXIC AIR CONTAMINANTS ASSESSMENT

The principal issues related to emissions exposure for sensitive receptors are the potential health risks associated with TAC exhaust from diesel delivery trucks at the project site. The ARB *Air Quality and Land Use Handbook* provides recommendations for the siting of new sensitive land uses near potential TAC sources (ARB 2005). Sensitive individuals refer to those segments of the population most susceptible to poor air quality (e.g., children, the elderly, pregnant women, or others with existing health issues). Land uses where sensitive individuals are most likely to spend extended periods of time include schools, parks, playgrounds, daycare centers, nursing homes, hospitals, and residential communities. The ARB recommends avoiding the siting of new sensitive land uses within 1,000 ft of a distribution center that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week.

Based on information from the Traffic Impact Analysis, the project site would generate fewer than 100 trucks per day, which travel to the site to deliver food and products. Additionally, the nearest residences are more than 1,200 ft from the southeast side of the project site. Due to the small number of trucks and large buffer distance, impacts related to the exposure of sensitive receptors to sources of TACs would be less than significant.

IMPACTS FROM ODORS

Odors are not expected to substantially increase from existing conditions in the area due to the proposed project. Typically, odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from the psychological (i.e., irritation, anger, or anxiety) to the physiological (including circulatory and respiratory effects, nausea, vomiting, and headache).

Neither the state nor the federal government has adopted rules or regulations for the control of odor sources. The SCAQMD investigates odor complaints from the public. These complaints and the results of SCAQMD investigations are recorded and kept on file. A review of SCAQMD records from the last 10 years shows no complaints logged by SCAQMD for odors associated with the project site and no notices of violations related to any issue related to releases of potential odors.

Potential operational airborne odors could result from cooking activities associated with the new restaurants. The proposed project would utilize the SCAQMD-required emission control device on the kitchen ducts and exhaust equipment. The other potential source of odors would be the new trash receptacles at the new buildings planned for the proposed project. However, the receptacles would have lids and would be emptied on a regular basis before potentially substantial odors would have a chance to develop. The diesel delivery trucks are not considered significant because the emissions are from a mobile source and the diesel odor emitted would dissipate as the vehicle moves and would not

be a constant source of odor. Therefore, there would be no significant adverse air quality impacts with respect to objectionable odors that could affect a substantial number of people. Objectionable odors from the proposed project operation would be less than significant.

GREENHOUSE GAS EMISSIONS

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

Construction and operation of project development would generate GHG emissions, with the majority of energy consumption (and associated generation of GHG emissions) occurring during the project's operation (as opposed to during its construction).

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

- **Construction Activities:** During construction of the project, GHGs would be emitted through the operation of construction equipment and from worker and vendor vehicles, which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs (e.g., CO_2, CH_4, and N_2O). Furthermore, CH_4 is emitted during the fueling of heavy equipment.
- **Gas, Electricity, and Water Use:** Natural gas use results in the emission of two GHGs: CH_4 (the major component of natural gas) and CO_2 (from the combustion of natural gas). Electricity use can result in GHG production if the electricity is generated by combusting fossil fuel. California's water conveyance system is energy-intensive. Estimates by CEC Public Interest Energy Research Industrial, Agriculture, and Water experts indicate the total energy used to pump and treat this water exceeds 6.5 percent of the total electricity used in the state per year (CEC 2006).
- **Solid Waste Disposal:** Solid waste generated by the project could contribute to GHG emissions in a variety of ways. Landfilling and other methods of disposal use energy for transporting and managing the waste, and produce additional GHGs to varying degrees. Landfilling, the most common waste management practice, results in the release of CH_4 from the anaerobic decomposition of organic materials. CH_4 is 25 times more potent a GHG than CO_2. However, landfill CH_4 can also be a source of energy. In addition, many materials in landfills do not decompose fully and the carbon that remains is sequestered in the landfill and not released into the atmosphere.
- **Motor Vehicle Use:** Transportation associated with the proposed project would result in GHG emissions from the combustion of fossil fuels in daily automobile and truck trips.

GHG emissions associated with project construction would occur over the short term from construction activities and would consist primarily of emissions from equipment exhaust. Long-term regional emissions would also be associated with project-related new vehicular trips and stationary-source emissions (e.g., natural gas used for heating and electricity usage for lighting). Preliminary guidance from the OPR and recent letters from the Attorney General critical of CEQA documents that have taken different approaches indicate that lead agencies should calculate, or estimate, emissions from vehicular traffic, energy consumption, water conveyance and treatment, waste generation, and

construction activities. The calculations presented below includes construction emissions in terms of CO_2 and annual CO_2e GHG emissions from increased energy consumption, water usage, solid waste disposal, and estimated GHG emissions from vehicular traffic that would result from implementation of the proposed project.

GHG emissions generated by the proposed project would predominantly consist of CO_2. In comparison to criteria air pollutants (e.g., O_3 and PM_{10}), CO_2 emissions persist in the atmosphere for a substantially longer period. While emissions of other GHGs (e.g., CH_4) are important with respect to GCC, emission levels of other GHGs are less dependent on the land use and circulation patterns associated with the proposed land use development project than levels of CO_2.

Construction Greenhouse Gas Emissions

Construction activities produce combustion emissions from various sources (e.g., demolition, site grading, utility engines, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, asphalt paving, and motor vehicles transporting the construction crew). Exhaust emissions from on-site construction activities would vary daily as construction activity levels change. Table N lists the annual CO_2 emissions for each of the planned construction phases (see Appendix A for details).

Architectural coatings used in project construction may contain VOCs that are similar to ROGs and are part of O_3 precursors. However, there are no significant emissions of GHGs from architectural coatings. The construction phase in Table N shows GHG emissions from equipment exhaust and energy use and indicate that project construction would generate approximately 928.50 MT CO_2e per year. Amortized over 30 years, the total construction emissions would generate approximately 31 MT CO_2e per year.

Table N: Estimated Construction Greenhouse Gas Emissions

Construction Phase	Peak Annual Emissions (MT/yr)				Total Emissions per Year (MT CO_2e)
	CO_2	CH_4	N_2O	Total CO_2e	
2017					
Demolition	37.97	<0.01	0.00	38.22	**167.99**
Site Preparation	18.57	<0.01	0.00	18.71	
Grading	110.59	0.02	0.00	111.07	
Building Construction	0.00	0.00	0.00	0.00	
Paving	0.00	0.00	0.00	0.00	
Architectural Coating	0.00	0.00	0.00	0.00	
2018					
Demolition	0.00	0.00	0.00	0.00	**625.66**
Site Preparation	0.00	0.00	0.00	0.00	
Grading	265.46	0.05	0.00	266.60	
Building Construction	357.55	0.06	0.00	359.06	
Paving	0.00	0.00	0.00	0.00	
Architectural Coating	0.00	0.00	0.00	0.00	

Table N: Estimated Construction Greenhouse Gas Emissions

Construction Phase	Peak Annual Emissions (MT/yr)				Total Emissions per Year (MT CO_2e)
	CO_2	CH_4	N_2O	Total CO_2e	
2019					
Demolition	0.00	0.00	0.00	0.00	**134.85**
Site Preparation	0.00	0.00	0.00	0.00	
Grading	0.00	0.00	0.00	0.00	
Building Construction	108.16	0.02	0.00	108.61	
Paving	21.90	<0.01	0.00	22.06	
Architectural Coating	4.17	<0.01	0.00	4.17	
Total Construction Emissions					**928.50**
Total Construction Emissions Amortized over 30 years					**30.95**

Source: Compiled by LSA Associates, Inc. (November 2016).

CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT CO_2e = metric tons of carbon dioxide equivalent
MT/yr = metric tons per year
N_2O = nitrous oxide

Operational Greenhouse Gas Emissions

Operation of the proposed project would generate GHG emissions from area and mobile sources and indirect emissions from stationary sources associated with energy consumption. Mobile-source emissions of GHGs would include project-generated vehicle trips associated with on-site facilities and customers and employees to the project site. Area-source emissions would be associated with activities including landscaping and maintenance of proposed land uses, natural gas for cooking and heating, and other sources. Increases in stationary-source emissions would also occur at off-site utility providers as a result of demand for electricity, natural gas, and water by the proposed uses.

The GHG emission estimates presented in Table O show the emissions associated with the level of development envisioned by the proposed project at opening. Appendix A includes the model outputs. Area sources include architectural coatings, consumer products, and landscaping. Energy sources include natural gas consumption for heating and cooking.

Table O: Estimated Operational Greenhouse Gas Emissions

Source	Pollutant Emissions (MT/yr)					
	Bio-CO_2	NBio-CO_2	Total CO_2	CH_4	N_2O	Total CO_2e
Construction emissions amortized over 30 years						30.95
Operational Emissions						
Area Sources	0	0.01	0.01	<0.01	0	0.01
Energy Sources	0	639	639	0.02	<0.01	641
Mobile Sources	0	7,659	7,659	0.29	0	7,666
Waste Sources	40	0	40	2.40	0	100
Water Usage	2	41	44	0.25	<0.01	52

Table O: Estimated Operational Greenhouse Gas Emissions

Source	Pollutant Emissions (MT/yr)					
	Bio-CO_2	NBio-CO_2	Total CO_2	CH_4	N_2O	Total CO_2e
Total Project Emissions	**42**	**8,339**	**8,382**	**2.97**	**0.01**	**8,491**

Source: Compiled by LSA Associates, Inc. (November 2016).

Note: Numbers in table may not appear to add up correctly due to rounding.

Bio-CO_2 = biologically generated CO_2
CO_2 = carbon dioxide
MT/yr = metric tons per year
NBio-CO_2 = Nonbiologically generated CO_2
CH_4 = methane
CO_2e = carbon dioxide equivalent
N_2O = nitrous oxide

As shown in Table O, the project operational emissions of GHGs (including the amortized construction emissions) would result in a net increase of 8,491 MT CO_2e per year.

At the November 19, 2009, SCAQMD Board meeting, staff recommended 3,000 $MTCO_2e$ per year screening threshold for commercial retail projects. If a project's GHG emissions exceed the 3,000 $MTCO_2e$ per year screening threshold, the project would move to a "Tier 4" analysis. Tier 4 establishes a decision tree approach that includes compliance options for projects that have incorporated design features into the project and/or implement GHG mitigation measures.

The City CAP is a comprehensive document to ensure the City reduces communitywide GHG emissions consistent with AB 32 and EO S-3-05. The CAP was prepared concurrently with the City's General Plan and Environmental Impact Report to serve as the City's primary information and policy document for GHG emissions reductions in order to analyze and reduce potentially significant GHG emissions resulting from development under the City General Plan.

The CAP includes a Project-Level CAP Consistency Worksheet, which is generally applicable to commercial land use development projects. As such, pursuant to the CAP documentation, further analysis is required to determine if a significant impact would occur.

CAP Plan Consistency Analysis

The City's CAP contains a GHG emissions reduction target based on a communitywide emissions reduction to 6.6 MT CO_2e per service population per year by 2020. The communitywide GHG emission reduction assumes a 22.3 percent reduction from the 2008 rate of 8.5 MT CO_2e per service population. The City's CAP also contains the following GHG-related measures that are applicable to the proposed project. The following CAP measures are binding and enforceable upon implementing projects as required by the CAP and shall be verified by the City prior to approval of the proposed project or prior to occupancy as appropriate.

- **T-1.2 Pedestrian Infrastructure.** Through the development review process, require the installation of sidewalks along new and reconstructed streets. Also require new subdivisions and large developments to provide sidewalks or paths to internally link all uses where applicable and provide connections to neighborhood activity centers, major destinations, and transit facilities contiguous with the project site; implement through conditions of approval.

- **T-1.4 Bicycle Infrastructure.** Through the development review process, require new development, as applicable, to implement and connect to the network of Class I, II, and III bikeways, trails and safety features identified in the General Plan, Bike Lane Master Plan, Trails Master Plan, and Western Riverside County Non-Motorized Transportation plan; implement through conditions of approval. The City will also continue to pursue and utilize funding when needed to implement portions of these plans.
- **T-1.5 Bicycle Parking Standards.** Through the development review process, enforce the following short-term and long-term bicycle parking standards for new nonresidential development (consistent with 2010 California Green Building Code [CalGreen], Section 5.106.4), and implement through conditions of approval:
    - **Short-Term Bicycle Parking.** If the project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitor entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack.
- **E-1.1 Tree Planting Requirements.** Through the development review process, require new development to plant at minimum one 15-gallon non-deciduous, umbrella-form tree per 30 linear feet of boundary length near buildings, per the Municipal Code. Trees shall be planted in strategic locations around buildings or to shade pavement in parking lots and streets.
- **E-1.2 Cool Roof Requirements.** Through the development review process, enforce the following non-residential roofing materials shall have solar reflectance, thermal emittance, or Solar Reflectance Index 3 per CalGreen Tier 1 values.
- **E-1.3 Energy Efficient Building Standards.** Adopt an ordinance requiring that all new construction exceed the California Energy Code requirements, based on the 2008 Energy Efficiency Standards by 15 percent (consistent with CalGreen Tier 1), through either the performance based or prescriptive approach described in the California Green Building Code; implement through conditions of approval. Alternately, a solar photovoltaic system and/or solar water heating may be used to assist in meeting all or a portion of the 15 percent requirement.
- **E-4.1 Landscaping Ordinance.** Through the development review process, enforce the City's Assembly Bill 1881 Landscaping Ordinance; implement through conditions of approval.
- **E-4.2 Indoor Water Conservation Requirements.** Amend the City's Uniform Building Code to require development projects to reduce indoor water consumption by 30 percent (consistent with CalGreen Tier 1, Section A5.303.2.3.1), and implement through conditions of approval.
- **S-1.4 Construction and Demolition Waste Diversion.** An implementing project accompanied by a waste management plan shall demonstrate how 65 percent of the nonhazardous construction and demolition debris generated at the site will be recycled or salvaged.

The proposed project is anticipated to comply with all the feasible CAP measures identified in Appendix D of the City CAP. Three other measures—T-2.1 fuel efficient vehicles, E-3.2 energy-efficient streetlights, and E-3.2 traffic signal lights—are not applicable to the project development site. The choice, use, and operation of fuel-efficient vehicles are under the control of patrons, not property owners or tenants. Patrons arrive at and leave the shopping center and fast-food restaurants within very short periods of time. Energy-efficient streetlights and traffic signals are under the control of the City. The streetlights and traffic signals are not part of the proposed project. Therefore, these

three measures are not feasible for the proposed project. The proposed project will be subject to the latest version of the 2016 Title 24 standards, which are approximately 30 percent more efficient than the 2008 Title 24 standards. The proposed project will also comply with CalGreen Standards. The project is anticipated to plant trees and include landscaping that complies with the City's AB 1881 Landscape Ordinance. The project is anticipated to divert 65 percent or more of nonhazardous construction and demolition debris generated at the site. Based on the information in the *Traffic Impact Analysis* (RK Engineering Group, Inc. 2016), it was assumed that approximately 4 percent of the vehicle trips would be pass-by trips.

Implementing projects that are in compliance with the above mandatory CAP GHG reduction measures would result in a decrease of GHG emissions. These measures will be applied to the proposed project to reduce GHG emissions. Appendix D of the CAP contains a project-level worksheet that an applicant may use to demonstrate consistency with the General Plan growth potential and CAP. The following are the criteria for determining consistency with the CAP:

1. Is the project consistent with the General Plan land use designation?

   Determination: Development of the project site would be General Commercial, which is consistent with the land uses specified in the City of Lake Elsinore's General Plan. Therefore, the project meets this criterion.

2. Is the project consistent with the General Plan population and employment projections for the site, upon which the CAP modeling is based?

   Determination: The City of Lake Elsinore General Plan's build-out of population, housing, and employment figures has anticipated development of the project site as C-2 General Commercial zoning. This zoning plan and projection were used in the preparation of the CAP. Therefore, the project meets this criterion.

3. Does the project incorporate the following CAP measures as binding and enforceable components of the project? Until these measures have been formally adopted by the City and incorporated in to applicable codes, the requirements must be incorporated as mitigation measures applicable to the project (*CEQA Guidelines*, Section 15183.5(b)(2)).

   Determination: Project design features require that the project implement CAP measures T-1.2, T-1.4, T-1.5, E-1.1, E-1.2, E-1.3, E-4.1, E-4.2, and S-1.4. Therefore, the project meets this criterion.

Based on the analysis above, with implementation of the CAP GHG reduction measures, the project will be consistent with and will be built upon the goals, policies, and implementation programs contained in the adopted City CAP. Therefore, the proposed project will be consistent and not conflict with an applicable City's policy, regulations, or CAP adopted for the purpose of reducing the emissions of greenhouse gases. GHG impacts would be considered less than significant.

AIR QUALITY MANAGEMENT PLAN CONSISTENCY

A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the air quality plans. A consistency determination fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are addressed.

Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review due to the air quality plan strategy being based on projections from local General Plans.

The AQMP is based on regional growth projections developed by SCAG. The proposed project is a commercial development and is not defined as a regionally significant project under CEQA; therefore, it does not meet SCAG's Intergovernmental Review criteria.

The proposed uses are consistent with the zoning designation for the project site, which is consistent with the City General Plan. The City General Plan is consistent with the SCAG Regional Comprehensive Plan Guidelines and the SCAQMD AQMP. Pursuant to the methodology in Chapter 12 of the 1993 SCAQMD *CEQA Air Quality Handbook*, consistency with the Basin 2012 AQMP is affirmed when a project (1) does not increase the frequency or severity of an air quality standards violation or cause a new violation; and (2) is consistent with the growth assumptions in the AQMP. Consistency review is presented below.

1. The proposed project would result in short-term construction and long-term pollutant emissions that are less than the CEQA significance emissions thresholds established by SCAQMD with control measures incorporated, as demonstrated above; therefore, the project would not result in an increase in the frequency or severity of any air quality standard violation and would not cause a new air quality standard violation.
2. The *CEQA Air Quality Handbook* indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities; therefore, the proposed project is not defined as significant.

Based on the consistency analysis presented above, the proposed project is consistent with the General Plans and the regional AQMP.

CONSISTENCY WITH GHG REDUCTION PLANS

Project implementation would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions. With implementation of applicable sustainable features, this impact would be less than significant. The proposed project would be required to comply with CalGreen building standards, as well as implement various sustainability features with which the Project Applicant is required to comply. These features would foster, among other benefits, reductions in energy consumption, waste generation, and associated pollution. In addition, newer construction materials and practices, current energy efficiency requirements, and newer appliances tend to emit lower levels of air pollutant emissions, including GHGs, as compared to materials and equipment used years ago. Accordingly, all project-related operational GHG emissions would be less than significant.

CUMULATIVE IMPACTS

The proposed project is located in the Basin, which is currently in nonattainment for ozone, PM_{10}, and $PM_{2.5}$. Cumulative impacts, in particular for nonattainment pollutants, can result from individually minor but collectively significant projects. For CEQA documents, the SCAQMD uses a zone of influence of 1 mile from the proposed project for ambient pollutants and 500 feet for TACs (SCAQMD 2013). The SCAQMD reasons that impacts to most air quality impacts are local in nature, no more than 1 mile, whereas impacts from exposures to TACs decline by approximately 90 percent at 300 to 500 feet from the emissions source. In accordance with SCAQMD's policy, this cumulative impact analysis considers related projects or projects causing related impacts within a geographic scope of 1 mile from the proposed project for ambient air pollutants and 500 feet for TACs.

The list of potentially overlapping projects is included in Exhibit 5-4 and Table 5-3 of the Central Plaza Traffic Impact Study and is included here by reference (RK Engineering 2016). Of these projects, five—a Walmart, Golden Corral, La Quinta Inn, Ness Industrial Garage, and Fairway Business Park—would be located within 1 mile, but more than 500 feet from the proposed project. Although these projects may occur in the vicinity of and contemporaneously with the proposed project, the proposed project would have a relatively short construction schedule of less than 2 years, with the majority of construction occurring in the first 6 months. Therefore, any construction impacts would be short in duration and unlikely to overlap substantially with other projects in the vicinity.

In addition, the SCAQMD developed a policy to address cumulative impacts of CEQA projects (SCAQMD 2003). The policy considers the cumulative threshold to be the same as the project threshold. Construction and operation of the proposed Project would not exceed SCAQMD project thresholds for regional emissions and localized impacts of criteria pollutants with implementation of Standard Construction Measures. As such, the proposed project would not be considered cumulatively considerable under SCAQMD policy as it does not exceed project-specific air quality significance thresholds. Because no project-level or cumulative significant air quality impacts are anticipated for the proposed project, no mitigation measures are required.

GHG emissions contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. As such, the cumulative global GHG emissions contributing to global climate change can be attributed to every nation, region, city, project, and person.

The challenge in assessing the significance of an individual project's contribution to global GHG emissions and associated global climate change impacts is to determine whether a project's GHG emissions, which are at a micro-scale relative to global emissions, make a cumulatively considerable incremental contribution to a macro-scale impact. For the purposes of this cumulative discussion, it is assumed that an exceedance of the project-level threshold could result in a cumulatively considerable contribution to the overall GHG burden (SCAQMD 2003).

Construction and operation impacts of the proposed project would exceed the SCAQMD's threshold of 3,000 metric tons per year of CO_2e for the proposed project. Therefore, the project shall apply feasible measures from the City's CAP. Appendix D of the City's CAP contains a project-level worksheet that an applicant may use to demonstrate consistency with the General Plan growth potential and CAP. With the implementation of the nine CAP measures, impacts from proposed project construction and operation would not make a cumulatively considerable contribution to an

existing significant cumulative impact related to GHG and global climate change under CEQA. Because the project is in compliance with the CAP, its GHG cumulative impacts are less than significant and no mitigation measures are required.

STANDARD SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT CONSTRUCTION CONTROL MEASURES

The Project Applicant shall include these standard construction measures for construction plans and shall require the construction contractor to implement the following measures:

- **Dust Control**
  - Apply soil stabilizers to inactive areas.
  - Prepare a high wind dust control plan and implement plan elements and terminate soil disturbance when winds exceed 25 mph.
  - Stabilize previously disturbed areas if subsequent construction is delayed.
  - Water exposed surfaces and haul roads 3 times per day.
  - Cover all stockpiles with tarps.
  - Replace groundcover in disturbed areas quickly.
  - Reduce speeds on unpaved roads to less than 15 mph.
- **Exhaust Emissions**
  - Require 90-day low-NO_X tune-ups for off-road equipment.
  - Require use of Tier 2-rated engines during site grading for all equipment exceeding 100 horsepower if available.
  - Utilize diesel particulate filters, if possible.
  - Give preference to contractors using equipment with oxidation catalysts, soot traps, or other modern control technology.
  - Use low-emission mobile construction equipment. The property owner/developer shall comply with ARB requirements for heavy construction equipment.
  - Maintain construction equipment engines by keeping them tuned.
  - Avoid unnecessary idling by shutting off engines that are expected to idle for more than 5 minutes.
  - Utilize existing power sources (i.e., power poles) when available.
  - Configure construction parking to minimize traffic interference.
  - Schedule construction operations affecting traffic for off-peak hours to the best extend when possible.
  - Develop a traffic plan to minimize traffic flow interference from construction activities.

- **VOC Control Measures**
  - Minimize the amount of paint used by using precoated, precolored, and naturally colored building materials.
  - Use high transfer efficiency painting methods (e.g., HVLP [High Volume Low Pressure] sprayers and brushes/rollers where possible).
  - Use SCAQMD-required low-VOC coatings where practical.

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APPENDIX A

CALEEMOD PRINTOUTS

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Central Plaza Lake Elsinore

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Regional Shopping Center	53.47	1000sqft	1.23	53,470.00	0
Fast Food Restaurant w/o Drive Thru	3.53	1000sqft	0.08	3,530.00	0
Fast Food Restaurant with Drive Thru	4.50	1000sqft	0.10	4,500.00	0
High Turnover (Sit Down Restaurant)	4.30	1000sqft	0.10	4,304.00	0
Parking Lot	363.00	Space	5.74	145,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land use square footages taken from Central Plaza Traffic Impact Study, City of Lake Elsinore, California (RK Engineering, 10-7-16). CalEEMod default acreage is 4.78 acres. However, project site is 7.25 acres. Increase parking lot area (to include driveways) from 3.27 acres to 5.74 acres.

Construction Phase - Anticipated construction dates based on CalEEMod defaults for 7.25 acres project site, with extended 120 days of grading period to accomodate imported soil. Commence in October 2017 and completed by June 2019.

Grading - It is anticiapted the project site will require the import of approx. 44,000 cubic yards of soil duuring grading period.

Demolition - An existing vacant single story residential house of approx. 5,000 sf will be demolished.

Trips and VMT - Haul and water truck trips will occur during construction.

Vehicle Trips - Vehicle trip rates from Traffic Impact Analysis (RK Engineering, 10-7-16). Pass-by trips from TIA were entered in CalEEMod. Assume all other trips are primary trips for shopping center in accordance with ITE manual.

Construction Off-road Equipment Mitigation - In accordance with ARB regulations for in-use off-road diesel equipment and vehicles, all construction equiment post-2010 model years are assumed to utilized U.S. EPA Tier 2 engine standards with level 2 diesel particulate filters. For fugitive dust controls, watering on-site will occur 3 times daily.

Mobile Land Use Mitigation - CAP measure T-1.2 from the City's Climate Action Plan, which requires the installation of sidewalks along streets as well as internal sidewalks. The installation of sidewalks would help improve the pedestrain network in the project area.

Area Mitigation - Low VOC for Architectural Coating under SCAQMD Rule 1113

Energy Mitigation -

Water Mitigation - In accordance with 2016 CalGreen Building Standards, mandatory measures for commercial retail buildings include a 20 percent reduction of potable water use within buildings through uise of low-flow fixtures. Outdoor water efficient landscape systems will be required to reduction of outdoor water use.

Waste Mitigation - In accordance with the California Recycle and Recovery regulations, solid waste management of 75% reduction in waste disposed will be implemented under the City and/or County Environmental Service Regulations.

Fleet Mix - Vehicle fleet mix were adjusted based on ITE defined primary trips for shopping center and fast food restuarants. It is anticipated that 78% light duty autos, 8.35% light duty trucks 1, 6% light duty trucks 2, 5% medium duty vehicles, 1% medium duty trucks, 1% heavy heavy duty trucks and 0.65% motorcycles would access the project site daily under primary trip mode.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2

tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	20.00	120.00
tblConstructionPhase	PhaseEndDate	9/29/2017	5/24/2019
tblConstructionPhase	PhaseEndDate	9/29/2017	3/15/2019
tblConstructionPhase	PhaseEndDate	9/29/2017	10/27/2017
tblConstructionPhase	PhaseEndDate	9/29/2017	4/27/2018
tblConstructionPhase	PhaseEndDate	9/29/2017	6/21/2019
tblConstructionPhase	PhaseEndDate	9/29/2017	11/10/2017
tblConstructionPhase	PhaseStartDate	9/30/2017	4/27/2019
tblConstructionPhase	PhaseStartDate	9/30/2017	4/28/2018
tblConstructionPhase	PhaseStartDate	9/30/2017	11/11/2017
tblConstructionPhase	PhaseStartDate	9/30/2017	5/25/2019
tblConstructionPhase	PhaseStartDate	9/30/2017	10/28/2017
tblFleetMix	HHD	0.07	0.01
tblFleetMix	HHD	0.07	0.01
tblFleetMix	HHD	0.07	0.01
tblFleetMix	HHD	0.07	0.01
tblFleetMix	HHD	0.07	0.01
tblFleetMix	LDA	0.53	0.78
tblFleetMix	LDA	0.53	0.78

tblFleetMix	LDA	0.53	0.78
tblFleetMix	LDA	0.53	0.78
tblFleetMix	LDA	0.53	0.78
tblFleetMix	LDT1	0.04	0.08
tblFleetMix	LDT1	0.04	0.08
tblFleetMix	LDT1	0.04	0.08
tblFleetMix	LDT1	0.04	0.08
tblFleetMix	LDT1	0.04	0.08
tblFleetMix	LDT2	0.18	0.06
tblFleetMix	LDT2	0.18	0.06
tblFleetMix	LDT2	0.18	0.06
tblFleetMix	LDT2	0.18	0.06
tblFleetMix	LDT2	0.18	0.06
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.5610e-003	0.00
tblFleetMix	LHD2	5.5610e-003	0.00
tblFleetMix	LHD2	5.5610e-003	0.00
tblFleetMix	LHD2	5.5610e-003	0.00
tblFleetMix	LHD2	5.5610e-003	0.00
tblFleetMix	MCY	4.6770e-003	6.5000e-003
tblFleetMix	MCY	4.6770e-003	6.5000e-003
tblFleetMix	MCY	4.6770e-003	6.5000e-003
tblFleetMix	MCY	4.6770e-003	6.5000e-003

tblFleetMix	MCY	4.6770e-003	6.5000e-003
tblFleetMix	MDV	0.13	0.05
tblFleetMix	MDV	0.13	0.05
tblFleetMix	MDV	0.13	0.05
tblFleetMix	MDV	0.13	0.05
tblFleetMix	MDV	0.13	0.05
tblFleetMix	MH	1.2110e-003	0.00
tblFleetMix	MH	1.2110e-003	0.00
tblFleetMix	MH	1.2110e-003	0.00
tblFleetMix	MH	1.2110e-003	0.00
tblFleetMix	MH	1.2110e-003	0.00
tblFleetMix	MHD	0.02	0.01
tblFleetMix	MHD	0.02	0.01
tblFleetMix	MHD	0.02	0.01
tblFleetMix	MHD	0.02	0.01
tblFleetMix	MHD	0.02	0.01
tblFleetMix	OBUS	1.3450e-003	0.00
tblFleetMix	OBUS	1.3450e-003	0.00
tblFleetMix	OBUS	1.3450e-003	0.00
tblFleetMix	OBUS	1.3450e-003	0.00
tblFleetMix	OBUS	1.3450e-003	0.00
tblFleetMix	SBUS	9.7400e-004	0.00
tblFleetMix	SBUS	9.7400e-004	0.00
tblFleetMix	SBUS	9.7400e-004	0.00
tblFleetMix	SBUS	9.7400e-004	0.00
tblFleetMix	SBUS	9.7400e-004	0.00
tblFleetMix	UBUS	1.2470e-003	0.00

tblFleetMix	UBUS	1.2470e-003	0.00
tblFleetMix	UBUS	1.2470e-003	0.00
tblFleetMix	UBUS	1.2470e-003	0.00
tblFleetMix	UBUS	1.2470e-003	0.00
tblGrading	AcresOfGrading	60.00	7.25
tblGrading	MaterialImported	0.00	44,000.00
tblLandUse	LotAcreage	3.27	5.74
tblProjectCharacteristics	OperationalYear	2018	2019
tblVehicleTrips	DV_TP	37.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	20.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	PB_TP	12.00	2.00
tblVehicleTrips	PB_TP	50.00	8.00
tblVehicleTrips	PB_TP	43.00	3.00
tblVehicleTrips	PB_TP	11.00	3.00
tblVehicleTrips	PR_TP	51.00	98.00
tblVehicleTrips	PR_TP	29.00	92.00
tblVehicleTrips	PR_TP	37.00	97.00
tblVehicleTrips	PR_TP	54.00	97.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.1284	1.5327	0.7018	1.7800e-003	0.5056	0.0688	0.5744	0.2610	0.0636	0.3246	0.0000	167.1361	167.1361	0.0343	0.0000	167.9936
2018	0.4201	4.3184	2.7317	6.7900e-003	0.5187	0.2036	0.7223	0.2400	0.1902	0.4302	0.0000	623.0140	623.0140	0.1058	0.0000	625.6579
2019	0.4296	0.8582	0.7474	1.5000e-003	0.0341	0.0454	0.0795	9.2000e-003	0.0426	0.0518	0.0000	134.2257	134.2257	0.0248	0.0000	134.8462
Maximum	**0.4296**	**4.3184**	**2.7317**	**6.7900e-003**	**0.5187**	**0.2036**	**0.7223**	**0.2610**	**0.1902**	**0.4302**	**0.0000**	**623.0140**	**623.0140**	**0.1058**	**0.0000**	**625.6579**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.0451	1.2059	0.7489	1.7800e-003	0.2245	0.0150	0.2395	0.1088	0.0150	0.1238	0.0000	167.1360	167.1360	0.0343	0.0000	167.9935
2018	0.2044	4.1461	2.8601	6.7900e-003	0.2942	0.0619	0.3561	0.1184	0.0616	0.1800	0.0000	623.0136	623.0136	0.1058	0.0000	625.6575
2019	0.3883	0.9790	0.7928	1.5000e-003	0.0341	0.0170	0.0511	9.2000e-003	0.0170	0.0262	0.0000	134.2256	134.2256	0.0248	0.0000	134.8461
Maximum	**0.3883**	**4.1461**	**2.8601**	**6.7900e-003**	**0.2942**	**0.0619**	**0.3561**	**0.1184**	**0.0616**	**0.1800**	**0.0000**	**623.0136**	**623.0136**	**0.1058**	**0.0000**	**625.6575**

Central Plaza Lake Elsinore - Riverside-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**34.79**	**5.64**	**-5.28**	**0.00**	**47.76**	**70.44**	**53.00**	**53.67**	**68.43**	**59.09**	**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	**10-1-2017**	**12-31-2017**	1.6775	1.2652
2	**1-1-2018**	**3-31-2018**	1.4943	1.2964
3	**4-1-2018**	**6-30-2018**	1.1615	1.0694
4	**7-1-2018**	**9-30-2018**	1.0274	0.9803
5	**10-1-2018**	**12-31-2018**	1.0275	0.9803
6	**1-1-2019**	**3-31-2019**	0.7472	0.7788
7	**4-1-2019**	**6-30-2019**	0.5236	0.5707
		Highest	1.6775	1.2964

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2802	5.0000e-005	5.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0106	0.0106	3.0000e-005	0.0000	0.0114
Energy	0.0189	0.1714	0.1440	1.0300e-003		0.0130	0.0130		0.0130	0.0130	0.0000	638.7282	638.7282	0.0222	7.2800e-003	641.4545
Mobile	2.4341	5.9888	30.1769	0.0843	8.5899	0.0788	8.6687	2.2840	0.0736	2.3576	0.0000	7,658.8895	7,658.8895	0.2930	0.0000	7,666.2132
Waste						0.0000	0.0000		0.0000	0.0000	40.5596	0.0000	40.5596	2.3970	0.0000	100.4848
Water						0.0000	0.0000		0.0000	0.0000	2.4439	41.3976	43.8415	0.2527	6.2800e-003	52.0311
Total	**2.7332**	**6.1603**	**30.3264**	**0.0854**	**8.5899**	**0.0919**	**8.6817**	**2.2840**	**0.0867**	**2.3707**	**43.0035**	**8,339.0259**	**8,382.0294**	**2.9650**	**0.0136**	**8,460.1949**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2802	5.0000e-005	5.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0106	0.0106	3.0000e-005	0.0000	0.0114
Energy	0.0189	0.1714	0.1440	1.0300e-003		0.0130	0.0130		0.0130	0.0130	0.0000	638.7282	638.7282	0.0222	7.2800e-003	641.4545
Mobile	2.5125	6.3401	32.4855	0.0920	9.4110	0.0855	9.4966	2.5024	0.0799	2.5823	0.0000	8,355.5476	8,355.5476	0.3134	0.0000	8,363.3835
Waste						0.0000	0.0000		0.0000	0.0000	40.5596	0.0000	40.5596	2.3970	0.0000	100.4848
Water						0.0000	0.0000		0.0000	0.0000	1.9551	34.4301	36.3852	0.2022	5.0400e-003	42.9415
Total	**2.8115**	**6.5115**	**32.6350**	**0.0930**	**9.4110**	**0.0986**	**9.5096**	**2.5024**	**0.0930**	**2.5953**	**42.5147**	**9,028.7165**	**9,071.2312**	**2.9350**	**0.0123**	**9,148.2757**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**-2.87**	**-5.70**	**-7.61**	**-8.98**	**-9.56**	**-7.33**	**-9.54**	**-9.56**	**-7.27**	**-9.48**	**1.14**	**-8.27**	**-8.22**	**1.01**	**9.14**	**-8.13**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	4/27/2019	5/24/2019	5	20	
2	Building Construction	Building Construction	4/28/2018	3/15/2019	5	230	
3	Grading	Grading	11/11/2017	4/27/2018	5	120	
4	Paving	Paving	5/25/2019	6/21/2019	5	20	
5	Site Preparation	Site Preparation	10/28/2017	11/10/2017	5	10	
6	Demolition	Demolition	10/1/2017	10/27/2017	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7.25

Acres of Paving: 5.74

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 98,706; Non-Residential Outdoor: 32,902; Striped Parking Area: 8,712 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
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
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	83.00	35.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	23.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	5,500.00	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
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3252					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5587
Total	**0.3279**	**0.0184**	**0.0184**	**3.0000e-005**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**2.5533**	**2.5533**	**2.2000e-004**	**0.0000**	**2.5587**

3.2 Architectural Coating - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.4000e-004	6.1000e-004	6.4500e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.6143	1.6143	4.0000e-005	0.0000	1.6154
Total	**8.4000e-004**	**6.1000e-004**	**6.4500e-003**	**2.0000e-005**	**1.8700e-003**	**1.0000e-005**	**1.8800e-003**	**5.0000e-004**	**1.0000e-005**	**5.1000e-004**	**0.0000**	**1.6143**	**1.6143**	**4.0000e-005**	**0.0000**	**1.6154**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3252					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1400e-003	0.0235	0.0183	3.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5586
Total	**0.3263**	**0.0235**	**0.0183**	**3.0000e-005**		**4.8000e-004**	**4.8000e-004**		**4.8000e-004**	**4.8000e-004**	**0.0000**	**2.5533**	**2.5533**	**2.2000e-004**	**0.0000**	**2.5586**

3.2 Architectural Coating - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.4000e-004	6.1000e-004	6.4500e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.6143	1.6143	4.0000e-005	0.0000	1.6154
Total	**8.4000e-004**	**6.1000e-004**	**6.4500e-003**	**2.0000e-005**	**1.8700e-003**	**1.0000e-005**	**1.8800e-003**	**5.0000e-004**	**1.0000e-005**	**5.1000e-004**	**0.0000**	**1.6143**	**1.6143**	**4.0000e-005**	**0.0000**	**1.6154**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2358	2.0583	1.5471	2.3700e-003		0.1320	0.1320		0.1241	0.1241	0.0000	209.2352	209.2352	0.0513	0.0000	210.5167
Total	**0.2358**	**2.0583**	**1.5471**	**2.3700e-003**		**0.1320**	**0.1320**		**0.1241**	**0.1241**	**0.0000**	**209.2352**	**209.2352**	**0.0513**	**0.0000**	**210.5167**

3.3 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0115	0.3799	0.0776	8.0000e-004	0.0195	3.1500e-003	0.0226	5.6100e-003	3.0200e-003	8.6300e-003	0.0000	76.7728	76.7728	6.7500e-003	0.0000	76.9415
Worker	0.0397	0.0300	0.3093	7.9000e-004	0.0803	5.1000e-004	0.0808	0.0213	4.7000e-004	0.0218	0.0000	71.5453	71.5453	2.1300e-003	0.0000	71.5986
Total	**0.0512**	**0.4099**	**0.3869**	**1.5900e-003**	**0.0997**	**3.6600e-003**	**0.1034**	**0.0269**	**3.4900e-003**	**0.0304**	**0.0000**	**148.3181**	**148.3181**	**8.8800e-003**	**0.0000**	**148.5401**

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	0.0951	2.0728	1.5729	2.3700e-003		0.0398	0.0398		0.0398	0.0398	0.0000	209.2349	209.2349	0.0513	0.0000	210.5165
Total	**0.0951**	**2.0728**	**1.5729**	**2.3700e-003**		**0.0398**	**0.0398**		**0.0398**	**0.0398**	**0.0000**	**209.2349**	**209.2349**	**0.0513**	**0.0000**	**210.5165**

3.3 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0115	0.3799	0.0776	8.0000e-004	0.0195	3.1500e-003	0.0226	5.6100e-003	3.0200e-003	8.6300e-003	0.0000	76.7728	76.7728	6.7500e-003	0.0000	76.9415
Worker	0.0397	0.0300	0.3093	7.9000e-004	0.0803	5.1000e-004	0.0808	0.0213	4.7000e-004	0.0218	0.0000	71.5453	71.5453	2.1300e-003	0.0000	71.5986
Total	**0.0512**	**0.4099**	**0.3869**	**1.5900e-003**	**0.0997**	**3.6600e-003**	**0.1034**	**0.0269**	**3.4900e-003**	**0.0304**	**0.0000**	**148.3181**	**148.3181**	**8.8800e-003**	**0.0000**	**148.5401**

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0638	0.5691	0.4634	7.3000e-004		0.0348	0.0348		0.0327	0.0327	0.0000	63.4781	63.4781	0.0155	0.0000	63.8647
Total	**0.0638**	**0.5691**	**0.4634**	**7.3000e-004**		**0.0348**	**0.0348**		**0.0327**	**0.0327**	**0.0000**	**63.4781**	**63.4781**	**0.0155**	**0.0000**	**63.8647**

3.3 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2000e-003	0.1091	0.0217	2.4000e-004	5.9700e-003	8.2000e-004	6.7900e-003	1.7200e-003	7.9000e-004	2.5100e-003	0.0000	23.3997	23.3997	1.9900e-003	0.0000	23.4496
Worker	0.0111	8.1100e-003	0.0850	2.4000e-004	0.0246	1.5000e-004	0.0248	6.5400e-003	1.4000e-004	6.6800e-003	0.0000	21.2807	21.2807	5.8000e-004	0.0000	21.2953
Total	**0.0143**	**0.1172**	**0.1067**	**4.8000e-004**	**0.0306**	**9.7000e-004**	**0.0316**	**8.2600e-003**	**9.3000e-004**	**9.1900e-003**	**0.0000**	**44.6804**	**44.6804**	**2.5700e-003**	**0.0000**	**44.7448**

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	0.0292	0.6360	0.4826	7.3000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	63.4781	63.4781	0.0155	0.0000	63.8647
Total	**0.0292**	**0.6360**	**0.4826**	**7.3000e-004**		**0.0122**	**0.0122**		**0.0122**	**0.0122**	**0.0000**	**63.4781**	**63.4781**	**0.0155**	**0.0000**	**63.8647**

3.3 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2000e-003	0.1091	0.0217	2.4000e-004	5.9700e-003	8.2000e-004	6.7900e-003	1.7200e-003	7.9000e-004	2.5100e-003	0.0000	23.3997	23.3997	1.9900e-003	0.0000	23.4496
Worker	0.0111	8.1100e-003	0.0850	2.4000e-004	0.0246	1.5000e-004	0.0248	6.5400e-003	1.4000e-004	6.6800e-003	0.0000	21.2807	21.2807	5.8000e-004	0.0000	21.2953
Total	**0.0143**	**0.1172**	**0.1067**	**4.8000e-004**	**0.0306**	**9.7000e-004**	**0.0316**	**8.2600e-003**	**9.3000e-004**	**9.1900e-003**	**0.0000**	**44.6804**	**44.6804**	**2.5700e-003**	**0.0000**	**44.7448**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3680	0.0000	0.3680	0.1995	0.0000	0.1995	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0537	0.5930	0.2993	5.2000e-004		0.0311	0.0311		0.0286	0.0286	0.0000	48.2291	48.2291	0.0148	0.0000	48.5985
Total	**0.0537**	**0.5930**	**0.2993**	**5.2000e-004**	**0.3680**	**0.0311**	**0.3991**	**0.1995**	**0.0286**	**0.2281**	**0.0000**	**48.2291**	**48.2291**	**0.0148**	**0.0000**	**48.5985**

3.4 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.6700e-003	0.2449	0.0304	6.2000e-004	0.0391	1.2900e-003	0.0404	0.0100	1.2300e-003	0.0112	0.0000	59.7168	59.7168	4.1500e-003	0.0000	59.8204
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	1.5800e-003	1.2300e-003	0.0127	3.0000e-005	2.8900e-003	2.0000e-005	2.9000e-003	7.7000e-004	2.0000e-005	7.8000e-004	0.0000	2.6466	2.6466	9.0000e-005	0.0000	2.6488
Total	**7.2500e-003**	**0.2462**	**0.0430**	**6.5000e-004**	**0.0420**	**1.3100e-003**	**0.0433**	**0.0108**	**1.2500e-003**	**0.0120**	**0.0000**	**62.3634**	**62.3634**	**4.2400e-003**	**0.0000**	**62.4693**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1435	0.0000	0.1435	0.0778	0.0000	0.0778	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0177	0.4599	0.3323	5.2000e-004		6.7600e-003	6.7600e-003		6.7600e-003	6.7600e-003	0.0000	48.2290	48.2290	0.0148	0.0000	48.5984
Total	**0.0177**	**0.4599**	**0.3323**	**5.2000e-004**	**0.1435**	**6.7600e-003**	**0.1503**	**0.0778**	**6.7600e-003**	**0.0846**	**0.0000**	**48.2290**	**48.2290**	**0.0148**	**0.0000**	**48.5984**

3.4 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.6700e-003	0.2449	0.0304	6.2000e-004	0.0391	1.2900e-003	0.0404	0.0100	1.2300e-003	0.0112	0.0000	59.7168	59.7168	4.1500e-003	0.0000	59.8204
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	1.5800e-003	1.2300e-003	0.0127	3.0000e-005	2.8900e-003	2.0000e-005	2.9000e-003	7.7000e-004	2.0000e-005	7.8000e-004	0.0000	2.6466	2.6466	9.0000e-005	0.0000	2.6488
Total	**7.2500e-003**	**0.2462**	**0.0430**	**6.5000e-004**	**0.0420**	**1.3100e-003**	**0.0433**	**0.0108**	**1.2500e-003**	**0.0120**	**0.0000**	**62.3634**	**62.3634**	**4.2400e-003**	**0.0000**	**62.4693**

3.4 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3680	0.0000	0.3680	0.1995	0.0000	0.1995	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1179	1.3036	0.7045	1.2600e-003		0.0659	0.0659		0.0607	0.0607	0.0000	115.2042	115.2042	0.0359	0.0000	116.1008
Total	**0.1179**	**1.3036**	**0.7045**	**1.2600e-003**	**0.3680**	**0.0659**	**0.4339**	**0.1995**	**0.0607**	**0.2601**	**0.0000**	**115.2042**	**115.2042**	**0.0359**	**0.0000**	**116.1008**

3.4 Grading - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0117	0.5440	0.0662	1.5000e-003	0.0440	2.0100e-003	0.0460	0.0118	1.9200e-003	0.0137	0.0000	144.0120	144.0120	9.5600e-003	0.0000	144.2510
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4600e-003	2.6200e-003	0.0270	7.0000e-005	7.0100e-003	4.0000e-005	7.0500e-003	1.8600e-003	4.0000e-005	1.9000e-003	0.0000	6.2445	6.2445	1.9000e-004	0.0000	6.2492
Total	**0.0152**	**0.5466**	**0.0932**	**1.5700e-003**	**0.0510**	**2.0500e-003**	**0.0531**	**0.0136**	**1.9600e-003**	**0.0156**	**0.0000**	**150.2565**	**150.2565**	**9.7500e-003**	**0.0000**	**150.5002**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1435	0.0000	0.1435	0.0778	0.0000	0.0778	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0429	1.1169	0.8071	1.2600e-003		0.0164	0.0164		0.0164	0.0164	0.0000	115.2041	115.2041	0.0359	0.0000	116.1007
Total	**0.0429**	**1.1169**	**0.8071**	**1.2600e-003**	**0.1435**	**0.0164**	**0.1599**	**0.0778**	**0.0164**	**0.0942**	**0.0000**	**115.2041**	**115.2041**	**0.0359**	**0.0000**	**116.1007**

3.4 Grading - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0117	0.5440	0.0662	1.5000e-003	0.0440	2.0100e-003	0.0460	0.0118	1.9200e-003	0.0137	0.0000	144.0120	144.0120	9.5600e-003	0.0000	144.2510
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4600e-003	2.6200e-003	0.0270	7.0000e-005	7.0100e-003	4.0000e-005	7.0500e-003	1.8600e-003	4.0000e-005	1.9000e-003	0.0000	6.2445	6.2445	1.9000e-004	0.0000	6.2492
Total	**0.0152**	**0.5466**	**0.0932**	**1.5700e-003**	**0.0510**	**2.0500e-003**	**0.0531**	**0.0136**	**1.9600e-003**	**0.0156**	**0.0000**	**150.2565**	**150.2565**	**9.7500e-003**	**0.0000**	**150.5002**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	7.5200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0221**	**0.1524**	**0.1467**	**2.3000e-004**		**8.2500e-003**	**8.2500e-003**		**7.5900e-003**	**7.5900e-003**	**0.0000**	**20.4752**	**20.4752**	**6.4800e-003**	**0.0000**	**20.6371**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.5000e-004	5.4000e-004	5.6900e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4244	1.4244	4.0000e-005	0.0000	1.4254
Total	**7.5000e-004**	**5.4000e-004**	**5.6900e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.4244**	**1.4244**	**4.0000e-005**	**0.0000**	**1.4254**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.3100e-003	0.2012	0.1730	2.3000e-004		3.3300e-003	3.3300e-003		3.3300e-003	3.3300e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	7.5200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0168**	**0.2012**	**0.1730**	**2.3000e-004**		**3.3300e-003**	**3.3300e-003**		**3.3300e-003**	**3.3300e-003**	**0.0000**	**20.4752**	**20.4752**	**6.4800e-003**	**0.0000**	**20.6371**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.5000e-004	5.4000e-004	5.6900e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4244	1.4244	4.0000e-005	0.0000	1.4254
Total	**7.5000e-004**	**5.4000e-004**	**5.6900e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.4244**	**1.4244**	**4.0000e-005**	**0.0000**	**1.4254**

3.6 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.2614	0.1173	1.9000e-004		0.0144	0.0144		0.0132	0.0132	0.0000	17.6672	17.6672	5.4100e-003	0.0000	17.8025
Total	**0.0248**	**0.2614**	**0.1173**	**1.9000e-004**	**0.0903**	**0.0144**	**0.1047**	**0.0497**	**0.0132**	**0.0629**	**0.0000**	**17.6672**	**17.6672**	**5.4100e-003**	**0.0000**	**17.8025**

3.6 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	4.2000e-004	4.3400e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9074	0.9074	3.0000e-005	0.0000	0.9082
Total	**5.4000e-004**	**4.2000e-004**	**4.3400e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.9074**	**0.9074**	**3.0000e-005**	**0.0000**	**0.9082**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0352	0.0000	0.0352	0.0194	0.0000	0.0194	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0500e-003	0.1686	0.1148	1.9000e-004		2.3700e-003	2.3700e-003		2.3700e-003	2.3700e-003	0.0000	17.6672	17.6672	5.4100e-003	0.0000	17.8025
Total	**6.0500e-003**	**0.1686**	**0.1148**	**1.9000e-004**	**0.0352**	**2.3700e-003**	**0.0376**	**0.0194**	**2.3700e-003**	**0.0217**	**0.0000**	**17.6672**	**17.6672**	**5.4100e-003**	**0.0000**	**17.8025**

3.6 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	4.2000e-004	4.3400e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9074	0.9074	3.0000e-005	0.0000	0.9082
Total	**5.4000e-004**	**4.2000e-004**	**4.3400e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.9074**	**0.9074**	**3.0000e-005**	**0.0000**	**0.9082**

3.7 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.4800e-003	0.0000	2.4800e-003	3.7000e-004	0.0000	3.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0410	0.4275	0.2301	3.9000e-004		0.0219	0.0219		0.0204	0.0204	0.0000	35.6005	35.6005	9.7300e-003	0.0000	35.8438
Total	**0.0410**	**0.4275**	**0.2301**	**3.9000e-004**	**2.4800e-003**	**0.0219**	**0.0244**	**3.7000e-004**	**0.0204**	**0.0208**	**0.0000**	**35.6005**	**35.6005**	**9.7300e-003**	**0.0000**	**35.8438**

3.7 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	3.5100e-003	4.4000e-004	1.0000e-005	2.0000e-004	2.0000e-005	2.2000e-004	5.0000e-005	2.0000e-005	7.0000e-005	0.0000	0.8562	0.8562	6.0000e-005	0.0000	0.8577
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.1000e-004	7.1000e-004	7.2300e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5124	1.5124	5.0000e-005	0.0000	1.5136
Total	**9.9000e-004**	**4.2200e-003**	**7.6700e-003**	**3.0000e-005**	**1.8500e-003**	**3.0000e-005**	**1.8800e-003**	**4.9000e-004**	**3.0000e-005**	**5.2000e-004**	**0.0000**	**2.3686**	**2.3686**	**1.1000e-004**	**0.0000**	**2.3713**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.7000e-004	0.0000	9.7000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0126	0.3266	0.2467	3.9000e-004		4.5700e-003	4.5700e-003		4.5700e-003	4.5700e-003	0.0000	35.6005	35.6005	9.7300e-003	0.0000	35.8438
Total	**0.0126**	**0.3266**	**0.2467**	**3.9000e-004**	**9.7000e-004**	**4.5700e-003**	**5.5400e-003**	**1.5000e-004**	**4.5700e-003**	**4.7200e-003**	**0.0000**	**35.6005**	**35.6005**	**9.7300e-003**	**0.0000**	**35.8438**

3.7 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	3.5100e-003	4.4000e-004	1.0000e-005	2.0000e-004	2.0000e-005	2.2000e-004	5.0000e-005	2.0000e-005	7.0000e-005	0.0000	0.8562	0.8562	6.0000e-005	0.0000	0.8577
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.1000e-004	7.1000e-004	7.2300e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5124	1.5124	5.0000e-005	0.0000	1.5136
Total	**9.9000e-004**	**4.2200e-003**	**7.6700e-003**	**3.0000e-005**	**1.8500e-003**	**3.0000e-005**	**1.8800e-003**	**4.9000e-004**	**3.0000e-005**	**5.2000e-004**	**0.0000**	**2.3686**	**2.3686**	**1.1000e-004**	**0.0000**	**2.3713**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Walkability Design

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.5125	6.3401	32.4855	0.0920	9.4110	0.0855	9.4966	2.5024	0.0799	2.5823	0.0000	8,355.5476	8,355.5476	0.3134	0.0000	8,363.3835
Unmitigated	2.4341	5.9888	30.1769	0.0843	8.5899	0.0788	8.6687	2.2840	0.0736	2.3576	0.0000	7,658.8895	7,658.8895	0.2930	0.0000	7,666.2132

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant w/o Drive Thru	2,527.48	2,456.88	1765.00	7,079,422	7,756,215
Fast Food Restaurant with Drive Thru	2,232.54	3,249.14	2442.24	6,695,584	7,335,681
High Turnover (Sit Down Restaurant)	547.25	681.62	567.44	1,772,011	1,941,415
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	2,283.17	2,671.90	1349.58	7,361,978	8,065,783
Total	7,590.44	9,059.54	6,124.26	22,908,995	25,099,095

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant w/o Drive	16.60	8.40	6.90	1.50	79.50	19.00	98	0	2
Fast Food Restaurant with Drive	16.60	8.40	6.90	2.20	78.80	19.00	92	0	8
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	97	0	3
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	97	0	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Regional Shopping Center	0.780000	0.083500	0.060000	0.050000	0.000000	0.000000	0.010000	0.010000	0.000000	0.000000	0.006500	0.000000	0.000000
Fast Food Restaurant w/o Drive Thru	0.780000	0.083500	0.060000	0.050000	0.000000	0.000000	0.010000	0.010000	0.000000	0.000000	0.006500	0.000000	0.000000
Fast Food Restaurant with Drive Thru	0.780000	0.083500	0.060000	0.050000	0.000000	0.000000	0.010000	0.010000	0.000000	0.000000	0.006500	0.000000	0.000000
High Turnover (Sit Down Restaurant)	0.780000	0.083500	0.060000	0.050000	0.000000	0.000000	0.010000	0.010000	0.000000	0.000000	0.006500	0.000000	0.000000
Parking Lot	0.780000	0.083500	0.060000	0.050000	0.000000	0.000000	0.010000	0.010000	0.000000	0.000000	0.006500	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	452.1332	452.1332	0.0187	3.8600e-003	453.7507
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	452.1332	452.1332	0.0187	3.8600e-003	453.7507
NaturalGas Mitigated	0.0189	0.1714	0.1440	1.0300e-003		0.0130	0.0130		0.0130	0.0130	0.0000	186.5950	186.5950	3.5800e-003	3.4200e-003	187.7038
NaturalGas Unmitigated	0.0189	0.1714	0.1440	1.0300e-003		0.0130	0.0130		0.0130	0.0130	0.0000	186.5950	186.5950	3.5800e-003	3.4200e-003	187.7038

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant w/o Drive Thru	966620	5.2100e-003	0.0474	0.0398	2.8000e-004		3.6000e-003	3.6000e-003		3.6000e-003	3.6000e-003	0.0000	51.5825	51.5825	9.9000e-004	9.5000e-004	51.8891
Fast Food Restaurant with Drive Thru	1.23224e+006	6.6400e-003	0.0604	0.0507	3.6000e-004		4.5900e-003	4.5900e-003		4.5900e-003	4.5900e-003	0.0000	65.7568	65.7568	1.2600e-003	1.2100e-003	66.1475
High Turnover (Sit Down Restaurant)	1.17856e+006	6.3600e-003	0.0578	0.0485	3.5000e-004		4.3900e-003	4.3900e-003		4.3900e-003	4.3900e-003	0.0000	62.8927	62.8927	1.2100e-003	1.1500e-003	63.2664
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
Regional Shopping Center	119238	6.4000e-004	5.8500e-003	4.9100e-003	4.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3630	6.3630	1.2000e-004	1.2000e-004	6.4008
Total		**0.0189**	**0.1714**	**0.1440**	**1.0300e-003**		**0.0130**	**0.0130**		**0.0130**	**0.0130**	**0.0000**	**186.5950**	**186.5950**	**3.5800e-003**	**3.4300e-003**	**187.7038**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant w/o Drive Thru	966620	5.2100e-003	0.0474	0.0398	2.8000e-004		3.6000e-003	3.6000e-003		3.6000e-003	3.6000e-003	0.0000	51.5825	51.5825	9.9000e-004	9.5000e-004	51.8891
Fast Food Restaurant with Drive Thru	1.23224e+006	6.6400e-003	0.0604	0.0507	3.6000e-004		4.5900e-003	4.5900e-003		4.5900e-003	4.5900e-003	0.0000	65.7568	65.7568	1.2600e-003	1.2100e-003	66.1475
High Turnover (Sit Down Restaurant)	1.17856e+006	6.3600e-003	0.0578	0.0485	3.5000e-004		4.3900e-003	4.3900e-003		4.3900e-003	4.3900e-003	0.0000	62.8927	62.8927	1.2100e-003	1.1500e-003	63.2664
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
Regional Shopping Center	119238	6.4000e-004	5.8500e-003	4.9100e-003	4.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3630	6.3630	1.2000e-004	1.2000e-004	6.4008
Total		**0.0189**	**0.1714**	**0.1440**	**1.0300e-003**		**0.0130**	**0.0130**		**0.0130**	**0.0130**	**0.0000**	**186.5950**	**186.5950**	**3.5800e-003**	**3.4300e-003**	**187.7038**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant w/o Drive Thru	170464	54.3134	2.2400e-003	4.6000e-004	54.5077
Fast Food Restaurant with Drive Thru	217305	69.2380	2.8600e-003	5.9000e-004	69.4857
High Turnover (Sit Down Restaurant)	207840	66.2223	2.7300e-003	5.7000e-004	66.4592
Parking Lot	127776	40.7122	1.6800e-003	3.5000e-004	40.8578
Regional Shopping Center	695645	221.6473	9.1500e-003	1.8900e-003	222.4403
Total		**452.1332**	**0.0187**	**3.8600e-003**	**453.7507**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant w/o Drive Thru	170464	54.3134	2.2400e-003	4.6000e-004	54.5077
Fast Food Restaurant with Drive Thru	217305	69.2380	2.8600e-003	5.9000e-004	69.4857
High Turnover (Sit Down Restaurant)	207840	66.2223	2.7300e-003	5.7000e-004	66.4592
Parking Lot	127776	40.7122	1.6800e-003	3.5000e-004	40.8578
Regional Shopping Center	695645	221.6473	9.1500e-003	1.8900e-003	222.4403
Total		**452.1332**	**0.0187**	**3.8600e-003**	**453.7507**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive 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	0.2802	5.0000e-005	5.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0106	0.0106	3.0000e-005	0.0000	0.0114
Unmitigated	0.2802	5.0000e-005	5.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0106	0.0106	3.0000e-005	0.0000	0.0114

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0325					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2472					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.2000e-004	5.0000e-005	5.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0106	0.0106	3.0000e-005	0.0000	0.0114
Total	**0.2802**	**5.0000e-005**	**5.5300e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0106**	**0.0106**	**3.0000e-005**	**0.0000**	**0.0114**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0325					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2472					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.2000e-004	5.0000e-005	5.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0106	0.0106	3.0000e-005	0.0000	0.0114
Total	**0.2802**	**5.0000e-005**	**5.5300e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0106**	**0.0106**	**3.0000e-005**	**0.0000**	**0.0114**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	36.3852	0.2022	5.0400e-003	42.9415
Unmitigated	43.8415	0.2527	6.2800e-003	52.0311

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant w/o Drive Thru	1.07147 / 0.068392	5.0273	0.0351	8.6000e-004	6.1626
Fast Food Restaurant with Drive Thru	1.3659 / 0.0871852	6.4088	0.0448	1.1000e-003	7.8560
High Turnover (Sit Down Restaurant)	1.30519 / 0.0833103	6.1239	0.0428	1.0500e-003	7.5069
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	3.96066 / 2.4275	26.2815	0.1301	3.2600e-003	30.5056
Total		**43.8415**	**0.2527**	**6.2700e-003**	**52.0311**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant w/o Drive Thru	0.857179 / 0.0642201	4.0555	0.0281	6.9000e-004	4.9639
Fast Food Restaurant with Drive Thru	1.09272 / 0.0818669	5.1699	0.0358	8.8000e-004	6.3279
High Turnover (Sit Down Restaurant)	1.04416 / 0.0782284	4.9401	0.0342	8.4000e-004	6.0466
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	3.16853 / 2.27942	22.2196	0.1041	2.6200e-003	25.6032
Total		**36.3852**	**0.2022**	**5.0300e-003**	**42.9415**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	40.5596	2.3970	0.0000	100.4848
Unmitigated	40.5596	2.3970	0.0000	100.4848

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant w/o Drive Thru	40.66	8.2536	0.4878	0.0000	20.4480
Fast Food Restaurant with Drive Thru	51.84	10.5231	0.6219	0.0000	26.0704
High Turnover (Sit Down Restaurant)	51.17	10.3871	0.6139	0.0000	25.7335
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	56.14	11.3959	0.6735	0.0000	28.2329
Total		**40.5596**	**2.3970**	**0.0000**	**100.4848**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant w/o Drive Thru	40.66	8.2536	0.4878	0.0000	20.4480
Fast Food Restaurant with Drive Thru	51.84	10.5231	0.6219	0.0000	26.0704
High Turnover (Sit Down Restaurant)	51.17	10.3871	0.6139	0.0000	25.7335
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	56.14	11.3959	0.6735	0.0000	28.2329
Total		**40.5596**	**2.3970**	**0.0000**	**100.4848**

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

Central Plaza Lake Elsinore

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Regional Shopping Center	53.47	1000sqft	1.23	53,470.00	0
Fast Food Restaurant w/o Drive Thru	3.53	1000sqft	0.08	3,530.00	0
Fast Food Restaurant with Drive Thru	4.50	1000sqft	0.10	4,500.00	0
High Turnover (Sit Down Restaurant)	4.30	1000sqft	0.10	4,304.00	0
Parking Lot	363.00	Space	5.74	145,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Central Plaza Lake Elsinore - Riverside-South Coast County, Summer

Project Characteristics -

Land Use - Land use square footages taken from Central Plaza Traffic Impact Study, City of Lake Elsinore, California (RK Engineering, 10-7-16). CalEEMod default acreage is 4.78 acres. However, project site is 7.25 acres. Increase parking lot area (to include driveways) from 3.27 acres to 5.74 acres.

Construction Phase - Anticipated construction dates based on CalEEMod defaults for 7.25 acres project site, with extended 120 days of grading period to accomodate imported soil. Commence in October 2017 and completed by June 2019.

Grading - It is anticiapted the project site will require the import of approx. 44,000 cubic yards of soil duuring grading period.

Demolition - An existing vacant single story residential house of approx. 5,000 sf will be demolished.

Trips and VMT - Haul and water truck trips will occur during construction.

Vehicle Trips - Vehicle trip rates from Traffic Impact Analysis (RK Engineering, 10-7-16). Pass-by trips from TIA were entered in CalEEMod. Assume all other trips are primary trips for shopping center in accordance with ITE manual.

Construction Off-road Equipment Mitigation - In accordance with ARB regulations for in-use off-road diesel equipment and vehicles, all construction equiment post-2010 model years are assumed to utilized U.S. EPA Tier 2 engine standards with level 2 diesel particulate filters. For fugitive dust controls, watering on-site will occur 3 times daily.

Mobile Land Use Mitigation - CAP measure T-1.2 from the City's Climate Action Plan, which requires the installation of sidewalks along streets as well as internal sidewalks. The installation of sidewalks would help improve the pedestrain network in the project area.

Area Mitigation - Low VOC for Architectural Coating under SCAQMD Rule 1113

Energy Mitigation -

Water Mitigation - In accordance with 2016 CalGreen Building Standards, mandatory measures for commercial retail buildings include a 20 percent reduction of potable water use within buildings through uise of low-flow fixtures. Outdoor water efficient landscape systems will be required to reduction of outdoor water use.

Waste Mitigation - In accordance with the California Recycle and Recovery regulations, solid waste management of 75% reduction in waste disposed will be implemented under the City and/or County Environmental Service Regulations.

Fleet Mix - Vehicle fleet mix were adjusted based on ITE defined primary trips for shopping center and fast food restuarants. It is anticipated that 78% light duty autos, 8.35% light duty trucks 1, 6% light duty trucks 2, 5% medium duty vehicles, 1% medium duty trucks, 1% heavy heavy duty trucks and 0.65% motorcycles would access the project site daily under primary trip mode.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2

tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
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tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	20.00	120.00
tblConstructionPhase	PhaseEndDate	9/29/2017	5/24/2019
tblConstructionPhase	PhaseEndDate	9/29/2017	3/15/2019
tblConstructionPhase	PhaseEndDate	9/29/2017	10/27/2017
tblConstructionPhase	PhaseEndDate	9/29/2017	4/27/2018
tblConstructionPhase	PhaseEndDate	9/29/2017	6/21/2019
tblConstructionPhase	PhaseEndDate	9/29/2017	11/10/2017
tblConstructionPhase	PhaseStartDate	9/30/2017	4/27/2019
tblConstructionPhase	PhaseStartDate	9/30/2017	4/28/2018
tblConstructionPhase	PhaseStartDate	9/30/2017	11/11/2017
tblConstructionPhase	PhaseStartDate	9/30/2017	5/25/2019
tblConstructionPhase	PhaseStartDate	9/30/2017	10/28/2017
tblFleetMix	HHD	0.07	0.01
tblFleetMix	HHD	0.07	0.01
tblFleetMix	HHD	0.07	0.01
tblFleetMix	HHD	0.07	0.01
tblFleetMix	HHD	0.07	0.01
tblFleetMix	LDA	0.53	0.78
tblFleetMix	LDA	0.53	0.78

tblFleetMix	LDA	0.53	0.78
tblFleetMix	LDA	0.53	0.78
tblFleetMix	LDA	0.53	0.78
tblFleetMix	LDT1	0.04	0.08
tblFleetMix	LDT1	0.04	0.08
tblFleetMix	LDT1	0.04	0.08
tblFleetMix	LDT1	0.04	0.08
tblFleetMix	LDT1	0.04	0.08
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tblFleetMix	LDT2	0.18	0.06
tblFleetMix	LDT2	0.18	0.06
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tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.5610e-003	0.00
tblFleetMix	LHD2	5.5610e-003	0.00
tblFleetMix	LHD2	5.5610e-003	0.00
tblFleetMix	LHD2	5.5610e-003	0.00
tblFleetMix	LHD2	5.5610e-003	0.00
tblFleetMix	MCY	4.6770e-003	6.5000e-003
tblFleetMix	MCY	4.6770e-003	6.5000e-003
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tblFleetMix	MCY	4.6770e-003	6.5000e-003

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tblFleetMix	MDV	0.13	0.05
tblFleetMix	MDV	0.13	0.05
tblFleetMix	MDV	0.13	0.05
tblFleetMix	MDV	0.13	0.05
tblFleetMix	MH	1.2110e-003	0.00
tblFleetMix	MH	1.2110e-003	0.00
tblFleetMix	MH	1.2110e-003	0.00
tblFleetMix	MH	1.2110e-003	0.00
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tblFleetMix	MHD	0.02	0.01
tblFleetMix	MHD	0.02	0.01
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tblFleetMix	UBUS	1.2470e-003	0.00
tblFleetMix	UBUS	1.2470e-003	0.00
tblFleetMix	UBUS	1.2470e-003	0.00
tblGrading	AcresOfGrading	60.00	7.25
tblGrading	MaterialImported	0.00	44,000.00
tblLandUse	LotAcreage	3.27	5.74
tblProjectCharacteristics	OperationalYear	2018	2019
tblVehicleTrips	DV_TP	37.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	20.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	PB_TP	12.00	2.00
tblVehicleTrips	PB_TP	50.00	8.00
tblVehicleTrips	PB_TP	43.00	3.00
tblVehicleTrips	PB_TP	11.00	3.00
tblVehicleTrips	PR_TP	51.00	98.00
tblVehicleTrips	PR_TP	29.00	92.00
tblVehicleTrips	PR_TP	37.00	97.00
tblVehicleTrips	PR_TP	54.00	97.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	5.0811	52.3543	24.4658	0.0674	18.2675	2.8799	21.1473	9.9840	2.6495	12.6335	0.0000	7,018.7886	7,018.7886	1.2007	0.0000	7,048.4923
2018	3.3082	43.2042	22.5081	0.0671	7.3517	1.5992	8.9509	3.6497	1.4730	5.1227	0.0000	6,938.2965	6,938.2965	1.1738	0.0000	6,967.6416
2019	32.8792	25.3434	21.5977	0.0456	1.1519	1.3259	2.4777	0.3106	1.2469	1.5575	0.0000	4,506.2828	4,506.2828	0.7354	0.0000	4,524.6684
Maximum	**32.8792**	**52.3543**	**24.4658**	**0.0674**	**18.2675**	**2.8799**	**21.1473**	**9.9840**	**2.6495**	**12.6335**	**0.0000**	**7,018.7886**	**7,018.7886**	**1.2007**	**0.0000**	**7,048.4923**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	1.4273	39.9598	25.5565	0.0674	7.2470	0.4744	7.7214	3.9263	0.4743	4.4006	0.0000	7,018.7886	7,018.7886	1.2007	0.0000	7,048.4923
2018	1.7095	38.8107	22.8014	0.0671	3.6108	0.4932	4.0450	1.6220	0.4912	2.0540	0.0000	6,938.2965	6,938.2965	1.1738	0.0000	6,967.6416
2019	32.7267	27.8190	22.3077	0.0456	1.1519	0.4878	1.6396	0.3106	0.4860	0.7966	0.0000	4,506.2828	4,506.2828	0.7354	0.0000	4,524.6684
Maximum	**32.7267**	**39.9598**	**25.5565**	**0.0674**	**7.2470**	**0.4932**	**7.7214**	**3.9263**	**0.4912**	**4.4006**	**0.0000**	**7,018.7886**	**7,018.7886**	**1.2007**	**0.0000**	**7,048.4923**

Central Plaza Lake Elsinore - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**13.10**	**11.84**	**-3.05**	**0.00**	**55.14**	**74.93**	**58.85**	**57.98**	**72.97**	**62.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.5367	4.1000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0938	0.0938	2.5000e-004		0.1002
Energy	0.1033	0.9392	0.7889	5.6400e-003		0.0714	0.0714		0.0714	0.0714		1,127.0451	1,127.0451	0.0216	0.0207	1,133.7425
Mobile	19.6642	38.0610	225.2424	0.6012	57.6251	0.5198	58.1449	15.3027	0.4855	15.7882		60,152.7892	60,152.7892	2.2271		60,208.4658
Total	**21.3042**	**39.0006**	**226.0755**	**0.6069**	**57.6251**	**0.5913**	**58.2164**	**15.3027**	**0.5570**	**15.8597**		**61,279.9282**	**61,279.9282**	**2.2489**	**0.0207**	**61,342.3085**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.4117	4.1000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0938	0.0938	2.5000e-004		0.1002
Energy	0.1033	0.9392	0.7889	5.6400e-003		0.0714	0.0714		0.0714	0.0714		1,127.0451	1,127.0451	0.0216	0.0207	1,133.7425
Mobile	20.2119	40.2260	243.4042	0.6561	63.1340	0.5643	63.6983	16.7656	0.5271	17.2927		65,636.6465	65,636.6465	2.3896		65,696.3854
Total	**24.7269**	**41.1656**	**244.2373**	**0.6617**	**63.1340**	**0.6358**	**63.7699**	**16.7656**	**0.5986**	**17.3643**		**66,763.7854**	**66,763.7854**	**2.4114**	**0.0207**	**66,830.2281**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**-16.07**	**-5.55**	**-8.03**	**-9.03**	**-9.56**	**-7.52**	**-9.54**	**-9.56**	**-7.47**	**-9.49**	**0.00**	**-8.95**	**-8.95**	**-7.23**	**0.00**	**-8.95**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	4/27/2019	5/24/2019	5	20	
2	Building Construction	Building Construction	4/28/2018	3/15/2019	5	230	
3	Grading	Grading	11/11/2017	4/27/2018	5	120	
4	Paving	Paving	5/25/2019	6/21/2019	5	20	
5	Site Preparation	Site Preparation	10/28/2017	11/10/2017	5	10	
6	Demolition	Demolition	10/1/2017	10/27/2017	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7.25

Acres of Paving: 5.74

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 98,706; Non-Residential Outdoor: 32,902; Striped Parking Area: 8,712 (Architectural Coating – sqft)

OffRoad Equipment

Central Plaza Lake Elsinore - Riverside-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
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
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	83.00	35.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	23.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	5,500.00	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
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	32.5192					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**32.7856**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

3.2 Architectural Coating - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0936	0.0574	0.7552	1.9400e-003	0.1900	1.1700e-003	0.1912	0.0504	1.0800e-003	0.0515		193.3788	193.3788	5.4100e-003		193.5141
Total	**0.0936**	**0.0574**	**0.7552**	**1.9400e-003**	**0.1900**	**1.1700e-003**	**0.1912**	**0.0504**	**1.0800e-003**	**0.0515**		**193.3788**	**193.3788**	**5.4100e-003**		**193.5141**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	32.5192					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0475	0.0475		0.0475	0.0475	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**32.6331**	**2.3524**	**1.8324**	**2.9700e-003**		**0.0475**	**0.0475**		**0.0475**	**0.0475**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

3.2 Architectural Coating - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0936	0.0574	0.7552	1.9400e-003	0.1900	1.1700e-003	0.1912	0.0504	1.0800e-003	0.0515		193.3788	193.3788	5.4100e-003		193.5141
Total	**0.0936**	**0.0574**	**0.7552**	**1.9400e-003**	**0.1900**	**1.1700e-003**	**0.1912**	**0.0504**	**1.0800e-003**	**0.0515**		**193.3788**	**193.3788**	**5.4100e-003**		**193.5141**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.3 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1290	4.2525	0.8227	9.2700e-003	0.2241	0.0357	0.2598	0.0645	0.0341	0.0987		976.9609	976.9609	0.0807		978.9781
Worker	0.4997	0.3178	4.1050	9.7900e-003	0.9277	5.8000e-003	0.9335	0.2460	5.3400e-003	0.2514		973.8153	973.8153	0.0297		974.5565
Total	**0.6287**	**4.5702**	**4.9277**	**0.0191**	**1.1519**	**0.0415**	**1.1933**	**0.3106**	**0.0395**	**0.3500**		**1,950.7762**	**1,950.7762**	**0.1103**		**1,953.5345**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0809	23.5544	17.8738	0.0269		0.4518	0.4518		0.4518	0.4518	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**1.0809**	**23.5544**	**17.8738**	**0.0269**		**0.4518**	**0.4518**		**0.4518**	**0.4518**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.3 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1290	4.2525	0.8227	9.2700e-003	0.2241	0.0357	0.2598	0.0645	0.0341	0.0987		976.9609	976.9609	0.0807		978.9781
Worker	0.4997	0.3178	4.1050	9.7900e-003	0.9277	5.8000e-003	0.9335	0.2460	5.3400e-003	0.2514		973.8153	973.8153	0.0297		974.5565
Total	**0.6287**	**4.5702**	**4.9277**	**0.0191**	**1.1519**	**0.0415**	**1.1933**	**0.3106**	**0.0395**	**0.3500**		**1,950.7762**	**1,950.7762**	**0.1103**		**1,953.5345**

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.3 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1166	3.9842	0.7466	9.2100e-003	0.2241	0.0303	0.2544	0.0645	0.0290	0.0935		970.5592	970.5592	0.0777		972.5006
Worker	0.4570	0.2805	3.6873	9.4800e-003	0.9277	5.7300e-003	0.9335	0.2460	5.2700e-003	0.2513		944.1435	944.1435	0.0264		944.8043
Total	**0.5736**	**4.2646**	**4.4340**	**0.0187**	**1.1519**	**0.0360**	**1.1879**	**0.3106**	**0.0342**	**0.3448**		**1,914.7027**	**1,914.7027**	**0.1041**		**1,917.3049**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0809	23.5544	17.8738	0.0269		0.4518	0.4518		0.4518	0.4518	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**1.0809**	**23.5544**	**17.8738**	**0.0269**		**0.4518**	**0.4518**		**0.4518**	**0.4518**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.3 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1166	3.9842	0.7466	9.2100e-003	0.2241	0.0303	0.2544	0.0645	0.0290	0.0935		970.5592	970.5592	0.0777		972.5006
Worker	0.4570	0.2805	3.6873	9.4800e-003	0.9277	5.7300e-003	0.9335	0.2460	5.2700e-003	0.2513		944.1435	944.1435	0.0264		944.8043
Total	**0.5736**	**4.2646**	**4.4340**	**0.0187**	**1.1519**	**0.0360**	**1.1879**	**0.3106**	**0.0342**	**0.3448**		**1,914.7027**	**1,914.7027**	**0.1041**		**1,917.3049**

3.4 Grading - 2017

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					6.1326	0.0000	6.1326	3.3242	0.0000	3.3242			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352		3,037.9107	3,037.9107	0.9308		3,061.1809
Total	**3.0705**	**33.8868**	**17.1042**	**0.0297**	**6.1326**	**1.7774**	**7.9100**	**3.3242**	**1.6352**	**4.9594**		**3,037.9107**	**3,037.9107**	**0.9308**		**3,061.1809**

3.4 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3177	13.6150	1.6207	0.0359	2.2736	0.0730	2.3467	0.5811	0.0699	0.6510		3,799.7570	3,799.7570	0.2513		3,806.0384
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1003	0.0657	0.8420	1.8200e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		181.1209	181.1209	6.0800e-003		181.2729
Total	**0.4180**	**13.6807**	**2.4627**	**0.0377**	**2.4413**	**0.0741**	**2.5154**	**0.6256**	**0.0709**	**0.6964**		**3,980.8779**	**3,980.8779**	**0.2573**		**3,987.3113**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.3917	0.0000	2.3917	1.2964	0.0000	1.2964			0.0000			0.0000
Off-Road	1.0093	26.2791	18.9906	0.0297		0.3862	0.3862		0.3862	0.3862	0.0000	3,037.9107	3,037.9107	0.9308		3,061.1809
Total	**1.0093**	**26.2791**	**18.9906**	**0.0297**	**2.3917**	**0.3862**	**2.7780**	**1.2964**	**0.3862**	**1.6827**	**0.0000**	**3,037.9107**	**3,037.9107**	**0.9308**		**3,061.1809**

3.4 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3177	13.6150	1.6207	0.0359	2.2736	0.0730	2.3467	0.5811	0.0699	0.6510		3,799.7570	3,799.7570	0.2513		3,806.0384
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1003	0.0657	0.8420	1.8200e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		181.1209	181.1209	6.0800e-003		181.2729
Total	**0.4180**	**13.6807**	**2.4627**	**0.0377**	**2.4413**	**0.0741**	**2.5154**	**0.6256**	**0.0709**	**0.6964**		**3,980.8779**	**3,980.8779**	**0.2573**		**3,987.3113**

3.4 Grading - 2018

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					6.1326	0.0000	6.1326	3.3242	0.0000	3.3242			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272		2,988.0216	2,988.0216	0.9302		3,011.2769
Total	**2.7733**	**30.6725**	**16.5770**	**0.0297**	**6.1326**	**1.5513**	**7.6839**	**3.3242**	**1.4272**	**4.7514**		**2,988.0216**	**2,988.0216**	**0.9302**		**3,011.2769**

3.4 Grading - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2704	12.4742	1.4472	0.0356	1.0515	0.0468	1.0983	0.2811	0.0448	0.3259		3,774.2842	3,774.2842	0.2382		3,780.2401
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0903	0.0574	0.7419	1.7700e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		175.9907	175.9907	5.3600e-003		176.1247
Total	**0.3607**	**12.5316**	**2.1891**	**0.0374**	**1.2191**	**0.0479**	**1.2670**	**0.3256**	**0.0458**	**0.3713**		**3,950.2749**	**3,950.2749**	**0.2436**		**3,956.3648**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.3917	0.0000	2.3917	1.2964	0.0000	1.2964			0.0000			0.0000
Off-Road	1.0093	26.2791	18.9906	0.0297		0.3862	0.3862		0.3862	0.3862	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769
Total	**1.0093**	**26.2791**	**18.9906**	**0.0297**	**2.3917**	**0.3862**	**2.7780**	**1.2964**	**0.3862**	**1.6827**	**0.0000**	**2,988.0216**	**2,988.0216**	**0.9302**		**3,011.2769**

3.4 Grading - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2704	12.4742	1.4472	0.0356	1.0515	0.0468	1.0983	0.2811	0.0448	0.3259		3,774.2842	3,774.2842	0.2382		3,780.2401
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0903	0.0574	0.7419	1.7700e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		175.9907	175.9907	5.3600e-003		176.1247
Total	**0.3607**	**12.5316**	**2.1891**	**0.0374**	**1.2191**	**0.0479**	**1.2670**	**0.3256**	**0.0458**	**0.3713**		**3,950.2749**	**3,950.2749**	**0.2436**		**3,956.3648**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.7519					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.2064**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0826	0.0507	0.6664	1.7100e-003	0.1677	1.0300e-003	0.1687	0.0445	9.5000e-004	0.0454		170.6284	170.6284	4.7800e-003		170.7478
Total	**0.0826**	**0.0507**	**0.6664**	**1.7100e-003**	**0.1677**	**1.0300e-003**	**0.1687**	**0.0445**	**9.5000e-004**	**0.0454**		**170.6284**	**170.6284**	**4.7800e-003**		**170.7478**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9311	20.1146	17.2957	0.0228		0.3335	0.3335		0.3335	0.3335	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.7519					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6830**	**20.1146**	**17.2957**	**0.0228**		**0.3335**	**0.3335**		**0.3335**	**0.3335**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0826	0.0507	0.6664	1.7100e-003	0.1677	1.0300e-003	0.1687	0.0445	9.5000e-004	0.0454		170.6284	170.6284	4.7800e-003		170.7478
Total	**0.0826**	**0.0507**	**0.6664**	**1.7100e-003**	**0.1677**	**1.0300e-003**	**0.1687**	**0.0445**	**9.5000e-004**	**0.0454**		**170.6284**	**170.6284**	**4.7800e-003**		**170.7478**

3.6 Site Preparation - 2017

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.9608	52.2754	23.4554	0.0380		2.8786	2.8786		2.6483	2.6483		3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**4.9608**	**52.2754**	**23.4554**	**0.0380**	**18.0663**	**2.8786**	**20.9448**	**9.9307**	**2.6483**	**12.5790**		**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

3.6 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1204	0.0789	1.0104	2.1900e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0546		217.3450	217.3450	7.3000e-003		217.5275
Total	**0.1204**	**0.0789**	**1.0104**	**2.1900e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0546**		**217.3450**	**217.3450**	**7.3000e-003**		**217.5275**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	1.2097	33.7214	22.9600	0.0380		0.4731	0.4731		0.4731	0.4731	0.0000	3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**1.2097**	**33.7214**	**22.9600**	**0.0380**	**7.0458**	**0.4731**	**7.5189**	**3.8730**	**0.4731**	**4.3461**	**0.0000**	**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

3.6 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1204	0.0789	1.0104	2.1900e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0546		217.3450	217.3450	7.3000e-003		217.5275
Total	**0.1204**	**0.0789**	**1.0104**	**2.1900e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0546**		**217.3450**	**217.3450**	**7.3000e-003**		**217.5275**

3.7 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2476	0.0000	0.2476	0.0375	0.0000	0.0375			0.0000			0.0000
Off-Road	4.1031	42.7475	23.0122	0.0388		2.1935	2.1935		2.0425	2.0425		3,924.2833	3,924.2833	1.0730		3,951.1070
Total	**4.1031**	**42.7475**	**23.0122**	**0.0388**	**0.2476**	**2.1935**	**2.4411**	**0.0375**	**2.0425**	**2.0800**		**3,924.2833**	**3,924.2833**	**1.0730**		**3,951.1070**

3.7 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9700e-003	0.3416	0.0407	9.0000e-004	0.0201	1.8300e-003	0.0220	5.5200e-003	1.7500e-003	7.2700e-003		95.3394	95.3394	6.3000e-003		95.4970
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1003	0.0657	0.8420	1.8200e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		181.1209	181.1209	6.0800e-003		181.2729
Total	**0.1083**	**0.4074**	**0.8827**	**2.7200e-003**	**0.1878**	**2.9000e-003**	**0.1907**	**0.0500**	**2.7400e-003**	**0.0527**		**276.4602**	**276.4602**	**0.0124**		**276.7699**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0966	0.0000	0.0966	0.0146	0.0000	0.0146			0.0000			0.0000
Off-Road	1.2617	32.6638	24.6739	0.0388		0.4568	0.4568		0.4568	0.4568	0.0000	3,924.2833	3,924.2833	1.0730		3,951.1070
Total	**1.2617**	**32.6638**	**24.6739**	**0.0388**	**0.0966**	**0.4568**	**0.5533**	**0.0146**	**0.4568**	**0.4714**	**0.0000**	**3,924.2833**	**3,924.2833**	**1.0730**		**3,951.1070**

3.7 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9700e-003	0.3416	0.0407	9.0000e-004	0.0201	1.8300e-003	0.0220	5.5200e-003	1.7500e-003	7.2700e-003		95.3394	95.3394	6.3000e-003		95.4970
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1003	0.0657	0.8420	1.8200e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		181.1209	181.1209	6.0800e-003		181.2729
Total	**0.1083**	**0.4074**	**0.8827**	**2.7200e-003**	**0.1878**	**2.9000e-003**	**0.1907**	**0.0500**	**2.7400e-003**	**0.0527**		**276.4602**	**276.4602**	**0.0124**		**276.7699**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Walkability Design

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	20.2119	40.2260	243.4042	0.6561	63.1340	0.5643	63.6983	16.7656	0.5271	17.2927		65,636.6465	65,636.6465	2.3896		65,696.3854
Unmitigated	19.6642	38.0610	225.2424	0.6012	57.6251	0.5198	58.1449	15.3027	0.4855	15.7882		60,152.7892	60,152.7892	2.2271		60,208.4658

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant w/o Drive Thru	2,527.48	2,456.88	1765.00	7,079,422	7,756,215
Fast Food Restaurant with Drive Thru	2,232.54	3,249.14	2442.24	6,695,584	7,335,681
High Turnover (Sit Down Restaurant)	547.25	681.62	567.44	1,772,011	1,941,415
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	2,283.17	2,671.90	1349.58	7,361,978	8,065,783
Total	7,590.44	9,059.54	6,124.26	22,908,995	25,099,095

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant w/o Drive	16.60	8.40	6.90	1.50	79.50	19.00	98	0	2
Fast Food Restaurant with Drive	16.60	8.40	6.90	2.20	78.80	19.00	92	0	8
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	97	0	3
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	97	0	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Regional Shopping Center	0.780000	0.083500	0.060000	0.050000	0.000000	0.000000	0.010000	0.010000	0.000000	0.000000	0.006500	0.000000	0.000000
Fast Food Restaurant w/o Drive Thru	0.780000	0.083500	0.060000	0.050000	0.000000	0.000000	0.010000	0.010000	0.000000	0.000000	0.006500	0.000000	0.000000
Fast Food Restaurant with Drive Thru	0.780000	0.083500	0.060000	0.050000	0.000000	0.000000	0.010000	0.010000	0.000000	0.000000	0.006500	0.000000	0.000000
High Turnover (Sit Down Restaurant)	0.780000	0.083500	0.060000	0.050000	0.000000	0.000000	0.010000	0.010000	0.000000	0.000000	0.006500	0.000000	0.000000
Parking Lot	0.780000	0.083500	0.060000	0.050000	0.000000	0.000000	0.010000	0.010000	0.000000	0.000000	0.006500	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1033	0.9392	0.7889	5.6400e-003		0.0714	0.0714		0.0714	0.0714		1,127.0451	1,127.0451	0.0216	0.0207	1,133.7425
NaturalGas Unmitigated	0.1033	0.9392	0.7889	5.6400e-003		0.0714	0.0714		0.0714	0.0714		1,127.0451	1,127.0451	0.0216	0.0207	1,133.7425

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant w/o Drive Thru	2648.27	0.0286	0.2596	0.2181	1.5600e-003		0.0197	0.0197		0.0197	0.0197		311.5616	311.5616	5.9700e-003	5.7100e-003	313.4131
Fast Food Restaurant with Drive Thru	3375.99	0.0364	0.3310	0.2780	1.9900e-003		0.0252	0.0252		0.0252	0.0252		397.1749	397.1749	7.6100e-003	7.2800e-003	399.5351
High Turnover (Sit Down Restaurant)	3228.94	0.0348	0.3166	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8757	379.8757	7.2800e-003	6.9600e-003	382.1331
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
Regional Shopping Center	326.68	3.5200e-003	0.0320	0.0269	1.9000e-004		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003		38.4329	38.4329	7.4000e-004	7.0000e-004	38.6613
Total		**0.1033**	**0.9392**	**0.7889**	**5.6400e-003**		**0.0714**	**0.0714**		**0.0714**	**0.0714**		**1,127.0451**	**1,127.0451**	**0.0216**	**0.0207**	**1,133.7425**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant w/o Drive Thru	2.64827	0.0286	0.2596	0.2181	1.5600e-003		0.0197	0.0197		0.0197	0.0197		311.5616	311.5616	5.9700e-003	5.7100e-003	313.4131
Fast Food Restaurant with Drive Thru	3.37599	0.0364	0.3310	0.2780	1.9900e-003		0.0252	0.0252		0.0252	0.0252		397.1749	397.1749	7.6100e-003	7.2800e-003	399.5351
High Turnover (Sit Down Restaurant)	3.22894	0.0348	0.3166	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8757	379.8757	7.2800e-003	6.9600e-003	382.1331
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
Regional Shopping Center	0.32668	3.5200e-003	0.0320	0.0269	1.9000e-004		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003		38.4329	38.4329	7.4000e-004	7.0000e-004	38.6613
Total		**0.1033**	**0.9392**	**0.7889**	**5.6400e-003**		**0.0714**	**0.0714**		**0.0714**	**0.0714**		**1,127.0451**	**1,127.0451**	**0.0216**	**0.0207**	**1,133.7425**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.4117	4.1000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0938	0.0938	2.5000e-004		0.1002
Unmitigated	1.5367	4.1000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0938	0.0938	2.5000e-004		0.1002

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1782					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3544					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.1900e-003	4.1000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0938	0.0938	2.5000e-004		0.1002
Total	**1.5367**	**4.1000e-004**	**0.0442**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**		**0.0938**	**0.0938**	**2.5000e-004**		**0.1002**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1782					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.2293					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.1900e-003	4.1000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0938	0.0938	2.5000e-004		0.1002
Total	**4.4117**	**4.1000e-004**	**0.0442**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**		**0.0938**	**0.0938**	**2.5000e-004**		**0.1002**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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

Central Plaza Lake Elsinore

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Regional Shopping Center	53.47	1000sqft	1.23	53,470.00	0
Fast Food Restaurant w/o Drive Thru	3.53	1000sqft	0.08	3,530.00	0
Fast Food Restaurant with Drive Thru	4.50	1000sqft	0.10	4,500.00	0
High Turnover (Sit Down Restaurant)	4.30	1000sqft	0.10	4,304.00	0
Parking Lot	363.00	Space	5.74	145,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Central Plaza Lake Elsinore - Riverside-South Coast County, Winter

Project Characteristics -

Land Use - Land use square footages taken from Central Plaza Traffic Impact Study, City of Lake Elsinore, California (RK Engineering, 10-7-16). CalEEMod default acreage is 4.78 acres. However, project site is 7.25 acres. Increase parking lot area (to include driveways) from 3.27 acres to 5.74 acres.

Construction Phase - Anticipated construction dates based on CalEEMod defaults for 7.25 acres project site, with extended 120 days of grading period to accomodate imported soil. Commence in October 2017 and completed by June 2019.

Grading - It is anticiapted the project site will require the import of approx. 44,000 cubic yards of soil duuring grading period.

Demolition - An existing vacant single story residential house of approx. 5,000 sf will be demolished.

Trips and VMT - Haul and water truck trips will occur during construction.

Vehicle Trips - Vehicle trip rates from Traffic Impact Analysis (RK Engineering, 10-7-16). Pass-by trips from TIA were entered in CalEEMod. Assume all other trips are primary trips for shopping center in accordance with ITE manual.

Construction Off-road Equipment Mitigation - In accordance with ARB regulations for in-use off-road diesel equipment and vehicles, all construction equiment post-2010 model years are assumed to utilized U.S. EPA Tier 2 engine standards with level 2 diesel particulate filters. For fugitive dust controls, watering on-site will occur 3 times daily.

Mobile Land Use Mitigation - CAP measure T-1.2 from the City's Climate Action Plan, which requires the installation of sidewalks along streets as well as internal sidewalks. The installation of sidewalks would help improve the pedestrain network in the project area.

Area Mitigation - Low VOC for Architectural Coating under SCAQMD Rule 1113

Energy Mitigation -

Water Mitigation - In accordance with 2016 CalGreen Building Standards, mandatory measures for commercial retail buildings include a 20 percent reduction of potable water use within buildings through uise of low-flow fixtures. Outdoor water efficient landscape systems will be required to reduction of outdoor water use.

Waste Mitigation - In accordance with the California Recycle and Recovery regulations, solid waste management of 75% reduction in waste disposed will be implemented under the City and/or County Environmental Service Regulations.

Fleet Mix - Vehicle fleet mix were adjusted based on ITE defined primary trips for shopping center and fast food restuarants. It is anticipated that 78% light duty autos, 8.35% light duty trucks 1, 6% light duty trucks 2, 5% medium duty vehicles, 1% medium duty trucks, 1% heavy heavy duty trucks and 0.65% motorcycles would access the project site daily under primary trip mode.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2

tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	20.00	120.00
tblConstructionPhase	PhaseEndDate	9/29/2017	5/24/2019
tblConstructionPhase	PhaseEndDate	9/29/2017	3/15/2019
tblConstructionPhase	PhaseEndDate	9/29/2017	10/27/2017
tblConstructionPhase	PhaseEndDate	9/29/2017	4/27/2018
tblConstructionPhase	PhaseEndDate	9/29/2017	6/21/2019
tblConstructionPhase	PhaseEndDate	9/29/2017	11/10/2017
tblConstructionPhase	PhaseStartDate	9/30/2017	4/27/2019
tblConstructionPhase	PhaseStartDate	9/30/2017	4/28/2018
tblConstructionPhase	PhaseStartDate	9/30/2017	11/11/2017
tblConstructionPhase	PhaseStartDate	9/30/2017	5/25/2019
tblConstructionPhase	PhaseStartDate	9/30/2017	10/28/2017
tblFleetMix	HHD	0.07	0.01
tblFleetMix	HHD	0.07	0.01
tblFleetMix	HHD	0.07	0.01
tblFleetMix	HHD	0.07	0.01
tblFleetMix	HHD	0.07	0.01
tblFleetMix	LDA	0.53	0.78
tblFleetMix	LDA	0.53	0.78

tblFleetMix	LDA	0.53	0.78
tblFleetMix	LDA	0.53	0.78
tblFleetMix	LDA	0.53	0.78
tblFleetMix	LDT1	0.04	0.08
tblFleetMix	LDT1	0.04	0.08
tblFleetMix	LDT1	0.04	0.08
tblFleetMix	LDT1	0.04	0.08
tblFleetMix	LDT1	0.04	0.08
tblFleetMix	LDT2	0.18	0.06
tblFleetMix	LDT2	0.18	0.06
tblFleetMix	LDT2	0.18	0.06
tblFleetMix	LDT2	0.18	0.06
tblFleetMix	LDT2	0.18	0.06
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.5610e-003	0.00
tblFleetMix	LHD2	5.5610e-003	0.00
tblFleetMix	LHD2	5.5610e-003	0.00
tblFleetMix	LHD2	5.5610e-003	0.00
tblFleetMix	LHD2	5.5610e-003	0.00
tblFleetMix	MCY	4.6770e-003	6.5000e-003
tblFleetMix	MCY	4.6770e-003	6.5000e-003
tblFleetMix	MCY	4.6770e-003	6.5000e-003
tblFleetMix	MCY	4.6770e-003	6.5000e-003

tblFleetMix	MCY	4.6770e-003	6.5000e-003
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tblFleetMix	MDV	0.13	0.05
tblFleetMix	MDV	0.13	0.05
tblFleetMix	MDV	0.13	0.05
tblFleetMix	MDV	0.13	0.05
tblFleetMix	MH	1.2110e-003	0.00
tblFleetMix	MH	1.2110e-003	0.00
tblFleetMix	MH	1.2110e-003	0.00
tblFleetMix	MH	1.2110e-003	0.00
tblFleetMix	MH	1.2110e-003	0.00
tblFleetMix	MHD	0.02	0.01
tblFleetMix	MHD	0.02	0.01
tblFleetMix	MHD	0.02	0.01
tblFleetMix	MHD	0.02	0.01
tblFleetMix	MHD	0.02	0.01
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tblFleetMix	OBUS	1.3450e-003	0.00
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tblFleetMix	SBUS	9.7400e-004	0.00
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tblFleetMix	SBUS	9.7400e-004	0.00
tblFleetMix	SBUS	9.7400e-004	0.00
tblFleetMix	SBUS	9.7400e-004	0.00
tblFleetMix	UBUS	1.2470e-003	0.00

tblFleetMix	UBUS	1.2470e-003	0.00
tblFleetMix	UBUS	1.2470e-003	0.00
tblFleetMix	UBUS	1.2470e-003	0.00
tblFleetMix	UBUS	1.2470e-003	0.00
tblGrading	AcresOfGrading	60.00	7.25
tblGrading	MaterialImported	0.00	44,000.00
tblLandUse	LotAcreage	3.27	5.74
tblProjectCharacteristics	OperationalYear	2018	2019
tblVehicleTrips	DV_TP	37.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	20.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	PB_TP	12.00	2.00
tblVehicleTrips	PB_TP	50.00	8.00
tblVehicleTrips	PB_TP	43.00	3.00
tblVehicleTrips	PB_TP	11.00	3.00
tblVehicleTrips	PR_TP	51.00	98.00
tblVehicleTrips	PR_TP	29.00	92.00
tblVehicleTrips	PR_TP	37.00	97.00
tblVehicleTrips	PR_TP	54.00	97.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	5.0782	52.3573	24.2793	0.0663	18.2675	2.8799	21.1473	9.9840	2.6495	12.6335	0.0000	6,909.1543	6,909.1543	1.2103	0.0000	6,939.4119
2018	3.3022	43.3440	21.8660	0.0660	7.3517	1.6001	8.9518	3.6497	1.4738	5.1235	0.0000	6,827.1583	6,827.1583	1.1956	0.0000	6,857.0493
2019	32.8771	25.3442	21.0203	0.0443	1.1519	1.3262	2.4781	0.3106	1.2473	1.5579	0.0000	4,372.8946	4,372.8946	0.7406	0.0000	4,391.4093
Maximum	**32.8771**	**52.3573**	**24.2793**	**0.0663**	**18.2675**	**2.8799**	**21.1473**	**9.9840**	**2.6495**	**12.6335**	**0.0000**	**6,909.1543**	**6,909.1543**	**1.2103**	**0.0000**	**6,939.4119**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	1.4395	40.1430	25.4080	0.0663	7.2470	0.4744	7.7214	3.9263	0.4743	4.4006	0.0000	6,909.1543	6,909.1543	1.2103	0.0000	6,939.4119
2018	1.7036	38.9506	22.1593	0.0660	3.6108	0.4937	4.0458	1.6220	0.4916	2.0548	0.0000	6,827.1583	6,827.1583	1.1956	0.0000	6,857.0493
2019	32.7245	27.8198	21.7303	0.0443	1.1519	0.4881	1.6400	0.3106	0.4864	0.7969	0.0000	4,372.8946	4,372.8946	0.7406	0.0000	4,391.4093
Maximum	**32.7245**	**40.1430**	**25.4080**	**0.0663**	**7.2470**	**0.4937**	**7.7214**	**3.9263**	**0.4916**	**4.4006**	**0.0000**	**6,909.1543**	**6,909.1543**	**1.2103**	**0.0000**	**6,939.4119**

Central Plaza Lake Elsinore - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	13.06	11.68	-3.17	0.00	55.14	74.92	58.84	57.98	72.96	62.45	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.5367	4.1000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0938	0.0938	2.5000e-004		0.1002
Energy	0.1033	0.9392	0.7889	5.6400e-003		0.0714	0.0714		0.0714	0.0714		1,127.0451	1,127.0451	0.0216	0.0207	1,133.7425
Mobile	16.0037	38.7412	191.4636	0.5437	57.6251	0.5218	58.1468	15.3027	0.4874	15.7901		54,433.8690	54,433.8690	2.1235		54,486.9559
Total	**17.6437**	**39.6808**	**192.2967**	**0.5493**	**57.6251**	**0.5933**	**58.2184**	**15.3027**	**0.5589**	**15.8616**		**55,561.0079**	**55,561.0079**	**2.1453**	**0.0207**	**55,620.7986**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.4117	4.1000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0938	0.0938	2.5000e-004		0.1002
Energy	0.1033	0.9392	0.7889	5.6400e-003		0.0714	0.0714		0.0714	0.0714		1,127.0451	1,127.0451	0.0216	0.0207	1,133.7425
Mobile	16.5097	41.0063	205.8555	0.5932	63.1340	0.5662	63.7003	16.7656	0.5290	17.2946		59,389.0897	59,389.0897	2.2688		59,445.8083
Total	**21.0247**	**41.9459**	**206.6886**	**0.5988**	**63.1340**	**0.6378**	**63.7718**	**16.7656**	**0.6005**	**17.3661**		**60,516.2286**	**60,516.2286**	**2.2906**	**0.0207**	**60,579.6511**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**-19.16**	**-5.71**	**-7.48**	**-9.01**	**-9.56**	**-7.50**	**-9.54**	**-9.56**	**-7.44**	**-9.49**	**0.00**	**-8.92**	**-8.92**	**-6.77**	**0.00**	**-8.92**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	4/27/2019	5/24/2019	5	20	
2	Building Construction	Building Construction	4/28/2018	3/15/2019	5	230	
3	Grading	Grading	11/11/2017	4/27/2018	5	120	
4	Paving	Paving	5/25/2019	6/21/2019	5	20	
5	Site Preparation	Site Preparation	10/28/2017	11/10/2017	5	10	
6	Demolition	Demolition	10/1/2017	10/27/2017	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7.25

Acres of Paving: 5.74

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 98,706; Non-Residential Outdoor: 32,902; Striped Parking Area: 8,712 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
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
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	83.00	35.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	23.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	5,500.00	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
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	32.5192					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**32.7856**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

3.2 Architectural Coating - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0915	0.0595	0.6121	1.7400e-003	0.1900	1.1700e-003	0.1912	0.0504	1.0800e-003	0.0515		173.4879	173.4879	4.7100e-003		173.6056
Total	**0.0915**	**0.0595**	**0.6121**	**1.7400e-003**	**0.1900**	**1.1700e-003**	**0.1912**	**0.0504**	**1.0800e-003**	**0.0515**		**173.4879**	**173.4879**	**4.7100e-003**		**173.6056**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	32.5192					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0475	0.0475		0.0475	0.0475	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**32.6331**	**2.3524**	**1.8324**	**2.9700e-003**		**0.0475**	**0.0475**		**0.0475**	**0.0475**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

3.2 Architectural Coating - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0915	0.0595	0.6121	1.7400e-003	0.1900	1.1700e-003	0.1912	0.0504	1.0800e-003	0.0515		173.4879	173.4879	4.7100e-003		173.6056
Total	**0.0915**	**0.0595**	**0.6121**	**1.7400e-003**	**0.1900**	**1.1700e-003**	**0.1912**	**0.0504**	**1.0800e-003**	**0.0515**		**173.4879**	**173.4879**	**4.7100e-003**		**173.6056**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.3 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1351	4.2490	0.9489	8.9300e-003	0.2241	0.0361	0.2602	0.0645	0.0345	0.0991		940.5697	940.5697	0.0895		942.8065
Worker	0.4876	0.3293	3.3367	8.7800e-003	0.9277	5.8000e-003	0.9335	0.2460	5.3400e-003	0.2514		873.7561	873.7561	0.0259		874.4023
Total	**0.6227**	**4.5782**	**4.2855**	**0.0177**	**1.1519**	**0.0419**	**1.1938**	**0.3106**	**0.0399**	**0.3504**		**1,814.3258**	**1,814.3258**	**0.1153**		**1,817.2089**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0809	23.5544	17.8738	0.0269		0.4518	0.4518		0.4518	0.4518	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**1.0809**	**23.5544**	**17.8738**	**0.0269**		**0.4518**	**0.4518**		**0.4518**	**0.4518**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.3 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1351	4.2490	0.9489	8.9300e-003	0.2241	0.0361	0.2602	0.0645	0.0345	0.0991		940.5697	940.5697	0.0895		942.8065
Worker	0.4876	0.3293	3.3367	8.7800e-003	0.9277	5.8000e-003	0.9335	0.2460	5.3400e-003	0.2514		873.7561	873.7561	0.0259		874.4023
Total	**0.6227**	**4.5782**	**4.2855**	**0.0177**	**1.1519**	**0.0419**	**1.1938**	**0.3106**	**0.0399**	**0.3504**		**1,814.3258**	**1,814.3258**	**0.1153**		**1,817.2089**

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.3 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1224	3.9751	0.8681	8.8700e-003	0.2241	0.0306	0.2548	0.0645	0.0293	0.0939		934.2852	934.2852	0.0863		936.4420
Worker	0.4465	0.2903	2.9885	8.5000e-003	0.9277	5.7300e-003	0.9335	0.2460	5.2700e-003	0.2513		847.0292	847.0292	0.0230		847.6038
Total	**0.5689**	**4.2654**	**3.8565**	**0.0174**	**1.1519**	**0.0364**	**1.1882**	**0.3106**	**0.0346**	**0.3452**		**1,781.3145**	**1,781.3145**	**0.1093**		**1,784.0458**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0809	23.5544	17.8738	0.0269		0.4518	0.4518		0.4518	0.4518	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**1.0809**	**23.5544**	**17.8738**	**0.0269**		**0.4518**	**0.4518**		**0.4518**	**0.4518**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.3 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1224	3.9751	0.8681	8.8700e-003	0.2241	0.0306	0.2548	0.0645	0.0293	0.0939		934.2852	934.2852	0.0863		936.4420
Worker	0.4465	0.2903	2.9885	8.5000e-003	0.9277	5.7300e-003	0.9335	0.2460	5.2700e-003	0.2513		847.0292	847.0292	0.0230		847.6038
Total	**0.5689**	**4.2654**	**3.8565**	**0.0174**	**1.1519**	**0.0364**	**1.1882**	**0.3106**	**0.0346**	**0.3452**		**1,781.3145**	**1,781.3145**	**0.1093**		**1,784.0458**

3.4 Grading - 2017

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					6.1326	0.0000	6.1326	3.3242	0.0000	3.3242			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352		3,037.9107	3,037.9107	0.9308		3,061.1809
Total	**3.0705**	**33.8868**	**17.1042**	**0.0297**	**6.1326**	**1.7774**	**7.9100**	**3.3242**	**1.6352**	**4.9594**		**3,037.9107**	**3,037.9107**	**0.9308**		**3,061.1809**

3.4 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3323	13.7956	1.8918	0.0350	2.2736	0.0741	2.3478	0.5811	0.0709	0.6520		3,708.6974	3,708.6974	0.2742		3,715.5518
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0978	0.0682	0.6866	1.6300e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		162.5462	162.5462	5.3200e-003		162.6792
Total	**0.4302**	**13.8639**	**2.5784**	**0.0366**	**2.4413**	**0.0752**	**2.5165**	**0.6256**	**0.0719**	**0.6975**		**3,871.2436**	**3,871.2436**	**0.2795**		**3,878.2310**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.3917	0.0000	2.3917	1.2964	0.0000	1.2964			0.0000			0.0000
Off-Road	1.0093	26.2791	18.9906	0.0297		0.3862	0.3862		0.3862	0.3862	0.0000	3,037.9107	3,037.9107	0.9308		3,061.1809
Total	**1.0093**	**26.2791**	**18.9906**	**0.0297**	**2.3917**	**0.3862**	**2.7780**	**1.2964**	**0.3862**	**1.6827**	**0.0000**	**3,037.9107**	**3,037.9107**	**0.9308**		**3,061.1809**

3.4 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3323	13.7956	1.8918	0.0350	2.2736	0.0741	2.3478	0.5811	0.0709	0.6520		3,708.6974	3,708.6974	0.2742		3,715.5518
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0978	0.0682	0.6866	1.6300e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		162.5462	162.5462	5.3200e-003		162.6792
Total	**0.4302**	**13.8639**	**2.5784**	**0.0366**	**2.4413**	**0.0752**	**2.5165**	**0.6256**	**0.0719**	**0.6975**		**3,871.2436**	**3,871.2436**	**0.2795**		**3,878.2310**

3.4 Grading - 2018

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					6.1326	0.0000	6.1326	3.3242	0.0000	3.3242			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272		2,988.0216	2,988.0216	0.9302		3,011.2769
Total	**2.7733**	**30.6725**	**16.5770**	**0.0297**	**6.1326**	**1.5513**	**7.6839**	**3.3242**	**1.4272**	**4.7514**		**2,988.0216**	**2,988.0216**	**0.9302**		**3,011.2769**

3.4 Grading - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2843	12.6120	1.7059	0.0347	1.0515	0.0477	1.0991	0.2811	0.0456	0.3267		3,681.2289	3,681.2289	0.2608		3,687.7479
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0881	0.0595	0.6030	1.5900e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		157.9077	157.9077	4.6700e-003		158.0245
Total	**0.3724**	**12.6715**	**2.3089**	**0.0363**	**1.2191**	**0.0487**	**1.2678**	**0.3256**	**0.0466**	**0.3721**		**3,839.1367**	**3,839.1367**	**0.2654**		**3,845.7724**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.3917	0.0000	2.3917	1.2964	0.0000	1.2964			0.0000			0.0000
Off-Road	1.0093	26.2791	18.9906	0.0297		0.3862	0.3862		0.3862	0.3862	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769
Total	**1.0093**	**26.2791**	**18.9906**	**0.0297**	**2.3917**	**0.3862**	**2.7780**	**1.2964**	**0.3862**	**1.6827**	**0.0000**	**2,988.0216**	**2,988.0216**	**0.9302**		**3,011.2769**

3.4 Grading - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2843	12.6120	1.7059	0.0347	1.0515	0.0477	1.0991	0.2811	0.0456	0.3267		3,681.2289	3,681.2289	0.2608		3,687.7479
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0881	0.0595	0.6030	1.5900e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		157.9077	157.9077	4.6700e-003		158.0245
Total	**0.3724**	**12.6715**	**2.3089**	**0.0363**	**1.2191**	**0.0487**	**1.2678**	**0.3256**	**0.0466**	**0.3721**		**3,839.1367**	**3,839.1367**	**0.2654**		**3,845.7724**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.7519					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.2064**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0807	0.0525	0.5401	1.5400e-003	0.1677	1.0300e-003	0.1687	0.0445	9.5000e-004	0.0454		153.0776	153.0776	4.1500e-003		153.1814
Total	**0.0807**	**0.0525**	**0.5401**	**1.5400e-003**	**0.1677**	**1.0300e-003**	**0.1687**	**0.0445**	**9.5000e-004**	**0.0454**		**153.0776**	**153.0776**	**4.1500e-003**		**153.1814**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9311	20.1146	17.2957	0.0228		0.3335	0.3335		0.3335	0.3335	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.7519					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6830**	**20.1146**	**17.2957**	**0.0228**		**0.3335**	**0.3335**		**0.3335**	**0.3335**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0807	0.0525	0.5401	1.5400e-003	0.1677	1.0300e-003	0.1687	0.0445	9.5000e-004	0.0454		153.0776	153.0776	4.1500e-003		153.1814
Total	**0.0807**	**0.0525**	**0.5401**	**1.5400e-003**	**0.1677**	**1.0300e-003**	**0.1687**	**0.0445**	**9.5000e-004**	**0.0454**		**153.0776**	**153.0776**	**4.1500e-003**		**153.1814**

3.6 Site Preparation - 2017

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.9608	52.2754	23.4554	0.0380		2.8786	2.8786		2.6483	2.6483		3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**4.9608**	**52.2754**	**23.4554**	**0.0380**	**18.0663**	**2.8786**	**20.9448**	**9.9307**	**2.6483**	**12.5790**		**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

3.6 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1174	0.0819	0.8240	1.9600e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0546		195.0554	195.0554	6.3900e-003		195.2150
Total	**0.1174**	**0.0819**	**0.8240**	**1.9600e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0546**		**195.0554**	**195.0554**	**6.3900e-003**		**195.2150**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	1.2097	33.7214	22.9600	0.0380		0.4731	0.4731		0.4731	0.4731	0.0000	3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**1.2097**	**33.7214**	**22.9600**	**0.0380**	**7.0458**	**0.4731**	**7.5189**	**3.8730**	**0.4731**	**4.3461**	**0.0000**	**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

3.6 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1174	0.0819	0.8240	1.9600e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0546		195.0554	195.0554	6.3900e-003		195.2150
Total	**0.1174**	**0.0819**	**0.8240**	**1.9600e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0546**		**195.0554**	**195.0554**	**6.3900e-003**		**195.2150**

3.7 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2476	0.0000	0.2476	0.0375	0.0000	0.0375			0.0000			0.0000
Off-Road	4.1031	42.7475	23.0122	0.0388		2.1935	2.1935		2.0425	2.0425		3,924.2833	3,924.2833	1.0730		3,951.1070
Total	**4.1031**	**42.7475**	**23.0122**	**0.0388**	**0.2476**	**2.1935**	**2.4411**	**0.0375**	**2.0425**	**2.0800**		**3,924.2833**	**3,924.2833**	**1.0730**		**3,951.1070**

3.7 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.3400e-003	0.3462	0.0475	8.8000e-004	0.0201	1.8600e-003	0.0220	5.5200e-003	1.7800e-003	7.3000e-003		93.0546	93.0546	6.8800e-003		93.2266
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0978	0.0682	0.6866	1.6300e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		162.5462	162.5462	5.3200e-003		162.6792
Total	**0.1062**	**0.4144**	**0.7341**	**2.5100e-003**	**0.1878**	**2.9300e-003**	**0.1907**	**0.0500**	**2.7700e-003**	**0.0528**		**255.6008**	**255.6008**	**0.0122**		**255.9058**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0966	0.0000	0.0966	0.0146	0.0000	0.0146			0.0000			0.0000
Off-Road	1.2617	32.6638	24.6739	0.0388		0.4568	0.4568		0.4568	0.4568	0.0000	3,924.2833	3,924.2833	1.0730		3,951.1070
Total	**1.2617**	**32.6638**	**24.6739**	**0.0388**	**0.0966**	**0.4568**	**0.5533**	**0.0146**	**0.4568**	**0.4714**	**0.0000**	**3,924.2833**	**3,924.2833**	**1.0730**		**3,951.1070**

3.7 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.3400e-003	0.3462	0.0475	8.8000e-004	0.0201	1.8600e-003	0.0220	5.5200e-003	1.7800e-003	7.3000e-003		93.0546	93.0546	6.8800e-003		93.2266
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0978	0.0682	0.6866	1.6300e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		162.5462	162.5462	5.3200e-003		162.6792
Total	**0.1062**	**0.4144**	**0.7341**	**2.5100e-003**	**0.1878**	**2.9300e-003**	**0.1907**	**0.0500**	**2.7700e-003**	**0.0528**		**255.6008**	**255.6008**	**0.0122**		**255.9058**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Walkability Design

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	16.5097	41.0063	205.8555	0.5932	63.1340	0.5662	63.7003	16.7656	0.5290	17.2946		59,389.0897	59,389.0897	2.2688		59,445.8083
Unmitigated	16.0037	38.7412	191.4636	0.5437	57.6251	0.5218	58.1468	15.3027	0.4874	15.7901		54,433.8690	54,433.8690	2.1235		54,486.9559

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant w/o Drive Thru	2,527.48	2,456.88	1765.00	7,079,422	7,756,215
Fast Food Restaurant with Drive Thru	2,232.54	3,249.14	2442.24	6,695,584	7,335,681
High Turnover (Sit Down Restaurant)	547.25	681.62	567.44	1,772,011	1,941,415
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	2,283.17	2,671.90	1349.58	7,361,978	8,065,783
Total	7,590.44	9,059.54	6,124.26	22,908,995	25,099,095

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant w/o Drive	16.60	8.40	6.90	1.50	79.50	19.00	98	0	2
Fast Food Restaurant with Drive	16.60	8.40	6.90	2.20	78.80	19.00	92	0	8
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	97	0	3
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	97	0	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Regional Shopping Center	0.780000	0.083500	0.060000	0.050000	0.000000	0.000000	0.010000	0.010000	0.000000	0.000000	0.006500	0.000000	0.000000
Fast Food Restaurant w/o Drive Thru	0.780000	0.083500	0.060000	0.050000	0.000000	0.000000	0.010000	0.010000	0.000000	0.000000	0.006500	0.000000	0.000000
Fast Food Restaurant with Drive Thru	0.780000	0.083500	0.060000	0.050000	0.000000	0.000000	0.010000	0.010000	0.000000	0.000000	0.006500	0.000000	0.000000
High Turnover (Sit Down Restaurant)	0.780000	0.083500	0.060000	0.050000	0.000000	0.000000	0.010000	0.010000	0.000000	0.000000	0.006500	0.000000	0.000000
Parking Lot	0.780000	0.083500	0.060000	0.050000	0.000000	0.000000	0.010000	0.010000	0.000000	0.000000	0.006500	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1033	0.9392	0.7889	5.6400e-003		0.0714	0.0714		0.0714	0.0714		1,127.0451	1,127.0451	0.0216	0.0207	1,133.7425
NaturalGas Unmitigated	0.1033	0.9392	0.7889	5.6400e-003		0.0714	0.0714		0.0714	0.0714		1,127.0451	1,127.0451	0.0216	0.0207	1,133.7425

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant w/o Drive Thru	2648.27	0.0286	0.2596	0.2181	1.5600e-003		0.0197	0.0197		0.0197	0.0197		311.5616	311.5616	5.9700e-003	5.7100e-003	313.4131
Fast Food Restaurant with Drive Thru	3375.99	0.0364	0.3310	0.2780	1.9900e-003		0.0252	0.0252		0.0252	0.0252		397.1749	397.1749	7.6100e-003	7.2800e-003	399.5351
High Turnover (Sit Down Restaurant)	3228.94	0.0348	0.3166	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8757	379.8757	7.2800e-003	6.9600e-003	382.1331
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
Regional Shopping Center	326.68	3.5200e-003	0.0320	0.0269	1.9000e-004		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003		38.4329	38.4329	7.4000e-004	7.0000e-004	38.6613
Total		**0.1033**	**0.9392**	**0.7889**	**5.6400e-003**		**0.0714**	**0.0714**		**0.0714**	**0.0714**		**1,127.0451**	**1,127.0451**	**0.0216**	**0.0207**	**1,133.7425**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant w/o Drive Thru	2.64827	0.0286	0.2596	0.2181	1.5600e-003		0.0197	0.0197		0.0197	0.0197		311.5616	311.5616	5.9700e-003	5.7100e-003	313.4131
Fast Food Restaurant with Drive Thru	3.37599	0.0364	0.3310	0.2780	1.9900e-003		0.0252	0.0252		0.0252	0.0252		397.1749	397.1749	7.6100e-003	7.2800e-003	399.5351
High Turnover (Sit Down Restaurant)	3.22894	0.0348	0.3166	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8757	379.8757	7.2800e-003	6.9600e-003	382.1331
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
Regional Shopping Center	0.32668	3.5200e-003	0.0320	0.0269	1.9000e-004		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003		38.4329	38.4329	7.4000e-004	7.0000e-004	38.6613
Total		**0.1033**	**0.9392**	**0.7889**	**5.6400e-003**		**0.0714**	**0.0714**		**0.0714**	**0.0714**		**1,127.0451**	**1,127.0451**	**0.0216**	**0.0207**	**1,133.7425**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.4117	4.1000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0938	0.0938	2.5000e-004		0.1002
Unmitigated	1.5367	4.1000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0938	0.0938	2.5000e-004		0.1002

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1782					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3544					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.1900e-003	4.1000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0938	0.0938	2.5000e-004		0.1002
Total	**1.5367**	**4.1000e-004**	**0.0442**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**		**0.0938**	**0.0938**	**2.5000e-004**		**0.1002**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1782					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.2293					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.1900e-003	4.1000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0938	0.0938	2.5000e-004		0.1002
Total	**4.4117**	**4.1000e-004**	**0.0442**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**		**0.0938**	**0.0938**	**2.5000e-004**		**0.1002**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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