



**Air Quality Analysis for the
Centre City Shopping Center Project
Escondido, California**

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A handwritten signature in cursive script that reads "Jessica Fleming".

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Acronyms

$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CO	carbon monoxide
DPM	diesel particulate matter
HARRF	Hale Avenue Resource Recovery Facility
LOS	level of service
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
NO_x	oxides of nitrogen
$^{\circ}\text{F}$	degrees Fahrenheit
OEHHA	Office of Environmental Health Hazard Assessment
Pb	lead
PM_{10}	particulate matter with an aerodynamic diameter of 10 microns or less
$\text{PM}_{2.5}$	particulate matter with an aerodynamic diameter of 2.5 microns or less
ppm	parts per million
RAQS	Regional Air Quality Strategy
ROG	reactive organic gas
SANDAG	San Diego Association of Governments
SCAQMD	South Coast Air Quality Management District
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_x	oxides of sulfur
TACs	toxic air contaminants
TCM	Transportation Control Measures
U.S. EPA	United States Environmental Protection Act
USC	United States Code
VMT	vehicle miles travelled
VOC	volatile organic compounds

Executive Summary

This report evaluates potential local and regional air quality impacts associated with the proposed Centre City Shopping Center Project (project) located at the intersection of West Mission Avenue and Centre City Parkway in the City of Escondido (City), California. The 2.24-acre site is currently developed with the Palm Tree Motor Lodge and the Wagon Wheel Restaurant. The project would demolish the existing uses on-site and construct a commercial development that would consist of three buildings. Building A would consist of 3,500 square feet of general retail space and a 2,874-square-foot restaurant with a drive-through (6,374 square feet total). Building B would consist of a 2,004-square-foot restaurant/coffee shop with a drive-through, a 2,400-square-foot restaurant without a drive-through, and 1,000 square feet of retail space (5,400 square feet total). Building C would consist of a 4,308-square-foot SuperStar carwash.

The primary goal of the San Diego Air Pollution Control District's Regional Air Quality Strategy (RAQS) is to reduce ozone precursor emissions. The project site is designated as GC – General Commercial in the Escondido General Plan. Because the project would be consistent with the General Plan land use designation, the project would be consistent with the growth anticipated by the General Plan and San Diego Association of Governments (SANDAG). The project would, therefore, not result in an increase in emissions that are not already accounted for in the RAQS. Thus, the project would not interfere with implementation of the RAQS or other air quality plans.

Additionally, as calculated in this analysis, project construction emissions would not exceed the applicable City emissions thresholds. These thresholds are designed to provide limits below which project emissions would not significantly change regional air quality. Therefore, as project emissions would be well below these limits, project construction would not result in regional emissions that would exceed the National Ambient Air Quality Standards (NAAQS) or California Ambient Air Quality Standards (CAAQS) or contribute to existing violations. Additionally, construction emissions would be temporary, intermittent, and would cease at the end of project construction.

Long-term emissions of regional air pollutants occur from operational sources. Based on emissions estimates, project operational emissions would not exceed the applicable regional emissions thresholds. Therefore, as project emissions would be well below these limits, project operations would not result in regional emissions that would exceed the NAAQS or CAAQS or contribute to existing violations.

The project would not result in the exposure of sensitive receptors to substantial concentrations of diesel particulate matter (DPM). Additionally, the project is not anticipated to result in a carbon monoxide (CO) hot spot. Therefore, the project would not expose air quality sensitive receptors to substantial pollutant concentrations.

The project does not include any uses that are typically associated with odor complaints. The project does include restaurants. Restaurants can produce noticeable odors through the

preparation of food. However, the odors from general food preparation are not generally considered objectionable. Additionally, restaurant kitchens are required to install ventilation systems that would decrease odor impacts. These sources are not expected to generate significant objectionable odors affecting a substantial number of people. The project would involve the use of diesel-powered construction equipment. Diesel exhaust may be noticeable temporarily at adjacent properties; however, construction activities would be temporary. Therefore, odor impacts would be less than significant.

1.0 Introduction

The purpose of this report is to assess potential short-term and long-term local and regional air quality impacts resulting from development of the proposed Centre City Shopping Centre Project (project).

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

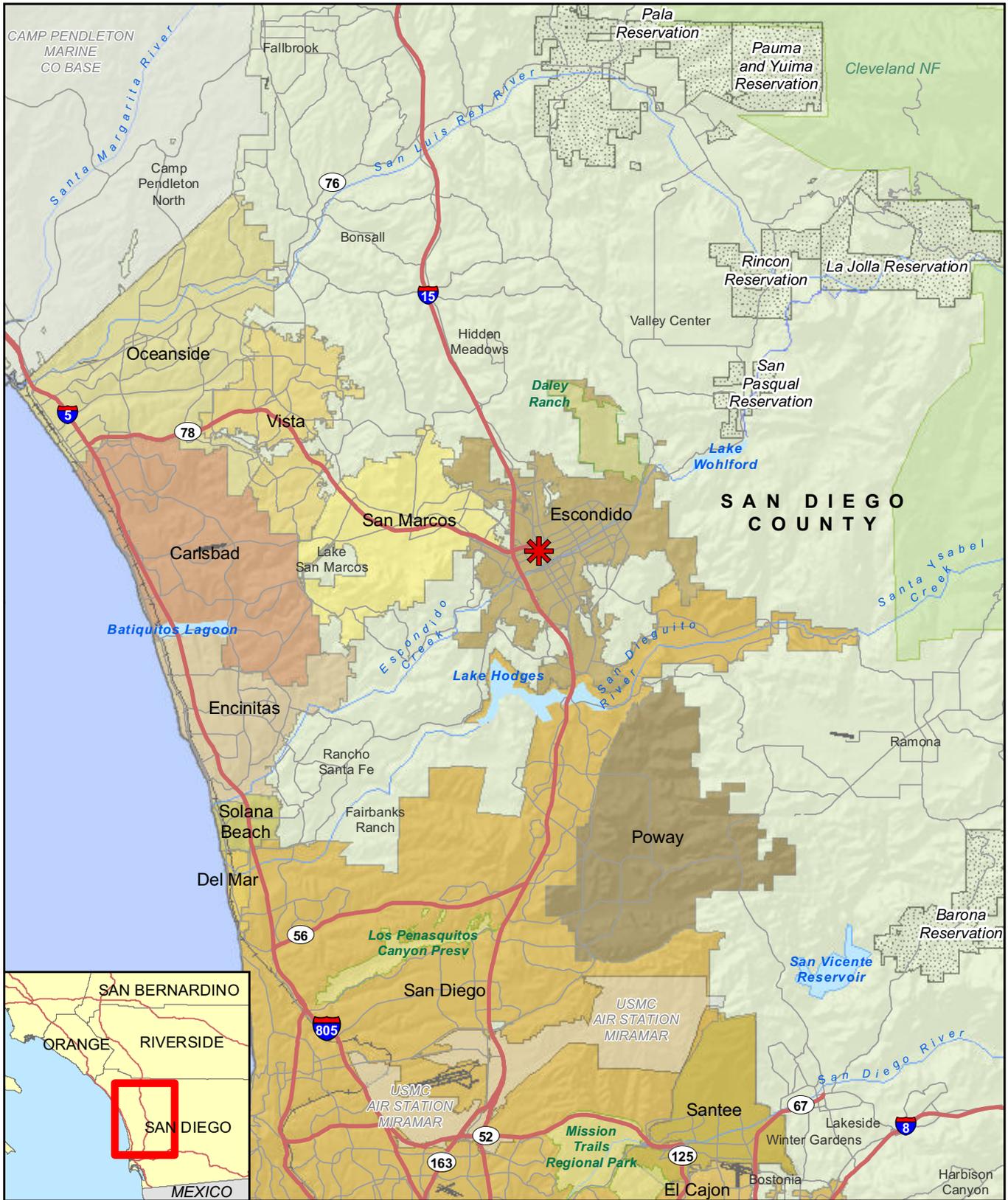
The state of California is divided geographically into 15 air basins for managing the air resources of the state on a regional basis. Areas within each air basin are considered to share the same air masses and, therefore, are expected to have similar ambient air quality. The project site is located within the San Diego Air Basin (SDAB). The SDAB is currently classified as a federal non-attainment area for ozone, and a state non-attainment area for particulate matter less than 10 microns (PM₁₀), particulate matter less than 2.5 microns (PM_{2.5}), and ozone.

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

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

2.0 Project Description

The project is located at 425 West Mission Avenue, on the southeast corner of the intersection of West Mission Avenue and Centre City Parkway. Figure 1 shows the regional location. The 2.24-acre project site is currently developed with the Palm Tree Motor Lodge and the Wagon Wheel Restaurant. The lodge consists of three buildings: an L-shaped row of 29 units and a lobby; a rectangular building housing 10 units; and a cabana building adjacent to the pool. Figure 2 shows an aerial photograph of the project vicinity.



 Project Location

FIGURE 1
Regional Location



 Project Boundary

FIGURE 2
Project Location on Aerial Photograph

The project would demolish the existing uses on-site and construct a commercial development that would consist of three buildings. Building A would consist of 3,500 square feet of general retail space and a 2,874-square-foot restaurant with a drive-through (6,374 square feet total). Building B would consist of a 2,004-square-foot restaurant/coffee shop with a drive-through, a 2,400-square-foot restaurant without a drive-through, and 1,000 square feet of retail space (5,404 square feet total). Building C would consist of a 4,308-square-foot SuperStar carwash. The carwash would include a drive-through tunnel and a maximum of 26 vacuum stalls. Figure 3 shows the site plan. Access to the site would be provided from both Centre City Parkway and Mission Avenue. Site access from Centre City Parkway and Mission Avenue would be right-in/right-out only. A northbound right-turn pocket/deceleration lane would be provided at the Centre City Parkway project driveway. The project also includes roadway improvements to create a third northbound through lane on Centre City Parkway. A total of 105 parking stalls would be provided on-site, mostly along the eastern project perimeter.

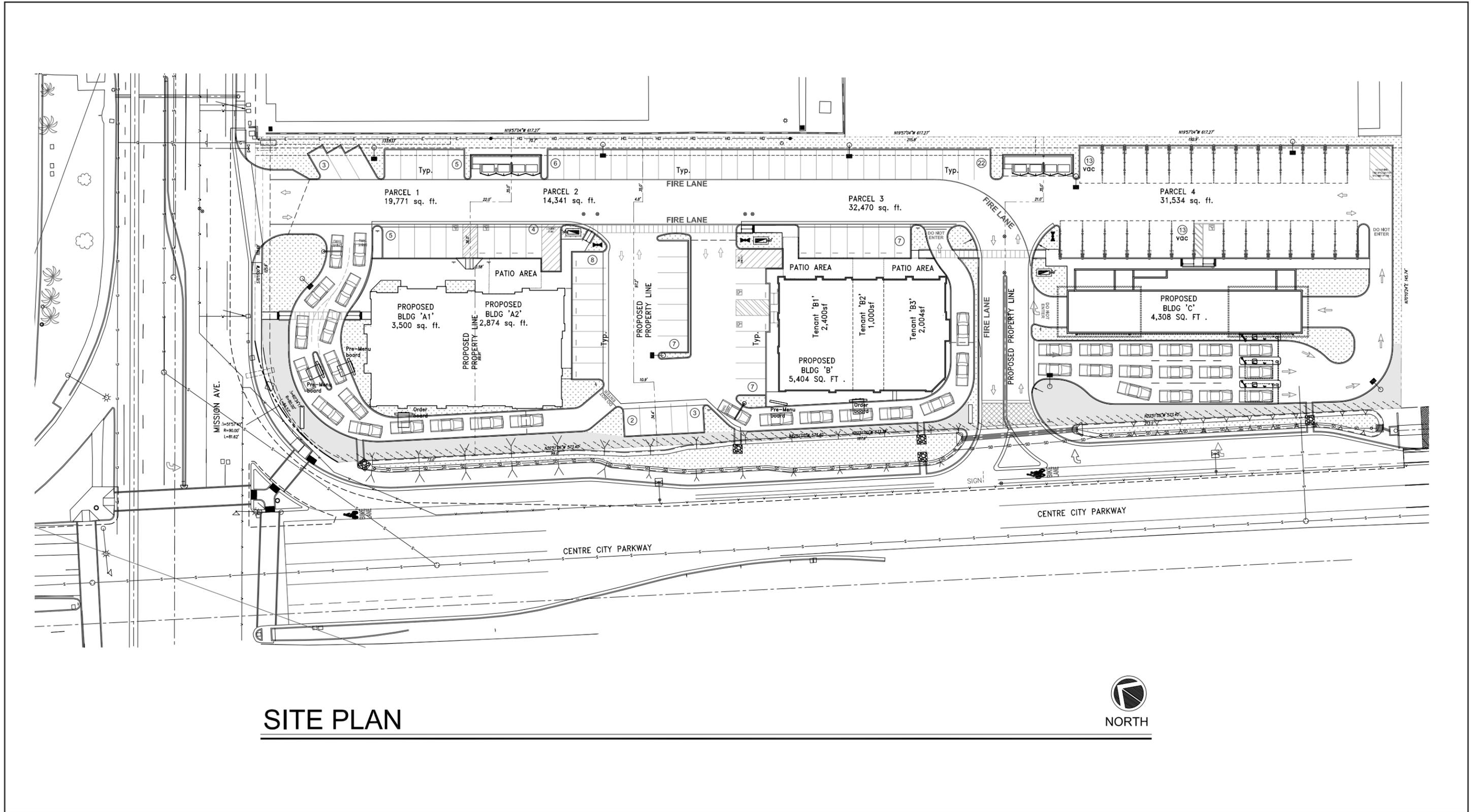
3.0 Regulatory Framework

3.1 Federal Regulations

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

Six criteria pollutants of primary concern have been designated: ozone, carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), lead (Pb), and respirable particulate matter (PM₁₀ and PM_{2.5}). The primary NAAQS "... in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health ..." and the secondary standards "... protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air" [42 USC 7409(b)(2)]. The primary NAAQS were established, with a margin of safety, considering long-term exposure for the most sensitive groups in the general population (i.e., children, senior citizens, and people with breathing difficulties). The NAAQS are presented in Table 1 (CARB 2016a).

An air basin is designated as either attainment or non-attainment for a particular pollutant. Once a non-attainment area has achieved the AAQS for a particular pollutant, it is re-designated as an attainment area for that pollutant. To be redesignated, the area must meet air quality standards for three consecutive years. After re-designation to attainment, the area is known as a maintenance area and must develop a 10-year plan for continuing to meet and maintain air quality standards, as well as satisfy other requirements of the federal CAA. The SDAB is a non-attainment area for the federal 8-hour ozone standard.



SITE PLAN



Table 1 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	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	No Separate State Standard		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		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-dispersive Infrared Photometry	35 ppm (40 mg/m ³)	–	Non-dispersive Infrared Photometry
	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 Chemi- luminescence	100 ppb (188 µg/m ³)	–	Gas Phase Chemi- luminescence
	Annual Arithmetic Mean	0.030 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 (1,300 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 ^{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) ¹²	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 Chroma- tography			
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 Chroma- tography			

See footnotes on next page.

Table 1
Ambient Air Quality Standards

ppm = parts per million; ppb = parts per billion; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; – = not applicable.

- ¹ California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, particulate matter (PM_{10} , $\text{PM}_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- ² National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three 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 $150 \mu\text{g}/\text{m}^3$ is equal to or less than one. For $\text{PM}_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
- 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 Air Resources Board 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 U.S. EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the U.S. EPA.
- ⁸ On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- ⁹ On December 14, 2012, the national annual $\text{PM}_{2.5}$ primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour $\text{PM}_{2.5}$ standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standards of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM_{10} standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ 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 standards are 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 one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
- ¹² The CARB has identified lead and vinyl chloride as ‘toxic air contaminants’ with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- ¹³ The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until one 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 CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively.

SOURCE: CARB 2016a.

3.2 State Regulations

3.2.1 Criteria Pollutants

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

Similar to the federal CAA, the state classifies areas air basins as either “attainment” or “nonattainment” areas for each pollutant based on the comparison of measured data with the CAAQS. The SDAB is a non-attainment area for the state ozone standards, the state PM₁₀ standard, and the state PM_{2.5} standard.

3.2.2 Toxic Air Contaminants

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

The California Air Toxics Program establishes the process for the identification and control of TACs and includes provisions to make the public aware of significant toxic exposures and for reducing risk. Additionally, the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly Bill) was enacted in 1987 and requires stationary sources to report the types and quantities of certain substances routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce those significant risks to acceptable levels.

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

of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB and are listed as carcinogens either under the state's Proposition 65 or under the federal Hazardous Air Pollutants program.

Following the identification of diesel particulate matter (DPM) as a TAC in 1998, CARB has worked on developing strategies and regulations aimed at reducing the risk from DPM. The overall strategy for achieving these reductions is found in the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (CARB 2000). A stated goal of the plan is to reduce the statewide cancer risk arising from exposure to DPM by 85 percent by 2020.

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

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

3.2.3 State Implementation Plan

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

The SDAPCD is responsible for preparing and implementing the portion of the SIP applicable to the SDAB. The SIP plans for San Diego County specifically include the Redesignation Request and Maintenance Plan for the 1997 National Ozone Standard for San Diego County (2012), and the 2004 Revision to the California State Implementation Plan for Carbon Monoxide – Updated Maintenance Plan for Ten Federal Planning Areas.

3.2.4 The California Environmental Quality Act

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

3.3 San Diego Air Pollution Control District

The SDAPCD is the agency that regulates air quality in the SDAB. The SDAPCD prepared the Regional Air Quality Study (RAQS) to prepare its portion of the SIP and in response to the requirements set forth in the California CAA AB 2595 (SDAPCD 1992) and the federal CAA. Motor vehicles are San Diego County's leading source of air pollution (SDAPCD 2013). In addition to these sources, other mobile sources include construction equipment, trains, and airplanes. Reducing mobile source emissions requires the technological improvement of existing mobile sources and the examination of future mobile sources, such as those associated with new or modification projects (e.g., retrofitting older vehicles with cleaner emission technologies). In addition to mobile sources, stationary sources also contribute to air pollution in the SDAB. Stationary sources include gasoline stations, power plants, dry cleaners, and other commercial and industrial uses. Stationary sources of air pollution are regulated by the local air pollution control or management district, in this case the SDAPCD.

As part of the RAQS, the SDAPCD identified transportation control measures (TCM) for the air quality plan prepared by the San Diego Association of Governments (SANDAG) in accordance with AB 2595 and adopted by SANDAG on March 27, 1992, as Resolution Number 92-49 and Addendum. The RAQS and TCM set forth the steps needed to accomplish attainment of NAAQS and CAAQS. The required triennial updates of the RAQS and corresponding TCM were adopted in 1995, 1998, 2001, 2004, 2009, and most recently in December 2016.

3.4 Local Regulations

The Escondido Municipal Code, Section 33-924(G), includes coordination of CEQA, quality of life standards, and growth management provisions. The purpose of Section 33-924(G) is to ensure consistency between the City's thresholds of environmental significance and the Public Facilities Master Plans which implements the growth management element of the General Plan. The City's General Plan contains quality of life standards that are to be considered in comprehensive planning efforts as well as individual project review.

Section 33-924(G)(6) includes thresholds for volatile organic compounds/reactive organic gases (VOC/ROG), oxides of nitrogen (NO_x), CO, sulfur oxides (SO_x), PM₁₀, PM_{2.5}, and lead. These thresholds are summarized in Table 2.

Pollutant	Emission Rate (pounds per day)
ROG/VOC ¹	75 ² /55 ³
NO _x	250
CO	550
SO _x	250
PM ₁₀	100
PM _{2.5}	55
Lead	3.2 ⁴

SOURCE: Escondido Municipal Code Section 33-924(G)
¹Note that reactive organic gases (ROG) and VOC are interchangeable in the context of this project analysis.
²Threshold for construction per SCAQMD CEQA Air Quality Handbook.
³Threshold for operation per SCAQMD CEQA Air Quality Handbook.
⁴Not applicable to construction.

4.0 Environmental Setting

4.1 Geographic Setting

The project is located in the city of Escondido, about 13 miles east of the Pacific Ocean. The eastern portion of the SDAB is surrounded by mountains to the north, east, and south. These mountains tend to restrict airflow and concentrate pollutants in the valleys and low-lying areas below.

4.2 Climate

The project area, like the rest of San Diego County’s inland valley areas, has a Mediterranean climate characterized by warm, dry summers and mild winters. The mean annual temperature for the project area is 62 degrees Fahrenheit (°F). The average annual precipitation is 16 inches, falling primarily from November to April. Winter low temperatures in the project area average about 38°F, and summer high temperatures average about 86°F. The average relative humidity is 69 percent and is based on the yearly average humidity at Lindbergh Field (Western Regional Climate Center 2016).

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

Fluctuations in the strength and pattern of winds from the Pacific High Pressure Zone interacting with the daily local cycle produce periodic temperature inversions that influence the dispersal or containment of air pollutants in the SDAB. Beneath the inversion layer pollutants become “trapped” as their ability to disperse diminishes. The mixing depth is the area under the inversion layer. Generally, the morning inversion layer is lower than the afternoon inversion layer. The greater the change between the morning and afternoon mixing depths the greater the ability of the atmosphere to disperse pollutants.

Throughout the year, the height of the temperature inversion in the afternoon varies between approximately 1,500 and 2,500 feet above mean sea level. In winter, the morning inversion layer is about 800 feet above mean sea level. In summer, the morning inversion layer is about 1,100 feet above mean sea level. Therefore, air quality generally tends to be better in the winter than in the summer.

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

Strong Santa Anas tend to blow pollutants out over the ocean, producing clear days. However, at the onset or during breakdown of these conditions, or if the Santa Ana is weak, local air quality may be adversely affected. In these cases, emissions from the South Coast Air Basin to the north are blown out over the ocean, and low pressure over Baja California draws this pollutant-laden air mass southward. As the high pressure weakens, prevailing northwesterly winds reassert themselves and send this cloud of contamination ashore in the SDAB. When this event does occur, the combination of transported and locally produced contaminants produce the worst air quality measurements recorded in the basin.

4.3 Existing Air Quality

Air quality at a particular location is a function of the kinds, amounts, and dispersal rates of pollutants being emitted into the air locally and throughout the basin. The major factors affecting pollutant dispersion are wind speed and direction, the vertical dispersion of pollutants (which is affected by inversions), and the local topography.

Air quality is commonly expressed as the number of days in which air pollution levels exceed state standards set by the CARB or federal standards set by the U.S. EPA. The SDAPCD maintains 10 air quality monitoring stations located throughout the greater San Diego metropolitan region. Air pollutant concentrations and meteorological information are continuously recorded at these stations. Measurements are then used by scientists to help forecast daily air pollution levels.

The Escondido—East Valley Parkway monitoring station located at 600 East Valley Parkway, approximately one mile east of the project site, is the nearest station to the project site. The Escondido monitoring station measures ozone, NO₂, PM₁₀, and PM_{2.5}.

Table 3 provides a summary of measurements collected at the Escondido monitoring station for the years 2011 through 2015.

Table 3 Summary of Air Quality Measurements Recorded at the Escondido – East Valley Parkway Monitoring Station					
Pollutant/Standard	2011	2012	2013	2014	2015
Ozone					
Days State 1-hour Standard Exceeded (0.09 ppm)	1	0	0	1	0
Days State 8-hour Standard Exceeded (0.07 ppm)	2	2	4	8	3
Days Federal 8-hour Standard Exceeded (0.075 ppm)	2	0	0	5	0
Max. 1-hr (ppm)	0.098	0.084	0.084	0.099	0.079
Max 8-hr (ppm)	0.089	0.074	0.075	0.080	0.071
Nitrogen Dioxide					
Days State 1-hour Standard Exceeded (0.18 ppm)	0	0	0	0	0
Days Federal 1-hour Standard Exceeded (0.100 ppm)	0	0	0	0	0
Max 1-hr (ppm)	0.062	0.062	0.061	0.063	0.048
Annual Average (ppm)	Na	0.013	0.013	0.011	Na
PM₁₀*					
Measured Days State 24-hour Standard Exceeded (50 µg/m ³)	0	0	1	0	0
Calculated Days State 24-hour Standard Exceeded (50 µg/m ³)	0.0	0.0	6.0	0.0	--
Measured Days Federal 24-hour Standard Exceeded (150 µg/m ³)	0	0	0	0	0
Calculated Days Federal 24-hour Standard Exceeded (150 µg/m ³)	0.0	0.0	0.0	0.0	--
Max. Daily (µg/m ³)	40.0	33.0	82.0	44.0	31.0
State Annual Average (µg/m ³)	18.8	18.1	23.1	21.5	--
Federal Annual Average (µg/m ³)	18.8	18.0	23.2	21.6	17.5
PM_{2.5}*					
Measured Days Federal 24-hour Standard Exceeded (35 µg/m ³)	0	1	1	1	0
Calculated Days Federal 24-hour Standard Exceeded (35 µg/m ³)	0.0	3.1	1.1	1.0	Na
Max. Daily (µg/m ³)	27.4	70.7	56.3	82.3	62.5
State Annual Average (µg/m ³)	10.4	Na	10.5	9.6	--
Federal Annual Average (µg/m ³)	10.4	10.5	11.0	9.9	--
SOURCE: CARB 2016b. ppm = parts per million µg/m ³ = micrograms per cubic meter -- = Not available. * Calculated days value. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.					

4.3.1 Ozone

Nitrogen oxides and hydrocarbons (reactive organic gases [ROG]) are known as the chief “precursors” of ozone. These compounds react in the presence of sunlight to produce ozone, which is the primary air pollution problem in the SDAB. Because sunlight plays such an important role in its formation, ozone pollution—or smog—is mainly a concern during the daytime in summer months. The SDAB is currently designated a federal and state non-attainment area for ozone. During the past 25 years, San Diego had experienced a decline in the number of days with unhealthy levels of ozone despite the region’s growth in population and vehicle miles traveled (SDAPCD 2013).

About half of smog-forming emissions come from automobiles. Population growth in San Diego has resulted in a large increase in the number of automobiles expelling ozone-forming pollutants while operating on area roadways. In addition, the occasional transport of smog-filled air from the South Coast Air Basin only adds to the SDAB's ozone problem. Stricter automobile emission controls, including more efficient automobile engines, have played a large role in why ozone levels have steadily decreased.

In order to address adverse health effects due to prolonged exposure, the U.S. EPA phased out the national 1-hour ozone standard and replaced it with the more protective 8-hour ozone standard. The SDAB is currently a non-attainment area for the previous (1997) national 8-hour standard, and is recommended as a non-attainment area for the revised (2008) national 8-hour standard of 0.075 parts per million (ppm).

Not all of the ozone within the SDAB is derived from local sources. Under certain meteorological conditions, such as during Santa Ana wind events, ozone and other pollutants are transported from the Los Angeles Basin and combine with ozone formed from local emission sources to produce elevated ozone levels in the SDAB.

Local agencies can control neither the source nor the transportation of pollutants from outside the air basin. The SDAPCD's policy, therefore, has been to control local sources effectively enough to reduce locally produced contamination to clean air standards. Through the use of air pollution control measures outlined in the RAQS, the SDAPCD has effectively reduced ozone levels in the SDAB.

Actions that have been taken in the SDAB to reduce ozone concentrations include:

- **TCMs if vehicle travel and emissions exceed attainment demonstration levels.** TCMs are strategies that will reduce transportation-related emissions by reducing vehicle use or improving traffic flow.
- **Enhanced motor vehicle inspection and maintenance program.** The smog check program is overseen by the Bureau of Automotive Repair. The program requires most vehicles to pass a smog test once every two years before registering in the state of California. The smog check program monitors the amount of pollutants automobiles produce. One focus of the program is identifying "gross polluters," or vehicles that exceed two times the allowable emissions for a particular model. Regular maintenance and tune-ups, changing the oil, and checking tire inflation can improve gas mileage and lower air pollutant emissions. It can also reduce traffic congestion due to preventable breakdowns, further lowering emissions.
- **Air Quality Improvement Program.** This program, established by AB 118, is a voluntary incentive program administered by the CARB to fund clean vehicle and equipment projects, research on biofuels production and the air quality impacts of alternative fuels, and workforce training.

4.3.2 Carbon Monoxide

The SDAB is classified as a state attainment area and as a federal maintenance area for CO. Until 2003, no violations of the state standard for CO had been recorded in the SDAB since 1991, and no violations of the national standard had been recorded in the SDAB since 1989. The violations that took place in 2003 were likely the result of massive wildfires that occurred throughout the county. No violations of the state or federal CO standards have occurred since 2003.

Small-scale, localized concentrations of CO above the state and national standards have the potential to occur at intersections with stagnation points such as those that occur on major highways and heavily traveled and congested roadways. Localized high concentrations of CO are referred to as “CO hot spots” and are a concern at congested intersections, where automobile engines burn fuel less efficiently and their exhaust contains more CO.

4.3.3 Particulate Matter

Particulate matter is a complex mixture of microscopic solid or liquid particles including chemicals, soot, and dust. Anthropogenic sources of direct particulate emissions include crushing or grinding operations, dust stirred up by vehicle traffic, and combustion sources such as motor vehicles, power plants, wood burning, forest fires, agricultural burning and industrial processes. Additionally, indirect emissions may be formed when aerosols react with compounds found in the atmosphere.

Health studies have shown a significant association between exposure to particulate matter and premature death in people with heart or lung diseases. Other important effects include aggravation of respiratory and cardiovascular disease, lung disease, decreased lung function, asthma attacks, and certain cardiovascular problems such as heart attacks and irregular heartbeat (U.S. EPA 2016).

As its properties vary based on the size of suspended particles, particulate matter is generally categorized as particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) or particulate matter with an aerodynamic diameter of 2.5 microns or less (PM_{2.5})

4.3.3.1 PM₁₀

PM₁₀, occasionally referred to as “inhalable coarse particles” has an aerodynamic diameter of about one-seventh of the diameter of a human hair. High concentrations of PM₁₀ are often found near roadways, construction, mining, or agricultural operations.

4.3.3.2 PM_{2.5}

PM_{2.5}, occasionally referred to as “inhalable fine particles” has an aerodynamic diameter of about one-thirtieth of the diameter of a human hair. PM_{2.5} is the main cause of haze in

many parts of the United States. Federal standards applicable to PM_{2.5} were first adopted in 1997.

4.3.4 Other Criteria Pollutants

The national and state standards for NO₂, oxides of sulfur (SO_x), and the previous standard for lead are being met in the SDAB, and the latest pollutant trends suggest that these standards will not be exceeded in the foreseeable future. As discussed above, new standards for these pollutants have been adopted, and new designations for the SDAB will be determined in the future. The SDAB is also in attainment of the state standards for vinyl chloride, hydrogen sulfides, sulfates, and visibility-reducing particulates.

5.0 Thresholds of Significance

Thresholds used to evaluate potential impacts to air quality are based on applicable criteria in the CEQA Guidelines Appendix G, SDAPCD regulations, and the City of Escondido Municipal Code. The project would have a significant air quality impact if it would:

1. Obstruct or conflict with the implementation of the RAQS.
2. Result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including the release of emissions which exceed quantitative thresholds for ozone precursors).
4. Expose sensitive receptors to substantial pollutant concentration including air toxics such as diesel particulates.
5. Create objectionable odors affecting a substantial number of people.

Emissions resulting from implementation of the project would be due to construction and operation of the project. As discussed in Section 3.4, the City Municipal Code Section 33-924(G)(6) includes thresholds for ROG/VOC, NO_x, CO, SO_x, PM₁₀, PM_{2.5}, and lead emissions. These thresholds are summarized in Table 2.

6.0 Air Quality Assessment

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

Construction and operation air emissions were calculated using California Emissions Estimator Model (CalEEMod) 2016.3.1 (California Air Pollution Control Officers Association [CAPCOA] 2016). The CalEEMod program is a tool used to estimate air emissions resulting from land development projects based on California-specific emission factors. The model estimates mass emissions from two basic sources: construction sources and operational sources (i.e., area and mobile sources).

Inputs to CalEEMod include such items as the air basin containing the project, land uses, trip generation rates, trip lengths, vehicle fleet mix (percentage of autos, medium truck, etc.), trip destination (i.e., percent of trips from home to work, etc.), duration of construction phases, construction equipment usage, grading areas, season, and ambient temperature, as well as other parameters. The CalEEMod output files contained in Attachment 1 indicate the specific outputs for each model run. Emissions of NO_x, CO, SO_x, PM₁₀, PM_{2.5}, and ROG are calculated. Emission factors are not available for lead, and consequently, lead emissions are not calculated. The SDAB is currently in attainment of the federal and state lead standards. Furthermore, fuel used in construction equipment and most other vehicles is not leaded.

6.1 Construction Emissions

Construction-related activities are temporary sources of air emissions. Sources of construction-related air emissions include:

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

Construction-related pollutants result from dust raised during demolition and grading, emissions from construction vehicles, and chemicals used during construction. Fugitive dust emissions vary greatly during construction and are dependent on the amount and type of activity, silt content of the soil, and the weather. Vehicles moving over paved and unpaved surfaces, demolition, excavation, earth movement, grading, and wind erosion from exposed surfaces are all sources of fugitive dust. Construction operations are subject to the requirements established in Regulation 4, Rules 52, 54, and 55, of the SDAPCD's rules and regulations.

Heavy-duty construction equipment is usually diesel powered. In general, emissions from diesel-powered equipment contain more NO_x, SO_x, and particulate matter than gasoline-powered engines. However, diesel-powered engines generally produce less CO and less ROG than do gasoline-powered engines. Standard construction equipment includes tractors/loaders/backhoes, rubber-tired dozers, excavators, graders, cranes, forklifts, rollers, paving equipment, generator sets, welders, cement and mortar mixers, and air compressors.

Construction emissions were modeled assuming construction would begin in May 2017 and last until December 2017. Primary inputs are the numbers of each piece of equipment and the length of each construction stage. Specific construction phasing and equipment parameters are not available at this time. However, CalEEMod can estimate the required construction equipment when project-specific information is unavailable. The estimates are based on surveys, performed by the SCAQMD and the Sacramento Metropolitan Air Quality Management District, of typical construction projects which provide a basis for scaling equipment needs and schedule with a project’s size. Air emission estimates in CalEEMod are based on the duration of construction phases; construction equipment type, quantity, and usage; grading area; season; and ambient temperature, among other parameters. Project construction would occur in five stages: site preparation, grading/excavation, building construction, paving, and architectural coatings.

Table 4 shows the total projected construction maximum daily emission levels for each criteria pollutant. The CalEEMod output files for construction emissions are contained in Attachment 1.

Table 4 Summary of Worst-case Construction Emissions (pounds per day)						
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Demolition	3	28	16	0	3	2
Site Preparation	2	27	15	0	3	1
Grading	2	26	11	0	8	5
Building Construction	4	25	18	0	2	2
Paving	2	17	13	0	1	1
Architectural Coatings	9	2	2	0	0	0
Maximum Daily Emissions	9	28	18	0	8	5
<i>Significance Threshold</i>	<i>75</i>	<i>250</i>	<i>550</i>	<i>250</i>	<i>100</i>	<i>55</i>

Standard dust control measures would be implemented as a part of project construction in accordance with SDAPCD rules and regulations. Fugitive dust emissions were calculated using CalEEMod default values, and did not take into account the required dust control measures. Thus, the emissions shown in Table 4 are conservative.

For assessing the significance of the air quality emissions that would be generated during construction of the project, the construction emissions were compared to the City significance thresholds shown in Table 4. As shown in Table 4, maximum daily construction emissions associated with the project are projected to be less than the applicable thresholds for all criteria pollutants. Construction related air quality impacts would be less than significant.

6.2 Operation Emissions

6.2.1 Mobile and Area Source Emissions

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

Mobile source operational emissions are based on the trip rate, trip length for each land use type and size. According to the project traffic report, the project would generate 5,931 average daily trips (Kimley-Horn 2017). Based on regional data compiled by CARB as part of the emission factor model, the average regional trip length for all trips in San Diego County is 5.8 miles. This distance is multiplied by the total trip generation of the project to determine total project annual vehicle miles traveled (VMT) (CARB 2011). Default vehicle emission factors were used.

Area source emissions associated with the project include consumer products, natural gas used in space and water heating, architectural coatings, and landscaping equipment. Hearths (fireplaces) and woodstoves are also a source of area emissions; however, the project would not include hearths or woodstoves. Consumer products are chemically formulated products used by household and institutional consumers, including, but not limited to, detergents, cleaning compounds, polishes, floor finishes, disinfectants, sanitizers, and aerosol paints but not including other paint products, furniture coatings, or architectural coatings. Emissions due to consumer products are calculated using total building area and product emission factors. Emissions are generated from the combustion of natural gas used in space and water heating. Emissions are based on the Residential Appliance Saturation Survey which is a comprehensive energy use assessment that includes the end use for various climate zones in California.

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

Table 5 provides a summary of the operational emissions generated by the project. CalEEMod output files for project operation are contained in Attachment 1. As shown, project-generated emissions are projected to be less than the City's significance thresholds for all criteria pollutants.

Table 5
Summary of Project Operational Emissions
(pounds per day)

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area Sources	0	0	0	0	0	0
Energy Sources	0	0	0	0	0	0
Mobile Sources	8	26	59	0	9	3
Total	8	27	59	0	9	3
<i>Significance Threshold</i>	<i>55</i>	<i>250</i>	<i>550</i>	<i>250</i>	<i>100</i>	<i>55</i>
NOTE: Totals may vary due to independent rounding.						

6.2.2 Localized Carbon Monoxide Impacts

Localized CO concentration is a direct function of motor vehicle activity at signalized intersections (e.g., idling time and traffic flow conditions), particularly during peak commute hours and certain meteorological conditions. Under specific meteorological conditions (e.g., stable conditions that result in poor dispersion), CO concentrations may reach unhealthy levels with respect to local sensitive land uses. Guidance for the evaluation of CO hot spots is provided in the *Transportation Project-level Carbon Monoxide Protocol* (CO protocol) (University of California, Davis 1997) prepared for the Environmental Program of the California Department of Transportation by the Institute of Transportation Studies, University of California Davis.

The SDAB is a CO maintenance area under the federal CAA. This means that SDAB was previously a non-attainment area and is currently implementing a 10-year plan for continuing to meet and maintain air quality standards. As a result, ambient CO levels have declined significantly. CO hot spots have been found to occur only at signalized intersections that operate at or below level of service (LOS) E with peak-hour trips for that intersection exceeding 3,000 trips (County of San Diego 2007). According to the CO Protocol, in maintenance areas, only projects that are likely to worsen air quality necessitate further analysis. The CO Protocol indicates that projects may worsen air quality if they worsen traffic flow, defined as increasing average delay at signalized intersections operating at LOS E or F or causing an intersection that would operate at LOS D or better without the project to operate at LOS E or F. Unsignalized intersections are not evaluated, as they are typically signalized as volumes increase and delays increase, and traffic volumes at unsignalized intersections are typically much lower than at signalized intersections.

The traffic study prepared for the project includes anticipated traffic volumes at intersections near the project site. Only one intersection, Centre City Parkway at El Norte Parkway, is anticipated to operate at LOS E in the existing plus cumulative plus project condition. Operation at this intersection would improve to LOS D in the year 2035 plus project condition. All other intersections are projected to operate at LOS D or better in the analyzed scenarios. Therefore, only the intersection of Centre City Parkway at El Norte Parkway in the existing plus cumulative plus project condition was included in the CO hot spot calculations.

CALINE4, a computer air emission dispersion model with a graphic interface (CalRoads View), was used to calculate CO concentrations at receivers located at each intersection. These concentrations were derived from inputs including traffic volumes from the traffic analysis and emission factors from EMFAC2014 (CARB 2014). The detailed modeling is based on the 2017 peak hour traffic volumes and emission factors from EMFAC2014. The one-hour background concentration of CO for the area, 3.2 ppm, was included in the model. This ambient concentration is considered conservative, as it was the highest recorded hourly concentration over the past five years at the Escondido–East Valley Parkway monitoring station. The average regional winter low temperature of 38°F was included in the model as reported by the Western Regional Climate Center data for the project area. For a worst-case meteorological setting, the wind angle assumes all wind is blowing at each receptor. The mixing height of pollutants was set at 1,000 feet with a stable atmosphere.

The results of the CO modeling are summarized in Table 6. CALINE4 output is contained in Attachment 2.

Table 6 Maximum CO Concentrations (ppm)					
Roadway	Existing + Cumulative + Project			Standard CAAQS/NAAQS	
	Peak Hour Volume	1-Hour Concentration	8-Hour Concentration	1-Hour	8-Hour
Centre City Parkway at El Norte Parkway	4,069	5.2	3.6	20/35	9.0/9

¹ 8-hour concentrations developed based on a 0.7 persistence factor.

As shown, the maximum 1-hour concentration would be 5.2 ppm. This concentration is below the federal and state 1-hour standards. In order to determine the 8-hour concentration, the 1-hour value was multiplied by a persistence factor of 0.7 as recommended in the CO Protocol. Based on this calculation, the maximum 8-hour concentration would be 3.6 ppm. Thus, increases of CO due to the project would be below the federal and state 8-hour standards. Therefore, localized air quality emissions would be less than significant.

6.3 Impact Analysis

1. Would the project obstruct or conflict with the implementation of the San Diego RAQS?

The RAQS is the applicable regional air quality plan that sets forth the SDAPCD’s strategies for achieving the NAAQS and CAAQS. The SDAB is designated non-attainment for the federal and state ozone standard. Accordingly, the RAQS was developed to identify feasible emission control measures and provide expeditious progress toward attaining the standards for ozone. The two pollutants addressed in the RAQS are ROG and NOx, which are precursors to the formation of ozone. Projected increases in motor vehicle usage, population, and growth create challenges in controlling emissions and by extension to maintaining and improving air quality. The RAQS, in conjunction with the TCM, were most recently adopted in 2009 as the air quality plan for the region.

The growth projections used by the SDAPCD to develop the RAQS emissions budgets are based on the population, vehicle trends, and land use plans developed in general plans and used by SANDAG in the development of the regional transportation plans and sustainable communities strategy. As such, projects that propose development that is consistent with the growth anticipated by SANDAG's growth projections and/or the general plan would not conflict with the RAQS. In the event that a project would propose development that is less dense than anticipated by the growth projections, the project would likewise be consistent with the RAQS. In the event a project proposes development that is greater than anticipated in the growth projections, further analysis would be warranted to determine if the project would exceed the growth projections used in the RAQS for the specific subregional area.

The project site is designated as GC – General Commercial in the Escondido General Plan. The project would be consistent with the General Plan land use designation and with the growth anticipated by the City General Plan. Additionally, as discussed under Issue 2, project emissions would not exceed the project-level significance thresholds from the City Municipal Code. These thresholds are intended to both define quality of life standards and implement the Growth Management Element of the City General Plan. The project would therefore not result in an increase in emissions that are not already accounted for in the RAQS. Thus, the project would not obstruct or conflict with implementation of the RAQS.

2. Would the project result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation?

As shown in Table 4, project construction would not exceed the City's thresholds of significance. Therefore, as project construction emissions would be below these limits, project construction would not result in regional emissions that would exceed the NAAQS or CAAQS or contribute to existing violations.

As shown in Table 5, project operation would not exceed the City's thresholds of significance. Therefore, as project operation emissions would be below these limits, project operation would not result in regional emissions that would exceed the NAAQS or CAAQS or contribute to existing violations. Therefore, the project would result in a less than significant impact.

3. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including release emissions which exceed quantitative thresholds for ozone precursors)?

The region is classified as attainment for all criterion pollutants except ozone, PM₁₀, and PM_{2.5}. The SDAB is non-attainment for the 8-hour federal and state ozone standards. Ozone is not emitted directly, but is a result of atmospheric activity on precursors. NO_x and ROG are known as the chief "precursors" of ozone. These compounds react in the presence of sunlight to produce ozone.

As shown in Tables 4 and 5, emissions of ozone precursors (ROG and NO_x), PM₁₀, and PM_{2.5} from construction and operation would be below the City's thresholds of significance. These thresholds were developed based on the CAA de minimis level, which are designed to provide limits below which project emissions from an individual project would not significantly affect regional air quality or the timely attainment of the NAAQS and CAAQS. Therefore, the project would not result in a cumulatively considerable net increase in emissions of ozone, PM₁₀, or PM_{2.5}, and impacts would be less than significant.

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

Sensitive land uses include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (CARB 2005). There are residential uses located southwest of the project site. Residential uses are also being constructed on the lot immediately south of the project site. Additionally, the Epiphany Prep Charter School is located adjacent to the eastern boundary of the project site, and the Escondido Kids Galore Preschool and Escondido Adult School are located approximately 0.15 and 0.25 mile, respectively, northeast of the project site. Residential uses and a senior living community are located adjacent to the intersection of Centre City Parkway and El Norte Parkway, which was analyzed for impacts related to CO hot spots.

Construction of the project and associated infrastructure would result in short-term diesel exhaust emissions from on-site heavy-duty equipment. Construction of the project would result in the generation of diesel-exhaust DPM emissions from the use of off-road diesel equipment required for site grading and excavation, paving, and other construction activities and on-road diesel equipment used to bring materials to and from the project site.

Generation of DPM from construction projects typically occurs in a single area for a defined period. Construction of the project would occur from May to December 2017. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2015). Thus, if the duration of proposed construction activities near any specific sensitive receptor were 9 months, the exposure would be less than 3 percent of the total exposure period used for health risk calculation.

Therefore, DPM generated by project construction is not expected to create conditions where the probability is greater than 10 in 1 million of contracting cancer for the Maximally Exposed Individual or to generate ground-level concentrations of noncarcinogenic TACs that exceed a Hazard Index greater than 1 for the Maximally Exposed Individual. Additionally, with ongoing implementation of U.S. EPA and CARB requirements for cleaner fuels; off-road diesel engine retrofits; and new, low-emission diesel engine types, the

DPM emissions of individual equipment would be substantially reduced over the years as the project construction continues. Therefore, project construction would not expose sensitive receptors to substantial pollutant concentration.

Localized CO concentration is a direct function of motor vehicle activity at signalized intersections (e.g., idling time and traffic flow conditions), particularly during peak commute hours and meteorological conditions. As shown in Table 6, the maximum 1-hour and 8-hour concentrations of CO would occur at the intersection of Centre City Parkway and El Norte Parkway and would be 5.2 ppm and 3.6 ppm, respectively. These concentrations are less than the CAAQS and NAAQS. All other intersections would operate at LOS D or better. Thus, it can be concluded that CO concentrations at these intersections would be less than the CO concentrations shown in Table 6. There would be no harmful concentrations of CO, and localized air quality emissions would not exceed applicable standards with implementation of the project; therefore, sensitive receptors would not be exposed to substantial pollutant concentrations.

5. Would the project create objectionable odors affecting a substantial number of people?

During construction, diesel equipment may generate some nuisance odors. Sensitive receptors near the project site include residential uses to the south and southwest; however, exposure to odors associated with project construction would be short term and temporary in nature. Construction odor impacts would be less than significant.

The following list provides some common types of facilities that are known producers of objectionable odors (Bay Area Air Quality Management District 2010). This list of facilities is not meant to be all-inclusive.

- Wastewater Treatment Plant
- Wastewater Pumping Facilities
- Sanitary Landfill
- Transfer Station
- Composting Facility
- Petroleum Refinery
- Asphalt Batch Plant
- Chemical Manufacturing
- Fiberglass Manufacturing
- Painting/Coating Operations
- Rendering Plant
- Coffee Roaster
- Food Processing Facility
- Confined Animal Facility/Feed Lot/Dairy
- Green Waste and Recycling Operations
- Metal Smelting Plants

The project does not include any of these uses that are typically associated with odor complaints. The project does include restaurants. Restaurants can produce noticeable odors through the preparation of food. However, the odors from general food preparation are not generally considered objectionable. Additionally, restaurant kitchens are required to install

ventilation systems that would decrease odor impacts. These sources are not expected to generate significant objectionable odors affecting a substantial number of people. Impacts would be less than significant.

7.0 Conclusions

The primary goal of the RAQS is to reduce ozone precursor emissions. The project site is designated as GC – General Commercial in the Escondido General Plan. Because the project would be consistent with the General Plan land use designation, it would be consistent with the growth anticipated by SANDAG. The project would therefore not result in an increase in emissions that are not already accounted for in the RAQS. Thus, the project would not interfere with implementation of the RAQS or other air quality plans.

As shown in Table 4, project construction emissions would not exceed the applicable regional emissions thresholds. These thresholds are designed to provide limits below which project emissions would not significantly change regional air quality. Therefore, as project emissions would be well below these limits, project construction would not result in regional emissions that would exceed the NAAQS or CAAQS or contribute to existing violations. Additionally, construction emissions would be temporary, intermittent, and would cease at the end of project construction.

As shown in Table 5, project operational emissions would not exceed the applicable regional emissions thresholds. Therefore, as project emissions would be well below these limits, project operations would not result in regional emissions that would exceed the NAAQS or CAAQS or contribute to existing violations.

The project would not result in the exposure of sensitive receptors to substantial concentrations of DPM. Maximum CO concentrations occur at the intersection of Centre City Parkway and El Norte Parkway and would be less than the CAAQS and NAAQS. All other intersections would operate at LOS D or better. Thus, it can be concluded that CO concentrations at these intersections would be less than the CO concentrations shown in Table 6. There would be no harmful concentrations of CO, and localized air quality emissions would not exceed applicable standards with implementation of the project; therefore, sensitive receptors would not be exposed to substantial pollutant concentrations.

The project does not include any uses that are typically associated with odor complaints. The project does include restaurants. Restaurants can produce noticeable odors through the preparation of food. However, the odors from general food preparation are not generally considered objectionable. Additionally, restaurant kitchens are required to install ventilation systems that would decrease odor impacts. These sources are not expected to generate significant objectionable odors affecting a substantial number of people. The project would involve the use of diesel-powered construction equipment. Diesel exhaust may be noticeable temporarily at adjacent properties; however, construction activities would be temporary. Therefore, odor impacts would be less than significant.

8.0 References Cited

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ATTACHMENTS

ATTACHMENT 1
CalEEMod Output – Project Emissions

8478 425 W Mission Ave - Project 2020 - San Diego County APCD Air District, Winter

8478 425 W Mission Ave - Project 2020
San Diego County APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	1.88	Acre	1.87	81,892.80	0
Fast Food Restaurant with Drive Thru	4.88	1000sqft	0.11	4,878.00	0
Fast Food Restaurant w/o Drive Thru	2.40	1000sqft	0.06	2,400.00	0
Automobile Care Center	4.31	1000sqft	0.10	4,308.00	0
Strip Mall	4.50	1000sqft	0.10	4,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	540.37	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

8478 425 W Mission Ave - Project 2020 - San Diego County APCD Air District, Winter

Project Characteristics - RPS status - 33% goal for 2020. SDGE has already achieved 35.2%

CalEEMod accounts for 10.2%

Additional 25% reduction applied

(540.37, 0.022, 0.005)

Land Use - 2.24 acres

Construction Phase - May - December 2017

Demolition -

Grading -

Architectural Coating - SDAPCD Rule 67.0.1

Vehicle Trips - Car Wash - 900 trips (208.91/ksf)

Fast food with drive-through - 3,171 trips (650/ksf)

Fast food without drive-through - 1,680 trips (700/ksf)

Retail - 180 trips (40/ksf)

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating - SDAPCD Rule 67

Energy Use - Default

Water And Wastewater - CalGreen 20% Indoor Water Reduction

324,391.656 + 9,198,000 = 9,522,391.656

582,784.728

1,184,995.616

266,661.08

Water Mitigation -

Waste Mitigation -

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00

8478 425 W Mission Ave - Project 2020 - San Diego County APCD Air District, Winter

tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	150
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblConstructionPhase	NumDays	10.00	21.00
tblConstructionPhase	NumDays	220.00	88.00
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	6.00	21.00
tblConstructionPhase	NumDays	10.00	21.00
tblConstructionPhase	NumDays	3.00	22.00
tblConstructionPhase	PhaseEndDate	1/29/2018	12/29/2017
tblConstructionPhase	PhaseStartDate	12/30/2017	12/1/2017
tblLandUse	LotAcreage	1.88	1.87
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	720.49	540.37
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2020
tblVehicleTrips	CC_TL	7.30	5.80
tblVehicleTrips	CC_TL	7.30	5.80
tblVehicleTrips	CC_TL	7.30	5.80
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	5.80
tblVehicleTrips	CNW_TL	7.30	5.80
tblVehicleTrips	CNW_TL	7.30	5.80
tblVehicleTrips	CNW_TL	7.30	5.80

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tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	5.80
tblVehicleTrips	CW_TL	9.50	5.80
tblVehicleTrips	CW_TL	9.50	5.80
tblVehicleTrips	CW_TL	9.50	5.80
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	5.80
tblVehicleTrips	ST_TR	23.72	208.91
tblVehicleTrips	SU_TR	11.88	208.91
tblVehicleTrips	WD_TR	23.72	208.91
tblVehicleTrips	WD_TR	496.12	650.00
tblVehicleTrips	WD_TR	716.00	700.00
tblVehicleTrips	WD_TR	44.32	40.00
tblWater	IndoorWaterUseRate	405,489.57	9,522,391.66
tblWater	IndoorWaterUseRate	1,481,244.52	1,184,995.62
tblWater	IndoorWaterUseRate	728,480.91	582,784.73
tblWater	IndoorWaterUseRate	333,326.35	266,661.08
tblWater	OutdoorWaterUseRate	248,525.87	0.00

2.0 Emissions Summary

8478 425 W Mission Ave - Project 2020 - San Diego County APCD Air District, Winter

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4256	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9300e-003	3.9300e-003	1.0000e-005		4.2000e-003
Energy	0.0393	0.3574	0.3002	2.1400e-003		0.0272	0.0272		0.0272	0.0272		428.8340	428.8340	8.2200e-003	7.8600e-003	431.3823
Mobile	8.3241	29.0066	67.0765	0.1549	11.9339	0.1707	12.1046	3.1898	0.1599	3.3497		15,735.2698	15,735.2698	1.1388		15,763.7399
Total	8.7890	29.3640	67.3786	0.1571	11.9339	0.1978	12.1317	3.1898	0.1871	3.3769		16,164.1077	16,164.1077	1.1470	7.8600e-003	16,195.1265

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4256	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9300e-003	3.9300e-003	1.0000e-005		4.2000e-003
Energy	0.0393	0.3574	0.3002	2.1400e-003		0.0272	0.0272		0.0272	0.0272		428.8340	428.8340	8.2200e-003	7.8600e-003	431.3823
Mobile	7.9347	26.4599	58.7825	0.1216	8.9103	0.1381	9.0484	2.3816	0.1294	2.5110		12,358.4788	12,358.4788	0.9824		12,383.0376
Total	8.3996	26.8173	59.0846	0.1238	8.9103	0.1653	9.0756	2.3816	0.1565	2.5382		12,787.3167	12,787.3167	0.9906	7.8600e-003	12,814.4241

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	4.43	8.67	12.31	21.20	25.34	16.43	25.19	25.34	16.33	24.84	0.00	20.89	20.89	13.64	0.00	20.87

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/1/2017	5/31/2017	5	23	
2	Site Preparation	Site Preparation	6/1/2017	6/30/2017	5	22	
3	Grading	Grading	7/1/2017	7/31/2017	5	21	
4	Building Construction	Building Construction	8/1/2017	11/30/2017	5	88	
5	Paving	Paving	12/1/2017	12/29/2017	5	21	
6	Architectural Coating	Architectural Coating	12/1/2017	12/29/2017	5	21	

Acres of Grading (Site Preparation Phase): 33

Acres of Grading (Grading Phase): 10.5

Acres of Paving: 1.87

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 24,129; Non-Residential Outdoor: 8,043; Striped Parking Area: 4,914 (Architectural Coating – sqft)

OffRoad Equipment

8478 425 W Mission Ave - Project 2020 - San Diego County APCD Air District, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

8478 425 W Mission Ave - Project 2020 - San Diego County APCD Air District, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	108.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	40.00	16.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 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					1.0313	0.0000	1.0313	0.1562	0.0000	0.1562			0.0000			0.0000
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404		2,421.4229	2,421.4229	0.6125		2,436.7347
Total	2.7625	26.7594	15.5573	0.0241	1.0313	1.6477	2.6790	0.1562	1.5404	1.6966		2,421.4229	2,421.4229	0.6125		2,436.7347

8478 425 W Mission Ave - Project 2020 - San Diego County APCD Air District, Winter

3.2 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	0.0519	1.6464	0.3521	3.7600e-003	0.0821	9.3400e-003	0.0914	0.0225	8.9400e-003	0.0314		407.5925	407.5925	0.0382		408.5477
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	0.0690	0.0506	0.4788	1.1300e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		112.6734	112.6734	4.2500e-003		112.7796
Total	0.1209	1.6970	0.8309	4.8900e-003	0.1888	0.0101	0.1990	0.0508	9.6700e-003	0.0605		520.2659	520.2659	0.0425		521.3273

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					1.0313	0.0000	1.0313	0.1562	0.0000	0.1562			0.0000			0.0000
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404	0.0000	2,421.4229	2,421.4229	0.6125		2,436.7347
Total	2.7625	26.7594	15.5573	0.0241	1.0313	1.6477	2.6790	0.1562	1.5404	1.6966	0.0000	2,421.4229	2,421.4229	0.6125		2,436.7347

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3.2 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	0.0519	1.6464	0.3521	3.7600e-003	0.0821	9.3400e-003	0.0914	0.0225	8.9400e-003	0.0314		407.5925	407.5925	0.0382		408.5477
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	0.0690	0.0506	0.4788	1.1300e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		112.6734	112.6734	4.2500e-003		112.7796
Total	0.1209	1.6970	0.8309	4.8900e-003	0.1888	0.0101	0.1990	0.0508	9.6700e-003	0.0605		520.2659	520.2659	0.0425		521.3273

3.3 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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	2.1335	26.7238	14.4219	0.0245		1.1097	1.1097		1.0209	1.0209		2,508.4086	2,508.4086	0.7686		2,527.6229
Total	2.1335	26.7238	14.4219	0.0245	1.5908	1.1097	2.7004	0.1718	1.0209	1.1926		2,508.4086	2,508.4086	0.7686		2,527.6229

8478 425 W Mission Ave - Project 2020 - San Diego County APCD Air District, Winter

3.3 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	0.0425	0.0312	0.2947	7.0000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		69.3375	69.3375	2.6200e-003		69.4029
Total	0.0425	0.0312	0.2947	7.0000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		69.3375	69.3375	2.6200e-003		69.4029

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	2.1335	26.7238	14.4219	0.0245		1.1097	1.1097		1.0209	1.0209	0.0000	2,508.4086	2,508.4086	0.7686		2,527.6229
Total	2.1335	26.7238	14.4219	0.0245	1.5908	1.1097	2.7004	0.1718	1.0209	1.1926	0.0000	2,508.4086	2,508.4086	0.7686		2,527.6229

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3.3 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	0.0425	0.0312	0.2947	7.0000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		69.3375	69.3375	2.6200e-003		69.4029
Total	0.0425	0.0312	0.2947	7.0000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		69.3375	69.3375	2.6200e-003		69.4029

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.3212	26.1643	10.7753	0.0206		1.2985	1.2985		1.1947	1.1947		2,112.1822	2,112.1822	0.6472		2,128.3614
Total	2.3212	26.1643	10.7753	0.0206	6.5523	1.2985	7.8509	3.3675	1.1947	4.5621		2,112.1822	2,112.1822	0.6472		2,128.3614

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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	0.0000	0.0000	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	0.0531	0.0389	0.3683	8.7000e-004	0.0822	6.0000e-004	0.0828	0.0218	5.6000e-004	0.0224		86.6718	86.6718	3.2700e-003		86.7536
Total	0.0531	0.0389	0.3683	8.7000e-004	0.0822	6.0000e-004	0.0828	0.0218	5.6000e-004	0.0224		86.6718	86.6718	3.2700e-003		86.7536

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.3212	26.1643	10.7753	0.0206		1.2985	1.2985		1.1947	1.1947	0.0000	2,112.1822	2,112.1822	0.6472		2,128.3614
Total	2.3212	26.1643	10.7753	0.0206	6.5523	1.2985	7.8509	3.3675	1.1947	4.5621	0.0000	2,112.1822	2,112.1822	0.6472		2,128.3614

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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	0.0000	0.0000	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	0.0531	0.0389	0.3683	8.7000e-004	0.0822	6.0000e-004	0.0828	0.0218	5.6000e-004	0.0224		86.6718	86.6718	3.2700e-003		86.7536
Total	0.0531	0.0389	0.3683	8.7000e-004	0.0822	6.0000e-004	0.0828	0.0218	5.6000e-004	0.0224		86.6718	86.6718	3.2700e-003		86.7536

3.5 Building Construction - 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					
Off-Road	3.3418	23.0287	16.3102	0.0250		1.4697	1.4697		1.4068	1.4068		2,347.6211	2,347.6211	0.5228		2,360.6922
Total	3.3418	23.0287	16.3102	0.0250		1.4697	1.4697		1.4068	1.4068		2,347.6211	2,347.6211	0.5228		2,360.6922

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3.5 Building Construction - 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	0.0992	2.2657	0.6837	4.3700e-003	0.1083	0.0214	0.1297	0.0312	0.0205	0.0516		466.9305	466.9305	0.0422		467.9843
Worker	0.2123	0.1557	1.4733	3.4800e-003	0.3286	2.4200e-003	0.3310	0.0872	2.2300e-003	0.0894		346.6873	346.6873	0.0131		347.0142
Total	0.3115	2.4214	2.1570	7.8500e-003	0.4369	0.0238	0.4607	0.1183	0.0227	0.1410		813.6178	813.6178	0.0552		814.9985

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	3.3418	23.0287	16.3102	0.0250		1.4697	1.4697		1.4068	1.4068	0.0000	2,347.6211	2,347.6211	0.5228		2,360.6922
Total	3.3418	23.0287	16.3102	0.0250		1.4697	1.4697		1.4068	1.4068	0.0000	2,347.6211	2,347.6211	0.5228		2,360.6922

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3.5 Building Construction - 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	0.0992	2.2657	0.6837	4.3700e-003	0.1083	0.0214	0.1297	0.0312	0.0205	0.0516		466.9305	466.9305	0.0422		467.9843
Worker	0.2123	0.1557	1.4733	3.4800e-003	0.3286	2.4200e-003	0.3310	0.0872	2.2300e-003	0.0894		346.6873	346.6873	0.0131		347.0142
Total	0.3115	2.4214	2.1570	7.8500e-003	0.4369	0.0238	0.4607	0.1183	0.0227	0.1410		813.6178	813.6178	0.0552		814.9985

3.6 Paving - 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					
Off-Road	1.6589	16.6726	12.2090	0.0178		1.0334	1.0334		0.9519	0.9519		1,802.2682	1,802.2682	0.5420		1,815.8177
Paving	0.2333					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.8922	16.6726	12.2090	0.0178		1.0334	1.0334		0.9519	0.9519		1,802.2682	1,802.2682	0.5420		1,815.8177

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3.6 Paving - 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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303
Total	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303

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	1.6589	16.6726	12.2090	0.0178		1.0334	1.0334		0.9519	0.9519	0.0000	1,802.2682	1,802.2682	0.5420		1,815.8177
Paving	0.2333					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.8922	16.6726	12.2090	0.0178		1.0334	1.0334		0.9519	0.9519	0.0000	1,802.2682	1,802.2682	0.5420		1,815.8177

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3.6 Paving - 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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303
Total	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303

3.7 Architectural Coating - 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					
Archit. Coating	9.0730					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	9.4053	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909

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3.7 Architectural Coating - 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	0.0425	0.0312	0.2947	7.0000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		69.3375	69.3375	2.6200e-003		69.4029
Total	0.0425	0.0312	0.2947	7.0000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		69.3375	69.3375	2.6200e-003		69.4029

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	9.0730					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	9.4053	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909

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3.7 Architectural Coating - 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	0.0425	0.0312	0.2947	7.0000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		69.3375	69.3375	2.6200e-003		69.4029
Total	0.0425	0.0312	0.2947	7.0000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		69.3375	69.3375	2.6200e-003		69.4029

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Diversity

Increase Transit Accessibility

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	7.9347	26.4599	58.7825	0.1216	8.9103	0.1381	9.0484	2.3816	0.1294	2.5110		12,358.4788	12,358.4788	0.9824		12,383.0376
Unmitigated	8.3241	29.0066	67.0765	0.1549	11.9339	0.1707	12.1046	3.1898	0.1599	3.3497		15,735.2698	15,735.2698	1.1388		15,763.7399

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	900.40	900.40	900.40	650,740	485,866
Fast Food Restaurant with Drive Thru	3,172.00	3,523.51	2648.47	2,333,143	1,742,008
Fast Food Restaurant w/o Drive Thru	1,680.00	1,670.40	1200.00	2,055,022	1,534,354
Parking Lot	0.00	0.00	0.00		
Strip Mall	180.00	189.18	91.94	196,845	146,971
Total	5,932.40	6,283.49	4,840.81	5,235,750	3,909,199

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	5.80	5.80	5.80	33.00	48.00	19.00	21	51	28
Fast Food Restaurant with Drive	5.80	5.80	5.80	2.20	78.80	19.00	29	21	50
Fast Food Restaurant w/o Drive	5.80	5.80	5.80	1.50	79.50	19.00	51	37	12
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Strip Mall	5.80	5.80	5.80	16.60	64.40	19.00	45	40	15

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Fast Food Restaurant with Drive Thru	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Fast Food Restaurant w/o Drive Thru	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Automobile Care Center	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Strip Mall	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

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	0.0393	0.3574	0.3002	2.1400e-003		0.0272	0.0272		0.0272	0.0272		428.8340	428.8340	8.2200e-003	7.8600e-003	431.3823
NaturalGas Unmitigated	0.0393	0.3574	0.3002	2.1400e-003		0.0272	0.0272		0.0272	0.0272		428.8340	428.8340	8.2200e-003	7.8600e-003	431.3823

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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					
Automobile Care Center	136.794	1.4800e-003	0.0134	0.0113	8.0000e-005		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003		16.0934	16.0934	3.1000e-004	3.0000e-004	16.1890
Fast Food Restaurant w/o Drive Thru	1147.79	0.0124	0.1125	0.0945	6.8000e-004		8.5500e-003	8.5500e-003		8.5500e-003	8.5500e-003		135.0343	135.0343	2.5900e-003	2.4800e-003	135.8368
Fast Food Restaurant with Drive Thru	2332.89	0.0252	0.2287	0.1921	1.3700e-003		0.0174	0.0174		0.0174	0.0174		274.4573	274.4573	5.2600e-003	5.0300e-003	276.0882
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
Strip Mall	27.6164	3.0000e-004	2.7100e-003	2.2700e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		3.2490	3.2490	6.0000e-005	6.0000e-005	3.2683
Total		0.0393	0.3574	0.3002	2.1500e-003		0.0272	0.0272		0.0272	0.0272		428.8340	428.8340	8.2200e-003	7.8700e-003	431.3823

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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					
Automobile Care Center	0.136794	1.4800e-003	0.0134	0.0113	8.0000e-005		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003		16.0934	16.0934	3.1000e-004	3.0000e-004	16.1890
Fast Food Restaurant w/o Drive Thru	1.14779	0.0124	0.1125	0.0945	6.8000e-004		8.5500e-003	8.5500e-003		8.5500e-003	8.5500e-003		135.0343	135.0343	2.5900e-003	2.4800e-003	135.8368
Fast Food Restaurant with Drive Thru	2.33289	0.0252	0.2287	0.1921	1.3700e-003		0.0174	0.0174		0.0174	0.0174		274.4573	274.4573	5.2600e-003	5.0300e-003	276.0882
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
Strip Mall	0.0276164	3.0000e-004	2.7100e-003	2.2700e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		3.2490	3.2490	6.0000e-005	6.0000e-005	3.2683
Total		0.0393	0.3574	0.3002	2.1500e-003		0.0272	0.0272		0.0272	0.0272		428.8340	428.8340	8.2200e-003	7.8700e-003	431.3823

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4256	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9300e-003	3.9300e-003	1.0000e-005		4.2000e-003
Unmitigated	0.4256	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9300e-003	3.9300e-003	1.0000e-005		4.2000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0522					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3733					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9300e-003	3.9300e-003	1.0000e-005		4.2000e-003
Total	0.4256	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9300e-003	3.9300e-003	1.0000e-005		4.2000e-003

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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	0.0522					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3733					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9300e-003	3.9300e-003	1.0000e-005		4.2000e-003
Total	0.4256	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9300e-003	3.9300e-003	1.0000e-005		4.2000e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

8478 425 W Mission Ave - Project 2020 - San Diego County APCD Air District, Winter

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

ATTACHMENT 2
CO Hot Spot Output

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
 JUNE 1989 VERSION
 PAGE 1

JOB: C:\Lakes\CALRoads View\CCP_ElNorte_E+C+P
 RUN: CALINE4 RUN (WORST CASE ANGLE)
 POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 0.5 M/S Z0= 100. CM ALT= 0.
 (M)
 BRG= WORST CASE VD= 0.0 CM/S
 CLAS= 7 (G) VS= 0.0 CM/S
 MIXH= 1000. M AMB= 3.2 PPM
 SIGTH= 5. DEGREES TEMP= 3.3 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	* X1	* Y1	* X2	* Y2	* TYPE	VEH	EF (G/MI)	H (M)	W (M)
A. Link_1	* *****	* *****	* *****	* *****	* AG	511	7.8	0.0	25.0
B. Link_2	* *****	* *****	* *****	* *****	* AG	430	4.8	0.0	12.0
C. Link_3	* *****	* *****	* *****	* *****	* AG	1404	7.8	0.0	34.0
D. Link_4	* *****	* *****	* *****	* *****	* AG	1637	4.8	0.0	12.0
E. Link_5	* *****	* *****	* *****	* *****	* AG	952	7.8	0.0	22.0
F. Link_6	* *****	* *****	* *****	* *****	* AG	952	7.8	0.0	22.0
G. Link_7	* *****	* *****	* *****	* *****	* AG	952	7.8	0.0	22.0
H. Link_8	* *****	* *****	* *****	* *****	* AG	952	7.8	0.0	22.0
I. Link_9	* *****	* *****	* *****	* *****	* AG	1020	4.8	0.0	12.0
J. Link_10	* *****	* *****	* *****	* *****	* AG	1020	4.8	0.0	12.0
K. Link_11	* *****	* *****	* *****	* *****	* AG	1020	4.8	0.0	12.0
L. Link_12	* *****	* *****	* *****	* *****	* AG	1020	4.8	0.0	12.0
M. Link_13	* *****	* *****	* *****	* *****	* AG	1202	7.8	0.0	15.0
N. Link_14	* *****	* *****	* *****	* *****	* AG	1202	7.8	0.0	15.0
O. Link_15	* *****	* *****	* *****	* *****	* AG	1202	7.8	0.0	15.0
P. Link_16	* *****	* *****	* *****	* *****	* AG	1202	7.8	0.0	15.0
Q. Link_17	* *****	* *****	* *****	* *****	* AG	982	4.8	0.0	14.0
R. Link_18	* *****	* *****	* *****	* *****	* AG	982	4.8	0.0	14.0
S. Link_19	* *****	* *****	* *****	* *****	* AG	982	4.8	0.0	14.0
T. Link_20	* *****	* *****	* *****	* *****	* AG	982	4.8	0.0	14.0
U. Link_21	* *****	* *****	* *****	* *****	* AG	982	4.8	0.0	14.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
 JUNE 1989 VERSION
 PAGE 2

JOB: C:\Lakes\CALRoads View\CCP_ElNorte_E+C+P
 RUN: CALINE4 RUN (WORST CASE ANGLE)
 POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (M)		
	* X	* Y	* Z
1. R_001	* 491275	* *****	* 1.8
2. R_002	* 491319	* *****	* 1.8
3. R_003	* 491317	* *****	* 1.8
4. R_004	* 491269	* *****	* 1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	* BRG * (DEG)	* PRED * CONC * (PPM)	CONC/LINK (PPM)									
			* A	B	C	D	E	F	G	H		
1. R_001	* 100.	* 5.2	* 0.1	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.3
2. R_002	* 317.	* 5.0	* 0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.3
3. R_003	* 285.	* 4.6	* 0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.3
4. R_004	* 169.	* 4.7	* 0.1	0.0	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.2

RECEPTOR	* CONC/LINK												
	* I	J	K	L	M	N	O	P	Q	R	S	T	U
1. R_001	* 0.3	0.1	0.0	0.0	0.2	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
2. R_002	* 0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0
3. R_003	* 0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.0	0.0	0.0	0.0
4. R_004	* 0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0