Appendix A

Air Quality Impact Analysis

URBAN CROSSROADS

County Line Road and Calimesa Boulevard Intersection Improvements

AIR QUALITY IMPACT ANALYSIS

CITY OF CALIMESA

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REVIEWED BY CITY OF CALIMESA

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LIST OF ABBREVIATED TERMS

(1)	Reference
µg/m3	Microgram per Cubic Meter
AADT	Annual Average Daily Trips
AQIA	Air Quality Impact Analysis
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
BACM	Best Available Control Measures
BMPs	Best Management Practices
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
DPM	Diesel Particulate Matter
EPA	Environmental Protection Agency
LST	Localized Significance Threshold
NAAQS	National Ambient Air Quality Standards
NO2	Nitrogen Dioxide
NOx	Oxides of Nitrogen
O3	Ozone
Pb	Lead
PM10	Particulate Matter 10 microns in diameter or less
PM2.5	Particulate Matter 2.5 microns in diameter or less
PPM	Parts Per Million
Project	County Line Road and Calimesa Boulevard Intersection Improvements
ROG	Reactive Organic Gases
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SIPs	State Implementation Plans

SO2	Sulfur Dioxide
SRA	Source Receptor Area
TAC	Toxic Air Contaminant
TIA	Traffic Impact Analysis
TOG	Total Organic Gases
VMT	Vehicle Miles Traveled

EXECUTIVE SUMMARY

CONSTRUCTION-SOURCE EMISSIONS

REGIONAL IMPACTS

Project construction-source emissions would not exceed the numerical regional thresholds of significance established by the South Coast Air Quality Management District (SCAQMD) for any criteria pollutants. It should be noted that Best Available Control Measures (BACMs) are not mitigation as they are standard regulatory requirements. Implementation of mitigation measure (MM) AQ-1 will further emissions to less than significant levels. Thus, a less than significant impact would occur for Project-related construction-source with and without implementation of MM AQ-1.

LOCALIZED IMPACTS

Project construction-source emissions would exceed the SCAQMD's localized significance thresholds for emissions of particulate matter ≤ 10 Microns (PM10) and particulate matter ≤ 2.5 Microns (PM2.5). MM AQ-1 is recommended to reduce the severity of the impacts. After implementation of MM AQ-1, Project construction-source emissions would not exceed the SCAQMD's localized significance thresholds for any criteria pollutant and a less than significant impact would occur.

Project construction-source emissions would be consistent with the applicable Air Quality Management Plans (AQMP).

ODORS

Established requirements addressing construction equipment operations, and construction material use, storage, and disposal requirements act to minimize odor impacts that may result from construction activities. Moreover, construction-source odor emissions would be temporary, short-term, and intermittent in nature and would not result in persistent impacts that would affect substantial numbers of people. Potential construction-source odor impacts are therefore considered less-than-significant.

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1 INTRODUCTION

This report presents the results of the air quality impact analysis (AQIA) prepared by Urban Crossroads, Inc., for the proposed County Line Road and Calimesa Boulevard Intersection Improvements ("Project"). The purpose of this AQIA is to evaluate the potential impacts to air quality associated with construction of the proposed Project, and recommend measures to mitigate impacts considered potentially significant in comparison to thresholds established by the South Coast Air Quality Management District (SCAQMD).

1.1 PROJECT DESCRIPTION

The City of Calimesaproposes to widen eastbound County Line Road from one-lane to two lanes from I-10 to approximately 600 feet east of Calimesa Boulevard; widen Calimesa Boulevard by adding one southbound lane from 150 feet south of County Line Road to County Line Road: and construct a 90-foot diameter roundabout at the intersection of County Line Road and Calimesa Boulevard, as shown on Exhibit 1-A. The improvements consist of constructing raised median, resurfacing existing pavement, construction curb, gutter, sidewalk, commercial driveways and curb ramps, and installing traffic signal, installing traffic signs, stripes and pavement markings.

1.2 CONSTRUCTION-SOURCE AIR POLLUTANT EMISSIONS MITIGATION MEASURES

1.2.1 MONITORING OF AND COMPLIANCE WITH STANDARD REGULATORY REQUIREMENTS/BEST AVAILABLE CONTROL MEASURES (BACMS)

Measures listed below (or equivalent language) shall appear on all Project grading plans, construction specifications and bid documents, and the City shall ensure such language is incorporated prior to issuance of any development permits. City monitoring of construction activities shall be conducted to ensure mitigation compliance.

SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to: Rule 1113 (Architectural Coatings) (1); Rule 431.2 (Low Sulfur Fuel) (2); Rule 403 (Fugitive Dust) (3); and Rule 1186 / 1186.1 (Street Sweepers) (4). In order to facilitate monitoring and compliance, applicable SCAQMD regulatory requirements are summarized below.

BACM AQ-1

The following measures shall be incorporated into Project plans and specifications as implementation of Rule 403 (3):

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day.

- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 miles per hour or less.

BACM AQ-2

Only "Low-Volatile Organic Compounds" paints (no more than 100 gram/liter of VOC) and/or High Pressure Low Volume (HPLV) applications consistent with South Coast Air Quality Management District Rule 1113 shall be used.

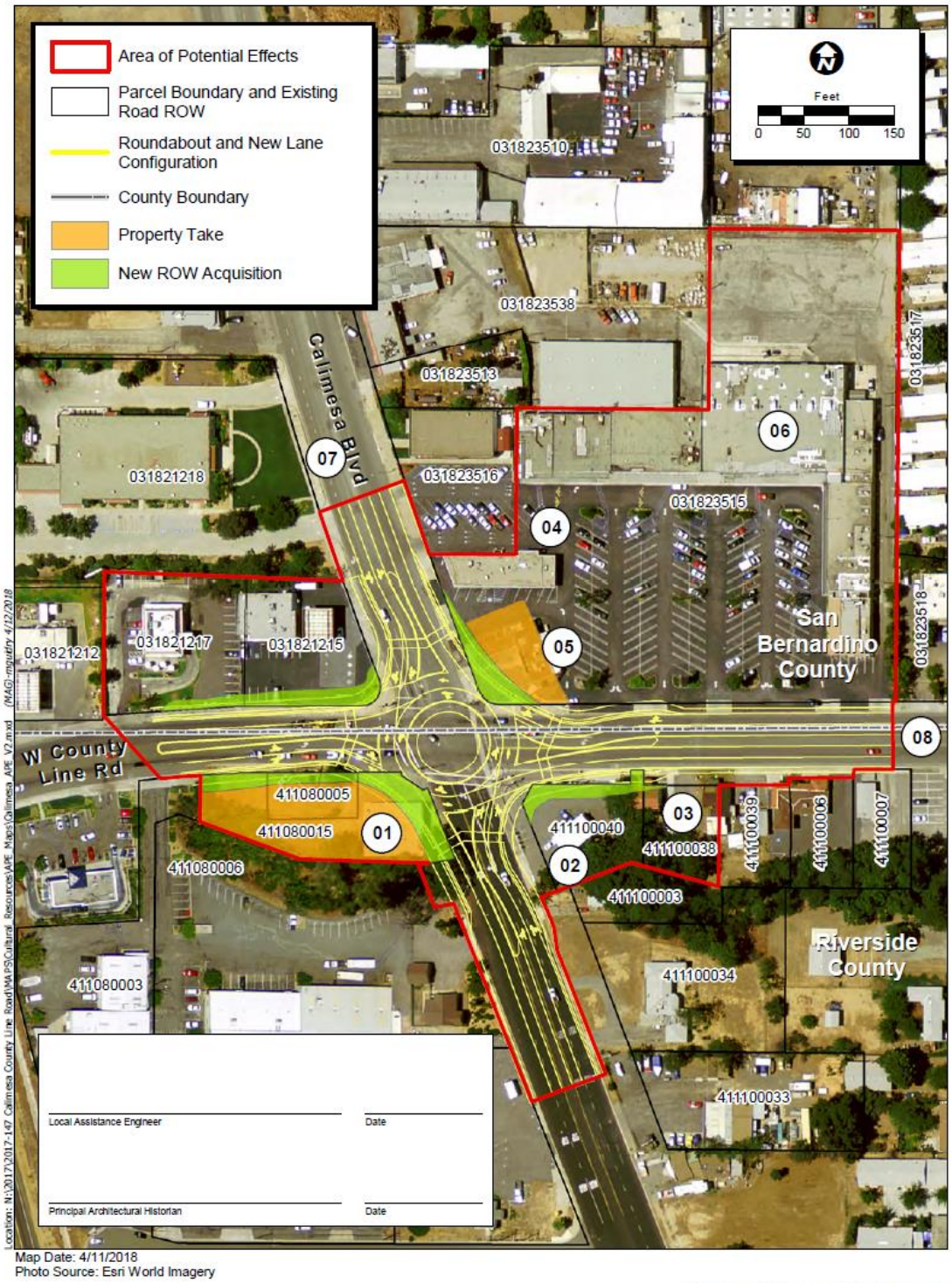
In addition to the above-cited SCAQMD regulatory requirements and BACMs, the Project shall implement the following construction activity mitigation measures.

1.2.2 CONSTRUCTION-SOURCE MITIGATION MEASURES

MM AQ-1

During construction, all rubber tired dozers and graders shall be CARB certified tier 3 or better.

EXHIBIT 1-A: LOCATION MAP



Map Date: 4/11/2018
Photo Source: Esri World Imagery

Area of Potential Effects

2017-147 Calimesa County Line Road

2 AIR QUALITY SETTING

This section provides an overview of the existing air quality conditions in the Project area and region.

2.1 SOUTH COAST AIR BASIN

The Project site is located in the South Coast Air Basin (SCAB) within the jurisdiction of SCAQMD (5). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. As discussed above, the Project site is located within the South Coast Air Basin, a 6,745-square mile sub-region of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The larger South Coast district boundary includes 10,743 square miles.

The SCAB is bound by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the Mojave Desert Air Basin is bound by the San Gabriel Mountains to the south and west, the Los Angeles / Kern County border to the north, and the Los Angeles / San Bernardino County border to the east. The Riverside County portion of the Salton Sea Air Basin is bound by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley.

2.2 REGIONAL CLIMATE

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality.

The annual average temperatures throughout the SCAB vary from the low to middle 60s ^{O}F (degrees Fahrenheit). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide to sulfates is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71 percent along the coast and 59 percent inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90 percent of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14 1/2 hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as oxides of nitrogen (NOx) and carbon monoxide (CO) from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

2.3 WIND PATTERNS AND PROJECT LOCATION

The distinctive climate of the Project area and the SCAB is determined by its terrain and geographical location. The Basin is located in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

Wind patterns across the south coastal region are characterized by westerly and southwesterly on-shore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

2.4 EXISTING AIR QUALITY

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated and in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 2-1 (6).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards presented in Table 2-1.

TABLE 2-1: AMBIENT AIR QUALITY STANDARDS (1 OF 2)

Ambient Air Quality Standards						
Pollutant	**Averaging Time**	**California Standards [1]**		**National Standards [2]**		
		Concentration [3]	**Method [4]**	**Primary [3,5]**	**Secondary [3,6]**	**Method [7]**
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[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 (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	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 Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[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 Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page …

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

TABLE 2-1: AMBIENT AIR QUALITY STANDARDS (2 OF 2)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, 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 PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, 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 ARB to give equivalent results at or near the level of the air quality standard may be used.

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

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

7. Reference method as described by the 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 PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

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

11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 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 ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ 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 ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (5/4/16)**

2.5 REGIONAL AIR QUALITY

The SCAQMD monitors levels of various criteria pollutants at 38 permanent monitoring stations and 5 single-pollutant source Lead (Pb) air monitoring sites throughout the air district (7). In 2016, the federal and state ambient air quality standards (NAAQS and CAAQS) were exceeded on one or more days for ozone, PM10, and PM2.5 at most monitoring locations (8). No areas of the SCAB exceeded federal or state standards for NO2, SO2, CO, sulfates or lead. See Table 2-2, for attainment designations for the SCAB (9) (10).

TABLE 2-2: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SOUTH COAST AIR BASIN (SCAB)

Criteria Pollutant	State Designation	Federal Designation
Ozone - 1hour standard	Nonattainment	No Standard
Ozone - 8 hour standard	Nonattainment	Nonattainment (Extreme)
PM_{10}	Nonattainment	Attainment (Maintenance)
$PM_{2.5}$	Nonattainment	Nonattainment (Serious)
Carbon Monoxide	Attainment	Attainment (Maintenance)
Nitrogen Dioxide	Attainment	Attainment (Maintenance)
Sulfur Dioxide	Attainment	Attainment
Lead[1]	Attainment	Nonattainment (Partial)

Source: State/Federal designations were available from the SCAQMD's 2016 AQMP (see Chapter 2)

2.6 LOCAL AIR QUALITY

Relative to the Project site, the nearest long-term air quality monitoring site is the San Gorgonio Pass monitoring station (SRA 29), at this location only Ozone (O_3), Nitrogen Dioxide (NO_2), and Particulate Matter ≤ 10 Microns (PM_{10}) are monitored. Concentrations for Carbon Monoxide (CO) and Particulate Matter ≤ 2.5 Microns ($PM_{2.5}$) are based on basin-wide maximums.

The most recent three (3) years of data available is shown on Table 2-3 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site (8). Additionally, data for SO_2 has been omitted as the air basin has been in attainment for SO2 since 2010 (attainment status is verified every three years).

[1] The Federal nonattainment designation for lead is only applicable towards the Los Angeles County portion of the SCAB.

TABLE 2-3: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2014-2016

POLLUTANT	STANDARD	YEAR		
		2014	2015	2016
Ozone (O_3)				
Maximum 1-Hour Concentration (ppm)		0.084	0.111	0.100
Maximum 8-Hour Concentration (ppm)		0.070	0.081	0.080
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	0	2	1
Number of Days Exceeding State 8-Hour Standard	> 0.07 ppm	0	6	1
Number of Days Exceeding Federal 1-Hour Standard	> 0.12 ppm	0	0	0
Number of Days Exceeding Federal 8-Hour Standard	> 0.075 ppm	0	4	1
Number of Days Exceeding Health Advisory	≥ 0.15 ppm	0	0	0
Carbon Monoxide (CO)				
Maximum 1-Hour Concentration (ppm)		--	3.0	--
Maximum 8-Hour Concentration (ppm)		2.6	2.1	--
Number of Days Exceeding State 1-Hour Standard	> 20 ppm	--	0	--
Number of Days Exceeding Federal / State 8-Hour Standard	> 9.0 ppm	0	0	--
Number of Days Exceeding Federal 1-Hour Standard	> 35 ppm	0	0	--
Nitrogen Dioxide (NO_2)				
Maximum 1-Hour Concentration (ppm)		0.082	0.076	0.059
Annual Arithmetic Mean Concentration (ppm)		0.018	0.015	0.015
Number of Days Exceeding State 1-Hour Standard	> 0.18 ppm	0	0	0
Particulate Matter ≤ 10 Microns (PM_{10})				
Maximum 24-Hour Concentration (µg/m^3)		77	85	59
Number of Samples		59	61	--
Number of Samples Exceeding State Standard	> 50 µg/m^3	1	2	2
Number of Samples Exceeding Federal Standard	> 150 µg/m^3	0	0	0
Particulate Matter ≤ 2.5 Microns ($PM_{2.5}$)				
Maximum 24-Hour Concentration (µg/m^3)		37.8	53.7	45.8
Annual Arithmetic Mean (µg/m^3)		10.09	11.2	14.8
Number of Samples Exceeding Federal 24-Hour Standard	> 35 µg/m^3	0	1	0

-- = data not available from SCAQMD or ARB

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and effects are identified below (11):

- Carbon Monoxide (CO): Is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest

during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

- Sulfur Dioxide (SO2): Is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO2 oxidizes in the atmosphere, it forms sulfates (SO4). Collectively, these pollutants are referred to as sulfur oxides (SOX).
- Nitrogen Oxides (Oxides of Nitrogen, or NOx): Nitrogen oxides (NOx) consist of nitric oxide (NO), nitrogen dioxide (NO2) and nitrous oxide (N2O) and are formed when nitrogen (N2) combines with oxygen (O2). Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. Nitrogen oxides are typically created during combustion processes, and are major contributors to smog formation and acid deposition. NO2 is a criteria air pollutant, and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO2 is the most abundant in the atmosphere. As ambient concentrations of NO2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO2 than those indicated by regional monitors.
- Ozone (O3): Is a highly reactive and unstable gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NOX) undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.
- PM10 (Particulate Matter less than 10 microns): A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. PM10 also causes visibility reduction and is a criteria air pollutant.
- PM2.5 (Particulate Matter less than 2.5 microns): A similar air pollutant consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO2 release from power plants and industrial facilities and nitrates that are formed from NOX release from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. PM2.5 is a criteria air pollutant.
- Volatile Organic Compounds (VOC): Volatile organic compounds are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form ozone to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include: carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a precursor to O3, which is a criteria pollutant. The SCAQMD uses the terms VOC and ROG (see below) interchangeably.

- Reactive Organic Gases (ROG): Similar to VOC, Reactive Organic Gases (ROG) are also precursors in forming ozone. Smog is formed when ROG and nitrogen oxides react in the presence of sunlight. The SCAQMD uses the terms ROG and VOC (see previous) interchangeably.
- Lead (Pb): Lead is a heavy metal that is highly persistent in the environment. In the past, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. As a result of the removal of lead from gasoline, there have been no violations at any of the SCAQMD's regular air monitoring stations since 1982. Currently, emissions of lead are largely limited to stationary sources such as lead smelters. It should be noted that the Project is not anticipated to generate a quantifiable amount of lead emissions. Lead is a criteria air pollutant.

Health Effects of Air Pollutants

Ozone

Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for ozone effects. Short-term exposure (lasting for a few hours) to ozone at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated ozone levels are associated with increased school absences. In recent years, a correlation between elevated ambient ozone levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple sports and live in communities with high ozone levels.

Ozone exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes ozone may be more toxic than exposure to ozone alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

Carbon Monoxide

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (oxygen deficiency) as seen at high altitudes.

Reduction in birth weight and impaired neurobehavioral development have been observed in animals chronically exposed to CO, resulting in COHb levels similar to those observed in smokers.

Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels; these include pre-term births and heart abnormalities.

Particulate Matter

A consistent correlation between elevated ambient fine particulate matter (PM10 and PM2.5) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life-span, and an increased mortality from lung cancer.

Daily fluctuations in PM2.5 concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long-term exposure to particulate matter.

The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM10 and PM2.5.

Nitrogen Dioxide

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups.

In animals, exposure to levels of NO2 considerably higher than ambient concentrations results in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of ozone exposure increases when animals are exposed to a combination of ozone and NO2.

Sulfur Dioxide

A few minutes of exposure to low levels of SO2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO2.

Animal studies suggest that despite SO2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.

Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO2 levels. In these studies, efforts to separate the effects of SO2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.

Lead

Fetuses, infants, and children are more sensitive than others to the adverse effects of lead (Pb) exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure.

Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.

Odors

The science of odor as a health concern is still new. Merely identifying the hundreds of VOCs that cause odors poses a big challenge. Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

2.7 REGULATORY BACKGROUND

2.7.1 FEDERAL REGULATIONS

The U.S. EPA is responsible for setting and enforcing the NAAQS for O3, CO, NOx, SO2, PM10, PM2.5, and lead (6). The U.S. EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The U.S. EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955, and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (12). The CAA also mandates that states submit and implement State Implementation Plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O3, NO2, SO2, PM10, CO, PM2.5, and lead. The NAAQS were amended in July 1997 to include an additional standard for O3 and to adopt a NAAQS for PM2.5. Table 2-1 (previously presented) provides the NAAQS within the basin.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and nitrogen oxides (NOx). NOx is a collective term that includes all forms of nitrogen oxides (NO, NO2, NO3) which are emitted as byproducts of the combustion process.

2.7.2 CALIFORNIA REGULATIONS

The CARB, which became part of the California EPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. The California CAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. However at this time, hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (13) (6).

Local air quality management districts, such as the SCAQMD, regulate air emissions from commercial and light industrial facilities. All basins have been formally designated as attainment or non-attainment for each CAAQS.

Non-attainment areas are required to prepare air quality management plans that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g. motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;

- Sufficient control strategies to achieve a five percent or more annual reduction in emissions or 15 percent or more in a period of three years for ROGs, NOx, CO and PM10. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than five percent per year under certain circumstances.

2.7.3 AIR QUALITY MANAGEMENT PLANNING

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB for PM10, PM2.5, and ozone. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards (14). AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.7.

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3 PROJECT AIR QUALITY IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will violate an air quality standard or contribute to an existing or projected air quality violation. Additionally, the Project has been evaluated to determine if it will result in a cumulatively considerable net increase of a criteria pollutant for which the SCAB is non-attainment under an applicable federal or state ambient air quality standard. The significance of these potential impacts is described in the following section.

3.2 STANDARDS OF SIGNIFICANCE

The SCAQMD has developed regional and localized significance thresholds for regulated pollutants, as summarized at Table 3-1 (15). The SCAQMD's CEQA Air Quality Significance Thresholds (March 2015) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

TABLE 3-1: MAXIMUM DAILY EMISSIONS THRESHOLDS

Pollutant	Construction
Regional Thresholds	
NOx	100 lbs/day
VOC	75 lbs/day
PM10	150 lbs/day
PM2.5	55 lbs/day
SOx	150 lbs/day
CO	550 lbs/day
Lead	3 lbs/day
Localized Thresholds	
CO	1,000 lbs/day
NOx	103 lbs/day
PM_{10}	6 lbs/day
$PM_{2.5}$	4 lbs/day

3.3 PROJECT-RELATED SOURCES OF POTENTIAL IMPACT

The Project would affect air quality through construction-source emissions. Because the Project does not generate any mobile trips and is intended to improve the LOS conditions of the Project road segment, no operational-source emissions were modeled.

In October 2017, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) released the latest version of the California Emissions Estimator Model™ (CalEEMod™) v2016.3.2. The purpose of this model is to calculate construction-source criteria

pollutant (NOx, VOC, PM10, PM2.5, SOx, and CO) and greenhouse gas (GHG) emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (16). Accordingly, the latest version of CalEEMod™ has been used for this Project to determine construction-source air quality emissions. Output from the model run for construction activity is provided in Appendix 3.2.

3.4 CONSTRUCTION EMISSIONS

Construction activities associated with the Project will result in emissions of CO, VOCs, NOx, SOx, PM10, and PM2.5. Construction related emissions are expected from construction activities associated with the road widening and site improvements of the Project.

Construction is expected to commence in 2020 and will last approximately 100 days as shown on Table 3-2. The construction schedule utilized in the analysis represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.[2] The associated construction equipment was based on CalEEMod model defaults. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per CEQA guidelines. Site specific construction fleet may vary due to specific project needs at the time of construction. Please refer to specific detailed modeling inputs/outputs contained in Appendix 3.2 of this analysis. A detailed summary of construction equipment assumptions by phase is provided at Table 3-3.

Dust is typically a major concern during rough grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions". Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). The CalEEMod model was utilized to calculate fugitive dust emissions resulting from this phase of activity. It is our understanding the Project will be balanced (will not require import/export of soil).

The Project will require demolition of existing roadways and some existing structures. Based on CalEEMod model defaults, demolition activity was estimated assuming that a conservative square footage of 120,000 square feet would be demolished.

Construction emissions for construction worker vehicles traveling to and from the Project site, as well as vendor trips (construction materials delivered to the Project site) were estimated based on information CalEEMod model defaults.

[2] As shown in the California Emissions Estimator Model (CalEEMod) User's Guide Version 2013.2, Table 3.4 "OFFROAD Equipment Emission Factors" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

TABLE 3-2: CONSTRUCTION DURATION

Phase Name	Days
Demolition	20
Grubbing/Land Clearing	14
Grading/Excavation	21
Drainage/Utilities/Sub-Grade	14
Paving	30

TABLE 3-3: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Activity	Equipment	Number	Hours Per Day
Demolition	Excavators	3	8
	Concrete/Industrial Saws	1	8
	Rubber Tired Dozers	2	8
Grubbing/Land Clearing	Tractors/Loaders/Backhoes	4	8
	Rubber Tired Dozers	3	8
Grading/Excavation	Excavators	1	8
	Rubber Tired Dozers	1	8
	Graders	1	8
	Tractors/Loaders/Backhoes	3	8
Drainage/Utilities/Subgrade	Cranes	1	7
	Forklifts	3	8
	Tractors/Loaders/Backhoes	3	7
	Generator Sets	1	8
	Welders	1	8
Paving	Pavers	1	8
	Rollers	2	6
	Tractors/Loaders/Backhoes	1	8
	Paving Equipment	2	6

3.4.1 CONSTRUCTION EMISSIONS SUMMARY

SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to: Rule 1403 (Asbestos); Rule 1113 (Architectural Coatings) (17); Rule 431.2 (Low Sulfur Fuel) (18); Rule 403 (Fugitive Dust) (19); and Rule 1186 / 1186.1 (Street Sweepers) (20). It should be noted that Best Available Control Measures (BACMs) are not mitigation as they are standard regulatory requirements. As such, credit for Rule 403 has been taken.

The estimated maximum daily construction emissions are summarized on Table 3-4. Detailed construction model outputs are presented in Appendix 3.2. Under the assumed scenarios, emissions resulting from the Project construction would not exceed the applicable SCAQMD regional thresholds of significance for any criteria pollutant. Therefore, a less than significant impact would occur and no mitigation is required for regional emissions.

TABLE 3-4: CONSTRUCTION EMISSIONS SUMMARY

Year	Emissions (pounds per day)					
	VOC	NOx	CO	SOx	PM10	PM2.5
Maximum Daily Emissions	**4.17**	**42.47**	**22.65**	**0.05**	**20.46**	**12.01**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

3.5 LOCALIZED SIGNIFICANCE - CONSTRUCTION ACTIVITY

BACKGROUND ON LOCALIZED SIGNIFICANCE THRESHOLDS (LSTS)

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (Methodology) (21). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs).

The significance of localized emissions impacts depends on whether ambient levels in the vicinity of any given project are above or below State standards. In the case of CO and NO2, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a state or federal standard, then project emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM10 and PM2.5; both of which are non-attainment pollutants.

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4[3]. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses.

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential

3 The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities. Further, the SCAQMD defines Environmental Justice as "…equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution."

localized adverse health effects. The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology) (22).

APPLICABILITY OF LSTS FOR THE PROJECT

For this Project, the appropriate Source Receptor Area (SRA) for the LST is the San Gorgonio Pass monitoring station (SRA 29). LSTs apply to CO, NO2, PM10, and PM2.5. The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size.

In order to determine the appropriate methodology for determining localized impacts that could occur as a result of Project-related construction, the following process is undertaken:

- CalEEMod is utilized to determine the maximum daily on-site emissions that will occur during construction activity.
- The SCAQMD's Fact Sheet for Applying CalEEMod to Localized Significance Thresholds (23) is used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod.
- If the total acreage disturbed is less than or equal to five acres per day, then the SCAQMD's screening look-up tables are utilized to determine if a Project has the potential to result in a significant impact. The look-up tables establish a maximum daily emissions threshold in pounds per day that can be compared to CalEEMod outputs.

EMISSIONS CONSIDERED

SCAQMD's Methodology clearly states that "off-site mobile emissions from the Project should NOT be included in the emissions compared to LSTs (24)." Therefore, for purposes of the construction LST analysis only emissions included in the CalEEMod "on-site" emissions outputs were considered.

MAXIMUM DAILY DISTURBED-ACREAGE

Table 3-5 is used to determine the maximum daily disturbed-acreage for purposes of modeling localized emissions. Based on Table 3-5, the proposed Project could actively disturb 1 acre per day during the grading/excavation phase of construction. Since the Project size is approximately 4 acres, it would not be feasible to grade the Project in its entirety. Use of a maximum 1 acre daily disturbed acreage is appropriate as the Project would be graded and closed off in small segments in order to allow a continuous flow of traffic during construction activity.

TABLE 3-5: MAXIMUM DAILY DISTURBED-ACREAGE

Construction Phase	Equipment Type	Equipment Quantity	Acres graded per 8-hour day	Operating Hours per Day	Acres graded per day
Grading/Excavation	Rubber Tired Dozers	1	0.5	8	0.5
	Crawler Tractors	0	0.5	8	0
	Graders	1	0.5	8	0.5
	Scrapers	0	1	8	0
Total acres graded per day during Grading					1.0

Sensitive Receptors

Some people are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects. These groups of people include children, the elderly, persons with preexisting respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Structures that house these persons or places where they gather to exercise are defined as "sensitive receptors".

The nearest sensitive receptor, where an individual can remain for 24 hours, is the residential community located adjacent to the proposed disturbance areas. Notwithstanding, the *Methodology* explicitly states that "*It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters* (25)." Therefore, LSTs for receptors located at 25 meters are utilized in this AQIA.

CONSTRUCTION-SOURCE EMISSIONS LST ANALYSIS

Since the total acreage disturbed is a maximum of 1 acre per day, SCAQMD's screening look-up tables at 1 acre are utilized in determining impacts. Use of the 1-acre maximum disturbance area is appropriate as the Project would be close off in small segments to allow a continuous flow of traffic. As previously noted, a 25-meter receptor distance is utilized to determine the LSTs for emissions of NOx, CO, PM10, and PM2.5. This methodology is consistent with recent recommendations made by the SCAQMD planning staff.

Impacts without Mitigation

Table 3-6 identifies the unmitigated localized impacts at the nearest receptor location in the vicinity of the Project. Emissions during the grading/excavation phase of construction activity would exceed the applicable thresholds for emissions of PM10 and PM2.5. Outputs from the model runs for construction LSTs are provided in Appendix 3.3.

TABLE 3-6: LOCALIZED SIGNIFICANCE SUMMARY CONSTRUCTION (WITHOUT MITIGATION)

On-Site Grading/Excavation Emissions	Emissions (pounds per day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	**26.38**	**16.05**	**7.83**	**4.54**
SCAQMD Localized Threshold	103	1,000	6	4
Threshold Exceeded?	**NO**	**NO**	**YES**	**YES**

Impacts with Mitigation

Table 3-7 identifies the mitigated localized impacts at the nearest receptor location in the vicinity of the Project. MM AQ-1 is recommended to reduce the impact to less than significant. After implementation of MM AQ-1, emissions during the site preparation phase and grading phase of construction activity would not exceed the applicable thresholds for any criteria pollutant. Therefore, a less than significant impact would occur.

TABLE 3-7: LOCALIZED SIGNIFICANCE SUMMARY CONSTRUCTION

On-Site Grading/Excavation Emissions	Emissions (pounds per day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	**15.91**	**16.05**	**3.34**	**2.06**
SCAQMD Localized Threshold	103	1,000	6	4
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

3.6 CO "HOT SPOT" ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots." Further, detailed modeling of Project-specific carbon monoxide (CO) "hot spots" is not needed to reach this conclusion.

An adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. At the time of the 1993 Handbook, the SCAB was designated nonattainment under the California AAQS and National AAQS for CO (26).

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment, as previously noted in Table 2-2. Also, CO concentrations in the Project vicinity have steadily declined, as indicated by historical emissions data presented previously at Table 2-3.

To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods. This "hot spot" analysis did not predict any violation of CO standards, as shown on Table 3-8.

Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, 9.3 ppm 8-hr CO concentration measured at the Long Beach Blvd. and Imperial Hwy. intersection (highest CO generating intersection within the "hot spot" analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 8.6 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared (26). In contrast, the ambient 8-hr CO concentration within the Project study area is estimated at 1.4 ppm—1.6 ppm (please refer to previous Table 2-3). Therefore, even if the traffic volumes for the proposed Project were double or even triple of the traffic volumes generated at the Long Beach Blvd. and Imperial Hwy. intersection, coupled with the on-going improvements in ambient air quality, the Project would not be capable of resulting in a CO "hot spot" at any study area intersections.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (27).

The busiest intersection evaluated for the "hot spot" analysis was that at Wilshire Blvd. and Veteran Ave., which has a daily traffic volume of approximately 100,000 vehicles per day. The 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm; this indicates that, should the daily traffic volume increase four times to 400,000 vehicles per day, CO concentrations (4.6 ppm x 4= 18.4 ppm) would still not likely exceed the most stringent 1-hour CO standard (20.0 ppm).[4] At buildout of the Project, the highest average daily trips would be 34,670 daily trips, which is lower than the highest daily traffic volumes generated at the busiest intersection in the CO "hot spot" analysis (28).

The proposed Project considered herein would not produce the volume of traffic required to generate a CO "hot spot" either in the context of the 2003 Los Angeles hot spot study, or based on representative BAAQMD CO threshold considerations. Therefore, CO "hot spots" are not an environmental impact of concern for the proposed Project. Localized air quality impacts related to mobile-source emissions would therefore be less than significant.

4 Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm).

TABLE 3-8: CO MODEL RESULTS

Intersection Location	Carbon Monoxide Concentrations (parts per million)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire-Veteran	4.6	3.5	4.2
Sunset-Highland	4	4.5	3.9
La Cienega-Century	3.7	3.1	5.8
Long Beach-Imperial	3	3.1	9.3

Source: 2003 AQMP
Notes: Federal 1-hour standard is 35 ppm and the deferral 8-hour standard is 9.0 ppm.

3.7 AIR QUALITY MANAGEMENT PLANNING

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the Southern California Association of Governments (SCAG), county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, these state and federal air quality standards are exceeded in most parts of the Basin. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

In March 2017, the AQMD released the Final 2016 AQMP. The 2016 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as, explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels (29). Similar to the 2012 AQMP, the 2016 AQMP incorporates scientific and technological information and planning assumptions, including the 2016 RTP/SCS and updated emission inventory methodologies for various source categories (30). The Project's consistency with the AQMP will be determined using the 2016 AQMP is discussed below:

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's CEQA Air Quality Handbook (1993) (31). These indicators are discussed below:

- Consistency Criterion No. 1: The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

Construction Impacts

Consistency Criterion No. 1 refers to violations of the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if localized significance thresholds (LSTs) or regional significance thresholds were exceeded. As evaluated as part of the Project LST analysis (previously presented), the Project's regional and localized construction-source emissions would not exceed applicable LSTs, and a less than significant impact is expected.

On the basis of the preceding discussion, the Project is determined to be consistent with the first criterion.

Consistency Criterion No. 2: The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase. Further, the Project will provide congestion relief and less delays in traffic flow due to implementation of the proposed roundabout.

Overview

The 2016 AQMP demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the Southern California Association of Governments (SCAG), which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in the General Plan is considered to be consistent with the AQMP.

AQMP Consistency Conclusion

The Project would not result in or cause NAAQS or CAAQS violations. The Project's does not propose a land use development but rather the widening of a road segment and implementation of a roundabout to reduce congestion in the study area. The Project is therefore considered to be consistent with the AQMP.

3.8 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Sensitive receptors can include uses such as long term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, child care centers, and athletic facilities can also be considered as sensitive receptors.

Results of the LST analysis indicate that the Project will not exceed the SCAQMD localized significance thresholds during construction (after mitigation). Therefore, sensitive receptors would not be subjected to a significant air quality impact during Project construction.

The proposed Project would not result in a CO "hotspot" as a result of Project related traffic during ongoing construction, nor would the Project result in a significant adverse health impact as discussed in Section 3.7.

3.9 ODORS

Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills or various heavy industrial uses. The Project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts. Potential sources of operational odors generated by the Project would include disposal of miscellaneous commercial refuse. Consistent with City requirements, all Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with solid waste regulations, thereby precluding substantial generation of odors due to temporary holding of refuse on-site Moreover, SCAQMD Rule 402 acts to prevent occurrences of odor nuisances (32).

3.10 CUMULATIVE IMPACTS

The Project area is designated as an extreme non-attainment area for ozone, and a non-attainment area for PM10, PM2.5, and lead.

The SCAQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (33). In this report the SCAQMD clearly states (Page D-3):

"…the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."

Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable. For this Project, a less than significant project-specific and thus less than significant cumulatively considerable impact would occur since the Project's emissions would not exceed the SCAQMD thresholds for construction activity.

Construction Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that Project construction-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, Project construction-source emissions would be considered less than significant on a project-specific and cumulative basis.

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4 FINDINGS & CONCLUSIONS

4.1 CONSTRUCTION-SOURCE EMISSIONS

REGIONAL IMPACTS

Project construction-source emissions would not exceed the numerical regional thresholds of significance established by the SCAQMD for any criteria pollutants. It should be noted that BACMs are not mitigation as they are standard regulatory requirements. . Implementation of mitigation measure MM AQ-1 will further emissions to less than significant levels. Thus, a less than significant impact would occur for Project-related construction-source with and without implementation of MM AQ-1.

Localized Impacts

Project construction-source emissions would exceed the SCAQMD's localized significance thresholds for emissions of PM10 and PM2.5. MM AQ-1 is recommended to reduce the severity of the impacts. After implementation of MM AQ-1, Project construction-source emissions would not exceed the SCAQMD's localized significance thresholds for any criteria pollutant and a less than significant impact would occur.

Project construction-source emissions would be consistent with the applicable AQMP.

ODORS

Established requirements addressing construction equipment operations, and construction material use, storage, and disposal requirements act to minimize odor impacts that may result from construction activities. Moreover, construction-source odor emissions would be temporary, short-term, and intermittent in nature and would not result in persistent impacts that would affect substantial numbers of people. Potential construction-source odor impacts are therefore considered less-than-significant.

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5 REFERENCES

1. **South Coast Air Quality Management District.** RULE 1113. Architectural Coatings. [Online] http://www.aqmd.gov/rules/reg/reg11/r1113.pdf.
2. —. RULE 431.2. Sulfur Content of Liquid Fuels. [Online] http://www.aqmd.gov/rules/siprules/sr431-2.pdf.
3. —. RULE 403. Fugitive Dust. [Online] http://www.aqmd.gov/rules/reg/reg04/r403.pdf.
4. —. RULE 1186. PM10 Emissions From Paved and Unpaved Roads, and Livestock Operations. [Online] http://www.aqmd.gov/rules/reg/reg11/r1186.pdf.
5. —. Southern California Air Basins. [Online] [Cited: September 17, 2014.] http://www.aqmd.gov/docs/default-source/default-document-library/map-of-jurisdiction.pdf.
6. **California Air Resources Board.** Ambient Air Quality Standards (AAQS). [Online] 2013. [Cited: April 6, 2015.] http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.
7. **South Coast Air Quality Management District.** Annual Air Quality Monitoring Network Plan. [Online] July 2016. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-monitoring-network-plan/annual-air-quality-monitoring-network-plan-v2.pdf?sfvrsn=2.
8. —. Historical Data by Year. [Online] http://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year.
9. **Air Resources Board.** Air Quality Standards and Area Designations. [Online] 2013. [Cited: September 17, 2014.] http://www.arb.ca.gov/desig/desig.htm.
10. **South Coast Air Quality Management District.** National Ambient Air Qualirt Standards (NAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin. *AQMD.* [Online] February 2016. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2.
11. —. 2012 Air Quality Management Plan (AQMP). [Online] 2012. [Cited: September 17, 2014.] http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan.
12. **Environmental Protection Agency.** Air Pollution and the Clean Air Act. [Online] [Cited: September 17, 2014.] http://www.epa.gov/air/caa/.
13. **Air Resources Board.** California Ambient Air Quality Standards (CAAQS). [Online] 2009. [Cited: September 17, 2014.] http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm.
14. **South Coast Air Quality Management District.** 2012 Air Quality Management Plan (AQMP). [Online] 2012. [Cited: November 13, 2013.] http://www.aqmd.gov/aqmp/2012aqmp/draft/index.html.
15. —. SCAQMD Air Quality Significance Thresholds. [Online] http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2.
16. —. California Emissions Estimator Model. [Online] 2013. [Cited: November 13, 2013.] http://www.caleemod.com/.
17. —. RULE 1113. Architectural Coatings. [Online] http://www.aqmd.gov/rules/reg/reg11/r1113.pdf.
18. —. RULE 431.2. Sulfur Content of Liquid Fuels. [Online] http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-431-2.pdf?sfvrsn=4.
19. —. RULE 403. Fugitive Dust. [Online] http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf?sfvrsn=4.

20. —. RULE 1186. PM10 Emissions From Paved and Unpaved Roads, and Livestock Operations. [Online] http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1186-1-less-polluting-sweepers.pdf?sfvrsn=4.
21. —. *Localized Significance Thresholds Methodology.* s.l. : South Coast Air Quality Managment District, 2003.
22. **Lake Environmental.** US EPA Models. *Lake Environmental.* [Online] http://www.weblakes.com/download/us_epa.html.
23. **South Coast Air Quality Management District.** Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. [Online] [Cited: December 9, 2013.] http://aqmd.gov/ceqa/handbook/LST/CalEEModguidance.pdf.
24. —. *Localized Significance Thresholds Methodology.* s.l. : South Coast Air Quality Managment District, 2003.
25. —. *Localized Significance Thresholds Methodology.* s.l. : South Coast Air Quality Managment District, 2008.
26. —. 2003 Air Quality Management Plan. [Online] 2003. http://www.aqmd.gov/aqmp/aqmd03aqmp.htm.
27. **Bay Area Air Quality Management District.** [Online] http://www.baaqmd.gov/.
28. **Mott MacDonald.** *Lincoln Avenue Widening Project Between East Street and Evergreen Street Traffic Impact Analysis.* Orange : s.n., 2016.
29. **South Coast Air Quality Management District.** Final 2016 Air Quality Management Plan (AQMP). [Online] March 2017. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=11.
30. **Southern California Association of Governments.** 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy. [Online] April 2016. http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf.
31. **South coast Air Quality Management District.** CEQA Air Quality Handbook (1993). [Online] 1993. [Cited: September 17, 2014.] http://www.aqmd.gov/ceqa/oldhdbk.html.
32. **South Coast Air Quality Management District.** RULE 402. Nuisance. [Online] May 7, 1976. [Cited: November 13, 2013.] http://www.aqmd.gov/rules/reg/reg04/r402.pdf.
33. **Goss, Tracy A and Kroeger, Amy.** White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution. [Online] South Coast Air Quality Management District, 2003. http://www.aqmd.gov/rules/ciwg/final_white_paper.pdf.

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6 CERTIFICATION

The contents of this AQIA represent an accurate depiction of the environmental impacts associated with the proposed County Line Road and Calimesa Boulevard Intersection Improvements Project. The information contained in this AQIA is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5987.

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Master of Science in Environmental Studies
California State University, Fullerton • May, 2010

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PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
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PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June, 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April, 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August, 2007
AB2588 Regulatory Standards – Trinity Consultants • November, 2006
Air Dispersion Modeling – Lakes Environmental • June, 2006

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APPENDIX 3.1:

STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS

TABLE 2-3

National Ambient Air Quality Standards (NAAQS) Attainment Status - South Coast Air Basin

Criteria Pollutant	Averaging Time	Designation[a]	Attainment Date[b]
Ozone (O_3)	(1979) **1-Hour** (0.12 ppm)[c]	Nonattainment ("extreme")	2/26/2023 (revised deadline)
	(2015) **8-Hour** (0.070 ppm)[d]	Pending – Expect Nonattainment ("extreme")	Pending (beyond 2032)
	(2008) **8-Hour** (0.075 ppm)[d]	Nonattainment ("extreme")	7/20/2032
	(1997) **8-Hour** (0.08 ppm)[d]	Nonattainment ("extreme")	6/15/2024
PM2.5[e]	(2006) **24-Hour** (35 µg/m^3)	Nonattainment ("serious")	12/31/2019
	(2012) **Annual** (12.0 µg/m^3)	Nonattainment ("moderate")	12/31/2021
	(1997) **Annual** (15.0 µg/m^3)	Attainment (final determination pending)	4/5/2015 (attained 2013)
PM10[f]	(1987) **24-hour** (150 µg/m^3)	Attainment (Maintenance)	7/26/2013 (attained)
Lead (Pb)[g]	(2008) **3-Months Rolling** (0.15 µg/m^3)	Nonattainment (Partial) (Attainment determination to be requested)	12/31/2015
CO	(1971) **1-Hour** (35 ppm)	Attainment (Maintenance)	6/11/2007 (attained)
	(1971) **8-Hour** (9 ppm)	Attainment (Maintenance)	6/11/2007 (attained)
NO_2[h]	(2010) **1-Hour** (100 ppb)	Unclassifiable/Attainment	N/A (attained)
	(1971) **Annual** (0.053 ppm)	Attainment (Maintenance)	9/22/1998 (attained)
SO_2[i]	(2010) **1-Hour** (75 ppb)	Designations Pending (expect Unclassifiable/Attainment)	N/A (attained)
	(1971) **24-Hour** (0.14 ppm) (1971) **Annual** (0.03 ppm)	Unclassifiable/Attainment	3/19/1979 (attained)

a) U.S. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassifiable/Attainment or Unclassifiable

b) A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for an attainment demonstration

c) The 1979 1-hour ozone NAAQS (0.12 ppm) was revoked, effective 6/15/05 ; however, the Basin has not attained this standard and therefore has some continuing obligations with respect to the revoked standard; original attainment date was 11/15/2010; the revised attainment date is 2/6/23

d) The 2008 8-hour ozone NAAQS (0.075 ppm) was revised to 0.070 ppm, effective 12/28/15 with classifications and implementation goals to be finalized by 10/1/17; the 1997 8-hour ozone NAAQS (0.08 ppm) was revoked in the 2008 ozone NAAQS implementation rule, effective 4/6/15; there are continuing obligations under the revoked 1997 and revised 2008 ozone NAAQS until they are attained

e) The attainment deadline for the 2006 24-hour PM2.5 NAAQS was 12/31/15 for the former "moderate" classification; U.S.EPA approved reclassification to "serious," effective 2/12/16 with an attainment deadline of 12/31/2019; the 2012 (proposal year) annual PM2.5 NAAQS was revised on 1/15/13, effective 3/18/13, from 15 to 12 µg/m^3; new annual designations were final 1/15/15, effective 4/15/15; on July 25, 2016 U.S. EPA finalized a determination that the Basin attained the 1997 annual (15.0 µg/m^3) and 24-hour PM2.5 (65 µg/m^3) NAAQS, effective August 24, 2016

f) The annual PM10 NAAQS was revoked, effective 12/18/06; the 24-hour PM10 NAAQS deadline was 12/31/2006; the Basin's Attainment Re-designation Request and PM10 Maintenance Plan was approved by U.S. EPA on 6/26/13, effective 7/26/13

g) Partial Nonattainment designation – Los Angeles County portion of the Basin only for near-source monitors; expect to remain in attainment based on current monitoring data; attainment re-designation request pending

h) New 1-hour NO_2 NAAQS became effective 8/2/10, with attainment designations 1/20/12; annual NO_2 NAAQS retained

i) The 1971 annual and 24-hour SO2 NAAQS were revoked, effective 8/23/10; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO2 1-hour NAAQS; final area designations expected by 12/31/20 due to new source-specific monitoring requirements; Basin expected to be in attainment due to ongoing clean data

TABLE 2-4

National Ambient Air Quality Standards (NAAQS) Attainment Status
Coachella Valley Portion of the Salton Sea Air Basin

Criteria Pollutant	Averaging Time	Designation[a]	Attainment Date[b]
Ozone (O_3)	(1979) **1-Hour** (0.12 ppm)[c]	Attainment	11/15/2007 (attained 12/31/2013)
	(2015) **8-Hour** (0.070 ppm)[d]	Pending – Expect Nonattainment (Severe)	Pending
	(2008) **8-Hour** (0.075 ppm)[d]	Nonattainment (Severe-15)	7/20/2027
	(1997) **8-Hour** (0.08 ppm)[d]	Nonattainment (Severe-15)	6/15/2019
PM2.5[e]	(2006) **24-Hour** (35 µg/m^3)	Unclassifiable/Attainment	N/A (attained)
	(2012) **Annual** (12.0 µg/m^3)	Unclassifiable/Attainment	N/A (attained)
	(1997) **Annual** (15.0 µg/m^3)	Unclassifiable/Attainment	N/A (attained)
PM10[f]	(1987) **24-hour** (150 µg/m^3)	Nonattainment ("serious")	12/31/2006
Lead (Pb)	(2008) **3-Months Rolling** (0.15 µg/m^3)	Unclassifiable/Attainment	Unclassifiable/ Attainment
CO	(1971) **1-Hour** (35 ppm)	Unclassifiable/Attainment	N/A (attained)
	(1971) **8-Hour** (9 ppm)	Unclassifiable/Attainment	N/A (attained)
NO_2[g]	(2010) **1-Hour** (100 ppb)	Unclassifiable/Attainment	N/A (attained)
	(1971) **Annual** (0.053 ppm)	Unclassifiable/Attainment	N/A (attained)
SO_2[h]	(2010) **1-Hour** (75 ppb)	Designations Pending	N/A
	(1971) **24-Hour** (0.14 ppm) (1971) **Annual** (0.03 ppm)	Unclassifiable/Attainment	Unclassifiable/ Attainment

a) U.S. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassifiable/Attainment or Unclassifiable

b) A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for an attainment demonstration

c) The 1979 1-hour ozone NAAQS (0.12 ppm) was revoked, effective 6/15/05; the Southeast Desert Modified Air Quality Management Area, including the Coachella Valley, had not timely attained this standard by the 11/15/07 "severe-17" deadline, based on 2005-2007 data; on 8/25/14, U.S. EPA proposed a clean data finding based on 2011–2013 data and a determination of attainment for the former 1-hour ozone NAAQS for the Southeast Desert nonattainment area; this rule was finalized by U.S. EPA on 4/15/15, effective 5/15/15, that included preliminary 2014 data

d) The 2008 8-hour ozone NAAQS (0.075 ppm) was revised to 0.070 ppm, effective 12/28/15 with classifications and implementation goals to be finalized by 10/1/17; the 1997 8-hour ozone NAAQS (0.08 ppm) was revoked in the 2008 ozone NAAQS implementation rule, effective 4/6/15; there are continuing obligations under the 1997 and 2008 ozone NAAQS until they are attained

e) The annual PM2.5 standard was revised on 1/15/13, effective 3/18/13, from 15 to 12 µg/m^3

f) The annual PM10 standard was revoked, effective 12/18/06; the 24-hour PM10 NAAQS attainment deadline was 12/31/2006; the Coachella Valley Attainment Re-designation Request and PM10 Maintenance Plan was postponed by U.S. EPA pending additional monitoring and analysis in the southeastern Coachella Valley

g) New 1-hour NO_2 NAAQS became effective 8/2/10; attainment designations 1/20/12; annual NO_2 NAAQS retained

h) The 1971 Annual and 24-hour SO_2 NAAQS were revoked, effective 8/23/10; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO_2 1-hour standard; final area designations expected by 12/31/2020 with SSAB expected to be designated Unclassifiable/Attainment

The current status of CAAQS attainment for the pollutants with State standards is presented in Table 2-5 for the Basin and the Riverside County portion of the SSAB (Coachella Valley).

TABLE 2-5

California Ambient Air Quality Standards (CAAQS) Attainment Status
South Coast Air Basin and Coachella Valley portion of Salton Sea Air Basin

Pollutant	Averaging Time and Level[b]	Designation[a]	
		South Coast Air Basin	Coachella Valley
Ozone (O_3)	**1-Hour** (0.09 ppm)[c]	Nonattainment	Nonattainment
	8-Hour (0.070 ppm)[d]	Nonattainment	Nonattainment
PM2.5	**Annual** (12.0 µg/m^3)	Nonattainment	Attainment
PM10	**24-Hour** (50 µg/m^3)	Nonattainment	Nonattainment
	Annual (20 µg/m^3)	Nonattainment	Nonattainment
Lead (Pb)	**30-Day Average** (1.5 µg/m^3)	Attainment	Attainment
CO	**1-Hour** (20 ppm)	Attainment	Attainment
	8-Hour (9.0 ppm)	Attainment	Attainment
NO_2	**1-Hour** (0.18 ppm)	Attainment	Attainment
	Annual (0.030 ppm)	Attainment	Attainment
SO_2	**1-Hour** (0.25 ppm)	Attainment	Attainment
	24-Hour (0.04 ppm)	Attainment	Attainment
Sulfates	**24-Hour** (25 µg/m^3)	Attainment	Attainment
H_2S[c]	**1-Hour** (0.03 ppm)	Unclassified	Unclassified [c)]

a) CA State designations shown were updated by CARB in 2016, based on the 2013–2015 3-year period; stated designations are based on a 3-year data period after consideration of outliers and exceptional events; Source: http://www.arb.ca.gov/desig/statedesig.htm#current

b) CA State standards, or CAAQS, for ozone, CO, SO_2, NO_2, PM10 and PM2.5 are values not to be exceeded; lead, sulfates, and H_2S standards are values not to be equaled or exceeded; CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations

c) SCAQMD began monitoring H_2S in the southeastern Coachella Valley in November 2013 due to odor events related to the Salton Sea; three full years of data are not yet available for a State designation, but nonattainment is anticipated for the H_2S CAAQS in at least part of the Coachella Valley

The 1979 federal 1-hour ozone standard (0.12 ppm) was revoked by the U.S. EPA and replaced by the 8-hour average ozone standard (0.08 ppm), effective June 15, 2005. However, the Basin and the former Southeast Desert Modified Air Quality Management Area (which included the Coachella Valley) had not attained the 1-hour federal ozone NAAQS by the attainment dates in 2010 and 2007, respectively, and, therefore, had continuing obligations under the former standard. On August 25, 2014, U.S. EPA

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APPENDIX 3.2:

CALEEMOD MODEL OUTPUTS

County Line Road and Calimesa Blvd. Intersection

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	174.24	1000sqft	4.00	174,240.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Demolition -

Construction Phase - 100 day construction schedule

Grading -

Construction Off-road Equipment Mitigation - All Dozers and Graders shall be Tier 3 or better

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	230.00	14.00
tblConstructionPhase	NumDays	8.00	21.00
tblConstructionPhase	NumDays	18.00	30.00
tblConstructionPhase	NumDays	5.00	14.00
tblConstructionPhase	PhaseEndDate	7/2/2021	10/5/2020
tblConstructionPhase	PhaseEndDate	8/14/2020	9/15/2020
tblConstructionPhase	PhaseEndDate	7/28/2021	11/17/2020
tblConstructionPhase	PhaseEndDate	8/4/2020	8/17/2020
tblConstructionPhase	PhaseStartDate	8/15/2020	9/16/2020
tblConstructionPhase	PhaseStartDate	8/5/2020	8/18/2020
tblConstructionPhase	PhaseStartDate	7/3/2021	10/6/2020

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.1681	42.4715	22.6473	0.0480	18.2675	2.1986	20.4661	9.9840	2.0227	12.0068	0.0000	4,712.6337	4,712.6337	1.1969	0.0000	4,740.3797
Maximum	**4.1681**	**42.4715**	**22.6473**	**0.0480**	**18.2675**	**2.1986**	**20.4661**	**9.9840**	**2.0227**	**12.0068**	**0.0000**	**4,712.6337**	**4,712.6337**	**1.1969**	**0.0000**	**4,740.3797**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.5722	22.3896	23.4452	0.0480	7.2470	1.1390	8.2408	3.9263	1.0711	4.8774	0.0000	4,712.6337	4,712.6337	1.1969	0.0000	4,740.3797
Maximum	**2.5722**	**22.3896**	**23.4452**	**0.0480**	**7.2470**	**1.1390**	**8.2408**	**3.9263**	**1.0711**	**4.8774**	**0.0000**	**4,712.6337**	**4,712.6337**	**1.1969**	**0.0000**	**4,740.3797**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**38.29**	**47.28**	**-3.52**	**0.00**	**60.33**	**48.20**	**59.73**	**60.67**	**47.05**	**59.38**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0767	1.7000e-004	0.0179	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0381	0.0381	1.0000e-004		0.0407
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0767**	**1.7000e-004**	**0.0179**	**0.0000**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**6.0000e-005**		**0.0381**	**0.0381**	**1.0000e-004**	**0.0000**	**0.0407**

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	0.0767	1.7000e-004	0.0179	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0381	0.0381	1.0000e-004		0.0407
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0767**	**1.7000e-004**	**0.0179**	**0.0000**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**6.0000e-005**		**0.0381**	**0.0381**	**1.0000e-004**	**0.0000**	**0.0407**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2020	7/28/2020	5	20	
2	Grubbing/Land Clearing	Site Preparation	7/29/2020	8/17/2020	5	14	
3	Grading/Excavation	Grading	8/18/2020	9/15/2020	5	21	
4	Drainage/Utilities/Sub-Grade	Building Construction	9/16/2020	10/5/2020	5	14	
5	Paving	Paving	10/6/2020	11/17/2020	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 4

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

County Line Road and Calimesa Blvd. Intersection - Riverside-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Drainage/Utilities/Sub-Grade	Cranes	1	7.00	231	0.29
Drainage/Utilities/Sub-Grade	Forklifts	3	8.00	89	0.20
Grading/Excavation	Excavators	1	8.00	158	0.38
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading/Excavation	Rubber Tired Dozers	1	8.00	247	0.40
Drainage/Utilities/Sub-Grade	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Drainage/Utilities/Sub-Grade	Generator Sets	1	8.00	84	0.74
Grading/Excavation	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grubbing/Land Clearing	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading/Excavation	Graders	1	8.00	187	0.41
Paving	Paving Equipment	2	6.00	132	0.36
Grubbing/Land Clearing	Rubber Tired Dozers	3	8.00	247	0.40
Drainage/Utilities/Sub-Grade	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	198.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grubbing/Land Clearing	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Excavation	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Drainage/Utilities/Sub-Grade	9	73.00	29.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Demolition - 2020

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					2.1572	0.0000	2.1572	0.3266	0.0000	0.3266			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**2.1572**	**1.6587**	**3.8159**	**0.3266**	**1.5419**	**1.8685**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

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	0.0509	2.3442	0.2892	7.5400e-003	0.1732	7.4700e-003	0.1807	0.0475	7.1500e-003	0.0546		799.6896	799.6896	0.0477		800.8810
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	0.0763	0.0451	0.6048	1.6600e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		165.2392	165.2392	4.2400e-003		165.3451
Total	**0.1272**	**2.3893**	**0.8941**	**9.2000e-003**	**0.3409**	**8.4900e-003**	**0.3493**	**0.0920**	**8.0800e-003**	**0.1000**		**964.9288**	**964.9288**	**0.0519**		**966.2261**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8413	0.0000	0.8413	0.1274	0.0000	0.1274			0.0000			0.0000
Off-Road	1.5714	18.6219	22.5512	0.0388		0.8554	0.8554		0.8274	0.8274	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**1.5714**	**18.6219**	**22.5512**	**0.0388**	**0.8413**	**0.8554**	**1.6967**	**0.1274**	**0.8274**	**0.9548**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

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	0.0509	2.3442	0.2892	7.5400e-003	0.1732	7.4700e-003	0.1807	0.0475	7.1500e-003	0.0546		799.6896	799.6896	0.0477		800.8810
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	0.0763	0.0451	0.6048	1.6600e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		165.2392	165.2392	4.2400e-003		165.3451
Total	**0.1272**	**2.3893**	**0.8941**	**9.2000e-003**	**0.3409**	**8.4900e-003**	**0.3493**	**0.0920**	**8.0800e-003**	**0.1000**		**964.9288**	**964.9288**	**0.0519**		**966.2261**

3.3 Grubbing/Land Clearing - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Grubbing/Land Clearing - 2020

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	0.0916	0.0542	0.7258	1.9900e-003	0.2012	1.2200e-003	0.2024	0.0534	1.1200e-003	0.0545		198.2870	198.2870	5.0800e-003		198.4141
Total	**0.0916**	**0.0542**	**0.7258**	**1.9900e-003**	**0.2012**	**1.2200e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**		**198.2870**	**198.2870**	**5.0800e-003**		**198.4141**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	1.4653	20.5486	22.7106	0.0380		0.9925	0.9925		0.9499	0.9499	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**1.4653**	**20.5486**	**22.7106**	**0.0380**	**7.0458**	**0.9925**	**8.0384**	**3.8730**	**0.9499**	**4.8229**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Grubbing/Land Clearing - 2020

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	0.0916	0.0542	0.7258	1.9900e-003	0.2012	1.2200e-003	0.2024	0.0534	1.1200e-003	0.0545		198.2870	198.2870	5.0800e-003		198.4141
Total	**0.0916**	**0.0542**	**0.7258**	**1.9900e-003**	**0.2012**	**1.2200e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**		**198.2870**	**198.2870**	**5.0800e-003**		**198.4141**

3.4 Grading/Excavation - 2020

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	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**6.5523**	**1.2734**	**7.8258**	**3.3675**	**1.1716**	**4.5390**		**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

3.4 Grading/Excavation - 2020

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	0.0763	0.0451	0.6048	1.6600e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		165.2392	165.2392	4.2400e-003		165.3451
Total	**0.0763**	**0.0451**	**0.6048**	**1.6600e-003**	**0.1677**	**1.0200e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**165.2392**	**165.2392**	**4.2400e-003**		**165.3451**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	1.2449	15.9079	18.1533	0.0297		0.7886	0.7886		0.7473	0.7473	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**1.2449**	**15.9079**	**18.1533**	**0.0297**	**2.5554**	**0.7886**	**3.3440**	**1.3133**	**0.7473**	**2.0606**	**0.0000**	**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

3.4 Grading/Excavation - 2020

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	0.0763	0.0451	0.6048	1.6600e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		165.2392	165.2392	4.2400e-003		165.3451
Total	**0.0763**	**0.0451**	**0.6048**	**1.6600e-003**	**0.1677**	**1.0200e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**165.2392**	**165.2392**	**4.2400e-003**		**165.3451**

3.5 Drainage/Utilities/Sub-Grade - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Drainage/Utilities/Sub-Grade - 2020

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	0.0808	2.9839	0.5459	7.5800e-003	0.1857	0.0170	0.2027	0.0535	0.0162	0.0697		798.6337	798.6337	0.0599		800.1312
Worker	0.3715	0.2197	2.9435	8.0700e-003	0.8160	4.9400e-003	0.8209	0.2164	4.5500e-003	0.2210		804.1640	804.1640	0.0206		804.6793
Total	**0.4523**	**3.2036**	**3.4894**	**0.0157**	**1.0017**	**0.0219**	**1.0236**	**0.2699**	**0.0208**	**0.2907**		**1,602.7977**	**1,602.7977**	**0.0805**		**1,604.8105**

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Drainage/Utilities/Sub-Grade - 2020

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	0.0808	2.9839	0.5459	7.5800e-003	0.1857	0.0170	0.2027	0.0535	0.0162	0.0697		798.6337	798.6337	0.0599		800.1312
Worker	0.3715	0.2197	2.9435	8.0700e-003	0.8160	4.9400e-003	0.8209	0.2164	4.5500e-003	0.2210		804.1640	804.1640	0.0206		804.6793
Total	**0.4523**	**3.2036**	**3.4894**	**0.0157**	**1.0017**	**0.0219**	**1.0236**	**0.2699**	**0.0208**	**0.2907**		**1,602.7977**	**1,602.7977**	**0.0805**		**1,604.8105**

3.6 Paving - 2020

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	1.1837	11.8015	12.2823	0.0189		0.6509	0.6509		0.6005	0.6005		1,804.7070	1,804.7070	0.5670		1,818.8830
Paving	0.3493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5330**	**11.8015**	**12.2823**	**0.0189**		**0.6509**	**0.6509**		**0.6005**	**0.6005**		**1,804.7070**	**1,804.7070**	**0.5670**		**1,818.8830**

3.6 Paving - 2020

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	0.1018	0.0602	0.8064	2.2100e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		220.3189	220.3189	5.6500e-003		220.4601
Total	**0.1018**	**0.0602**	**0.8064**	**2.2100e-003**	**0.2236**	**1.3500e-003**	**0.2249**	**0.0593**	**1.2500e-003**	**0.0605**		**220.3189**	**220.3189**	**5.6500e-003**		**220.4601**

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	1.1837	11.8015	12.2823	0.0189		0.6509	0.6509		0.6005	0.6005	0.0000	1,804.7070	1,804.7070	0.5670		1,818.8830
Paving	0.3493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5330**	**11.8015**	**12.2823**	**0.0189**		**0.6509**	**0.6509**		**0.6005**	**0.6005**	**0.0000**	**1,804.7070**	**1,804.7070**	**0.5670**		**1,818.8830**

3.6 Paving - 2020

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	0.1018	0.0602	0.8064	2.2100e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		220.3189	220.3189	5.6500e-003		220.4601
Total	**0.1018**	**0.0602**	**0.8064**	**2.2100e-003**	**0.2236**	**1.3500e-003**	**0.2249**	**0.0593**	**1.2500e-003**	**0.0605**		**220.3189**	**220.3189**	**5.6500e-003**		**220.4601**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0767	1.7000e-004	0.0179	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0381	0.0381	1.0000e-004		0.0407
Unmitigated	0.0767	1.7000e-004	0.0179	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0381	0.0381	1.0000e-004		0.0407

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	0.0133					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0617					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.6800e-003	1.7000e-004	0.0179	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0381	0.0381	1.0000e-004		0.0407
Total	**0.0767**	**1.7000e-004**	**0.0179**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0381**	**0.0381**	**1.0000e-004**		**0.0407**

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	0.0133					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0617					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.6800e-003	1.7000e-004	0.0179	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0381	0.0381	1.0000e-004		0.0407
Total	**0.0767**	**1.7000e-004**	**0.0179**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0381**	**0.0381**	**1.0000e-004**		**0.0407**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

URBAN CROSSROADS

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May 2, 2018

Mr. Roger Mason
ECORP Consulting, Inc.
1801 Park Court Place, B-103
Santa Ana, California 92701

SUBJECT: COUNTY LINE ROAD AND CALIMESA BOULEVARD EXPANSION AIR QUALITY MEMORANDUM

Dear Mr. Roger Mason:

Urban Crossroads, Inc. is pleased to submit this Air Quality Memorandum (Memo) to ECORP Consulting, Inc. (Client) for the County Line Road and Calimesa Boulevard Expansion ("Project"). The project will widen eastbound County Line Road from one-lane to two lanes from I-10 to approximately 600 feet east of Calimesa Boulevard; widen Calimesa Boulevard by adding one southbound lane from 150 feet south of County Line Road to County Line Road; and construct a 90-foot diameter roundabout at the intersection of County Line Road and Calimesa Boulevard. The improvements consist of constructing raised median, resurfacing existing pavement, construction curb, gutter, sidewalk, commercial driveways and curb ramps, and installing traffic signal, installing traffic signs, stripes and pavement markings.

SUMMARY OF FINDINGS

Results of the Memo indicate the construction and operations of the proposed Project would result in less than significant impacts associated with air quality emissions. In addition, according to the Roundabout Feasibility Study for Interstate 10 and County Line Road Corridor, the installation of this roundabout will alter the LOS rating of the intersection from LOS C to LOS B resulting in an overall decrease in traffic congestion (5). Based on the improvements made to the intersection and the decrease to traffic congestion, this project would not result in a CO Hot-spot.

REGIONAL CONFORMITY REQUIREMENTS

The currently approved regional plan and program are included within the 2017 Federal Transportation Improvement Program (FTIP). The 2017 FTIP was adopted by SCAG on September 1, 2016 and was federally approved on December 16, 2016. The most recent Amendment to the 2017 FTIP is No. 17-05, approved by FHWA and FTA on March 22, 2017. The proposed project is currently included in the 2016 RTP and 2017 Riverside County Local Highways FTIP and is identified by the project number RIV060102 (2)(3). The design concept and scope of the proposed project is consistent with the project description identified in the RTP and TIP and the assumptions in the SCAG's regional emissions analysis. The FTIP sheet is provided as attachment "A" to this document.

PROJECT-RELATED REGIONAL CONFORMITY REQUIREMENTS

The local analysis is commonly referred to as a project-level hot-spot analysis. Conformity must be demonstrated at the project-level for projects in CO, PM10, and PM2.5 nonattainment and maintenance areas. A region is a nonattainment area if one or more monitoring stations in the region fail to attain the relevant CAAQS or NAAQS. In general, projects must not cause the standards to be violated, and in nonattainment areas, the project must not cause any increase in the number and severity of violations.

The Department of Transportation CO Protocol has a screening exercise that would determine whether the project requires a qualitative or quantitative analysis, or whether none would be necessary. Below is a step-by-step explanation of the CO Protocol flowchart (4). Each level cited is followed by a response, which will determine the next applicable level of the flowchart for the proposed project. The local CO Analysis flowchart is presented in Attachment "B". This flowchart is used to determine the type of CO analysis required for the proposed project.

DETERMINATION OF PROJECT REQUIREMENTS

Q. 3.1.1. Is this project exempt from all emissions analyses?

A. No. As shown in Table 1 of the CO Protocol, the proposed project does not fall into a project category that is exempt from all emissions analysis (proceed to 3.1.2)

Q. 3.1.2. Is project exempt from regional emissions analyses?

A. No. Table 2 of the CO Protocol is Table 3 of 40 CFR 93.127. The question is attempting to determine if the project is exempt from regional emissions analyses. The proposed project is not listed in Table 2; and therefore, it is not exempt from regional emissions analyses. The flowchart directs the project evaluation to Section 3.1.3.

Q. 3.1.3. Is the project locally defined as regionally significant?

A: Yes. The project Program Code CAX63 identified within the 2017 FTIP is defined as Highway/Road Improvement- Lane Additions Without HOV Lanes -Regionally Significant.

Q. 3.1.4. Is project in a federal attainment area?

A. No. The proposed project is located in the South Coast Air Basin, which is a federal extreme nonattainment area for O3 and a nonattainment area for PM2.5 (see Table 2.2.6-1). If a project area is not classified as an attainment area for all transportation-related criteria pollutants, the project is subject to a regional conformity determination (proceed to 3.1.5).

Q. 3.1.5. Is there a conforming RTP and TIP?

A. Yes. SCAG's most recently approved plan and program is the 2016 RTP/SCS and the 2017 FTIP. (proceed to 3.1.6)

Q. 3.1.6. Is the project included in the regional emissions analysis supporting the currently conforming RTP and TIP?

A. Yes. A project included in the FHWA approved RTP and TIP satisfies the regional analysis requirement. The proposed project is currently included in the latest conforming FTIP (RIV060102).

Q. 3.1.7. Has project design concept and/or scope changed significantly from that in regional analysis?

A. No. The scope and design concept of the proposed project is consistent with the scope and design concept identified in the conforming RTP and FTIP. (proceed to 3.1.9)

Q. 3.1.9. Examine Local Impacts

A. Section 3.1.9 of the flowchart directs the project evaluation to Section 4, Local Air Quality Analysis of the CO Protocol. The Local Analysis starts at level 1 of the CO Protocol. It is illustrated in Figure 3 (of the CO Protocol) entitled Local CO Analysis. This flowchart is utilized in determining the type of project-level CO analysis required for the proposed project. A step-by-step response to each step and level is provided below. Each level cited is followed by a response, which will determine the next applicable level of the flowchart.

Level 1: Is the project in a CO nonattainment area?

A. No. The South Coast Air Basin is classified as an attainment/maintenance area for the federal CO standards (Table 2.2.6-1).

Level 1: Was the area redesignated as an attainment area after the 1990 Clean Air Act?

A. Yes. The South Coast Air Basin was reclassified to attainment/maintenance status from serious nonattainment, effective June 11, 2007.

Level 1: Has "continued attainment" been verified with the local air district, if appropriate?

A. Yes. Based on ambient air monitoring data collected by SCAQMD, the South Coast Air Basin has continually met the federal ambient air quality standards for CO since 2003 (California Air Resources Board 2006) (proceed to Level 7).

Level 7: Does the project worsen air quality?

The CO Protocol Section 4.7.1 recommends the following criteria to be used to determine whether the project is likely to worsen air quality for the area substantially affected by the project.

1. The project significantly increases the percentage of vehicles operating in cold start mode. Increasing the number of vehicles operating in cold start mode by as little as 2 percent should be considered potentially significant.
2. The project significantly increases traffic volumes. Increases in traffic volumes in excess of 5 percent should be considered potentially significant. Increasing the traffic volume by less than 5 percent may still be potentially significant if there is also a reduction in average speeds.

3. The project worsens traffic flow. For uninterrupted roadway segments, a reduction in average speeds (within a range of 3 to 50 mph) should be regarded as worsening traffic flow. For intersection segments, a reduction in average speed or an increase in average delay should be considered as worsening traffic flow.

A. No. Improvements made to the intersection will result in a decrease in traffic congestion and an overall improvement to air quality.

LOCALIZED PM2.5 AND PM10 HOT-SPOT EVALUATION

The EPA specifies in 40 CFR 93.123(b)(1) that only projects of air quality concern (POAQCs) are required to undergo a PM2.5 and PM10 hot-spot analysis (1). The EPA defines POAQCs as certain highway and transit projects that involve significant levels of diesel traffic or any other project that is identified by the PM2.5 SIP as a localized air quality concern.

According to the final rule, the following types of projects are considered POAQC:

1. New or expanded highway projects that have a significant number of or significant increase in diesel vehicles (significant number is defined as greater than 125,000 Annual Average Daily Traffic (AADT), and eight percent or more of such AADT is diesel truck traffic), or in practice 10,000 truck AADT or more regardless of total AADT; significant increase is defined in practice as a 10 percent increase in heavy duty truck traffic).

2. Projects affecting intersections that are at a LOS D, E, or F, with a significant number of diesel vehicles, or that will change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project.

3. New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location.

4. Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location.

5. Projects in or affecting locations, areas, or categories of sites which are identified in the PM2.5 or PM10 implementation plan or implementation plan submission, as appropriate, as sites of possible violation.

The project is designed to alleviate congestion near the intersection of County Line Road and Calimesa Boulevard. Analytical data pertaining to the project within the Roundabout Feasibility Study for Interstate 10 and County Line Road Corridor study indicates the project will alter the LOS rating of the existing intersection from LOS C to LOS B, decreasing traffic congestion and creating safer conditions than would be present with a typical all way stop (5). No additional traffic is expected to be generated by the project. As such, the project would not be expected to increase the quantity of diesel vehicles traveling through the project site. The proposed project would not affect any intersections that are at a LOS D, E, or F, or that have the potential to change to LOS D, E, or F. The project does not involve new or

expanded bus and rail terminals, or transfer points, and the project area is not identified in the PM2.5 or PM10 implementation plan as a site of possible violation. Furthermore, the project would be expected to improve circulation in the area, which could potentially reduce pollutant emissions in the area. Therefore, the proposed project is not a POAQC, and a PM hot spot analysis is not required.

If you have any questions, please contact me directly at (949) 336-5987.

Respectfully submitted,

URBAN CROSSROADS, INC.

Haseeb Qureshi,
Senior Associate

REFERENCES

1. Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas, Environmental Protection Agency, Transportation and Climate Division Office of Transportation and Air Quality U.S. Environmental Protection Agency, November 2015.

2. Final Adopted 2017 Riverside County Local Highways Federal Transportation Improvement Plan, Federal Transportation Improvement Program (FTIP), December 16, 2017.

3. Final 2016 Regional Transportation Plan / Sustainable Communities Strategy, Southern California Association of Governments (SCAG), April 7, 2016.

4. Transportation Project-Level Carbon Monoxide Protocol, California Department of Transportation (CA DOT), Revised December 1997. UCD-ITS-RR-97-21.

5. Roundabout Feasibility Study for Interstate 10 and County Line Road Corridor, City of Yucaipa, City of Calimesa, and TKE Engineering. Completed by Omni Means Engineering and Planners, September 4, 2013.

ATTACHMENT "A"

SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

Final 2017 Federal Transportation Improvement Program

Riverside County Project Listing
Local Highway
(In $000`s)

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amendment
RIV100102	Riverside	SCAB		3AL204	CAX66				L	NON-EXEMPT	0
Description:							PTC	21,846	Agency	BEAUMONT	

IN WESTERN RIVERSIDE CO IN BEAUMONT: SR79 BYPASS EXT NO. PH II – INSTAL OF A 3-LN PRE-FAB BRIDGES ON THE EASTSIDE OF THE PH I POTRERO BRIDGE SR79 BYPASS EXT. NO., EXTENDING THE POTRERO BLVD 0.675 MI. NO. FROM THE FUTURE SR60/POTRERO FWY IC (RIV050535), TO CONNECT TO THE OAK VALLEY PKWY IN BEAUMONT, INCLUDING THE INSTAL OF A CLASS I MULTI-PURPOSES TRAIL, FLARED INTERSECTION AND TURNING POCKETS.

Fund	ENG	R/W	CON	Total	Prior	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Total
DEVELOPER FEES	3,276	2,185	16,385	21,846	3,276		2,185	16,385				21,846
RIV100102 Total	3,276	2,185	16,385	21,846	3,276		2,185	16,385				21,846

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amendment
RIV140805	Riverside	MDAB		REG0704	LUM06				L	EXEMPT - 93.126	0
Description:							PTC	29	Agency	CALIF DEPARTMENT OF PARKS & RECREATION	

IN EASTERN RIVERSIDE COUNTY NEAR THE CITY OF BLYTHE - COMPOSITION AND PRINTING OF A BLYTHE AREA OFF HIGHWAY VEHICLE TRAIL MAP

Fund	ENG	R/W	CON	Total	Prior	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Total
RECREATIONAL TRAILS			25	25		25						25
AGENCY			4	4		4						4
RIV140805 Total			29	29		29						29

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amendment
RIV060102	Riverside	SCAB		RIV060102	CAX63				L	NON-EXEMPT	0
Description:							PTC	2,366	Agency	CALIMESA	

IN CALIMESA - WIDEN EB COUNTY LN RD FROM 1 TO 2 LNS (I-10 TO 600' E/O CALIMESA BLVD), CONSTRUCT 90 FT. ROUNDABOUT AT INTERSECTION OF CALIMESA BLVD AND COUNTY LN RD, WIDEN ALL ADJACENT CORNERS FOR TRANSITION TO ROUNDABOUT INCLUDING CURB AND GUTTER AS REQUIRED. ADDITIONAL IMPROVEMENTS INCLUDE DRAINAGE AND CONCRETE WORK (SAFETEA-LU-DEMO ID 445, 1316)

Fund	ENG	R/W	CON	Total	Prior	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Total
DEMO-SAFETEA-LU	506	934		1,440	506	934						1,440
CITY FUNDS	127	529	270	926	127	529	270					926
RIV060102 Total	633	1,463	270	2,366	633	1,463	270					2,366

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amendment
RIV091011	Riverside	SSAB		3A07027	CAX60				L	NON-EXEMPT	0
Description:							PTC	18,703	Agency	CATHEDRAL CITY	

IN EASTERN RIVERSIDE COUNTY IN THE COACHELLA VALLEY - DATE PALM DR OVER THE WHITEWATER RIVER: WIDENING OF DATE PALM DR FROM 4 TO 6 LNS (3 LNS IN EA DIR), FROM APPROX. 350 FT S/O THE BRIDGE TO 250 FT N/O THE BRIDGE (VIA ESTRADA TO THE NORTH AND PEREZ RD. TO THE SOUTH), INCLUDING THE CONSTRUCTION OF A RAISED MEDIAN AND SIDEWALK ALONG THE EAST SIDE OF THE PROJECT (BRIDGE NO. 56C0189).

Fund	ENG	R/W	CON	Total	Prior	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Total
CITY FUNDS	206	29	1,910	2,145	235	1,910						2,145
BRIDGE - LOCAL	1,594	221	14,743	16,558	1,815	14,743						16,558
RIV091011 Total	1,800	250	16,653	18,703	2,050	16,653						18,703

ATTACHMENT "B"

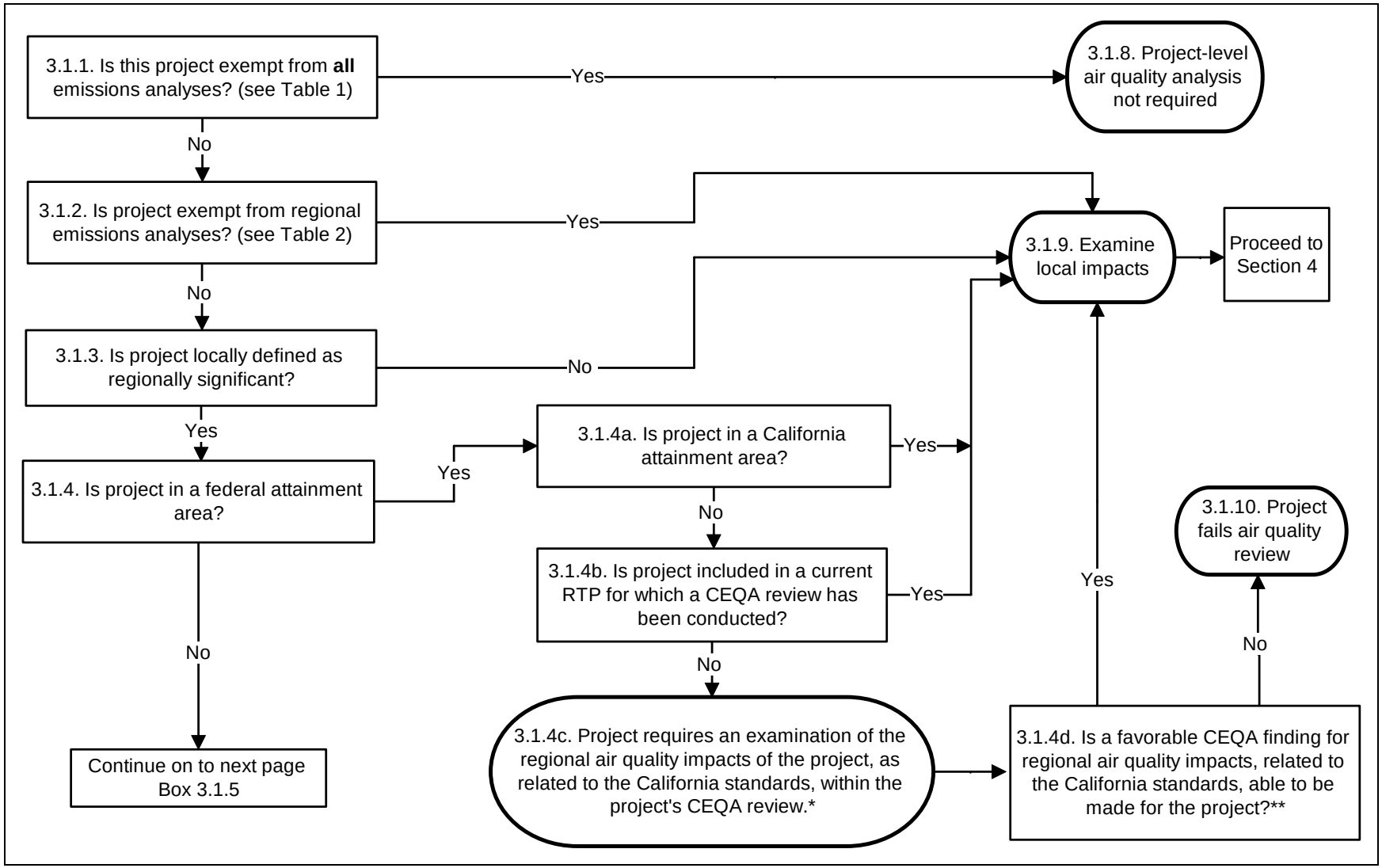

Figure 1. Requirements for New Projects

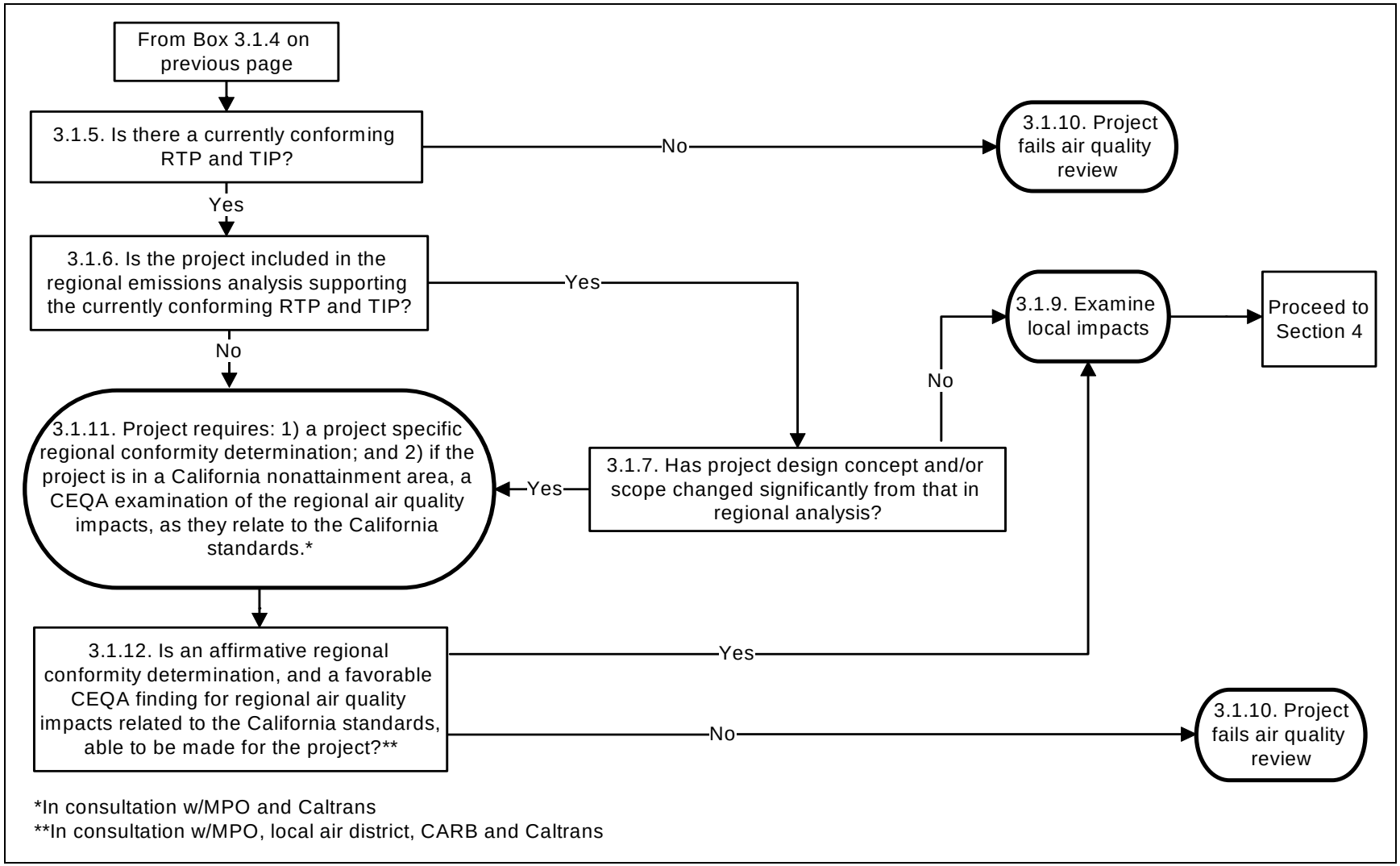

Figure 1 (cont.). Requirements for New Projects

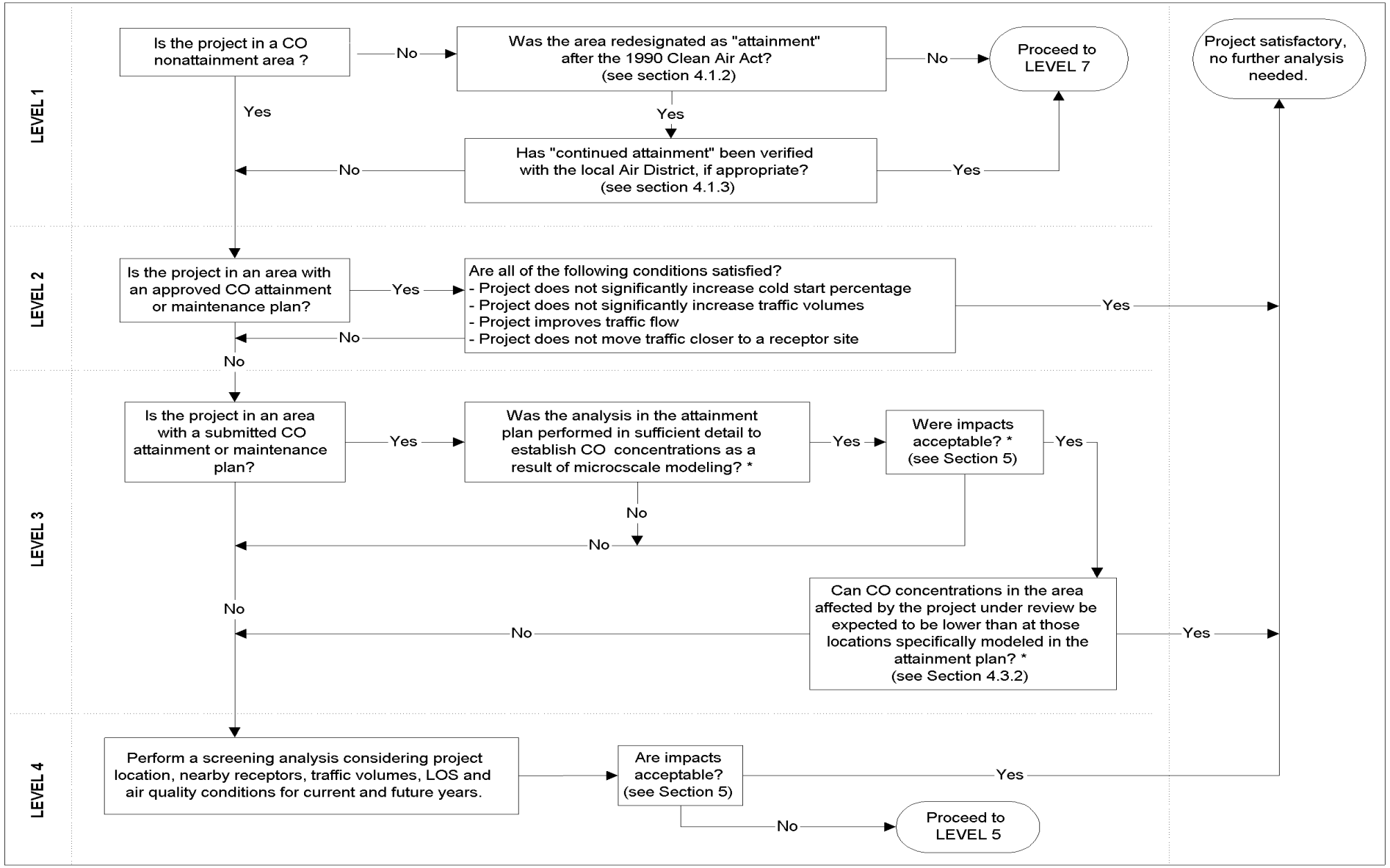

Figure 3. Local CO Analysis

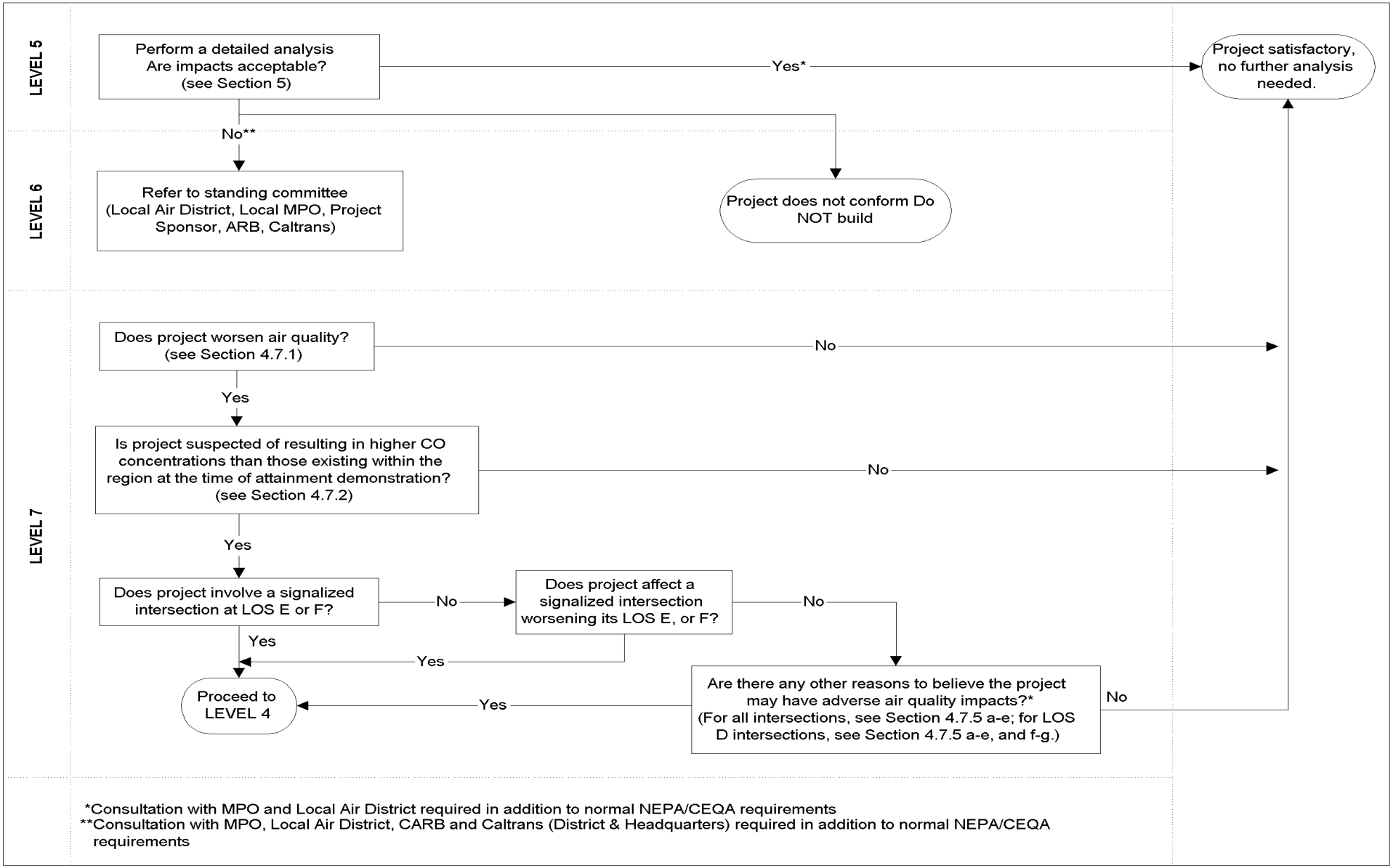

Figure 3 (cont.). Local CO Analysis

Transportation Air Quality Conformity Findings Checklist

Project Name:	County Line Road and Calimesa Boulevard Expansion
Dist-Co-Rte-PM:	**EA:**
Federal-Aid No.:	HPLUL-5460(006)
Document Type:	☒ **23 USC 326 CE** ☐ **23 USC 327 CE** ☐ **EA** ☐ **EIS**

Step 1. Is the project located in a nonattainment or maintenance area for ozone, nitrogen dioxide, carbon monoxide (CO), PM2.5, or PM10 per EPA's Green Book listing of non-attainment areas?

☐ If no, go to Step 17. **Transportation conformity does not apply to the project.**

☒ If yes, go to Step 2.

Step 2. Is the project exempt from conformity per 40 CFR 93.126 or 40 CFR 93.128

☐ If yes, go to Step 17. **The project is exempt from all project-level conformity requirements (40 CFR 93.126 or 128)** (check one box below and identify the project type, if applicable).

- ☐ 40 CFR 93.126 Project type: _____
- ☐ 40 CFR 93.128

☒ If no, **go** to Step 3.

Step 3. Is the project exempt from regional conformity per 40 CFR 93.127

☐ If yes, go to Step 8. **The project is exempt from regional conformity requirements (40 CFR 93.127)** (identify the project type). Project type: _____

☒ If no, go to Step 4.

Step 4. Is the project located in a region with a currently conforming RTP and TIP?

☒ If yes, **the project is included in a currently conforming RTP and TIP per 40 CFR 93.115. The project's design and scope have not changed significantly from what was assumed in RTP conformity analysis (40 CFR 93.115[b])** Go to Step 8.

☐ If no and the project is located in an isolated rural area, go to Step 5.

☐ If no and the project is not located in an isolated rural area, STOP and do not proceed until a conforming RTP and TIP are adopted.

Step 5. For isolated rural areas, is the project regionally significant per 40 CFR 93.101, based on review by Interagency Consultation?

☐ If yes, go to Step 6.

☐ If no, go to Step 8. **The project, located in an isolated rural area, is not regionally significant and does not require a regional emissions analysis (40 CFR 93.101 and 93.109[l]).**

Step 6. Is the project included in another regional conformity analysis that meets the isolated rural area analysis requirements per 40 CFR 93.109, including Interagency Consultation and public involvement?

☐ If yes, go to Step 8. **The project, located in an isolated rural area, has met its regional analysis requirements through inclusion in a previously-approved regional conformity analysis that meets current requirements (40 CFR 93.109[l]).**

☐ If no, go to Step 7.

Step 7. The project, located in an isolated rural area, requires a separate regional emissions analysis.

☐ **Regional emissions analysis for regionally significant project, located in an isolated rural area, is complete. Regional conformity analysis was conducted that includes the project and reasonably foreseeable regionally significant projects for at least 20 years. Interagency Consultation and public participation were conducted. Based on the analysis, the interim or emission budget conformity tests applicable to the area are met (40 CFR 93.109[l] and 95.105).**[1] Go to Step 8.

Step 8. Is the project located in a CO nonattainment or maintenance area?

☐ If no, go to Step 9. **CO conformity analysis is not required.**

☒ If yes, **hot-spot analysis requirements for CO per the** CO Protocol (or per EPA's modeling guidance, CAL3QHCR can be used with EMFAC emission factors[2]) **have been met. Project will not cause or contribute to a new localized CO violation (40 CFR 93.116 and 93.123)**[3]**.** Go to Step 9.

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[1] The analysis must support this conclusion before going to the next step.

[2] Use of the CO Protocol is strongly recommended due to its use of screening methods to minimize the need for modeling. When modeling is needed, the Protocol simplifies the modeling approach. Use of CAL3QHCR must follow U.S. EPA's latest CO hot spot guidance, using EMFAC instead of MOVES; see: http://www.epa.gov/otaq/stateresources/transconf/projectlevel-hotspot.htm#co-hotspot.

[3] As of October 1, 2007, there are no CO nonattainment areas in California. Therefore, the requirements to not worsen existing violations and to reduce/eliminate existing violations do not apply.

Step 9. Is the project located in a PM10 and/or a PM2.5 nonattainment or maintenance area?

☐ If no, go to Step 13. **PM2.5/PM10 conformity analysis is not required.**

☒ If yes, go to Step 10.

Step 10. Is the project considered to be a Project of Air Quality Concern (POAQC), as described in EPA's Transportation Conformity Guidance for PM 10 and PM 2.5?

☒ If no, **the project is not a project of concern for PM10 and/or PM2.5 hot-spot analysis based on 40 CFR 93.116 and 93.123 and EPA's Hot-Spot Analysis Guidance. Interagency Consultation concurred with this determination on _____.** Go to Step 12.

☐ If yes, go to Step 11.

Step 11. The project is a POAQC.

☐ **The project is a project of concern for PM10 and/or PM2.5 hot-spot analysis based on 40 CFR 93.116 and 93.123, and EPA's Hot-Spot Guidance. Interagency Consultation concurred with this determination on _____. Detailed PM hot-spot analysis, consistent with 40 CFR 93.116 and 93.123 and EPA's Hot-Spot Guidance, shows that the project would not cause or contribute to, or worsen, any new localized violation of PM10 and/or PM2.5 standards.** Go to Step 12.

Step 12. Does the approved PM SIP include any PM10 and/or PM2.5 control measures that apply to the project, and has a written commitment been made as part of the air quality analysis to implement the identified SIP control measures? [(Control measures can be found in the applicable Federal Register notice at: http://www.epa.gov/otaq/stateresources/transconf/reg9sips.htm#ca.]

☐ If yes, **a written commitment is made to implement the identified SIP control measures for PM10 and/or PM2.5 through construction or operation of this project (40 CFR 93.117).** Go to Step 14.

☒ If no, go to Step 13.

Step 13a. Have project-level mitigation or control measures for CO, PM10, and/or PM2.5, included as part of the project's design concept and scope, been identified as a condition of the RTP or TIP conformity determination? AND/OR

Step 13b. Are project-level mitigation or control measures for CO, PM10, and/or PM2.5 included in the project's NEPA document?

AND

Step 13c (applies only if Step 13a and/or 13b are answered "yes"). Has a written commitment been made as part of the air quality analysis to implement the identified measures?

☐ If yes to 13a and/or 13b and 13c, **a written commitment is made to implement the identified mitigation or control measures for CO, PM10, and/or PM2.5 through construction or operation of this project. These mitigation or control measures are identified in the project's NEPA document and/or as conditions of the RTP or TIP conformity determination[1] (40 CFR 93.125(a)).** Go to Step 14.

☒ If no, go to Step 14

Step 14. Does the project qualify for a 771.117(c)(22) or 771.117(c)(23) Categorical Exclusion pursuant to 23 USC 326 and is an Air Quality Conformity Analysis required to document any analysis required by Steps 1 through 13 of this form?[4]

☐ If yes, then Caltrans prepares the Air Quality Conformity Analysis and makes the conformity determination. No FHWA involvement is required. See the AQCA Annotated Outline. Go to Step 17.

☒ If no, go to Step 15.

Step 15. Does the project quality for any other Categorical Exclusion pursuant to 23 USC 326 (but NOT 771.117(c)(22) or 771.117(c)(23))?

☒ If yes, then no FHWA involvement is required and Caltrans makes the conformity determination through its signature on the CE form. **An Air Quality Conformity Analysis (AQCA) is not needed.** Go to Step 17.

☐ If no, go to Step 16.

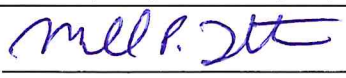
Step 16. Does the project require preparation of a Categorical Exclusion, EA, or EIS pursuant to 23 USC 327?

☐ If yes, then Caltrans submits a conformity determination to FHWA for FHWA's conformity determination. **An AQCA is needed.** See the AQCA Annotated Outline.

Date of FHWA air quality conformity determination: _____

Go to Step 17.

Step 17. STOP as all air quality conformity requirements have been met.

Signature:			
Printed Name:	Michael Thornton	**Date:**	10/8/2018
Title:	City Engineer		

[4] Please note that for ALL projects the project file must include evidence that one of the three following situation applies: 1) Conformity does not apply to the project area; or 2) The project is exempt from all conformity analysis requirements; or 3) The project is subject to project-level conformity analysis (and possibly regional conformity analysis) and meets the criteria for a conformity determination. The project file must include all supporting documentation and this checklist.