

TECHNICAL MEMORANDUM

To: Steven Berzansky, Steven Walker Communities
From: Jin Choi and Ryan Chiene, Kimley-Horn and Associates, Inc.
Date: February 4, 2025
Subject: Updated Site Plan Evaluation, Riverside, CA – Air Quality and Greenhouse Gas Analysis

Purpose and Background

The purpose of this memorandum is to evaluate impacts from air pollutant and greenhouse gas (GHG) emissions as a result of the updated site plan for the Arlington and Monroe Gas Station and Convenience Store Project (Project), located in the City of Riverside, California.

The Project consists of a 4,650 square-foot (sf) convenience store with 12 vehicle fueling positions. The updated site plan proposes a change to the convenience store from 4,740 square feet (sf) to 4,650 sf and rotating the building by 90 degrees. The previous site plan is presented in [Attachment A: Previous Site Plan](#), and the updated site plan is presented in [Attachment B: Updated Site Plan](#).

Air Quality and Greenhouse Gas Emissions Evaluation

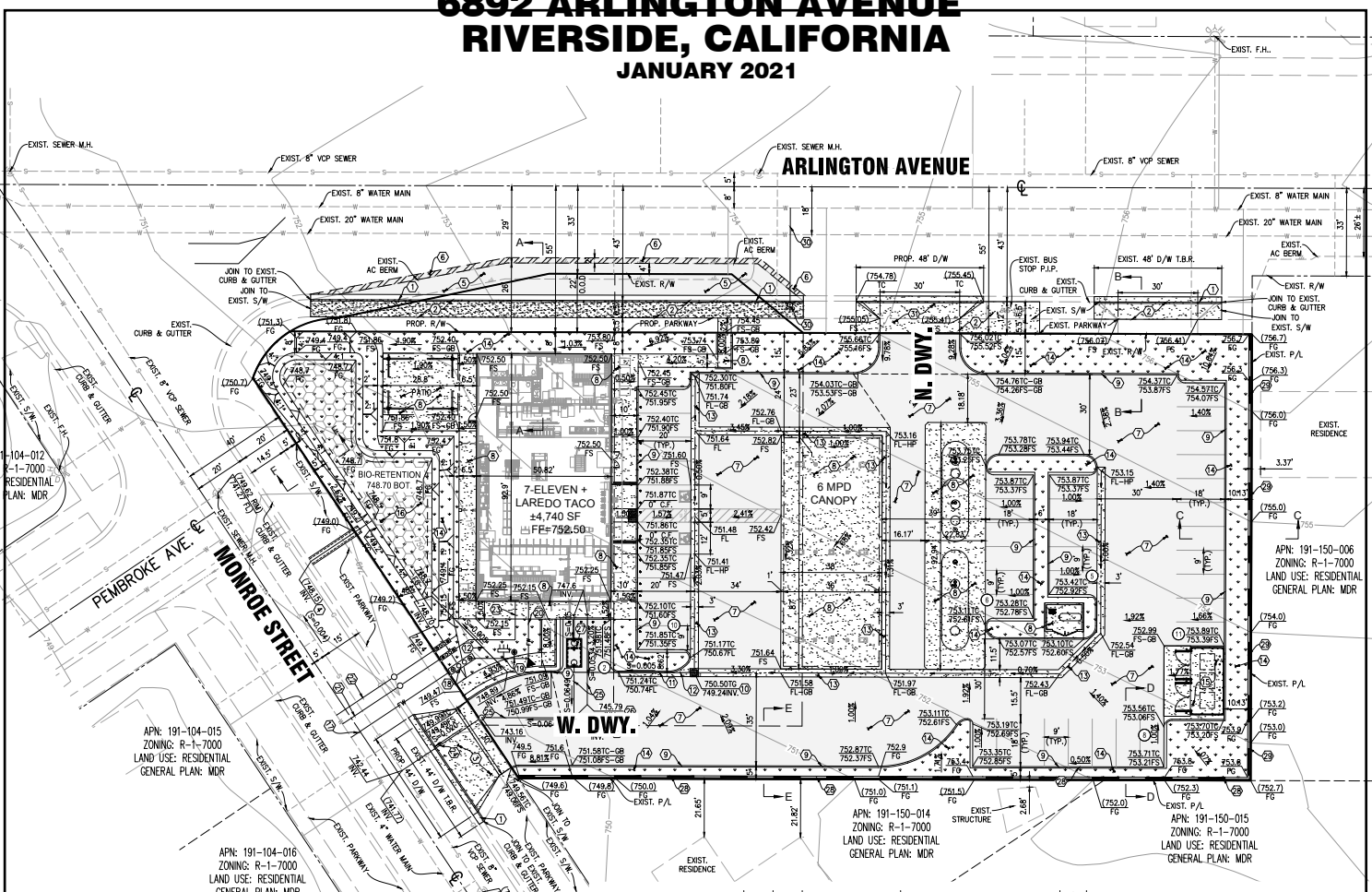
Kimley-Horn prepared the air quality and GHG assessments in January 2021, analyzing Project impacts from construction and operational air pollutant and GHG emissions. As discussed in the air quality and GHG assessments, Project impacts from air quality and GHG emissions would not exceed South Coast Air Quality Management District (SCAQMD) thresholds and/or conflict with applicable air quality/GHG emissions reduction plans. Thus, impacts were considered less than significant, and no mitigation measures were required.

The decrease in convenience storage square footage and change in building orientation would not result in significant air quality and/or GHG impacts since the uses and trip generation have not changed. Thus, the existing air quality and GHG assessments are still applicable to the updated site plan. Therefore, Project implementation would not result in significant air quality and GHG impacts, and no mitigation measures would be required.

ATTACHMENT A
PREVIOUS SITE PLAN

6892 ARLINGTON AVENUE RIVERSIDE, CALIFORNIA

JANUARY 2021



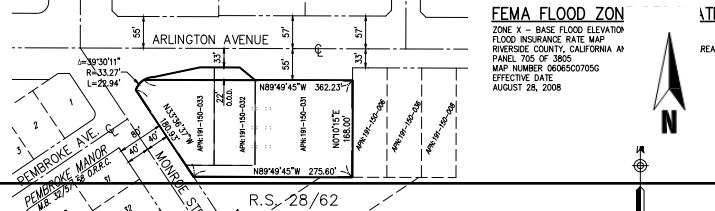
INSTRUCTION NOTES

- 1. PROPOSED 6" CURB AND GUTTER PER CITY OF RIVERSIDE STD. NO. 200. TYPE 1.
- 2. PROPOSED CURB SIDEWALK PER CITY OF RIVERSIDE STD. NO. 325.
- 3. PROPOSED TYPE PL 2 DRIVEWAY APPROACH PER CITY OF RIVERSIDE STD. NO. 302.
- 4. PROPOSED PARKWAY DRAIN PER CITY OF RIVERSIDE STD. NO. 410.
- 5. PROPOSED STREET A.C. PAVING.
- 6. PROPOSED COLD PLANE AND OVERLAY.
- 7. PROPOSED ON-SITE A.C. PAVING.
- 8. PROPOSED CONCRETE HARDCAPE.
- 9. PROPOSED 6" CURB ONLY.
- 10. PROPOSED 24"x24" INLET.
- 11. PROPOSED 6" CURB AND GUTTER.

- 12. PROPOSED FIRE SERVICE.
- 13. PROPOSED DGDIA BACKFLOW DEVICE.
- 14. PROPOSED PIVY AND FDC.
- 15. PROPOSED FIRE WATER LINE (PRIVATE).
- 16. PROPOSED DOMESTIC SERVICE, METER AND BACKFLOW DEVICE.
- 17. PROPOSED IRRIGATION SERVICE, METER AND BACKFLOW DEVICE.
- 18. PROPOSED DOMESTIC WATER LINE (PRIVATE).
- 19. PROPOSED SEWER LATERAL AND CLEAN OUT.
- 20. PROPOSED SEWER LINE (PRIVATE).
- 21. PROPOSED SEWER CLEAN OUT.
- 22. PROPOSED GREASE INTERCEPTOR.

FEMA FLOOD ZON

ZONE 1 = BASE FLOOD ELEVATION
FLOOD INSURANCE RATE MAP
RIVERSIDE COUNTY, CALIFORNIA AP
PANEL 705 OF 3865
MAP NUMBER 060650705G
EFFECTIVE DATE
AUGUST 28, 2008



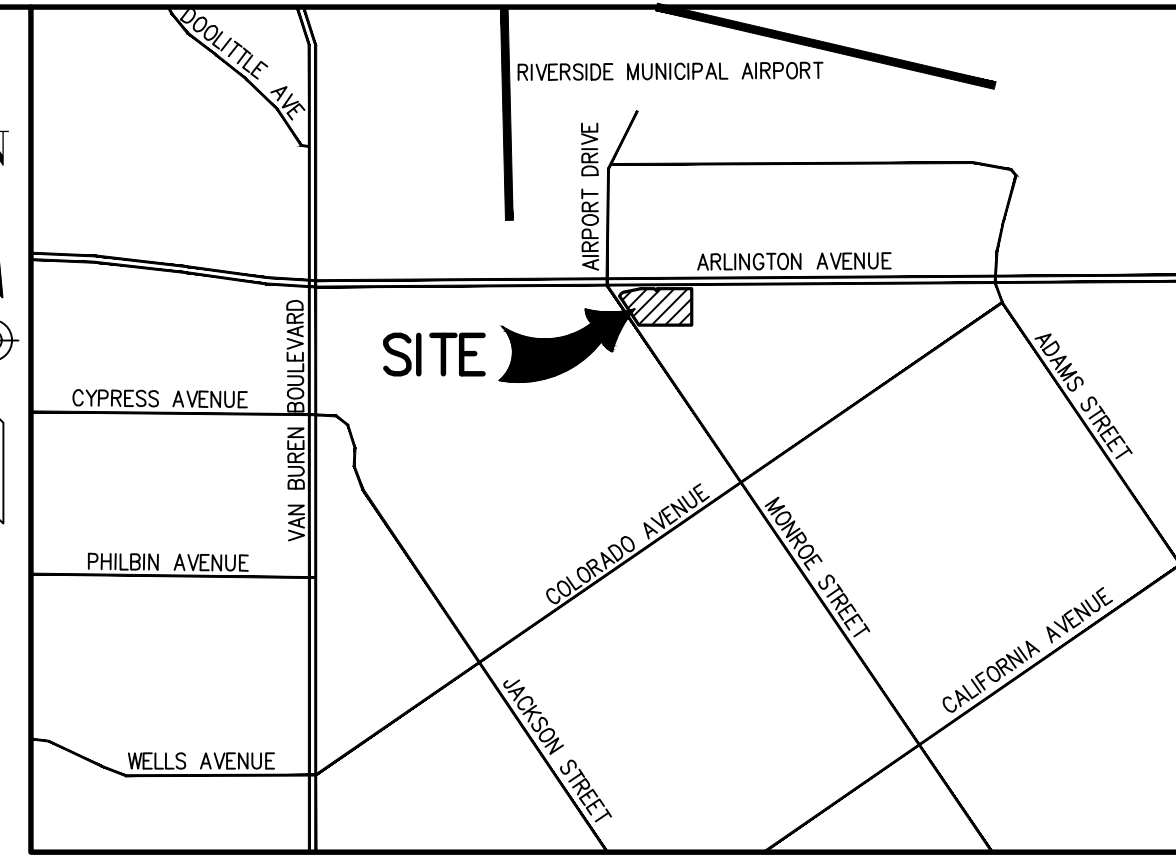
ATTACHMENT B
UPDATED SITE PLAN

CONCEPTUAL GRADING PLAN

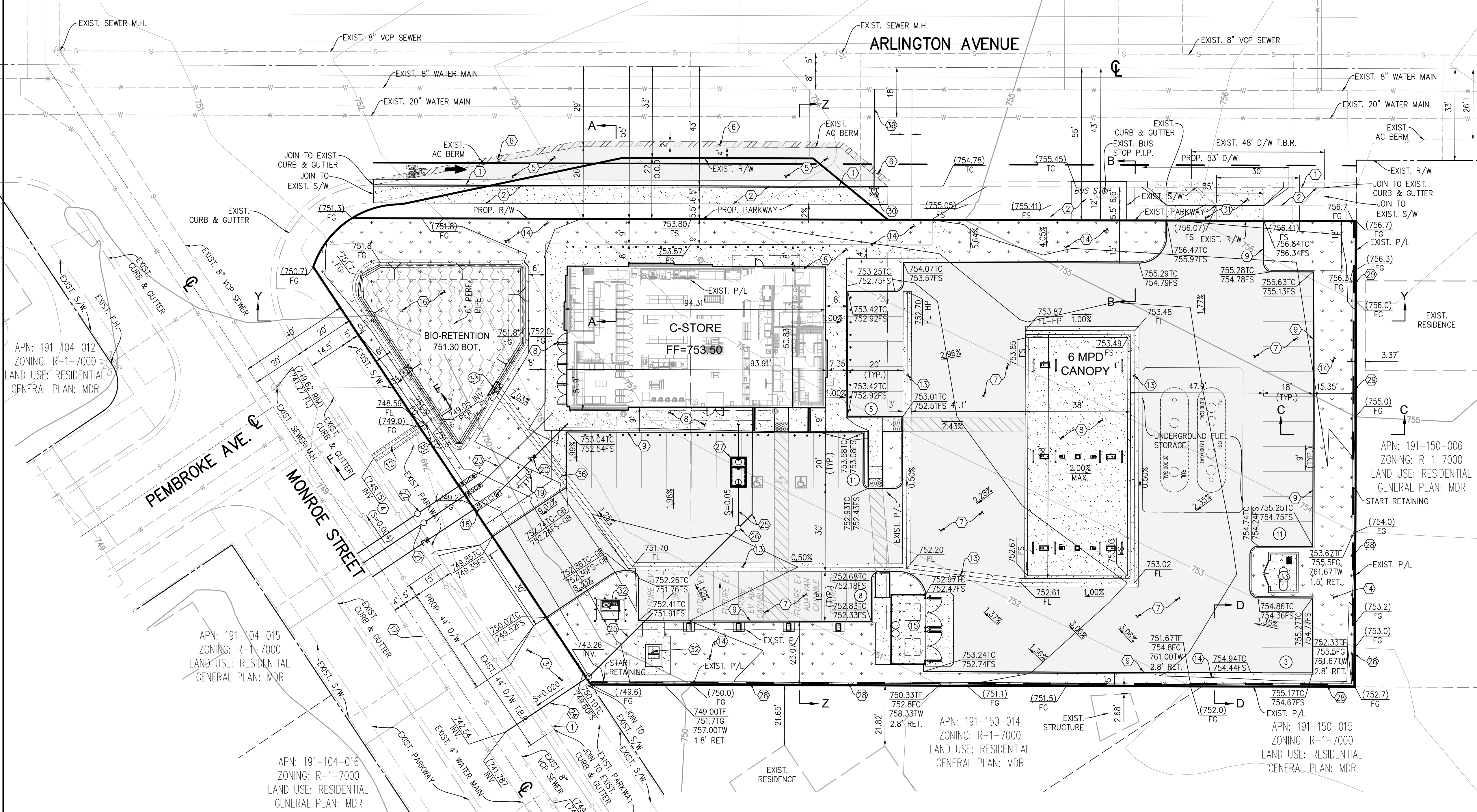
6902, 6892, 6836 ARLINGTON AVENUE

RIVERSIDE, CALIFORNIA

FEBRUARY 2026



VICINITY MAP
 THOMAS GUIDE - PAGE 714 GRID J-2 (2005 EDITION)
 SECTION 6, TOWNSHIP 3 SOUTH, RANGE 5 WEST
 NOT TO SCALE



OWNER/APPLICANT

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 RIVERSIDE, CA. 92504
 PH: (951) 784-0840

ENGINEER

WOODARD GROUP
 1485 SPRUCE ST., STE. "M"
 RIVERSIDE, CA 92507
 PH: (951) 907-5077
 CONTACT: ANDREW C. WOODARD

TOPOGRAPHY SOURCE

EXISTING TOPOGRAPHY IS BASED ON CITY OF RIVERSIDE CADME DATABASE AND RECORD INFORMATION

LEGAL DESCRIPTION

THOSE PORTIONS OF LOT 5 IN BLOCK 4 OF THE LANDS OF THE RIVERSIDE CADME AND IRRIGATING CO., AS SHOWN BY MAP ON FILE IN BOOK 1, PAGE 70 THEREOF, OF MAPS, RECORDS OF SAN BERNARDINO COUNTY CALIFORNIA.

ASSESSOR PARCEL NO

BOOK	PAGE	PARCELS
191	150	031
191	150	032
191	150	033

ACREAGE

APN: 191-150-031	0.70 ACRES
APN: 191-150-032	0.27 ACRES
APN: 191-150-033	0.37 ACRES
GROSS	1.34 ACRES
NET	1.28 ACRES
DISTURBED AREA	1.28 ACRES
OFFER OF DEDICATION	0.06 ACRES

ZONING/LAND USE/GENERAL PLAN

EXISTING ZONING (191-150-032, 191-150-033)	R-1-7000
EXISTING ZONING (191-150-031)	MU-V (MIXED USE-VILLAGE)
EXISTING LAND USE:	VACANT
EXISTING GENERAL PLAN:	O (OFFICE) & MU-V (MIXED USE - VILLAGE)
PROPOSED ZONING:	CR (COMMERCIAL RETAIL)
PROPOSED LAND USE:	SERVICE STATION/RETAIL/RESTAURANT
PROPOSED GENERAL PLAN AMENDMENT:	MU-V (MIXED USE - VILLAGE)

UTILITY PROVIDERS

WATER: CITY OF RIVERSIDE
 SEWER: CITY OF RIVERSIDE
 ELECTRICITY: CITY OF RIVERSIDE
 GAS: THE GAS COMPANY
 TELEPHONE: VERIZON
 TELEVISION: AIR WAVES / CHARTER COMMUNICATIONS

LEGEND

---	EXISTING PROPERTY LINE
---	PROPOSED RIGHT OF WAY
---	EXISTING RIGHT OF WAY
---	EXISTING CENTERLINE
---	PROPOSED CURB
---	EXISTING CURB
---	PROPOSED SIDEWALK
---	EXISTING SIDEWALK
---	EXISTING DIRT ROAD
---	PROPOSED PARKING STRIPE
---	EXISTING EASEMENT
---	EXISTING CONTOUR MAJOR
---	EXISTING CONTOUR MINOR
---	EXISTING FENCE
---	EXISTING BUILDING
---	EXISTING CONCRETE
---	PROPOSED UNDERGROUND UTILITY
---	EXISTING UNDERGROUND UTILITY
---	EXISTING EDGE OF PAVEMENT
---	PROPOSED EDGE OF PAVEMENT
---	EXISTING CONTOUR ELEVATION
---	EXISTING SPOT ELEVATION

ABBREVIATIONS

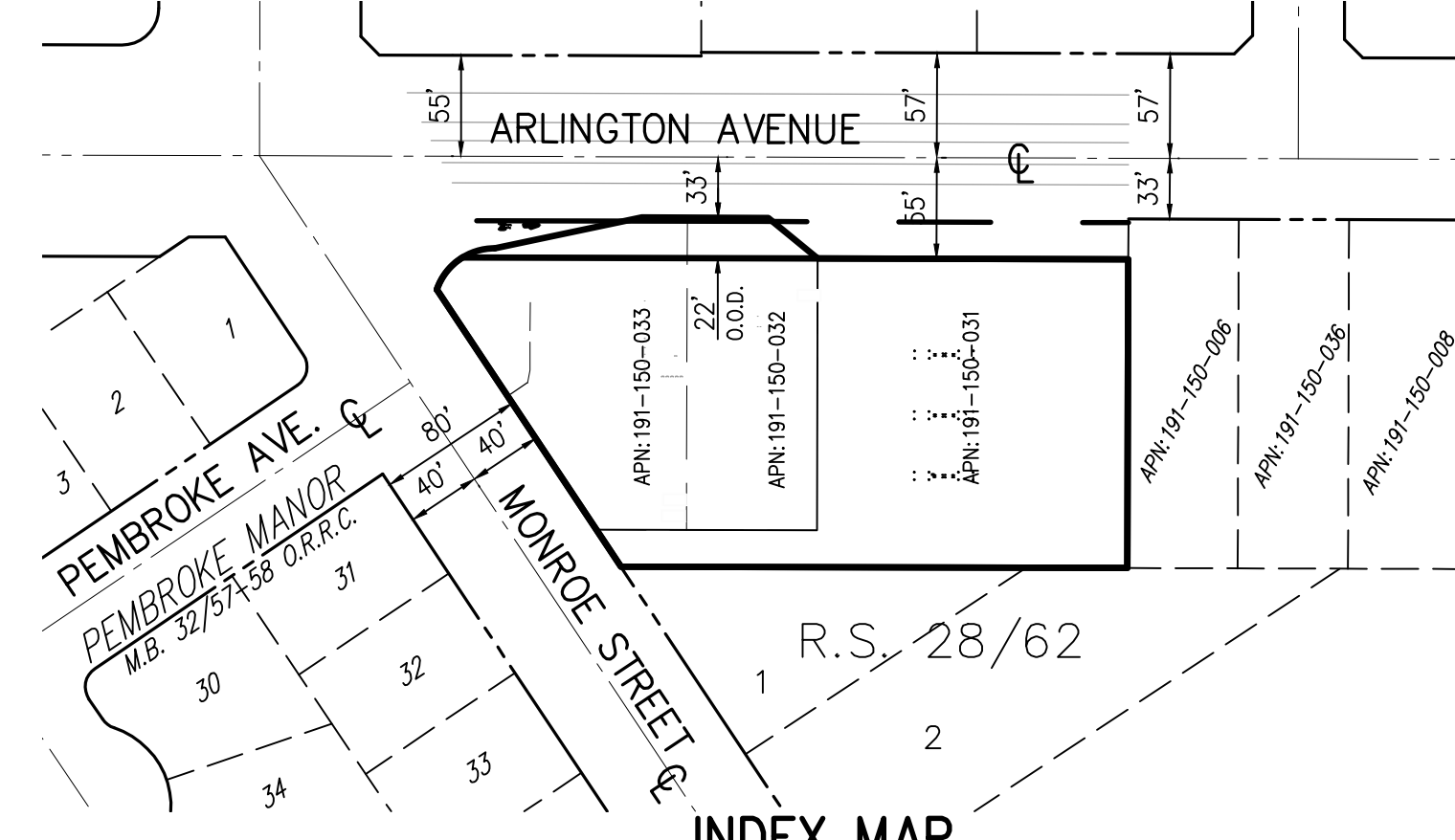
R/W	RIGHT OF WAY
P/L	PROPERTY LINE
EXIST.	EXISTING
PROP.	PROPOSED
S.F.	SQUARE FEET
D/W	DRIVEWAY
S/W	SIDEWALK
M.H.	MANHOLE
FS	FINISH SURFACE
TC	TOP OF CURB
FL	FLOW LINE
FG	FINISH GRADE
TG	TOP OF GRATE
INV.	INVERT
S.D.	STORM DRAIN
EG	EXISTING GROUND
T.B.R.	TO BE REMOVED
P.I.P.	PROTECT IN PLACE
P.P.	POWER POLE
F.H.	FIRE HYDRANT
L/S	LANDSCAPE

CONSTRUCTION NOTES

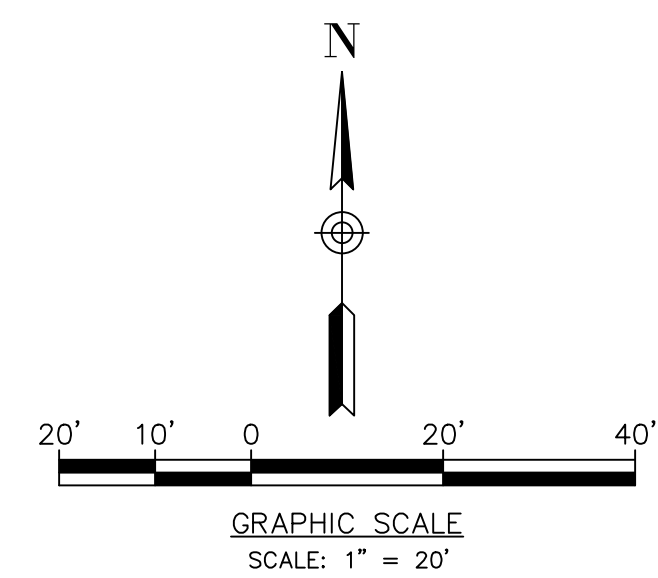
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- PROPOSED CONCRETE LANDSCAPE.
- PROPOSED 6" CURB ONLY.
- PROPOSED 24"x24" INLET
- PROPOSED 6" CURB AND GUTTER.
- PROPOSED OVERFLOW PARKWAY DRAIN.
- PROPOSED 3' WIDE CONCRETE RIBBON GUTTER.
- PROPOSED LANDSCAPE.
- PROPOSED TRASH ENCLOSURE.
- WQMP BIO-RETENTION BASIN
- PROPOSED FIRE SERVICE.
- PROPOSED DCDA BACKFLOW DEVICE.
- PROPOSED PIV AND FDC.
- PROPOSED FIRE WATER LINE (PRIVATE)
- PROPOSED DOMESTIC SERVICE, METER AND BACKFLOW DEVICE.
- PROPOSED IRRIGATION SERVICE, METER AND BACKFLOW DEVICE.
- PROPOSED DOMESTIC WATER LINE (PRIVATE)
- PROPOSED SEWER LATERAL AND CLEAN OUT.
- PROPOSED SEWER CLEAN OUT.
- PROPOSED GREASE INTERCEPTOR.
- PROPOSED COMBINATION RETAINING/FREE STANDING WALL H=9' MAX.
- PROPOSED 6' HIGH FREE STANDING WALL.
- PROPOSED FIRE HYDRANT.
- PROPOSED TYPE CURB 2 DRIVEWAY APPROACH PER CITY OF RIVERSIDE STD. NO. 302.
- PROPOSED TRANSFORMER SEE ARCHITECTURE PLAN.
- PROPOSED HEALY TANK SEE ARCHITECTURE PLAN.
- PROPOSED RIP-RAP PAD.
- PROPOSED 6" STORM DRAIN PIPE.
- PROPOSED PRIVATE UNDER SIDEWALK DRAIN.

FEMA FLOOD ZONE DESIGNATION

ZONE X - BASE FLOOD ELEVATIONS DETERMINED.
 FLOOD INSURANCE RATE MAP
 RIVERSIDE COUNTY, CALIFORNIA AND INCORPORATED AREAS.
 PANEL 705 OF 3805
 MAP NUMBER 06065C0705G
 EFFECTIVE DATE:
 AUGUST 28, 2008



INDEX MAP
 SCALE: 1"=100'



MARK	REVISIONS	DATE	BY

CONCEPTUAL GRADING PLAN
 6902, 6892 & 6836 ARLINGTON AVENUE

FOR: STEVEN WALKER COMMUNITIES
 SCALE: 1"=20'
 DATE: 02/2026
 DESIGNED: AW
 CHECKED: AW
 PLN CK REF:
 F.B.

woodard group

W.O. SHEET 1 OF 3 SHEETS DWG. NO. 1103

Air Quality Assessment
Gas Station and Convenience Store Project
City of Riverside, California



Expect More. Experience Better.

Prepared by:

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714.939.1030

January 2021

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APPENDICES

Appendix A: Air Quality Modeling Data

LIST OF ABBREVIATED TERMS

AQMP	Air quality management plan
AB	Assembly Bill
ADT	Average daily traffic
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CCAA	California Clean Air Act
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CO	Carbon monoxide
cy	Cubic yards
DPM	Diesel particulate matter
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
H ₂ S	Hydrogen sulfide
Pb	Lead
LST	Local significance threshold
µg/m ³	Micrograms per cubic meter
mg/m ³	Milligrams per cubic meter
NAAQS	National Ambient Air Quality Standards
NO ₂	Nitrogen dioxide
NO _x	Nitrogen oxide
O ₃	Ozone
PM ₁₀	Particulate matter less than 10 microns in diameter
PM _{2.5}	Particulate matter less than 2.5 microns in diameter
ppm	Parts per million
ROG	Reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SRA	Source receptor area
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Governments
sf	Square foot
SO ₄₋₂	Sulfates
SO ₂	Sulfur dioxide
TAC	Toxic air contaminant
C ₂ H ₃ Cl	Vinyl chloride
VOC	Volatile organic compound

1 INTRODUCTION

This report documents the results of an Air Quality Assessment completed for the Gas Station and Convenience Store Project (“Project” or “Proposed Project”). The purpose of this Air Quality Assessment is to evaluate the potential construction and operational emissions associated with the Project and determine the level of impact the Project would have on the environment.

1.1 PROJECT LOCATION AND SETTING

The Project site is located on the southeastern corner of Arlington Avenue and Monroe Street in the City of Riverside (City), within Riverside County (County), adjacently west of Interstate 215 (I-210) and approximately six miles east of the Interstate 15 (I-15); refer to [Figure 1: Regional Location](#).

The Project site bounded by Arlington Street to the north, Monroe Street to the west, and residences to the east and south. Commercial uses are located to the north and west, across Arlington Street and Monroe Street. The Project site is an irregular, vacant, and unimproved rectangular-shaped site on approximately 1.3 acres. Based on aerial imagery, the site is predominately vacant and annually covered with scattered natural grasses and a single tree located in the southwestern portion of the site; refer to [Figure 2: Site Vicinity](#).

1.2 PROJECT DESCRIPTION

The proposed Project consists the construction of a new gas station with a 7-Eleven convenience store. The Project proposes the development of a 50,770 square foot gas fueling area with 12 pumps at the central section of the Project site. The Project also includes an approximately 4,740 square foot convenience store and restaurant building located on the western portion of the site with associated facilities and improvements such as a kitchen, storage, and restroom spaces; refer to [Figure 3: Site Plan](#). The store’s hours of operation are proposed from 7:00 a.m. to 11:00 p.m.

As noted above, the Project site is currently undeveloped, but it is immediately surrounded by developed properties. The Project as a whole encompasses several applications that will require approval by the City’s Planning Commission and City Council.

- P20-0429 proposes the modification of the General Plan land use designation on the Project site from O (Office) to C (Commercial).
- P20-0430 proposes the modification of the zoning of a portion of the Project site from R-1-7000 (Single Family Residential, 7,000 square foot minimum lot size) to C-R (Commercial Retail) in conformance with the rest of the property that is zoned C-R.
- PP20-0431 proposes the establishment of a gas station / convenience store with off-sale beer and wine sales in accordance with Table 19.150.020 of the City’s Zoning Ordinance.
- PP20-0432 proposes the review of the site planning and architecture for a proposed gas station, convenience store, and indoor restaurant. The site plan includes a 4,740 square foot main building which will house the convenience store and restaurant; a covered canopy for six (6) fuel pumps, thirty (30) parking spaces, of which two will be handicapped accessible; an outdoor dining pation, and a bio retention basin.

- P20-0433 proposes the finding of Public Convenience and Necessity (PCN) for the off-sale consumption of alcohol from the convenience store. As of this writing, four off-sale licenses are allowed in this census tract per the allotment of the California Department of Beverage Control (ABC). Six off-sale licenses already exist in this census tract, and this establishment would increase that number to seven.

Project Phasing and Construction

The Project is anticipated to be developed in one phase. Should the Project be approved, construction is anticipated to occur over a duration of approximately one year, commencing in the second half of 2021; the facility would be operational in the second half of 2022.



FIGURE 1: Regional Vicinity
7-11 Project
City of Riverside

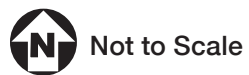
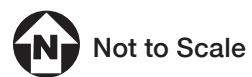




FIGURE 2: Site Vicinity
7-11 Project
City of Riverside



2 ENVIRONMENTAL SETTING

2.1 CLIMATE AND METEOROLOGY

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The Project is located within the South Coast Air Basin (SCAB), which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, as well as all of Orange County. The SCAB is on a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean on the southwest and high mountains forming the remainder of the perimeter¹. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

The SCAB is part of a semi-permanent high-pressure zone in the eastern Pacific. As a result, the climate is mild and tempered by cool sea breezes. This usually mild weather pattern is occasionally interrupted by periods of extreme heat, winter storms, and Santa Ana winds. The annual average temperature throughout the 6,645-square-mile SCAB ranges from low 60 to high 80 degrees Fahrenheit with little variance. With more oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas.

Contrasting the steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all annual rainfall occurs between the months of November and April. Summer rainfall is reduced to widely scattered thundershowers near the coast, with slightly heavier activity in the east and over the mountains.

Although the SCAB has a semiarid climate, the air closer to the Earth's surface is typically moist because of the presence of a shallow marine layer. Except for occasional periods when dry, continental air is brought into the SCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog are frequent and low clouds known as high fog are characteristic climatic features, especially along the coast. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SCAB.

Wind patterns across the SCAB are characterized by westerly or southwesterly on-shore winds during the day and easterly or northeasterly breezes at night. Wind speed is typically higher during the dry summer months than during the rainy winter. Between periods of wind, air stagnation may occur in both the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During winter and fall, surface high-pressure systems over the SCAB, combined with other meteorological conditions, result in very strong, downslope Santa Ana winds. These winds normally continue for a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the diffusion of pollutants by inhibiting the eastward transport of pollutants. Air quality in the SCAB generally ranges from fair to poor and is similar to air quality in most of coastal Southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions.

In addition to the characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two distinct types of temperature inversions control the vertical depth through which air pollutants are mixed. These inversions are the marine inversion and the radiation inversion. The height of

¹ South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.

the base of the inversion at any given time is called the “mixing height.” The combination of winds and inversions is a critical determinant leading to highly degraded air quality for the SCAB in the summer and generally good air quality in the winter.

2.2 AIR POLLUTANTS OF CONCERN

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by state and federal laws. These regulated air pollutants are known as “criteria air pollutants” and are categorized into primary and secondary pollutants.

Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_x), sulfur dioxide (SO₂), coarse particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead are primary air pollutants. Of these, CO, NO_x, SO₂, PM₁₀, and PM_{2.5} are criteria pollutants. ROG and NO_x are criteria pollutant precursors and form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O₃) is formed by a chemical reaction between ROG and NO_x in the presence of sunlight. O₃ and nitrogen dioxide (NO₂) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in Table 1: Air Contaminants and Associated Public Health Concerns.

Pollutant	Major Man-Made Sources	Human Health Effects
Particulate Matter (PM ₁₀ and PM _{2.5})	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O ₃)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC) ¹ and nitrogen oxides (NO _x) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Sulfur Dioxide (SO ₂)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO ₂)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to O ₃ . Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
¹ Volatile Organic Compounds (VOCs or Reactive Organic Gases [ROG]) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).		
Source: California Air Pollution Control Officers Association (CAPCOA), <i>Health Effects</i> , http://www.capcoa.org/health-effects/ , accessed November 24, 2020.		

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that can cause short-term (acute) or long-term (i.e. chronic, carcinogenic or cancer causing) adverse human health effects (i.e. injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes more than 200 compounds, including particulate emissions from diesel-fueled engines.

CARB identified diesel particulate matter (DPM) as a toxic air contaminant. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Ambient Air Quality

CARB monitors ambient air quality at approximately 250 air monitoring stations across the State. These stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. Existing levels of ambient air quality, historical trends, and projections near the Project are documented by measurements made by the South Coast Air Quality Management District (SCAQMD), the air pollution regulatory agency in the SCAB that maintains air quality monitoring stations which process ambient air quality measurements.

Pollutants of concern in the SCAB include O₃, PM₁₀, and PM_{2.5}. The closest air monitoring station to the Project that monitors ambient concentrations of these pollutants is the Riverside-Rubidoux Monitoring Station (located approximately 5 miles to the northeast of the Project site). Local air quality data from 2017 to 2019 are provided in [Table 2: Ambient Air Quality Data](#), which lists the monitored maximum concentrations and number of exceedances of state or federal air quality standards for each year.

Table 2: Ambient Air Quality Data			
Criteria Pollutant	2017	2018	2019
Ozone (O₃)¹			
1-hour Maximum Concentration (ppm)	0.145	0.123	0.123
8-hour Maximum Concentration (ppm)	0.118	0.101	0.096
<i>Number of Days Standard Exceeded</i>			
CAAQS 1-hour (>0.09 ppm)	47	22	24
NAAQS 8-hour (>0.070 ppm)	81	53	59
Carbon Monoxide (CO)¹			
1-hour Maximum Concentration (ppm)	8.689	5.692	4.407
<i>Number of Days Standard Exceeded</i>			
NAAQS 1-hour (>35 ppm)	0	0	0
CAAQS 1-hour (>20 ppm)	0	0	0
Nitrogen Dioxide (NO₂)¹			

Criteria Pollutant	2017	2018	2019
1-hour Maximum Concentration (ppm)	0.063	0.0554	0.056
<i>Number of Days Standard Exceeded</i>			
NAAQS 1-hour (>0.100 ppm)	0	0	0
CAAQS 1-hour (>0.18 ppm)	0	0	0
Particulate Matter Less Than 10 Microns (PM₁₀)¹			
National 24-hour Maximum Concentration	92	86.5	132.5
State 24-hour Maximum Concentration	137.6	126	182.4
State Annual Average Concentration (CAAQS=20 µg/m ³)	—	—	—
<i>Number of Days Standard Exceeded</i>			
NAAQS 24-hour (>150 µg/m ³)	0	0	0
CAAQS 24-hour (>50 µg/m ³)	98	127	110
Particulate Matter Less Than 2.5 Microns (PM_{2.5})¹			
National 24-hour Maximum Concentration	50.3	66.3	55.7
State 24-hour Maximum Concentration	50.3	68.3	57.6
<i>Number of Days Standard Exceeded</i>			
NAAQS 24-hour (>35 µg/m ³)	7	3	5
Notes: NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million; µg/m ³ = micrograms per cubic meter; — = not measured			
¹ Measurements taken at the Riverside-Rubidoux Monitoring Station at 5888 Mission Boulevard Rubidoux, Riverside, California 92509			
Source: All pollutant measurements are from the CARB Aerometric Data Analysis and Management system database (https://www.arb.ca.gov/adam) except for CO, which were retrieved from the CARB Air Quality and Meteorological Information System (https://www.arb.ca.gov/aqmis2/aqdselect.php).			

2.3 SENSITIVE RECEPTORS

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive receptors that are in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive land uses surrounding the Project consist mostly of single-family residential communities. Sensitive land uses nearest to the Project are shown in **Table 3: Sensitive Receptors**.

Receptor Description	Distance and Direction from the Project
Single-Family Residences	Adjacent to the east
Single-Family Residences	20 feet to the south
Single-Family Residences	110 feet to the west
Source: Google Earth, 2020.	

3 REGULATORY SETTING

3.1 FEDERAL

Federal Clean Air Act

Air quality is federally protected by the Federal Clean Air Act (FCAA) and its amendments. Under the FCAA, the United States Environmental Protection Agency (EPA) developed the primary and secondary National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants including O₃, NO₂, CO, SO₂, PM₁₀, PM_{2.5}, and lead. Proposed projects in or near nonattainment areas could be subject to more stringent air-permitting requirements. The FCAA requires each state to prepare a State Implementation Plan to demonstrate how it will attain the NAAQS within the federally imposed deadlines.

The EPA can withhold certain transportation funds from states that fail to comply with the planning requirements of the FCAA. If a state fails to correct these planning deficiencies within two years of Federal notification, the EPA is required to develop a Federal implementation plan for the identified nonattainment area or areas. The provisions of 40 Code of Federal Regulations Parts 51 and 93 apply in all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan. The EPA has designated enforcement of air pollution control regulations to the individual states. Applicable federal standards are summarized in [Table 4: State and Federal Ambient Air Quality Standards](#).

3.2 STATE OF CALIFORNIA

California Air Resources Board

CARB administers the air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in [Table 4](#), are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates.

The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for the preparation of the State Implementation Plan for meeting federal clean air standards for the State of California. Like the EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events such as wildfires, volcanoes, etc. are not considered violations of a state standard, and are not used as a basis for designating areas as nonattainment. The applicable State standards are summarized in [Table 4](#).

Pollutant	Averaging Time	State Standards ¹	Federal Standards ²
Ozone (O ₃) ^{2, 5, 7}	8 Hour	0.070 ppm (137 µg/m ³)	0.070 ppm
	1 Hour	0.09 ppm (180 µg/m ³)	NA
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)
	1 Hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)
Nitrogen Dioxide (NO ₂)	1 Hour	0.18 ppm (339 µg/m ³)	0.10 ppm ¹¹
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)
Sulfur Dioxide (SO ₂) ⁸	24 Hour	0.04 ppm (105 µg/m ³)	0.14 ppm (365 µg/m ³)
	1 Hour	0.25 ppm (655 µg/m ³)	0.075 ppm (196 µg/m ³)
	Annual Arithmetic Mean	NA	0.03 ppm (80 µg/m ³)
Particulate Matter (PM ₁₀) ^{1, 3, 6}	24-Hour	50 µg/m ³	150 µg/m ³
	Annual Arithmetic Mean	20 µg/m ³	NA
Fine Particulate Matter (PM _{2.5}) ^{3, 4, 6, 9}	24-Hour	NA	35 µg/m ³
	Annual Arithmetic Mean	12 µg/m ³	12 µg/m ³
Sulfates (SO ₄₋₂)	24 Hour	25 µg/m ³	NA
Lead (Pb) ^{10, 11}	30-Day Average	1.5 µg/m ³	NA
	Calendar Quarter	NA	1.5 µg/m ³
	Rolling 3-Month Average	NA	0.15 µg/m ³
Hydrogen Sulfide (H ₂ S)	1 Hour	0.03 ppm (42 µg/m ³)	NA
Vinyl Chloride (C ₂ H ₃ Cl) ¹⁰	24 Hour	0.01 ppm (26 µg/m ³)	NA

Notes:

ppm = parts per million; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; – = no information available.

- California standards for O₃, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM₁₀, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e. all standards except for lead and the PM₁₀ annual standard), then some measurements may be excluded. Measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe carbon monoxide standard is 6.0 ppm, a level one-half the national standard and two-thirds the State standard.
- National standards shown are the "primary standards" designed to protect public health. National standards other than for O₃, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour O₃ standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour O₃ standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm or less. The 24-hour PM₁₀ standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m³. The 24-hour PM_{2.5} standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m³.
- Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM₁₀ is met if the 3-year average falls below the standard at every site. The annual PM_{2.5} standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard. NAAQS are set by the EPA at levels determined to be protective of public health with an adequate margin of safety.
- On October 1, 2015, the national 8-hour O₃ primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour O₃ concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the O₃ level in the area.
- The national 1-hour O₃ standard was revoked by the EPA on June 15, 2005.
- In June 2002, CARB established new annual standards for PM_{2.5} and PM₁₀.
- The 8-hour California O₃ standard was approved by the CARB on April 28, 2005 and became effective on May 17, 2006.
- On June 2, 2010, the EPA established a new 1-hour SO₂ standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO₂ NAAQS however must continue to be used until one year following EPA initial designations of the new 1-hour SO₂ NAAQS.
- In December 2012, EPA strengthened the annual PM_{2.5} NAAQS from 15.0 to 12.0 µg/m³. In December 2014, the EPA issued final area designations for the 2012 primary annual PM_{2.5} NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.
- CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.
- National lead standards, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.

Source: South Coast Air Quality Management District, *Air Quality Management Plan*, 2016; California Air Resources Board, *Ambient Air Quality Standards*, May 6, 2016.

3.3 REGIONAL

South Coast Air Quality Management District

The SCAQMD is the air pollution control agency for Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The agency's primary responsibility is ensuring that state and federal ambient air quality standards are attained and maintained in the SCAB. The SCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, and many other activities. All projects are subject to SCAQMD rules and regulations in effect at the time of construction.

The SCAQMD is also the lead agency in charge of developing the AQMP, with input from the Southern California Association of Governments (SCAG) and CARB. The AQMP is a comprehensive plan that includes control strategies for stationary and area sources, as well as for on-road and off-road mobile sources. SCAG has the primary responsibility for providing future growth projections and the development and implementation of transportation control measures. CARB, in coordination with federal agencies, provides the control element for mobile sources.

The 2016 AQMP was adopted by the SCAQMD Governing Board on March 3, 2017. The purpose of the AQMP is to set forth a comprehensive and integrated program that would lead the SCAB into compliance with the federal 24-hour PM_{2.5} air quality standard, and to provide an update to the SCAQMD's commitments towards meeting the federal 8-hour O₃ standards. The AQMP incorporates the latest scientific and technological information and planning assumptions, including SGAG's *Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) and updated emission inventory methodologies for various source categories.

The SCAQMD has published the *CEQA Air Quality Handbook* (approved by the SCAQMD Governing Board in 1993 and augmented with guidance for Local Significance Thresholds [LST] in 2008). The SCAQMD guidance helps local government agencies and consultants to develop environmental documents required by California Environmental Quality Act (CEQA) and provides identification of suggested thresholds of significance for criteria pollutants for both construction and operation (see discussion of thresholds below). With the help of the *CEQA Air Quality Handbook* and associated guidance, local land use planners and consultants are able to analyze and document how proposed and existing projects affect air quality in order to meet the requirements of the CEQA review process. The SCAQMD periodically provides supplemental guidance and updates to the handbook on their website.

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. Under federal law, SCAG is designated as a Metropolitan Planning Organization and under State law as a Regional Transportation Planning Agency and a Council of Governments.

The state and federal attainment status designations for the SCAB are summarized in [Table 5: South Coast Air Basin Attainment Status](#). The SCAB is currently designated as a nonattainment area with respect to the State O₃, PM₁₀, and PM_{2.5} standards, as well as the national 8-hour O₃ and PM_{2.5} standards. The SCAB is designated as attainment or unclassified for the remaining state and federal standards.

Pollutant	State	Federal
Ozone (O ₃) (1 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)
Ozone (O ₃) (8 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)
Particulate Matter (PM _{2.5}) (24 Hour Standard)	–	Non-Attainment (Serious)
Particulate Matter (PM _{2.5}) (Annual Standard)	Non-Attainment	Non-Attainment (Moderate)
Particulate Matter (PM ₁₀) (24 Hour Standard)	Non-Attainment	Attainment (Maintenance)
Particulate Matter (PM ₁₀) (Annual Standard)	Non-Attainment	–
Carbon Monoxide (CO) (1 Hour Standard)	Attainment	Attainment (Maintenance)
Carbon Monoxide (CO) (8 Hour Standard)	Attainment	Attainment (Maintenance)
Nitrogen Dioxide (NO ₂) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Nitrogen Dioxide (NO ₂) (Annual Standard)	Attainment	Attainment (Maintenance)
Sulfur Dioxide (SO ₂) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Sulfur Dioxide (SO ₂) (24 Hour Standard)	Attainment	–
Lead (Pb) (30 Day Standard)	–	Unclassifiable/Attainment
Lead (Pb) (3 Month Standard)	Attainment	–
Sulfates (SO ₄₋₂) (24 Hour Standard)	Attainment	–
Hydrogen Sulfide (H ₂ S) (1 Hour Standard)	Unclassified	–

Source: South Coast Air Quality Management District, *Air Quality Management Plan*, 2016; United States Environmental Protection Agency, *Nonattainment Areas for Criteria Pollutants (Green Book)*, 2020.

The following is a list of SCAQMD rules that are required of construction activities associated with the Project:

- Rule 402 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. This rule is intended to reduce PM₁₀ emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM₁₀ suppression techniques are summarized below.

- a) Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
 - b) All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.
 - c) All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
 - d) The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
 - e) Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the workday to remove soil tracked onto the paved surface.
- **Rule 431.2 (Sulfur Content of Liquid Fuels)** – This rule limits the sulfur content in diesel and other liquid fuels for the purpose of both reducing the formation of sulfur oxides and particulates during combustion and to enable the use of add-on control devices for diesel fueled internal combustion engines.
 - **Rule 1113 (Architectural Coatings)** – This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories.

3.4 LOCAL

City of Riverside

City of Riverside General Plan, Air Quality Element, determines all operations within the city shall be conducted in compliance with all the requirements of the SCAQMD (Code 1968, § 33-172). The City's General Plan identifies goals that will result in a healthier city. Goals and policies that relate to air quality impacts include the following:

Policy AQ-2.23: Preserve transportation corridors with the potential of high demand or of regional significance for future expansion to meet project demand.

Policy AQ-2.24: Support full compliance with the SCAQMD's Clean Fleet Rules.

Policy AQ-2.25: Support the development of alternative fuel infrastructure that is publicly accessible.

Policy AQ-2.26: Allow or encourage programs for priority parking or free parking in City parking lots for alternative fuel vehicles, especially zero and super ultra-low emission vehicles (ZEVs and SULEVs).

Policy AQ-2.27: Develop and coordinate a plan for effective use of AB 2766 (Motor Vehicle Fee Program) funds so that such funds are used for projects and programs identified in the most recently approved Air Quality Management Plan.

- Policy AQ-2.28: Advocate to the State and Federal governments the need for increased regulation of diesel vehicles (e.g., trucks, trains and ships), an expedited schedule for fuel improvement and exhaust filtering and other emissions standards.
- Policy AQ-2.29: Advocate to the state for the use of smog checks for diesel vehicles similar to those required of gas-powered vehicles.
- Policy AQ-2.30: Continue our membership in the Western Riverside County Clean Cities Coalition.
- Policy AQ-3.3: Support SCAQMD's efforts to require stationary air pollution sources, such as gasoline stations, restaurants with charbroilers and deep fat fryers, to comply with or exceed applicable SCAQMD rules and control measures.
- Policy AQ-3.4: Require projects to mitigate, to the extent feasible, anticipated emissions, which exceed AQMP Guidelines.
- Policy AQ-3.5: Consider ordinances and/or voluntary incentive programs that encourage residential builders to go above and beyond state codes to conserve energy and reduce air pollution.
- Policy AQ-3.6: Support "green" building codes that require air conditioning/filtration installation, upgrades, or improvements for all buildings, but particularly for those associated with sensitive receptors.
- Policy AQ-3.7: Require use of pollution control measures for stationary and area sources through the use of best available control technologies, fuel/material substitution, cleaner fuel alternatives, product reformulation, change in work practices, and of control measures identified in the latest AQMP.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 AIR QUALITY THRESHOLDS

Based upon the criteria derived from Appendix G of the CEQA Guidelines, a Project normally would have a significant effect on the environment if it would:

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

SCAQMD Thresholds

The significance criteria established by SCAQMD may be relied upon to make the above determinations. According to the SCAQMD, an air quality impact is considered significant if the Project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SCAQMD has established thresholds of significance for air quality during construction and operational activities of land use development projects, as shown in Table 6: South Coast Air Quality Management District Emissions Thresholds.

Criteria Air Pollutants and Precursors	Construction-Related	Operational-Related
Reactive Organic Gases (ROG)	75	55
Carbon Monoxide (CO)	550	550
Nitrogen Oxides (NO _x)	100	55
Sulfur Oxides (SO _x)	150	150
Coarse Particulates (PM ₁₀)	150	150
Fine Particulates (PM _{2.5})	55	55

Source: South Coast Air Quality Management District, *South Coast AQMD Air Quality Significance Thresholds*, April 2019.

Localized Carbon Monoxide

In addition to the daily thresholds listed above, development associated with the Project would also be subject to the ambient air quality standards. These are addressed through an analysis of localized CO impacts. The significance of localized impacts depends on whether ambient CO levels near the Project are above state and federal CO standards (the more stringent California standards are 20 ppm for 1-hour and 9 ppm for 8-hour). The SCAB has been designated as attainment under the 1-hour and 8-hour standards.

Localized Significance Thresholds

In addition to the CO hotspot analysis, the SCAQMD developed LSTs for emissions of NO₂, CO, PM₁₀, and PM_{2.5} generated at new development sites (off-site mobile source emissions are not included in the LST analysis). LSTs represent the maximum emissions that can be generated at a project without expecting to

cause or substantially contribute to an exceedance of the most stringent state or federal ambient air quality standards. LSTs are based on the ambient concentrations of that pollutant within the Project source receptor area (SRA), as demarcated by the SCAQMD, and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects that disturb 5 acres or less on a single day. The Project site is located within SCAQMD SRA 23. Table 7: Local Significance Thresholds for Construction/Operations, shows the LSTs for a 1-acre, 2-acre, and 5-acre project in SRA 23 within 25 meters of the Project. The nearest sensitive receptors are residences located adjacent to the east. Therefore, the lowest threshold distance of 25 meters was used for analysis based on the SCAQMD LST methodology guidance. LSTs associated with all acreage categories are provided in Table 7 for informational purposes. Table 7 shows that the LSTs increase as acreages increase. It should be noted that LSTs are screening thresholds and are therefore conservative. The construction LST acreage is determined based on daily acreage disturbed. The operational LST acreage is based on the total area of the Project site. Although the Project site is approximately 1.3 acres, the 1-acre operational LSTs are conservatively used to evaluate the Project.

Project Size	Nitrogen Oxide (NO _x)	Carbon Monoxide (CO)	Coarse Particulates (PM ₁₀)	Fine Particulates (PM _{2.5})
1 Acre	147/147	602/602	4/1	3/1
2 Acres	213/213	883/883	7/2	4/1
5 Acres	337/337	1,577/1,577	13/4	8/2

Source: South Coast Air Quality Management District, *Localized Significance Threshold Methodology*, July 2008.

4.2 METHODOLOGY

This air quality impact analysis considers construction and operational impacts associated with the Project. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod). CalEEMod is a Statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Air quality impacts were assessed according to methodologies recommended by CARB and the SCAQMD.

Construction equipment, trucks, worker vehicles, and ground-disturbing activities associated with Project construction would generate emissions of criteria air pollutants and precursors. Daily regional construction emissions are estimated by assuming construction occurs at the earliest feasible date (i.e., a conservative estimate of construction activities) and applying off-road, fugitive dust, and on-road emissions factors in CalEEMod.

Project operations would result in emissions of area sources (consumer products), energy sources (natural gas usage), and mobile sources (motor vehicles from Project generated vehicle trips). Project-generated increases in operational emissions would be predominantly associated with motor vehicle use. The increase of traffic over existing conditions as a result of the Project was obtained from the Project's Traffic Impact Analysis prepared by Trames Solutions Inc. (January 2021). Other operational emissions from area, energy, and stationary sources were quantified in CalEEMod based on land use activity data.

As discussed above, the SCAQMD provides significance thresholds for emissions associated with proposed Project construction and operations. The proposed Project's construction and operational emissions are

compared to the daily criteria pollutant emissions significance thresholds in order to determine the significance of a Project's impact on regional air quality.

The localized effects from the Project's on-site emissions were evaluated in accordance with the SCAQMD's LST methodology, which uses on-site mass emissions rate look-up tables and Project-specific modeling. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 AIR QUALITY ANALYSIS

Threshold 5.1 Would the Project conflict with or obstruct implementation of the applicable air quality plan?

As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan that demonstrates the means to attain the federal standards. The State Implementation Plan must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under State law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment regarding the state and federal ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The Project is located within the SCAB, which is under the jurisdiction of the SCAQMD. The SCAQMD is required, pursuant to the FCAA, to reduce emissions of criteria pollutants for which the SCAB is in nonattainment. To reduce such emissions, the SCAQMD drafted the 2016 AQMP. The 2016 AQMP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The 2016 AQMP is a regional and multi-agency effort including the SCAQMD, CARB, SCAG, and EPA. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's growth projections and RTP/SCS, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The Project is subject to the SCAQMD's AQMP.

Criteria for determining consistency with the AQMP are defined by the following indicators:

- **Consistency Criterion No. 1:** The 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.
- **Consistency Criterion No. 2:** The Project will not exceed the assumptions in the AQMP or increments based on the years of the Project build-out phase.

According to the SCAQMD's *CEQA Air Quality Handbook*, the purpose of the consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it would interfere with the region's ability to comply with CAAQS and NAAQS.

The violations to which Consistency Criterion No. 1 refers are CAAQS and NAAQS. As shown in [Table 8](#) and [Table 9](#) below, the Project would not exceed the construction or operational standards. Therefore, the Project would not contribute to an existing air quality violation. Thus, the Project would be consistent with the first criterion.

Concerning Consistency Criterion No. 2, the AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. Although, the project proposes a general plan

amendment and zone change to allow for commercial uses, the Project would not result in a direct increase in population since the proposed gas station and convenient store would serve the surrounding neighborhood and would not accommodate any new residents. As such, the Project would not result in substantial unplanned growth or unaccounted for growth in the General Plan or job growth projections used by the SCAQMD to develop the AQMP. Thus, the Project is also consistent with the second criterion and a less than significant impact would occur.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 5.2 **Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable state or federal ambient air quality standard?**

Construction Emissions

Construction associated with the Project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the Project area include O₃-precursor pollutants (i.e. ROG and NO_x) and PM₁₀ and PM_{2.5}. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SCAQMD's thresholds of significance.

Construction results in the temporary generation of emissions resulting from site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water.

The duration of construction activities associated with the Project is estimated to last approximately 12 months. Construction-generated emissions associated the Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See [Appendix A: Air Quality Modeling Data](#) for more information regarding the construction assumptions used in this analysis. Predicted maximum daily construction-generated emissions for the Project are summarized in in [Table 8: Construction-Related Emissions](#).

Fugitive dust emissions may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the Project vicinity. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. SCAQMD Rules 402 and 403 (prohibition of nuisances, watering of inactive and perimeter areas, track out requirements, etc.), are applicable to the Project and were applied in CalEEMod to minimize fugitive dust emissions. Standard Condition (SC) AQ-1 requires the implementation of Rule 402 and 403 dust control techniques to minimize PM₁₀ and PM_{2.5} concentrations.

Rule 1113 provides specifications on painting practices and regulates the ROG content of paint. As required by law, all architectural coatings for the Project structures would comply with SCAQMD Rule 1113. [Table 8](#) shows that Project construction would not exceed ROG thresholds with the implementation

of SC AQ-2, which limits the VOC content of paint to 50 grams per liter or less. Construction ROG emissions would not exceed SCAQMD thresholds.

Construction Year	Pollutant (Maximum Pounds per Day)					
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO _x)	Carbon Monoxide (CO)	Sulfur Dioxide (SO ₂)	Coarse Particulate Matter (PM ₁₀)	Fine Particulate Matter (PM _{2.5})
2021 Construction	1.94	17.44	13.76	0.03	3.33	1.99
2022 Construction	7.07	13.34	13.52	0.03	0.89	0.65
<i>SCAQMD Threshold</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>55</i>	<i>150</i>
Exceed SCAQMD Threshold?	No	No	No	No	No	No
Notes: SCAQMD Rule 403 Fugitive Dust applied. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. No mitigation was applied to construction equipment. Refer to Appendix A for Model Data Outputs.						
Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.						

As shown in [Table 8](#), all criteria pollutant emissions would remain below their respective thresholds. While impacts would be considered less than significant, the Project would be subject to SCAQMD Rules 402, 403, and 1113, described in the Regulatory Framework subsection above and SC AQ-1 and SC AQ-2. The proposed Project construction emissions would not worsen ambient air quality, create additional violations of federal and State standards, or delay SCAB's goal for meeting attainment standards.

Operational Emissions

Project-generated emissions would be primarily associated with motor vehicle use and area sources, such as the use of landscape maintenance equipment and architectural coatings. Long-term operational emissions attributable to the Project are summarized in [Table 9: Long-Term Operational Emissions](#). Each of these sources are described below.

Source	Pollutant (Maximum Pounds per Day)					
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO _x)	Carbon Monoxide (CO)	Sulfur Dioxide (SO ₂)	Coarse Particulate Matter (PM ₁₀)	Fine Particulate Matter (PM _{2.5})
Area Source Emissions	0.15	0.00	0.00	0.00	0.00	0.00
Energy Emissions	0.00	0.09	0.07	0.00	0.00	0.00
Mobile Emissions	4.8	37.10	30.62	0.11	6.07	1.67
Total Emissions	4.95	37.19	30.69	0.11	6.07	1.67
<i>SCAQMD Threshold</i>	<i>55</i>	<i>55</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
Exceeds Threshold?	No	No	No	No	No	No
Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.						

- **Area Source Emissions.** Area source emissions would be generated due to on-site equipment, architectural coating, and landscaping that were previously not present on the site.

- **Energy Source Emissions.** Energy source emissions would be generated due to electricity and natural gas usage associated with the Project. Primary uses of electricity and natural gas by the Project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics.
- **Mobile Source.** Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_x, PM₁₀, and PM_{2.5} are all pollutants of regional concern. NO_x and ROG react with sunlight to form O₃, known as photochemical smog. Additionally, wind currents readily transport PM₁₀ and PM_{2.5}. However, CO tends to be a localized pollutant, dispersing rapidly at the source. Project-generated vehicle emissions are based on the trip generation within the Project Traffic Study and incorporated into CalEEMod as recommended by the SCAQMD. Based on these rates, the Project would generate 4,258 total daily trips and 2,490 net daily trips (including pass-by and internal capture)².

As shown in [Table 9](#), Project emissions would not exceed SCAQMD thresholds for any criteria air pollutants. Therefore, long-term operations emissions would result in a less than significant impact.

Cumulative Short-Term Emissions

The SCAB is designated nonattainment for O₃, PM₁₀, and PM_{2.5} for State standards and nonattainment for O₃ and PM_{2.5} for Federal standards. Appendix D of the SCAQMD White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (2003) notes that projects that result in emissions that do not exceed the project-specific SCAQMD regional thresholds of significance should result in a less than significant impact on a cumulative basis unless there is other pertinent information to the contrary. The mass-based regional significance thresholds published by the SCAQMD are designed to ensure compliance with both NAAQS and CAAQS and are based on an inventory of projected emissions in the SCAB. Therefore, if a project is estimated to result in emissions that do not exceed the thresholds, the project's contribution to the cumulative impact on air quality in the SCAB would not be cumulatively considerable. As shown in [Table 8](#) above, Project construction-related emissions by themselves would not exceed the SCAQMD significance thresholds for criteria pollutants. Therefore, the proposed Project would not generate a cumulatively considerable contribution to air pollutant emissions during construction.

The SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the AQMP pursuant to the FCAA mandates. The analysis assumed fugitive dust controls would be utilized during construction, including frequent water applications. SCAQMD rules, mandates, and compliance with adopted AQMP emissions control measures would also be imposed on construction projects throughout the SCAB, which would include related projects. Compliance with SCAQMD rules and regulations would further reduce the Project construction-related impacts. Therefore, Project-related construction emissions, combined with those from other projects in the area, would not substantially deteriorate local air quality. Construction emissions associated with the Project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

² Trames Solutions Inc., *Arlington at Monroe Project Traffic Impact Analysis*, January 2020.

Cumulative Long-Term Impacts

The SCAQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, individual project emissions contribute to existing cumulatively significant adverse air quality impacts. The SCAQMD developed the operational thresholds of significance based on the level above which individual project emissions would result in a cumulatively considerable contribution to the SCAB's existing air quality conditions. Therefore, a project that exceeds the SCAQMD operational thresholds would also be a cumulatively considerable contribution to a significant cumulative impact.

As shown in Table 9, the Project operational emissions would not exceed SCAQMD thresholds. As a result, operational emissions associated with the Project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts. Additionally, adherence to SCAQMD rules and regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis. Project operations would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant.

Standard Conditions and Requirements:

SC AQ-1 Prior to the issuance of grading permits, the City Engineer shall confirm that the Grading Plan, Building Plans and Specifications require all construction contractors to comply with South Coast Air Quality Management District's (SCAQMD's) Rules 402 and 403 to minimize construction emissions of dust and particulates. The measures include, but are not limited to, the following:

- Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
- All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.
- All material transported off site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
- The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
- Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the workday to remove soil tracked onto the paved surface.

SC AQ-2 The applicant shall require by contract specifications that the interior and exterior architectural coatings (paint and primer including parking lot paint) products used would have a volatile organic compound rating of 50 grams per liter or less. Contract specifications shall be included in the construction documents for the Project, which shall be reviewed and approved by the City of Riverside prior to the issuance of building permits.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 5.3 Would the Project expose sensitive receptors to substantial pollutant concentrations?

Localized Construction Significance Analysis

The nearest sensitive receptors are residential houses located adjacent to the east of the Project. To identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with Project-specific emissions.

Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, Table 10: Equipment-Specific Grading Rates, is used to determine the maximum daily disturbed acreage for comparison to LSTs. The appropriate SRA for the localized significance thresholds is the Metropolitan Riverside County (SRA 23) since this area includes the Project. LSTs apply to CO, NO₂, PM₁₀, and PM_{2.5}. The SCAQMD produced look-up tables for projects that disturb areas less than or equal to 5 acres in size. Project construction is anticipated to disturb a maximum of 1.5 acres in a single day. As the LST guidance provides thresholds for projects disturbing 1-, 2-, and 5-acres in size and the thresholds increase with size of the site, the LSTs for a 1.5-acre threshold were interpolated and utilized for this analysis.

Construction Phase	Equipment Type	Equipment Quantity	Acres Graded per 8-Hour Day	Operating Hours per Day	Acres Graded per Day
Site Preparation	Tractors	1	0.5	8	0.5
	Graders	1	0.5	8	0.5
	Dozers	1	0.5	8	0.5
	Scrapers	0	1	8	0
Total Acres Graded per Day					1.5
Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.					

The SCAQMD's methodology states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs." Therefore, only emissions included in the CalEEMod "on-site" emissions outputs were considered. The nearest sensitive receptors are residential houses located adjacent to the east of the Project. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. Therefore, LSTs for 25 meters were utilized in this analysis. Table 11: Localized Significance of Construction Emissions, shows the results of localized emissions during construction. This table represents the worst-case scenario and are based on peak earthwork volumes anticipated.

Construction Activity	Pollutant (Maximum Pounds per Day)			
	Nitrogen Oxide (NO _x)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM ₁₀)	Fine Particulate Matter (PM _{2.5})
Site Preparation (2021)	17.42	7.56	3.24	1.97
Grading (2021)	14.33	6.33	2.74	1.67
Building Construction (2021)	13.64	12.90	0.68	0.66
Building Construction (2022)	12.50	12.73	0.59	0.57
Paving (2022)	6.77	8.81	0.35	0.32
Architectural Coating (2022)	1.41	1.81	0.08	0.08
<i>SCAQMD Localized Screening Threshold (adjusted for 1.5 acres at 25 meters)</i>	<i>275</i>	<i>1,230</i>	<i>10</i>	<i>6</i>
Exceed SCAQMD Threshold?	No	No	No	No

Source: CalEEMod version 2016.3.2. Refer to [Appendix A](#) for model outputs.

Table 11 shows that emissions of these pollutants would not result in significant concentrations of pollutants at nearby sensitive receptors. Significant impacts would not occur concerning LSTs during construction.

Localized Operational Significance Analysis

According to the SCAQMD localized significance threshold methodology, operational LSTs apply to onsite sources. As the nearest receptors are located adjacent to the Project site, LSTs for 25 meters for SRA 23 were used in this analysis. The 1-acre operational LST threshold was used for approximately 1.3-acre Project site. As the LSTs increase with size of the site, the 1-acre LSTs are conservative for evaluation of a 1.3-acre site. The on-site operational emissions were calculated using CalEEMod and are compared to the LST thresholds in [Table 12: Localized Significance of Operational Emissions](#). The operational emissions shown in [Table 12](#) include all on-site project-related stationary sources (i.e., area and energy sources). [Table 12](#) shows that the project would not generate localized emissions during project operations. Therefore, the project would result in a less than significant impact concerning LSTs during operational activities.

Activity	Pollutant (Maximum Pounds per Day)			
	Nitrogen Oxide (NO _x)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM ₁₀)	Fine Particulate Matter (PM _{2.5})
On-Site Emissions	0.09	0.07	0.00	0.00
<i>SCAQMD Localized Screening Threshold (1 acres at 25 meters)²</i>	<i>147</i>	<i>602</i>	<i>1</i>	<i>1</i>
Exceed SCAQMD Threshold?	No	No	No	No

1. SRA Zone 23 – Metropolitan Riverside County; 1-acre area, 25 meters to receptor.
Source: CalEEMod version 2016.3.2. Refer to [Appendix A](#) for model outputs.

Criteria Pollutant Health Impacts

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (*Sierra Club v. County of Fresno* [Friant Ranch, L.P.] [2018] Cal.5th, Case No. S219783). The SCAQMD has set its CEQA significance thresholds based on the FCAA, which defines a major stationary source (in extreme ozone nonattainment areas such as the South Coast Air Basin) as emitting 10 tons per year. The thresholds correlate with the trigger levels for the federal New Source Review (NSR) Program and SCAQMD Rule 1303 for new or modified sources. The NSR Program³ was created by the FCAA to ensure that stationary sources of air pollution are constructed or modified in a manner that is consistent with attainment of health-based federal ambient air quality standards. The federal ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, projects that do not exceed the SCAQMD's LSTs and mass emissions thresholds would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts.

NO_x and ROG are precursor emissions that form ozone in the atmosphere in the presence of sunlight where the pollutants undergo complex chemical reactions. It takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources. Breathing ground-level ozone can result health effects that include reduced lung function, inflammation of airways, throat irritation, pain, burning, or discomfort in the chest when taking a deep breath, chest tightness, wheezing, or shortness of breath. In addition to these effects, evidence from observational studies strongly indicates that higher daily ozone concentrations are associated with increased asthma attacks, increased hospital admissions, increased daily mortality, and other markers of morbidity. The consistency and coherence of the evidence for effects upon asthmatics suggests that ozone can make asthma symptoms worse and can increase sensitivity to asthma triggers.

According to the SCAQMD's 2016 AQMP, ozone, NO_x, and ROG have been decreasing in the Basin since 1975 and are projected to continue to decrease in the future. Although vehicle miles traveled in the Basin continue to increase, NO_x and ROG levels are decreasing because of the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. NO_x emissions from electric utilities have also decreased due to the use of cleaner fuels and renewable energy. The 2016 AQMP demonstrates how the SCAQMD's control strategy to meet the 8-hour ozone standard in 2023 would lead to sufficient NO_x emission reductions to attain the 1-hour ozone standard by 2022. In addition, since NO_x emissions also lead to the formation of PM_{2.5}, the NO_x reductions needed to meet the ozone standards will likewise lead to improvement of PM_{2.5} levels and attainment of PM_{2.5} standards.

The SCAQMD's air quality modeling demonstrates that NO_x reductions prove to be much more effective in reducing ozone levels and will also lead to significant improvement in PM_{2.5} concentrations. NO_x-emitting stationary sources regulated by the SCAQMD include Regional Clean Air Incentives Market (RECLAIM) facilities (e.g., refineries, power plants, etc.), natural gas combustion equipment (e.g., boilers, heaters, engines, burners, flares) and other combustion sources that burn wood or propane. The 2016 AQMP identifies robust NO_x reductions from new regulations on RECLAIM facilities, non-refinery flares, commercial cooking, and residential and commercial appliances. Such combustion sources are already heavily regulated with the lowest NO_x emissions levels achievable but there are opportunities to require

³ Code of Federal Regulation (CFR) [i.e., PSD (40 CFR 52.21, 40 CFR 51.166, 40 CFR 51.165 (b)), Non-attainment NSR (40 CFR 52.24, 40 CFR 51.165, 40 CFR part 51, Appendix S)]

and accelerate replacement with cleaner zero-emission alternatives, such as residential and commercial furnaces, pool heaters, and backup power equipment. The AQMD plans to achieve such replacements through a combination of regulations and incentives. Technology-forcing regulations can drive development and commercialization of clean technologies, with future year requirements for new or existing equipment. Incentives can then accelerate deployment and enhance public acceptability of new technologies.

The 2016 AQMD also emphasizes that beginning in 2012, continued implementation of previously adopted regulations will lead to NO_x emission reductions of 68 percent by 2023 and 80 percent by 2031. With the addition of 2016 AQMP proposed regulatory measures, a 30 percent reduction of NO_x from stationary sources is expected in the 15-year period between 2008 and 2023. This is in addition to significant NO_x reductions from stationary sources achieved in the decades prior to 2008.

As previously discussed, Project emissions would be less than significant and would not exceed SCAQMD thresholds (refer to [Table 8](#) and [Table 9](#)). Localized effects of on-site Project emissions on nearby receptors were also found to be less than significant (refer to [Table 11](#) and [Table 12](#)). The LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable state or federal ambient air quality standard. The LSTs were developed by the SCAQMD based on the ambient concentrations of that pollutant for each SRA and distance to the nearest sensitive receptor. The ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect public health, including protecting the health of sensitive populations.

Carbon Monoxide Hotspots

An analysis of CO “hot spots” is needed to determine whether the change in the level of service of an intersection resulting from the Project would have the potential to result in exceedances of the CAAQS or NAAQS. It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations have steadily declined. Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard.

The South Coast Air Basin (SCAB) was re-designated as attainment in 2007 and is no longer addressed in the SCAQMD’s AQMP. The 2003 AQMP is the most recent version that addresses CO concentrations. As part of the SCAQMD *CO Hotspot Analysis*, the Wilshire Boulevard/Veteran Avenue intersection, one of the most congested intersections in Southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day, was modeled for CO concentrations. This modeling effort identified a CO concentration high of 4.6 ppm, which is well below the 35-ppm Federal standard. The Project considered herein would not produce the volume of traffic required to generate a CO hot spot in the context of SCAQMD’s *CO Hotspot Analysis*. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection even as it accommodates 100,000 vehicles daily, it can be reasonably inferred that CO hotspots would not be experienced at any vicinity intersections resulting from 2,490 additional vehicle trips attributable to the Project. Therefore, impacts would be less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 5.4 Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Construction

Odors that could be generated by construction activities are required to follow SCAQMD Rule 402 to prevent odor nuisances on sensitive land uses. SCAQMD Rule 402, Nuisance, states:

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

During construction-related activities, some odors (not substantial pollutant concentrations) that may be detected are those typical of construction vehicles (e.g. diesel exhaust from grading and construction equipment). These odors are a temporary short-term impact that is typical of construction projects, are not expected to affect a substantial number of people and would disperse rapidly. Furthermore, odors that could be generated by construction activities are required to follow SCAQMD Rule 402 (Nuisance) to prevent odor nuisances on sensitive land uses. Therefore, impacts related to odors associated with the Project's construction-related activities would be less than significant.

Operational

The SCAQMD *CEQA Air Quality Handbook* identifies certain land uses as sources of odors. These land uses include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Project would not include any of the land uses that have been identified by the SCAQMD as odor sources. Therefore, the proposed Project would not create objectionable odors.

Mitigation Measures: No mitigation is required.

Level of Significance: No impact.

CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

Cumulative Setting

The cumulative setting for air quality includes the City of Riverside and SCAB. SCAB is designated as a nonattainment area for State standards of ozone, PM₁₀, and PM_{2.5}. The SCAB is designated as a nonattainment area for federal standards of ozone and PM_{2.5}, attainment and serious maintenance for federal PM₁₀ standards, and is designated as unclassified or attainment for all other pollutants. Cumulative growth in population and vehicle use could inhibit efforts to improve regional air quality and attain the ambient air quality standards.

Cumulative Impacts and Mitigation Measures

The SCAQMD's approach to assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with requirements of the FCAA and CCAA. As discussed above, the proposed Project would be consistent with the AQMP, which is intended to bring SCAB into attainment for all criteria pollutants. Since the Project's estimated construction and operational emissions would not exceed the applicable SCAQMD daily significance thresholds that are designed to assist the region in attaining both NAAQS and CAAQS, cumulative impacts would be less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

6 REFERENCES

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3. California Air Resources Board, *Aerometric Data Analysis and Measurement System (ADAM) Top Four Summaries from 2017 to 2019*, 2020.
4. California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*, 2005.
5. California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, 2000.
6. City of Riverside, *General Plan and Supporting Documents EIR, Section 5.3-Air Quality*, November 2007.
7. South Coast Air Quality Management District, *2016 Air Quality Management Plan*, March 2017.
8. South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.
9. South Coast Air Quality Management District, *Localized Significance Threshold Methodology*, 2008.
10. South Coast Air Quality Management District, *South Coast AQMD Air Quality Significance Thresholds*, April 2019.
11. Trames Solutions Inc., *Arlington at Monroe Traffic Impact Analysis Project*, January 2020.
12. United States Environmental Protection Agency, *National Ambient Air Quality Standards Table*, 2016.
13. United States Environmental Protection Agency, *Nonattainment Areas for Criteria Pollutants*, 2019.
14. United States Environmental Protection Agency, *Policy Assessment for the Review of the Lead National Ambient Air Quality Standards*, 2013.
15. Woodard Group, *Conceptual Grading Plan for 6892 Arlington Avenue*, January 2021.

Appendix A

Air Quality Modeling Data

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

Gas Station and 7-Eleven Store
Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	50.77	1000sqft	1.17	50,768.00	0
Fast Food Restaurant w/o Drive Thru	1.12	1000sqft	0.03	1,120.00	0
Convenience Market With Gas Pumps	12.00	Pump	0.11	4,740.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2022
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1092.34	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

Project Characteristics - Adjusted per the RPU 2019 Power Content Label.

Land Use - Site acreage

Construction Phase - Anticipated construction schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - No Demolition phase

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Grading -

Vehicle Trips - Per traffic study

Energy Use -

Construction Off-road Equipment Mitigation - Rule 403

Water Mitigation -

Waste Mitigation -

Mobile Land Use Mitigation -

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	2.00	15.00
tblConstructionPhase	NumDays	4.00	15.00
tblConstructionPhase	NumDays	200.00	260.00
tblLandUse	LandUseSquareFeet	50,770.00	50,768.00
tblLandUse	LandUseSquareFeet	1,694.10	4,740.00
tblLandUse	LotAcreage	0.04	0.11
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	1325.65	1092.34
tblVehicleTrips	ST_TR	204.47	322.50
tblVehicleTrips	ST_TR	696.00	346.00
tblVehicleTrips	SU_TR	166.88	322.50
tblVehicleTrips	SU_TR	500.00	346.00
tblVehicleTrips	WD_TR	542.60	322.50
tblVehicleTrips	WD_TR	716.00	346.00

2.0 Emissions Summary

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

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	0.1534	6.0000e-005	6.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0140	0.0140	4.0000e-005		0.0149
Energy	9.3600e-003	0.0851	0.0715	5.1000e-004		6.4700e-003	6.4700e-003		6.4700e-003	6.4700e-003		102.1033	102.1033	1.9600e-003	1.8700e-003	102.7101
Mobile	5.9088	38.4098	31.6388	0.1246	6.4227	0.0770	6.4997	1.7184	0.0720	1.7903		12,813.3145	12,813.3145	1.1775		12,842.7509
Total	6.0715	38.4949	31.7168	0.1251	6.4227	0.0835	6.5062	1.7184	0.0784	1.7968		12,915.4318	12,915.4318	1.1795	1.8700e-003	12,945.4759

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	0.1534	6.0000e-005	6.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0140	0.0140	4.0000e-005		0.0149
Energy	9.3600e-003	0.0851	0.0715	5.1000e-004		6.4700e-003	6.4700e-003		6.4700e-003	6.4700e-003		102.1033	102.1033	1.9600e-003	1.8700e-003	102.7101
Mobile	5.8723	38.0739	30.5183	0.1195	5.9911	0.0736	6.0647	1.6029	0.0688	1.6717		12,293.1213	12,293.1213	1.1635		12,322.2097
Total	6.0351	38.1591	30.5963	0.1200	5.9911	0.0801	6.0712	1.6029	0.0753	1.6782		12,395.2386	12,395.2386	1.1655	1.8700e-003	12,424.9347

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.60	0.87	3.53	4.09	6.72	4.07	6.69	6.72	4.07	6.60	0.00	4.03	4.03	1.18	0.00	4.02

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	9/1/2021	8/31/2021	5	0	
2	Site Preparation	Site Preparation	9/1/2021	9/21/2021	5	15	
3	Grading	Grading	9/22/2021	10/12/2021	5	15	
4	Building Construction	Building Construction	10/13/2021	10/11/2022	5	260	
5	Paving	Paving	10/12/2022	10/25/2022	5	10	
6	Architectural Coating	Architectural Coating	10/26/2022	11/8/2022	5	10	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 5.63

Acres of Paving: 1.17

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 8,790; Non-Residential Outdoor: 2,930; Striped Parking Area: 3,046 (Architectural Coating – sqft)

OffRoad Equipment

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

3.2 Demolition - 2021

Mitigated Construction Off-Site

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

3.3 Site Preparation - 2021

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					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.5558	17.4203	7.5605	0.0172		0.7654	0.7654		0.7041	0.7041		1,666.5174	1,666.5174	0.5390		1,679.9920
Total	1.5558	17.4203	7.5605	0.0172	5.7996	0.7654	6.5650	2.9537	0.7041	3.6578		1,666.5174	1,666.5174	0.5390		1,679.9920

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

3.3 Site Preparation - 2021

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	0.0379	0.0216	0.2958	8.5000e-004	0.0894	5.3000e-004	0.0900	0.0237	4.9000e-004	0.0242		85.1801	85.1801	2.0300e-003		85.2309
Total	0.0379	0.0216	0.2958	8.5000e-004	0.0894	5.3000e-004	0.0900	0.0237	4.9000e-004	0.0242		85.1801	85.1801	2.0300e-003		85.2309

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					2.4793	0.0000	2.4793	1.2627	0.0000	1.2627			0.0000			0.0000
Off-Road	1.5558	17.4203	7.5605	0.0172		0.7654	0.7654		0.7041	0.7041	0.0000	1,666.5174	1,666.5174	0.5390		1,679.9920
Total	1.5558	17.4203	7.5605	0.0172	2.4793	0.7654	3.2447	1.2627	0.7041	1.9669	0.0000	1,666.5174	1,666.5174	0.5390		1,679.9920

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

3.3 Site Preparation - 2021

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	0.0379	0.0216	0.2958	8.5000e-004	0.0848	5.3000e-004	0.0853	0.0226	4.9000e-004	0.0231		85.1801	85.1801	2.0300e-003		85.2309
Total	0.0379	0.0216	0.2958	8.5000e-004	0.0848	5.3000e-004	0.0853	0.0226	4.9000e-004	0.0231		85.1801	85.1801	2.0300e-003		85.2309

3.4 Grading - 2021

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					4.9146	0.0000	4.9146	2.5257	0.0000	2.5257			0.0000			0.0000
Off-Road	1.2884	14.3307	6.3314	0.0141		0.6379	0.6379		0.5869	0.5869		1,365.0648	1,365.0648	0.4415		1,376.1020
Total	1.2884	14.3307	6.3314	0.0141	4.9146	0.6379	5.5525	2.5257	0.5869	3.1125		1,365.0648	1,365.0648	0.4415		1,376.1020

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

3.4 Grading - 2021

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	0.0379	0.0216	0.2958	8.5000e-004	0.0894	5.3000e-004	0.0900	0.0237	4.9000e-004	0.0242		85.1801	85.1801	2.0300e-003		85.2309
Total	0.0379	0.0216	0.2958	8.5000e-004	0.0894	5.3000e-004	0.0900	0.0237	4.9000e-004	0.0242		85.1801	85.1801	2.0300e-003		85.2309

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					2.1010	0.0000	2.1010	1.0797	0.0000	1.0797			0.0000			0.0000
Off-Road	1.2884	14.3307	6.3314	0.0141		0.6379	0.6379		0.5869	0.5869	0.0000	1,365.0648	1,365.0648	0.4415		1,376.1020
Total	1.2884	14.3307	6.3314	0.0141	2.1010	0.6379	2.7389	1.0797	0.5869	1.6666	0.0000	1,365.0648	1,365.0648	0.4415		1,376.1020

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

3.4 Grading - 2021

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	0.0379	0.0216	0.2958	8.5000e-004	0.0848	5.3000e-004	0.0853	0.0226	4.9000e-004	0.0231		85.1801	85.1801	2.0300e-003		85.2309
Total	0.0379	0.0216	0.2958	8.5000e-004	0.0848	5.3000e-004	0.0853	0.0226	4.9000e-004	0.0231		85.1801	85.1801	2.0300e-003		85.2309

3.5 Building Construction - 2021

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

3.5 Building Construction - 2021

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	0.0210	0.8329	0.1486	2.3300e-003	0.0576	1.5800e-003	0.0592	0.0166	1.5200e-003	0.0181		245.9259	245.9259	0.0176		246.3658
Worker	0.1090	0.0621	0.8503	2.4600e-003	0.2571	1.5100e-003	0.2586	0.0682	1.3900e-003	0.0696		244.8927	244.8927	5.8400e-003		245.0387
Total	0.1301	0.8950	0.9989	4.7900e-003	0.3147	3.0900e-003	0.3178	0.0848	2.9100e-003	0.0877		490.8186	490.8186	0.0234		491.4045

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

3.5 Building Construction - 2021

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	0.0210	0.8329	0.1486	2.3300e-003	0.0552	1.5800e-003	0.0568	0.0160	1.5200e-003	0.0175		245.9259	245.9259	0.0176		246.3658
Worker	0.1090	0.0621	0.8503	2.4600e-003	0.2437	1.5100e-003	0.2452	0.0649	1.3900e-003	0.0663		244.8927	244.8927	5.8400e-003		245.0387
Total	0.1301	0.8950	0.9989	4.7900e-003	0.2989	3.0900e-003	0.3019	0.0809	2.9100e-003	0.0838		490.8186	490.8186	0.0234		491.4045

3.5 Building Construction - 2022

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	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581
Total	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

3.5 Building Construction - 2022

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	0.0196	0.7858	0.1382	2.3100e-003	0.0576	1.3300e-003	0.0590	0.0166	1.2700e-003	0.0179		243.8327	243.8327	0.0167		244.2492
Worker	0.1020	0.0559	0.7843	2.3700e-003	0.2571	1.4700e-003	0.2586	0.0682	1.3600e-003	0.0695		235.9446	235.9446	5.2500e-003		236.0757
Total	0.1216	0.8417	0.9225	4.6800e-003	0.3147	2.8000e-003	0.3175	0.0848	2.6300e-003	0.0874		479.7773	479.7773	0.0219		480.3249

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	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581
Total	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

3.5 Building Construction - 2022

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	0.0196	0.7858	0.1382	2.3100e-003	0.0552	1.3300e-003	0.0565	0.0160	1.2700e-003	0.0173		243.8327	243.8327	0.0167		244.2492
Worker	0.1020	0.0559	0.7843	2.3700e-003	0.2437	1.4700e-003	0.2452	0.0649	1.3600e-003	0.0663		235.9446	235.9446	5.2500e-003		236.0757
Total	0.1216	0.8417	0.9225	4.6800e-003	0.2988	2.8000e-003	0.3017	0.0809	2.6300e-003	0.0835		479.7773	479.7773	0.0219		480.3249

3.6 Paving - 2022

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	0.6877	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205		1,297.3789	1,297.3789	0.4113		1,307.6608
Paving	0.3065					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9942	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205		1,297.3789	1,297.3789	0.4113		1,307.6608

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

3.6 Paving - 2022

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	0.0577	0.0316	0.4433	1.3400e-003	0.1453	8.3000e-004	0.1461	0.0385	7.7000e-004	0.0393		133.3600	133.3600	2.9600e-003		133.4341
Total	0.0577	0.0316	0.4433	1.3400e-003	0.1453	8.3000e-004	0.1461	0.0385	7.7000e-004	0.0393		133.3600	133.3600	2.9600e-003		133.4341

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6877	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205	0.0000	1,297.3789	1,297.3789	0.4113		1,307.6608
Paving	0.3065					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9942	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205	0.0000	1,297.3789	1,297.3789	0.4113		1,307.6608

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

3.6 Paving - 2022

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	0.0577	0.0316	0.4433	1.3400e-003	0.1377	8.3000e-004	0.1386	0.0367	7.7000e-004	0.0374		133.3600	133.3600	2.9600e-003		133.4341
Total	0.0577	0.0316	0.4433	1.3400e-003	0.1377	8.3000e-004	0.1386	0.0367	7.7000e-004	0.0374		133.3600	133.3600	2.9600e-003		133.4341

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.8440					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	7.0486	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

3.7 Architectural Coating - 2022

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	0.0222	0.0122	0.1705	5.1000e-004	0.0559	3.2000e-004	0.0562	0.0148	3.0000e-004	0.0151		51.2923	51.2923	1.1400e-003		51.3208
Total	0.0222	0.0122	0.1705	5.1000e-004	0.0559	3.2000e-004	0.0562	0.0148	3.0000e-004	0.0151		51.2923	51.2923	1.1400e-003		51.3208

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.8440					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	7.0486	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

3.7 Architectural Coating - 2022

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	0.0222	0.0122	0.1705	5.1000e-004	0.0530	3.2000e-004	0.0533	0.0141	3.0000e-004	0.0144		51.2923	51.2923	1.1400e-003		51.3208
Total	0.0222	0.0122	0.1705	5.1000e-004	0.0530	3.2000e-004	0.0533	0.0141	3.0000e-004	0.0144		51.2923	51.2923	1.1400e-003		51.3208

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Diversity

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.8723	38.0739	30.5183	0.1195	5.9911	0.0736	6.0647	1.6029	0.0688	1.6717		12,293.12 13	12,293.12 13	1.1635		12,322.20 97
Unmitigated	5.9088	38.4098	31.6388	0.1246	6.4227	0.0770	6.4997	1.7184	0.0720	1.7903		12,813.31 45	12,813.31 45	1.1775		12,842.75 09

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	3,870.00	3,870.00	3870.00	2,309,905	2,154,691
Fast Food Restaurant w/o Drive Thru	387.52	387.52	387.52	701,816	654,657
Parking Lot	0.00	0.00	0.00		
Total	4,257.52	4,257.52	4,257.52	3,011,721	2,809,348

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market With Gas	16.60	8.40	6.90	0.80	80.20	19.00	14	21	65
Fast Food Restaurant w/o Drive	16.60	8.40	6.90	1.50	79.50	19.00	51	37	12
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market With Gas Pumps	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Fast Food Restaurant w/o Drive Thru	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Parking Lot	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

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	9.3600e-003	0.0851	0.0715	5.1000e-004		6.4700e-003	6.4700e-003		6.4700e-003	6.4700e-003		102.1033	102.1033	1.9600e-003	1.8700e-003	102.7101
NaturalGas Unmitigated	9.3600e-003	0.0851	0.0715	5.1000e-004		6.4700e-003	6.4700e-003		6.4700e-003	6.4700e-003		102.1033	102.1033	1.9600e-003	1.8700e-003	102.7101

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas 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					
Convenience Market With Gas Pumps	28.8296	3.1000e-004	2.8300e-003	2.3700e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		3.3917	3.3917	7.0000e-005	6.0000e-005	3.4119
Fast Food Restaurant w/o Drive Thru	839.049	9.0500e-003	0.0823	0.0691	4.9000e-004		6.2500e-003	6.2500e-003		6.2500e-003	6.2500e-003		98.7116	98.7116	1.8900e-003	1.8100e-003	99.2982
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		9.3600e-003	0.0851	0.0715	5.1000e-004		6.4600e-003	6.4600e-003		6.4600e-003	6.4600e-003		102.1033	102.1033	1.9600e-003	1.8700e-003	102.7101

Mitigated

	Natural Gas 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					
Convenience Market With Gas Pumps	0.0288296	3.1000e-004	2.8300e-003	2.3700e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		3.3917	3.3917	7.0000e-005	6.0000e-005	3.4119
Fast Food Restaurant w/o Drive Thru	839.049	9.0500e-003	0.0823	0.0691	4.9000e-004		6.2500e-003	6.2500e-003		6.2500e-003	6.2500e-003		98.7116	98.7116	1.8900e-003	1.8100e-003	99.2982
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		9.3600e-003	0.0851	0.0715	5.1000e-004		6.4600e-003	6.4600e-003		6.4600e-003	6.4600e-003		102.1033	102.1033	1.9600e-003	1.8700e-003	102.7101

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

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	0.1534	6.0000e-005	6.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0140	0.0140	4.0000e-005		0.0149
Unmitigated	0.1534	6.0000e-005	6.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0140	0.0140	4.0000e-005		0.0149

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

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	0.0188					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1340					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.1000e-004	6.0000e-005	6.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0140	0.0140	4.0000e-005		0.0149
Total	0.1534	6.0000e-005	6.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0140	0.0140	4.0000e-005		0.0149

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	0.0188					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1340					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.1000e-004	6.0000e-005	6.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0140	0.0140	4.0000e-005		0.0149
Total	0.1534	6.0000e-005	6.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0140	0.0140	4.0000e-005		0.0149

7.0 Water Detail

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Gas Station and 7-Eleven Store - Riverside-South Coast County, Summer

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

Gas Station and 7-Eleven Store
Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	50.77	1000sqft	1.17	50,768.00	0
Fast Food Restaurant w/o Drive Thru	1.12	1000sqft	0.03	1,120.00	0
Convenience Market With Gas Pumps	12.00	Pump	0.11	4,740.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2022
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MW hr)	1092.34	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

Project Characteristics - Adjusted per the RPU 2019 Power Content Label.

Land Use - Site acreage

Construction Phase - Anticipated construction schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - No Demolition phase

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Grading -

Vehicle Trips - Per traffic study

Energy Use -

Construction Off-road Equipment Mitigation - Rule 403

Water Mitigation -

Waste Mitigation -

Mobile Land Use Mitigation -

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	2.00	15.00
tblConstructionPhase	NumDays	4.00	15.00
tblConstructionPhase	NumDays	200.00	260.00
tblLandUse	LandUseSquareFeet	50,770.00	50,768.00
tblLandUse	LandUseSquareFeet	1,694.10	4,740.00
tblLandUse	LotAcreage	0.04	0.11
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	1325.65	1092.34
tblVehicleTrips	ST_TR	204.47	322.50
tblVehicleTrips	ST_TR	696.00	346.00
tblVehicleTrips	SU_TR	166.88	322.50
tblVehicleTrips	SU_TR	500.00	346.00
tblVehicleTrips	WD_TR	542.60	322.50
tblVehicleTrips	WD_TR	716.00	346.00

2.0 Emissions Summary

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1534	6.0000e-005	6.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0140	0.0140	4.0000e-005		0.0149
Energy	9.3600e-003	0.0851	0.0715	5.1000e-004		6.4700e-003	6.4700e-003		6.4700e-003	6.4700e-003		102.1033	102.1033	1.9600e-003	1.8700e-003	102.7101
Mobile	4.8342	37.4481	31.5176	0.1135	6.4227	0.0797	6.5024	1.7184	0.0745	1.7929		11,671.0935	11,671.0935	1.2978		11,703.5383
Total	4.9969	37.5332	31.5956	0.1140	6.4227	0.0861	6.5089	1.7184	0.0810	1.7994		11,773.2108	11,773.2108	1.2998	1.8700e-003	11,806.2633

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	0.1534	6.0000e-005	6.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0140	0.0140	4.0000e-005		0.0149
Energy	9.3600e-003	0.0851	0.0715	5.1000e-004		6.4700e-003	6.4700e-003		6.4700e-003	6.4700e-003		102.1033	102.1033	1.9600e-003	1.8700e-003	102.7101
Mobile	4.8001	37.0957	30.6225	0.1087	5.9911	0.0763	6.0674	1.6029	0.0713	1.6742		11,187.5095	11,187.5095	1.2849		11,219.6309
Total	4.9628	37.1808	30.7005	0.1092	5.9911	0.0827	6.0739	1.6029	0.0778	1.6807		11,289.6268	11,289.6268	1.2869	1.8700e-003	11,322.3558

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.68	0.94	2.83	4.16	6.72	3.95	6.68	6.72	3.94	6.59	0.00	4.11	4.11	1.00	0.00	4.10

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	9/1/2021	8/31/2021	5	0	
2	Site Preparation	Site Preparation	9/1/2021	9/21/2021	5	15	
3	Grading	Grading	9/22/2021	10/12/2021	5	15	
4	Building Construction	Building Construction	10/13/2021	10/11/2022	5	260	
5	Paving	Paving	10/12/2022	10/25/2022	5	10	
6	Architectural Coating	Architectural Coating	10/26/2022	11/8/2022	5	10	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 5.63

Acres of Paving: 1.17

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 8,790; Non-Residential Outdoor: 2,930; Striped Parking Area: 3,046 (Architectural Coating – sqft)

OffRoad Equipment

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

3.2 Demolition - 2021

Mitigated Construction Off-Site

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

3.3 Site Preparation - 2021

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					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.5558	17.4203	7.5605	0.0172		0.7654	0.7654		0.7041	0.7041		1,666.5174	1,666.5174	0.5390		1,679.9920
Total	1.5558	17.4203	7.5605	0.0172	5.7996	0.7654	6.5650	2.9537	0.7041	3.6578		1,666.5174	1,666.5174	0.5390		1,679.9920

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

3.3 Site Preparation - 2021

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	0.0372	0.0224	0.2387	7.7000e-004	0.0894	5.3000e-004	0.0900	0.0237	4.9000e-004	0.0242		76.4155	76.4155	1.7700e-003		76.4596
Total	0.0372	0.0224	0.2387	7.7000e-004	0.0894	5.3000e-004	0.0900	0.0237	4.9000e-004	0.0242		76.4155	76.4155	1.7700e-003		76.4596

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					2.4793	0.0000	2.4793	1.2627	0.0000	1.2627			0.0000			0.0000
Off-Road	1.5558	17.4203	7.5605	0.0172		0.7654	0.7654		0.7041	0.7041	0.0000	1,666.5174	1,666.5174	0.5390		1,679.9920
Total	1.5558	17.4203	7.5605	0.0172	2.4793	0.7654	3.2447	1.2627	0.7041	1.9669	0.0000	1,666.5174	1,666.5174	0.5390		1,679.9920

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

3.3 Site Preparation - 2021

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	0.0372	0.0224	0.2387	7.7000e-004	0.0848	5.3000e-004	0.0853	0.0226	4.9000e-004	0.0231		76.4155	76.4155	1.7700e-003		76.4596
Total	0.0372	0.0224	0.2387	7.7000e-004	0.0848	5.3000e-004	0.0853	0.0226	4.9000e-004	0.0231		76.4155	76.4155	1.7700e-003		76.4596

3.4 Grading - 2021

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					4.9146	0.0000	4.9146	2.5257	0.0000	2.5257			0.0000			0.0000
Off-Road	1.2884	14.3307	6.3314	0.0141		0.6379	0.6379		0.5869	0.5869		1,365.0648	1,365.0648	0.4415		1,376.1020
Total	1.2884	14.3307	6.3314	0.0141	4.9146	0.6379	5.5525	2.5257	0.5869	3.1125		1,365.0648	1,365.0648	0.4415		1,376.1020

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

3.4 Grading - 2021

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	0.0372	0.0224	0.2387	7.7000e-004	0.0894	5.3000e-004	0.0900	0.0237	4.9000e-004	0.0242		76.4155	76.4155	1.7700e-003		76.4596
Total	0.0372	0.0224	0.2387	7.7000e-004	0.0894	5.3000e-004	0.0900	0.0237	4.9000e-004	0.0242		76.4155	76.4155	1.7700e-003		76.4596

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					2.1010	0.0000	2.1010	1.0797	0.0000	1.0797			0.0000			0.0000
Off-Road	1.2884	14.3307	6.3314	0.0141		0.6379	0.6379		0.5869	0.5869	0.0000	1,365.0648	1,365.0648	0.4415		1,376.1020
Total	1.2884	14.3307	6.3314	0.0141	2.1010	0.6379	2.7389	1.0797	0.5869	1.6666	0.0000	1,365.0648	1,365.0648	0.4415		1,376.1020

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

3.4 Grading - 2021

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	0.0372	0.0224	0.2387	7.7000e-004	0.0848	5.3000e-004	0.0853	0.0226	4.9000e-004	0.0231		76.4155	76.4155	1.7700e-003		76.4596
Total	0.0372	0.0224	0.2387	7.7000e-004	0.0848	5.3000e-004	0.0853	0.0226	4.9000e-004	0.0231		76.4155	76.4155	1.7700e-003		76.4596

3.5 Building Construction - 2021

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

3.5 Building Construction - 2021

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	0.0223	0.8257	0.1758	2.2400e-003	0.0576	1.6300e-003	0.0593	0.0166	1.5600e-003	0.0182		236.6759	236.6759	0.0196		237.1660
Worker	0.1070	0.0642	0.6864	2.2000e-003	0.2571	1.5100e-003	0.2586	0.0682	1.3900e-003	0.0696		219.6945	219.6945	5.0800e-003		219.8214
Total	0.1293	0.8899	0.8622	4.4400e-003	0.3147	3.1400e-003	0.3179	0.0848	2.9500e-003	0.0877		456.3704	456.3704	0.0247		456.9874

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

3.5 Building Construction - 2021

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	0.0223	0.8257	0.1758	2.2400e-003	0.0552	1.6300e-003	0.0568	0.0160	1.5600e-003	0.0176		236.6759	236.6759	0.0196		237.1660
Worker	0.1070	0.0642	0.6864	2.2000e-003	0.2437	1.5100e-003	0.2452	0.0649	1.3900e-003	0.0663		219.6945	219.6945	5.0800e-003		219.8214
Total	0.1293	0.8899	0.8622	4.4400e-003	0.2989	3.1400e-003	0.3020	0.0809	2.9500e-003	0.0838		456.3704	456.3704	0.0247		456.9874

3.5 Building Construction - 2022

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	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581
Total	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

3.5 Building Construction - 2022

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	0.0208	0.7779	0.1641	2.2200e-003	0.0576	1.3700e-003	0.0590	0.0166	1.3100e-003	0.0179		234.6094	234.6094	0.0186		235.0741
Worker	0.1004	0.0578	0.6321	2.1200e-003	0.2571	1.4700e-003	0.2586	0.0682	1.3600e-003	0.0695		211.6779	211.6779	4.5700e-003		211.7921
Total	0.1212	0.8357	0.7962	4.3400e-003	0.3147	2.8400e-003	0.3176	0.0848	2.6700e-003	0.0875		446.2874	446.2874	0.0232		446.8661

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	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581
Total	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

3.5 Building Construction - 2022

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	0.0208	0.7779	0.1641	2.2200e-003	0.0552	1.3700e-003	0.0565	0.0160	1.3100e-003	0.0173		234.6094	234.6094	0.0186		235.0741
Worker	0.1004	0.0578	0.6321	2.1200e-003	0.2437	1.4700e-003	0.2452	0.0649	1.3600e-003	0.0663		211.6779	211.6779	4.5700e-003		211.7921
Total	0.1212	0.8357	0.7962	4.3400e-003	0.2988	2.8400e-003	0.3017	0.0809	2.6700e-003	0.0836		446.2874	446.2874	0.0232		446.8661

3.6 Paving - 2022

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	0.6877	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205		1,297.3789	1,297.3789	0.4113		1,307.6608
Paving	0.3065					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9942	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205		1,297.3789	1,297.3789	0.4113		1,307.6608

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

3.6 Paving - 2022

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	0.0567	0.0327	0.3573	1.2000e-003	0.1453	8.3000e-004	0.1461	0.0385	7.7000e-004	0.0393		119.6441	119.6441	2.5800e-003		119.7086
Total	0.0567	0.0327	0.3573	1.2000e-003	0.1453	8.3000e-004	0.1461	0.0385	7.7000e-004	0.0393		119.6441	119.6441	2.5800e-003		119.7086

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6877	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205	0.0000	1,297.3789	1,297.3789	0.4113		1,307.6608
Paving	0.3065					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9942	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205	0.0000	1,297.3789	1,297.3789	0.4113		1,307.6608

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

3.6 Paving - 2022

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	0.0567	0.0327	0.3573	1.2000e-003	0.1377	8.3000e-004	0.1386	0.0367	7.7000e-004	0.0374		119.6441	119.6441	2.5800e-003		119.7086
Total	0.0567	0.0327	0.3573	1.2000e-003	0.1377	8.3000e-004	0.1386	0.0367	7.7000e-004	0.0374		119.6441	119.6441	2.5800e-003		119.7086

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.8440					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	7.0486	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

3.7 Architectural Coating - 2022

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	0.0218	0.0126	0.1374	4.6000e-004	0.0559	3.2000e-004	0.0562	0.0148	3.0000e-004	0.0151		46.0169	46.0169	9.9000e-004		46.0418
Total	0.0218	0.0126	0.1374	4.6000e-004	0.0559	3.2000e-004	0.0562	0.0148	3.0000e-004	0.0151		46.0169	46.0169	9.9000e-004		46.0418

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.8440					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	7.0486	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

3.7 Architectural Coating - 2022

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	0.0218	0.0126	0.1374	4.6000e-004	0.0530	3.2000e-004	0.0533	0.0141	3.0000e-004	0.0144		46.0169	46.0169	9.9000e-004		46.0418
Total	0.0218	0.0126	0.1374	4.6000e-004	0.0530	3.2000e-004	0.0533	0.0141	3.0000e-004	0.0144		46.0169	46.0169	9.9000e-004		46.0418

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Diversity

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.8001	37.0957	30.6225	0.1087	5.9911	0.0763	6.0674	1.6029	0.0713	1.6742		11,187.5095	11,187.5095	1.2849		11,219.6309
Unmitigated	4.8342	37.4481	31.5176	0.1135	6.4227	0.0797	6.5024	1.7184	0.0745	1.7929		11,671.0935	11,671.0935	1.2978		11,703.5383

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	3,870.00	3,870.00	3,870.00	2,309,905	2,154,691
Fast Food Restaurant w/o Drive Thru	387.52	387.52	387.52	701,816	654,657
Parking Lot	0.00	0.00	0.00		
Total	4,257.52	4,257.52	4,257.52	3,011,721	2,809,348

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market With Gas	16.60	8.40	6.90	0.80	80.20	19.00	14	21	65
Fast Food Restaurant w/o Drive	16.60	8.40	6.90	1.50	79.50	19.00	51	37	12
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market With Gas Pumps	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Fast Food Restaurant w/o Drive Thru	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965
Parking Lot	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

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	9.3600e-003	0.0851	0.0715	5.1000e-004		6.4700e-003	6.4700e-003		6.4700e-003	6.4700e-003		102.1033	102.1033	1.9600e-003	1.8700e-003	102.7101
NaturalGas Unmitigated	9.3600e-003	0.0851	0.0715	5.1000e-004		6.4700e-003	6.4700e-003		6.4700e-003	6.4700e-003		102.1033	102.1033	1.9600e-003	1.8700e-003	102.7101

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas 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					
Convenience Market With Gas Pumps	28.8296	3.1000e-004	2.8300e-003	2.3700e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		3.3917	3.3917	7.0000e-005	6.0000e-005	3.4119
Fast Food Restaurant w/o Drive Thru	839.049	9.0500e-003	0.0823	0.0691	4.9000e-004		6.2500e-003	6.2500e-003		6.2500e-003	6.2500e-003		98.7116	98.7116	1.8900e-003	1.8100e-003	99.2982
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		9.3600e-003	0.0851	0.0715	5.1000e-004		6.4600e-003	6.4600e-003		6.4600e-003	6.4600e-003		102.1033	102.1033	1.9600e-003	1.8700e-003	102.7101

Mitigated

	Natural Gas 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					
Convenience Market With Gas Pumps	0.0288296	3.1000e-004	2.8300e-003	2.3700e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		3.3917	3.3917	7.0000e-005	6.0000e-005	3.4119
Fast Food Restaurant w/o Drive Thru	839.049	9.0500e-003	0.0823	0.0691	4.9000e-004		6.2500e-003	6.2500e-003		6.2500e-003	6.2500e-003		98.7116	98.7116	1.8900e-003	1.8100e-003	99.2982
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		9.3600e-003	0.0851	0.0715	5.1000e-004		6.4600e-003	6.4600e-003		6.4600e-003	6.4600e-003		102.1033	102.1033	1.9600e-003	1.8700e-003	102.7101

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

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	0.1534	6.0000e-005	6.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0140	0.0140	4.0000e-005		0.0149
Unmitigated	0.1534	6.0000e-005	6.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0140	0.0140	4.0000e-005		0.0149

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

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	0.0188					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1340					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.1000e-004	6.0000e-005	6.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0140	0.0140	4.0000e-005		0.0149
Total	0.1534	6.0000e-005	6.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0140	0.0140	4.0000e-005		0.0149

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	0.0188					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1340					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.1000e-004	6.0000e-005	6.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0140	0.0140	4.0000e-005		0.0149
Total	0.1534	6.0000e-005	6.5300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0140	0.0140	4.0000e-005		0.0149

7.0 Water Detail

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Gas Station and 7-Eleven Store - Riverside-South Coast County, Winter
