



Appendix B. Air Quality/Greenhouse Gas Technical Memorandum

This page is intentionally blank.



Air Quality/Greenhouse Gas Technical Memorandum

Spring Street Business Park Project

City of Long Beach, California

May 2019





This page is intentionally blank.

Contents

1	Introduction	1
1.1	Purpose of the Report	1
2	Project Location and Description	3
2.1	Project Location.....	3
2.2	Project Description	3
3	Regulatory Setting.....	9
3.1	Federal Clean Air Act	9
3.2	California Clean Air Act	9
3.3	California State Implementation Plan.....	15
3.4	South Coast Air Quality Management District.....	15
3.4.1	Air Quality Management Plan	15
3.5	Climate Change.....	16
3.5.1	State Regulations	17
3.5.2	Local Regulations.....	22
4	Affected Environment	25
4.1	Climate	25
4.2	Monitored Air Quality Pollutants	26
4.2.1	Carbon Monoxide	27
4.2.2	Ozone	27
4.2.3	Oxides of Sulfur.....	28
4.2.4	Coarse Particulate Matter	28
4.2.5	Fine Particulate Matter	28
4.2.6	Volatile Organic Compounds or Reactive Organic Gases	28
4.3	Sensitive Receptors	29
5	Methods and Thresholds.....	31
5.1	Methods.....	31
5.1.1	Criteria Air Pollutants.....	31
5.1.2	Quantification of Greenhouse Gases	31
5.2	CEQA Significance Criteria	31
5.3	South Coast Air Quality Management District Guidelines.....	32
5.3.1	Localized Significance Thresholds.....	32
5.3.2	Local Carbon Monoxide Concentrations	33
5.3.3	Greenhouse Gas Emission Threshold	33
6	Project Impacts.....	35
6.1	Air Quality Emissions	35
6.1.1	Construction Impacts.....	35
6.1.2	Operation Impacts	37
6.2	Greenhouse Gas Emissions	39
6.2.1	Construction Emissions.....	39
6.2.2	Operational Emissions	40
6.3	Air Quality Management Plan Consistency.....	41
6.4	Cumulative Impact.....	41

7	Standard Conditions.....	Error! Bookmark not defined.
8	Conclusion.....	45
9	References	47

Tables

Table 2-1. Spring Street Business Park Project - Building and Site Characteristics	7
Table 3-1. Federal and State Criteria Air Pollutant Standards, Effects, and Sources	11
Table 3-2. Global Warming Potential of Greenhouse Gases.....	17
Table 4-1. Ambient Air Quality Monitoring Concentrations.....	26
Table 5-1. South Coast Air Quality Management District Air Quality Thresholds of Significance	32
Table 5-2. South Coast Air Quality Management District Localized Significance Thresholds	33
Table 6-1. Construction Emissions	35
Table 6-2. Summary of On-Site Construction Emissions, Localized Significance.....	37
Table 6-3. Daily Operational Emissions	38
Table 6-4. Summary of On-Site Operation Emissions, Localized Significance	38
Table 6-5. Construction Greenhouse Gas Emissions.....	40
Table 6-6. Annual Greenhouse Gas Emissions.....	41

Figures

Figure 2-1. Regional Vicinity and Project Location	5
Figure 2-2. Project Site Plan	6

Appendices

Appendix A. CalEEMod Results

Acronyms

AB	Assembly Bill
AQMP	Air Quality Management Plan
ARB	Air Resources Board
BAU	business as usual
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CH ₄	methane
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
EO	Executive Order
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
GHG	greenhouse gas
GWP	global warming potential
LCFS	low carbon fuel standard
LST	localized significance threshold
MT	metric tons
NAAQS	National Ambient Air Quality Standards
N ₂ O	nitrous oxide
NO ₂	nitrogen dioxide
NO _x	oxides of nitrogen
O ₃	ozone
PM _{2.5}	particles of 2.5 micrometers and smaller
PM ₁₀	particles of 10 micrometers and smaller
ppm	parts per million
ROG	reactive organic gases
RPS	Renewable Portfolio Standard
SB	Senate Bill
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SF ₆	sulfur hexafluoride
SIP	state implementation plans
SLCP	short-lived climate pollutant
SO ₂	sulfur dioxide
VOC	volatile organic compounds

This page is intentionally blank.

1 Introduction

1.1 Purpose of the Report

This Air Quality and Greenhouse Gas (GHG) Technical Memorandum provides a project description, physical setting of the project study area, and the regulatory framework for air quality and climate change. The analysis provides data on existing air quality and evaluates potential air quality impacts associated with project construction and operation.

This page is intentionally blank.

2 Project Location and Description

2.1 Project Location

The Spring Street Business Park (project) site is approximately 7.8 acres of land and consists of a single parcel (Assessor's Parcel Number 7212-009-021) located along the City of Long Beach boundary with the adjacent City of Signal Hill, to the east. The project site is vacant and is immediately bounded by Spring Street on the north, Willow Springs Park on the south, Orange Avenue on the east, and undeveloped property on the west (Figure 2-1). The project site can be accessed via Spring Street and Orange Avenue.

Surrounding land uses include:

- North – Spring Street: The land across Spring Street is occupied by a MySnug camper shell sales facility and Maxim Crane Works yard.
- East – Orange Avenue: The land across Orange Avenue is occupied by a Signal Hill Petroleum facility and Signal Hill Business Park in the City of Signal Hill.
- South – The land south of the project site is part of Willow Springs Park. A property with oil wells is also located south of the project site.
- West – The land west of the project site is vacant.

2.2 Project Description

The project is a proposed business park with off-site street improvements, along Spring Street and Orange Avenue, and park enhancements consistent with the Willow Springs Park Master Plan. Project improvements are consistent with the land use and development standards of the medium industrial zoning district.

The project includes the following primary components:

- Business Park Complex – The project includes development of three new concrete “tilt-up” buildings for new industrial, with accessory office, uses. Table 2-1 summarizes the key elements associated with the three buildings, and Figure 2-2 depicts the proposed site plan.
- Off-Site Street Improvements – The project includes the following improvements to adjacent city streets:
 - Orange Avenue Widening (adjacent and east of the project site) – Demolition and reconstruction of the sidewalk pavement, curb, curb gutter, bus pad, and roadway to achieve a 100-foot public right-of-way, 40-foot wide roadway, and 10-foot wide sidewalk located on both sides of the roadway.
 - An additional 2 feet of sidewalk would be provided in the vicinity of the bus stop on Orange Avenue adjacent to the project site, achieving a 12-foot wide public sidewalk. Unused driveways and curb cuts would be replaced with full-height curb, curb gutter, and sidewalk.
 - Spring Street (adjacent and north of the project site) – Reconstruction of cracked, deteriorated, or uplifted/depressed sections of sidewalk pavement, curb and curb gutter

- Resetting to grade of manholes, pull boxes, meters, and other existing facilities in conjunction with the required street improvements
- New crosswalks at project site entrances
- Construction of new bicycle facilities along Orange Avenue and Spring Street in accordance with the City's Bicycle Master Plan (or contribution of a fair share fee to the City for future implementation)
- Off-Site Park Improvements – The project includes grading, planting, and irrigating of the property west and south of, and immediately adjacent to, the project site to create a park buffer zone, consistent with future plans for the City's Willow Springs Park.

Figure 2-1. Regional Vicinity and Project Location



Figure 2-2. Project Site Plan



Source: Signal Hill Petroleum 2018

Table 2-1. Spring Street Business Park Project - Building and Site Characteristics

Project Element	Building 1	Building 2	Building 3	TOTAL
Site Area				
SF	—			339,027
AC	—			7.783
Gross Building Area				
Footprint (SF)	36,812	45,745	68,116	150,673
Mezzanine (SF)	3,000	3,000	4,000	10,000
TOTAL (SF)	39,812	48,745	72,116	160,673
25% Office Area Allowable (SF)	9.953	12,186	18,029	40,168
Coverage	—	—	—	49%
Building Clear Height	28 Feet (ft)	28 ft	30 ft	
Auto Parking Required	—	—	—	—
Office and Warehouse: 1/1,000 SF (Office area greater than 25% calculated separately)	40	49	73	162 stalls
Auto Parking Provided				
Standard (8.5 ft x18 ft)	32	41	60	133 stalls
ADA Accessible (9 ft x18 ft)	2	2	2	6
Van Accessible (12 ft x18 ft)	1	1	1	3
Clean Air Vehicle (8.5 ft x18 ft)	3	3	6	12
EV Charging (8.5 ft x18 ft)	2	2	4	8
TOTAL	40	49	73	162 stalls
Trailer Parking Required				
0 – 3,000 @ not applicable	N/A	N/A	N/A	N/A
3,001 – 10,000 @ 1 space	1	1	1	3 stalls
10,001 – 40,000 @ 1 space	1	1	1	3 stalls

Table 2-1. Spring Street Business Park Project - Building and Site Characteristics

Project Element	Building 1	Building 2	Building 3	TOTAL
Above 40,000 @ 1 space per 40,000	0	1	1	2 stalls
TOTAL	2	3	3	8 stalls
Trailer Parking Provided	—	—	—	—
Trailer (14 ft x60 ft)	2	3	3	8 stalls
Maximum Building Height Allowed				
Height – 45 ft				
Maximum Lot Coverage				
Coverage – 60%				
Setbacks				
Arterial Street – 10 ft				
Local Street – none				
Yard abutting Alley – 10 ft from centerline				
Parking fronting street – 5 ft				
Zoning Designation				
IM				

Notes:

AC=acre; ADA=Americans with Disabilities Act; EV=electric vehicle; IM=Medium Industrial, SF=square feet

3 Regulatory Setting

3.1 Federal Clean Air Act

The Federal Clean Air Act (FCAA), as amended, is the primary federal law that governs air quality. These laws, and related regulations by the United States Environmental Protection Agency (U.S. EPA) and California Air Resources Board (ARB), set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS standards have been established for six transportation-related criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter, which is broken down for regulatory purposes into particles of 10 micrometers and smaller (PM₁₀) and particles of 2.5 micrometers and smaller (PM_{2.5}), and sulfur dioxide (SO₂). In addition, national standards exist for lead. The NAAQS standards are set at levels that protect public health, with a margin of safety, and are subject to periodic review and revision. Toxic air contaminants are covered as well.

The FCAA requires the U.S. EPA to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the NAAQS have been achieved. The federal standards are summarized in Table 3-1. The U.S. EPA has classified the South Coast Air Basin (SCAB) as attainment/maintenance for CO, PM₁₀, and NO₂ and nonattainment for O₃ and PM_{2.5}. In addition, the Los Angeles County portion of the SCAB is in nonattainment for lead.

3.2 California Clean Air Act

In California, the California Clean Air Act (CCAA) is administered by the ARB at the state level and by the air quality management districts and air pollution control districts at the regional and local levels. The ARB, which became part of the California Environmental Protection Agency in 1991, is responsible for meeting the state requirements of the FCAA, administering the CCAA, and establishing the California Ambient Air Quality Standards. The CCAA, as amended in 1992, requires all air districts in the state to endeavor to achieve and maintain California Ambient Air Quality Standards. California Ambient Air Quality Standards are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

ARB also regulates mobile air pollution sources, such as motor vehicles. ARB is responsible for setting emission standards for vehicles sold in California and other emission sources, such as consumer products and certain off-road equipment. ARB established passenger vehicle fuel specifications, which became effective in March 1996.

ARB oversees the functions of local air pollution control districts and air quality management districts, which, in turn, administer air quality activities at the regional and county levels. The state standards are summarized in Table 3-1. The CCAA requires ARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the California Ambient Air Quality Standards 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 3 calendar years. Exceedances that are

affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment.

Under the CCAA, SCAB is designated as a nonattainment area for O_3 , $PM_{2.5}$, and PM_{10} .

Table 3-1. Federal and State Criteria Air Pollutant Standards, Effects, and Sources

Pollutant	Averaging Time	State Standard ⁸	Federal Standard ⁹	Principal Health and Atmospheric Effects	Typical Sources	SCAB Attainment Status
O ₃ ²	1 hour	0.09 ppm	—	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic VOC may also contribute.	Low-altitude ozone is almost entirely formed from ROG or VOC and NO _x in the presence of sunlight and heat. Major sources include motor vehicles and other mobile sources, solvent evaporation, and industrial and other combustion processes.	Federal: Extreme Nonattainment (8-hour)
	8 hours	0.070 ppm	0.070 ppm ⁴ (4th highest in 3 years)			State: Nonattainment (1-hour and 8-hour)
CO	1 hour	20 ppm	35 ppm	CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. CO also is a minor precursor for photochemical ozone.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.	Federal: Attainment/ Maintenance
	8 hours	9.0 ppm ¹	9 ppm			State: Attainment
	8 hours (Lake Tahoe)	6 ppm	—			
Respirable Particulate Matter (PM ₁₀) ²	24 hours	50 µg/m ³	150 µg/m ³	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many aerosol and solid compounds are part of PM ₁₀ .	Dust- and fume-producing industrial and agricultural operations; combustion smoke and vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources.	Federal: Attainment/ Maintenance
	Annual	20 µg/m ³	--- ² (expected number of days above standard < or equal to 1)			State: Nonattainment
Fine Particulate Matter (PM _{2.5}) ²	24 hours	—	35 µg/m ³	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – a toxic air contaminant – is in the PM _{2.5} size range. Many toxic and	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical (including photochemical) reactions involving	Federal: Nonattainment
	Annual	12 µg/m ³	12.0 µg/m ³			State: Nonattainment

Table 3-1. Federal and State Criteria Air Pollutant Standards, Effects, and Sources

Pollutant	Averaging Time	State Standard ⁸	Federal Standard ⁹	Principal Health and Atmospheric Effects	Typical Sources	SCAB Attainment Status
	Secondary Standard (annual)	—	15 µg/m ³ (98th percentile over 3 years)	other aerosol and solid compounds are part of PM _{2.5} .	other pollutants including NO _x , SO _x , ammonia, and ROG.	
NO ₂	1 hour	0.18 ppm	100 ppb ⁶ (98th percentile over 3 years)	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain. Part of the NO _x group of ozone precursors.	Motor vehicles and other mobile sources; refineries; industrial operations.	Federal: Attainment/Maintenance
	Annual	0.030 ppm	0.053 ppm			State: Attainment
SO ₂	1 hour	0.25 ppm	75 ppb ⁷ (99th percentile over 3 years)	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources like active volcanoes. Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.	Federal: Attainment/Unclassified
	3 hours	—	0.5 ppm ⁹			State: Attainment/Unclassified
	24 hours	0.04 ppm	0.14 ppm			
	Annual Arithmetic Mean	---	0.03 ppm			
Pb ³	Monthly Calendar Quarter	1.5 µg/m ³ —	— 1.5 µg/m ³	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also a toxic air contaminant and water pollutant.	Lead-based industrial processes like battery production and smelters. Lead paint, leaded gasoline. Aerially deposited lead from gasoline may exist in soils along major roads.	Federal: Attainment (Los Angeles County region in nonattainment)
	Rolling 3-month average	—	0.15 µg/m ³ ¹⁰			State: Attainment

Table 3-1. Federal and State Criteria Air Pollutant Standards, Effects, and Sources

Pollutant	Averaging Time	State Standard ⁸	Federal Standard ⁹	Principal Health and Atmospheric Effects	Typical Sources	SCAB Attainment Status
Sulfate	24 hours	25 µg/m ³	—	Premature mortality and respiratory effects. Contributes to acid rain. Some toxic air contaminants attach to sulfate aerosol particles.	Industrial processes, refineries, and oil fields, mines, natural sources like volcanic areas, salt-covered dry lakes, and large sulfide rock areas.	Federal: N/A State: Attainment/ Unclassified
H ₂ S	1 hour	0.03 ppm	—	Colorless, flammable, poisonous. Respiratory irritant. Neurological damage and premature death. Headache, nausea.	Industrial processes such as: refineries and oil fields, asphalt plants, livestock operations, sewage treatment plants, and mines. Some natural sources like volcanic areas and hot springs.	Federal: N/A State: Attainment/ Unclassified
VRP	8 hours	Visibility of 10 miles or more (Tahoe: 30 miles) at relative humidity less than 70 percent	—	Reduces visibility. Produces haze. NOTE: not related to the Regional Haze program under the Federal Clean Air Act, which is oriented primarily toward visibility issues in National Parks and other “Class I” areas.	See particulate matter above.	Federal: N/A State: Attainment/ Unclassified
Vinyl Chloride ³	24 hours	0.01 ppm	—	Neurological effects, liver damage, cancer. Also considered a toxic air contaminant.	Industrial processes	Federal: N/A State: Attainment/ Unclassified

Table 3-1. Federal and State Criteria Air Pollutant Standards, Effects, and Sources

Pollutant	Averaging Time	State Standard ⁸	Federal Standard ⁹	Principal Health and Atmospheric Effects	Typical Sources	SCAB Attainment Status
-----------	----------------	-----------------------------	-------------------------------	--	-----------------	------------------------

Source: ARB 2011 and 2019.

Notes:

¹ Rounding to an integer value is not allowed for the State 8-hour CO standard. Violation occurs at or above 9.05 ppm.

² Annual PM10 NAAQS revoked October 2006; was 50 µg/m³. 24-hour. PM2.5 NAAQS tightened October 2006; was 65 µg/m³. Annual PM2.5 NAAQS tightened from 15 µg/m³ to 12 µg/m³ December 2012, and secondary standard set at 15 µg/m³.

³ The ARB has identified vinyl chloride and the particulate matter fraction of diesel exhaust as toxic air contaminants. Diesel exhaust particulate matter is part of PM10 and, in larger proportion, PM2.5. Both the ARB and the U.S. EPA have identified lead and various organic compounds that are precursors to ozone and PM2.5 as toxic air contaminants. There are no exposure criteria for substantial health effects due to toxic air contaminants, and control requirements may apply at ambient concentrations below any criteria levels specified above for these pollutants or the general categories of pollutants to which they belong.

⁴ Prior to June 2005, the 1-hour NAAQS was 0.12 ppm. Emission budgets for 1-hour ozone are still in use in some areas where 8-hour ozone emission budgets have not been developed, such as the San Francisco Bay Area. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

⁵ The 0.08 ppm 1997 ozone standard is revoked FOR CONFORMITY PURPOSES ONLY when area designations for the 2008 0.75 ppm standard become effective for conformity use (July 20, 2013). Conformity requirements apply for all NAAQS, including revoked NAAQS, until emission budgets for newer NAAQS are found adequate, SIP amendments for the newer NAAQS are approved with an emission budget, U.S. EPA specifically revokes conformity requirements for an older standard, or the area becomes attainment/unclassified. SIP-approved emission budgets remain in force indefinitely unless explicitly replaced or eliminated by a subsequent approved SIP amendment. During the "Interim" period prior to availability of emission budgets, conformity tests may include some combination of build vs. no build, build vs. baseline, or compliance with prior emission budgets for the same pollutant.

⁶ Final 1-hour NO₂ NAAQS published in the Federal Register on February 9, 2010, effective March 9, 2010. Initial area designation for California (2012) was attainment/unclassifiable throughout. Project-level hot-spot analysis requirements do not currently exist. Near-road monitoring starting in 2013 may cause redesignation to nonattainment in some areas after 2016.

⁷ The U.S. EPA finalized a 1-hour SO₂ standard of 75 ppb in June 2010. Nonattainment areas have not yet been designated as of September 2012.

⁸ California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

⁹ National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

¹⁰ Lead NAAQS are not considered in Transportation Conformity analysis

ARB=Air Resources Board; CO=carbon monoxide; H₂S=hydrogen sulfide; NO₂=nitrogen dioxide; NO_x=oxides of nitrogen; O₃=Ozone; Pb= lead; PM_{2.5}=particles of 2.5 micrometers and smaller; PM₁₀=particles of 10 micrometers and smaller; ROG=reactive organic gases; SO₂=sulfur dioxide; SO_x=sulfur oxides; VOC=volatile organic compounds; VRP=visibility reducing particles

3.3 California State Implementation Plan

The 1990 amendments to the FCAA set new deadlines for attainment based on the severity of the pollution problem and launched a comprehensive planning process for attaining the NAAQS. The promulgation of the national 8-hour ozone standard and the fine particulate matter (PM_{2.5}) standards in 1997 resulted in additional statewide air quality planning efforts. In response to new federal regulations, state implementation plans (SIP) also began to address ways to improve visibility in national parks and wilderness areas. SIPs are not single documents, but rather a compilation of new and previously submitted plans, programs, district rules, state regulations, and federal controls. Many of California's SIPs rely on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations, and limits on emissions from consumer products. State law makes ARB the lead agency for all SIP-related purposes. Local air districts and other agencies prepare SIP elements and submit them to ARB for review and approval. ARB then forwards SIP revisions to the U.S. EPA for approval and publication in the *Federal Register*. The Code of Federal Regulations Title 40, Chapter I, Part 52, Subpart F, Section 52.220 lists all of the items included in the California SIP.

3.4 South Coast Air Quality Management District

The 1977 Lewis Air Quality Management Act created the South Coast Air Quality Management District (SCAQMD) to coordinate air quality planning efforts throughout Southern California. This act merged four county air pollution control agencies into one regional district to better address the issue of improving air quality in Southern California. Under the act, renamed the Lewis-Presley Air Quality Management Act in 1988, SCAQMD is the agency principally responsible for comprehensive air pollution control in the region. Specifically, SCAQMD is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards in the district. Programs that were developed include air quality rules and regulations that regulate stationary sources, area sources, point sources, and certain mobile source emissions. SCAQMD is also responsible for establishing stationary source permitting requirements and ensuring that new, modified, or relocated stationary sources do not create net emission increases.

3.4.1 Air Quality Management Plan

The FCAA requires areas not attaining the NAAQS to develop and implement an emission reduction strategy that would bring the area into attainment in a timely manner. The *Air Quality Management Plan* (AQMP) (SCAQMD 2016) is the SCAQMD plan for improving regional air quality. It addresses FCAA requirements and demonstrates attainment with state and federal ambient air quality standards. The AQMP is prepared by SCAQMD in collaboration with the Southern California Association of Governments and the ARB. The AQMP provides policies and control measures that reduce emissions to attain both state and federal ambient air quality standards by their applicable deadlines. Environmental review of individual projects within the SCAB must demonstrate that daily construction and operational emissions thresholds, as established by the SCAQMD, would not be exceeded. The environmental review must also demonstrate that individual projects would not increase the number or severity of existing air quality violations.

The 2016 AQMP was adopted by the SCAQMD Governing Board on March 3, 2017. It incorporates the latest scientific and technological information and planning assumptions, including the Southern California Association of Governments' 2016 Regional Transportation Plan/Sustainable Communities Strategy and updated emission inventory methodologies for various source categories. The 2016 AQMP includes the integrated strategies and measures needed to meet the NAAQS.

To ensure air quality goals would be met while maximizing benefits and minimizing adverse impacts to the regional economy, the following policy objectives guided the development of the 2016 AQMP:

- Eliminate reliance on future technology (FCAA §182(e)(5)) measures to the maximum extent feasible
- Calculate and take credit for co-benefits from other planning efforts
- Develop a strategy with fair-share emission reductions at the federal, state, and local levels
- Invest in strategies and technologies meeting multiple objectives regarding air quality, climate change, toxic air contaminant exposure, energy, and transportation
- Identify and secure significant funding for incentives to implement early deployment and commercialization of zero and near-zero technologies
- Enhance the socioeconomic analysis and pursue the most efficient and cost-effective path to achieve multi-pollutant and multi-deadline targets
- Prioritize enforceable regulatory measures, as well as non-regulatory, innovative and “win-win” approaches for emission reductions

3.5 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to GHG emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), HFC-23 (fluoroform), HFC-134a (1,1,1,2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) make up the largest source of GHG-emitting sources. The dominant GHG emitted is CO₂, mostly from fossil fuel combustion.

There are typically two terms used when discussing the impacts of climate change: “Greenhouse Gas Mitigation” and “Adaptation.” “Greenhouse Gas Mitigation” is a term for reducing GHG emissions to reduce or “mitigate” the impacts of climate change. “Adaptation” refers to the effort of planning for and adapting to impacts resulting from climate change, such as adjusting transportation design standards to withstand more intense storms and higher sea levels.

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies; 2) reducing travel activity; 3) transitioning to lower GHG-emitting fuels; and 4) improving vehicle technologies/efficiency. To be most effective, all four strategies should be pursued cooperatively.

GHGs vary considerably in terms of global warming potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO₂, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO₂ over a specified time period. GHG emissions are typically measured in terms of pounds or tons of CO₂ equivalents (CO₂e). Table 3-2 shows the GWPs for each type of GHG. For example, SF₆ is 23,900 times more potent at contributing to global warming than CO₂.

Table 3-2. Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	GWP (100-year Time Horizon)
CO ₂	50–200	1
CH ₄	12	21
N ₂ O	114	310
HFC-23	270	11,700
HFC-134a	14	1,300
HFC-152a	1.4	140
PFC: CF ₄	50,000	6,500
PFC: C ₂ F ₆	10,000	9,200
SF ₆	3,200	23,900

Source: Intergovernmental Panel on Climate Change 2007

Notes:

C₂F₆=Hexafluoromethane; CF₄=Tetrafluoromethane; CH₄=Methane; CO₂=Carbon Dioxide; N₂O=Nitrous Oxide; SF₆= Sulfur Hexafluoride

3.5.1 State Regulations

Executive Order S-3-05 – Statewide Greenhouse Gas Emission Targets

On June 1, 2005, the Governor issued Executive Order (EO) S-3-05, which set the following GHG emission reduction targets:

- By 2010, reduce GHG emissions to 2000 levels
- By 2020, reduce GHG emissions to 1990 levels
- By 2050, reduce GHG emissions to 80 percent below 1990 levels

This EO also directed the secretary of the California Environmental Protection Agency to oversee the efforts made to reach these targets and prepare biannual reports on the progress made toward meeting the targets, as well as the impacts to California related to global warming. The first such Climate Action Team Assessment Report was produced in March 2006 and has been updated every 2 years thereafter.

Executive Order B-55-18

EO S-3-05 was expanded upon by Executive Order B-55-18, which was issued by the Governor in 2018. EO B-55-18 creates a goal of statewide carbon neutrality by 2045 and to achieve and maintain net negative emissions thereafter. Future scoping plans would be required to identify measures to achieve the carbon neutrality goal.

California Global Warming Solutions Act (Assembly Bill 32)

In 2006, the California State Legislature enacted the California Global Warming Solutions Act of 2006, also known as Assembly Bill (AB) 32. AB 32 focuses on reducing GHG emissions in California. GHGs, as defined under AB 32, include CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. ARB is the state agency charged with monitoring and regulating sources of emissions of GHGs that cause global warming to reduce emissions of GHGs. AB 32 also requires that by January 1, 2008, ARB must determine what the statewide GHG emissions level was in 1990, and it must approve a statewide GHG emissions limit so it may be applied to the 2020 benchmark. ARB approved a 1990 GHG emissions level of 427 million metric tons (MT) of CO₂e, on December 6, 2007, in its staff report. Therefore, in 2020, emissions in California are required to be at, or below, 427 million MT of CO₂e.

Under the “business as usual” (BAU) scenario established in 2008, statewide emissions were increasing at a rate of approximately 1 percent per year. It was estimated that the 2020 estimated BAU of 596 million MT of CO₂e would have required a 28-percent reduction to reach the 1990 level of 427 million MT of CO₂e.

Executive Order B-30-15

On April 20, 2015, Governor Edmund G. Brown Jr. signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor’s EO aligns California’s GHG reduction targets with those of leading international governments, such as the 28-nation European Union, which adopted the same target in October 2014. California is on track to meet or exceed its legislated target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32). California’s new emission reduction target of 40 percent below 1990 levels by 2030 would make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2°C, the warming threshold at which there would likely be major climate disruptions, such as super droughts and rising sea levels.

Senate Bill 32

Senate Bill 32 (SB) 32 was signed into law on September 8, 2016, and expands upon AB 32 to reduce GHG emissions. SB 32 sets into law the mandated GHG emissions target of 40 percent below 1990 levels by 2030 written into EO B-30-15.

Climate Change Scoping Plan

The scoping plan released by ARB in 2008 outlined the state's strategy to achieve the AB 32 goals. This scoping plan, developed by ARB in coordination with the Climate Action Team, proposed a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health. It was adopted by ARB at its December 2008 meeting. According to the scoping plan, the 2020 target of 427 million MT of CO₂e requires the reduction of 169 million MT of CO₂e, or approximately 28.3 percent, from the state's projected 2020 BAU emissions level of 596 million MT of CO₂e.

In August 2011, the scoping plan was reapproved by the Board and includes the final supplement to the Scoping Plan Functional Equivalent Document. This document includes expanded analysis of project alternatives, as well as updates the 2020 emission projections in light of the current economic forecasts. Considering the updated 2020 BAU estimate of 507 million MT of CO₂e, only a 16-percent reduction below the estimated new BAU levels would be necessary to return to 1990 levels by 2020. The 2011 scoping plan expands the list of 9 early action measures into a list of 39 recommended actions.

In May 2014, ARB developed, in collaboration with the Climate Action Team, the *First Update to California's Climate Change Scoping Plan* (update), which shows that California is on track to meet the near-term 2020 GHG limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32. In accordance with the United Nations Framework Convention on Climate Change, ARB is beginning to transition to the use of the AR4's 100-year GWPs in its climate change programs. ARB has recalculated the 1990 GHG emissions level with the AR4 GWPs to be 431 million MT of CO₂e; therefore, the 2020 GHG emissions limit established in response to AB 32 is now slightly higher than the 427 million MT of CO₂e in the initial Scoping Plan.

In 2016, the Legislature passed SB 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the Legislature passed companion legislation AB 197, which provides additional direction for developing the scoping plan. ARB is moving forward with a second update to the scoping plan to reflect the 2030 target set by EO B-30-15 and codified by SB 32. According to the 2017 scoping plan, the 2030 target of 260 million MT of CO₂e requires the reduction of 129 million MT of CO₂e, or approximately 33.2 percent, from the state's projected 2030 BAU emissions level of 389 million MT of CO₂e.

Assembly Bill 1493 – Light-duty Vehicle Greenhouse Gas Emissions Standards

AB 1493 (Pavley) requires ARB to develop and adopt regulations that achieve “the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by ARB to be vehicles whose primary use is noncommercial personal transportation in the State.” On September 24, 2009, ARB adopted amendments to the Pavley regulations that intend to reduce GHG emissions in new passenger vehicles from 2009 through 2016. The amendments bind California's enforcement of AB 1493 (starting in 2009), while providing vehicle manufacturers with new compliance flexibility. The amendments also prepare California to merge its rules with the federal corporate average fuel economy rules for passenger vehicles. In January 2012, ARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single packet of standards called Advanced Clean Cars.

Executive Order S-01-07

This EO, signed by Governor Schwarzenegger on January 18, 2007, directs that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by the year 2020. It orders that a low carbon fuel standard (LCFS) for transportation fuels be established for California and directs the ARB to determine whether a LCFS can be adopted as a discrete early action measure pursuant to AB 32. The ARB approved the LCFS as a discrete early action item with a regulation adopted and implemented in April 2010. On December 29, 2011, District Judge Lawrence O'Neill in the Eastern District of California issued a preliminary injunction blocking the ARB from implementing LCFS for the remainder of the *Rocky Mountain Farmers Union* litigation. The injunction was lifted in April 2012 so that ARB can continue enforcing the LCFS pending ARB's appeal of the federal district court ruling.

Renewable Portfolio Standard

The Renewable Portfolio Standard (RPS) promotes diversification of the state's electricity supply and decreased reliance on fossil fuel energy sources. Originally adopted in 2002, with a goal to achieve a 20-percent renewable energy mix by 2020 (referred to as the "initial RPS"), the goals have been accelerated and increased by EO S-14-08 and EO S-21-09 to a goal of 33 percent by 2020. In April 2011, the Governor signed SB 2 (1X) codifying California's 33-percent RPS goal. Section 399.19 requires the California Public Utilities Commission, in consultation with the California Energy Commission, to report to the Legislature on the progress and status of RPS procurement and other benchmarks. The purpose of the RPS, upon full implementation, is to provide 33 percent of the state's electricity needs through renewable energy sources. Renewable energy includes, but is not limited to, wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.

The RPS is included in ARB's scoping plan list of GHG reduction measures to reduce energy sector emissions. It is designed to accelerate the transformation of the electricity sector through such means as investment in the energy transmission infrastructure and systems to allow integration of large quantities of intermittent wind and solar generation. Increased use of renewables would decrease California's reliance on fossil fuels, thus reducing emissions of GHGs from the electricity sector. In 2008, as part of the scoping plan original estimates, ARB estimated that full achievement of the RPS would decrease statewide GHG emissions by 21.3 million MT of CO₂e. In 2010, ARB increased this number to 24.0 million MT of CO₂e.

Senate Bill 97 – CEQA Greenhouse Gas Amendments

SB 97 acknowledges that climate change is a prominent environmental issue that requires analysis under the California Environmental Quality Act (CEQA). The California Natural Resources Agency adopted amendments to the CEQA Guidelines to address GHG emissions, consistent with the Legislature's directive in Public Resources Code Section 21083.05.

Senate Bill 743

SB 743, adopted by the California Natural Resources Agency in December 2018, changes the way that transportation impacts are analyzed under CEQA. With the amended CEQA Guidelines Section 15064.4, transportation impacts may be evaluated using vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated, as level of service and auto delay are no longer considered a significant impact under CEQA.

Senate Bill 375 – Sustainable Communities Act

SB 375, the Sustainable Communities Act, was passed by the State Assembly in August 2008 and signed by the Governor in September 2008. SB 375 is intended to encourage reductions in transportation-related emissions from cars and light trucks. Under SB 275, Metropolitan Planning Organizations are required to prepare and adopt a sustainable community strategy to reach emission reduction targets by linking housing needs and transportation planning with GHG reduction targets.

State of California Building Energy Efficiency Standards (Title 24, Part 6)

California's Energy Efficiency Standards for Residential and Nonresidential Buildings (24 California Code of Regulations Part 6) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The premise for the standards is that energy efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for space and water heating) results in GHG emissions.

The California Energy Commission adopted new 2013 Building Energy Efficiency Standards effective July 1, 2014. The 2013 standards improve upon the 2008 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2008 standards were updated for a number of reasons, including:

- To respond to AB 32, the Global Warming Solutions Act of 2006
- To pursue California energy policy that would establish energy efficiency as the resource of first choice for meeting California's energy needs
- To act on the findings of California's Integrated Energy Policy Report that indicates standards in general (as opposed to incentives or other mechanisms) are the most cost-effective means to achieve energy efficiency
- To meet California's commitment to include aggressive energy efficiency measures in updates of state building codes
- To meet California's commitment to improve the energy efficiency of nonresidential buildings through aggressive standards

Senate Bill 350

SB 350 was signed into law in September 2015. SB 350 establishes tiered increases to the RPS of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

Senate Bill 100

SB 100, adopted in September 2018, requires the state's retail electricity to achieve a 60-percent renewable energy portfolio by 2030 (an increase from 50 percent set forth by SB 350), and 100-percent carbon-free by 2045.

Short-Lived Climate Pollutant Reduction Strategy

This final proposed short-lived climate pollutant (SLCP) reduction strategy (SLCP Strategy) was developed pursuant to SB 605 and SB 1383 and lays out a range of options to accelerate SLCP emission reductions in California, including regulations, incentives, and other market-supporting activities. The SLCP Strategy will inform and be integrated into the upcoming 2017 Climate Change Scoping Plan update, which will incorporate input from a wide range of stakeholders to develop a comprehensive plan for achieving the SB 32 statewide 2030 GHG limit of 40 percent below 1990 levels. The process for updating the scoping plan began in fall 2015 and is scheduled for completion in 2017.

Achievable goals through implementation of the SLCP Strategy:

- The following reductions by 2030 (from 2013 levels):
 - 50 percent for anthropogenic Black Carbon
 - 40 percent for CH₄
 - 40 percent for HFCs
- Convert manure and organic wastes into valuable energy and soil amendment products
- Reduce disposal of edible foods by diverting them to food banks and other outlets
- Reduce harmful emissions from residential wood stoves
- Accelerate the reduction of the fastest growing source of GHG emissions by building on global HFC phasedown agreements

California Green Building Code

The California Green Building Standards Code (2016), referred to as CalGreen, took effect on January 1, 2017, and instituted mandatory minimum environmental performance standards for all ground-up new construction of commercial and low-rise residential buildings, state-owned buildings, schools, and hospitals.

3.5.2 Local Regulations

City of Long Beach Climate Action and Adaptation Plan

Pursuant to California SB 379, all California cities and counties are required to include climate adaptation and resiliency strategies in their general plans to ensure safety and protection of their community in the future. Currently, the City of Long Beach is in a multi-year effort to develop a Climate Change Action and Adaptation Plan (CAAP) that will provide a framework for creating or updating policies, programs, practices, and incentives for Long Beach residents and businesses to reduce the City's greenhouse gas (GHG) footprint, and ensure the community and physical assets are better protected from the impacts of climate change.

The climate action/mitigation element of the CAAP will include the following steps:

- A GHG inventory of emissions from various sectors in the Long Beach community, such as building energy, transportation, solid waste, and wastewater.
- A forecast of projected emissions based on anticipated City growth.

- Development of GHG reduction targets based on the latest climate science, and local, regional, State, and federal context and requirements.
- Analysis of existing sustainability and climate mitigation efforts.
- Development of additional GHG mitigation strategies to reduce future emissions from key sectors.
- Development of a framework for implementing mitigation strategies.
- A plan to monitor the performance of the mitigation strategies using performance metrics to track GHG reduction targets.

City of Long Beach Municipal Code

Section 21.45.400 of the City's Municipal Code further regulates public and private development to include various standards that promote green buildings. A green building, also known as a sustainable building, is a structure that is designed, built, renovated, operated, or reused in an ecological and resource-efficient manner. Green buildings are designed to meet certain objectives such as protecting occupant health; improving employee productivity; using energy, water and other resources more efficiently; and reducing the overall impact to the environment. The City of Long Beach recognizes the benefit of green buildings and establishes a green building program.

City of Long Beach General Plan

The City's General Plan Mobility Element includes strategies to reduce single-occupancy vehicle trips and reduce vehicle miles traveled and associated GHG emissions. Policies in the General Plan Mobility Element include reducing vehicle miles traveled and vehicle trips through alternative modes of transportation and Transportation Demand Management; encouraging use of low- or no-emissions vehicles to reduce pollution; and supporting the development of a network of alternative fuel vehicle charging/fueling stations Citywide.

This page is intentionally blank.

4 Affected Environment

4.1 Climate

The project is located in the City of Long Beach, an area within the SCAB, which includes Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. Air quality regulation in the SCAB is administered by SCAQMD.

The SCAB climate is determined by its terrain and geographical location. The SCAB is a coastal plain with connecting broad valleys and low hills. The Pacific Ocean forms the southwestern boundary, and high mountains surround the rest of the SCAB. The region lies in the semi-permanent high pressure zone of the eastern Pacific. The resulting climate is mild and tempered by cool ocean breezes. This climatological pattern is rarely interrupted; however, periods of extremely hot weather, winter storms, and Santa Ana wind conditions do occur.

The annual average temperature varies little throughout the SCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The annual average maximum temperature recorded at the Long Beach Daugherty Field Station, the closest climatological station to the project site, is 74.2°F, and the annual average minimum is 54.8°F. January is typically the coldest month in this area of the SCAB.

The majority of annual rainfall in the SCAB occurs between November and April. Summer rainfall is minimal and generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern part of the SCAB along the coastal side of the mountains. Average rainfall measured at the Long Beach Daugherty Field Station varies from 2.90 inches in February to 0.19 inches or less between June and September, with an average annual total of 12.01 inches.

The SCAB experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed from midafternoon to late afternoon on hot summer days, when the smog appears to clear up suddenly. Winter inversions frequently break by midmorning.

Inversion layers are essential in determining O₃ formation. O₃ and its precursors will mix and react to produce higher concentrations under an inversion. The inversion will also simultaneously trap and hold directly emitted pollutants such as CO. PM₁₀ is both directly emitted and created indirectly in the atmosphere as a result of chemical reactions. Concentration levels are directly related to inversion layers because of the limitation of mixing space.

Surface or radiation inversions are formed when the ground surface becomes cooler than the air above it during the night. The earth's surface goes through a radiative process on clear nights, when heat energy is transferred from the ground to a cooler night sky. As the earth's surface cools during the evening hours, the air directly above it also cools, while air higher up remains relatively warm. The inversion is destroyed when heat from the sun warms the ground, which in turn heats the lower layers of air; this heating stimulates the ground level air to float up through the inversion layer.

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

4.2 Monitored Air Quality Pollutants

SCAQMD monitors air quality conditions at 37 locations throughout the SCAB. The closest monitoring stations to the project site are the Long Beach – Hudson Station, located at 2425 Webster Street and the South Long Beach Station located at 1305 Pacific Coast Highway. Table 4-1 shows pollutant levels, the state and federal standards, and the number of exceedances recorded at these stations from 2015 to 2017.

Table 4-1. Ambient Air Quality Monitoring Concentrations

Pollutant	Pollutant Concentration and Standard	Maximum Concentration		
		2015	2016	2017
Carbon Monoxide	Maximum 1-hour Concentration (ppm)	3.3	3.3	3.9
	Days> 20 ppm (state 1-hr standard)	0	0	0
	Days> 35 ppm (federal 1-hr standard)	0	0	0
	Maximum 8-hour Concentration (ppm)	2.2	2.2	2.6
	Days> 9 ppm (state 8-hr standard)	0	0	0
	Days> 9 ppm (federal 8-hr standard)	0	0	0
Ozone	Maximum 1-hour Concentration (ppm)	0.087	0.079	0.082
	Days> 0.09 ppm (state 1-hr standard)	0	0	0
	Maximum 8-hour Concentration (ppm)	0.066	0.059	0.068
	Days> 0.070 ppm (state 8-hr standard)	0	0	0
	Days> 0.070 ppm (federal 8-hr standard)	0	0	0
Nitrogen Dioxide	Maximum 1-hour Concentration (ppm)	0.102	0.076	0.090
	Days> 0.18 ppm (state 1-hr standard)	0	0	0
	Days> 0.10 ppm (federal 1-hr standard)	1	0	0
	Annual Arithmetic Mean (ppm)	0.020	0.019	0.018
	Exceed 0.030 ppm? (state Annual Standard)	No	No	No
	Exceed 0.053 ppm? (federal Annual Standard)	No	No	No
PM ₁₀	Maximum 24-hour Concentration (µg/m ³)	62	57	71
	Days> 50 µg/m ³ (state 24-hr standard)	2	4	2

Table 4-1. Ambient Air Quality Monitoring Concentrations

Pollutant	Pollutant Concentration and Standard	Maximum Concentration		
		2015	2016	2017
	Days > 150 µg/m ³ (federal 24-hr standard)	0	0	0
	Annual Arithmetic Mean (µg/m ³)	26.5	27.8	14.7
	Exceed 20 µg/m ³ ? (state Annual Standard)	Yes	Yes	No
PM _{2.5}	Maximum 24-hour Concentration (µg/m ³)	48.3	28.9	56.3
	Days > 35 µg/m ³ (federal 24-hr standard)	4	0	5
	Annual Arithmetic Mean (µg/m ³)	10.2	9.5	11.0
	Exceed 12 µg/m ³ ? (state Annual Standard)	No	No	No
	Exceed 12 µg/m ³ ? (federal Annual Standard)	No	No	No

Notes:

PM_{2.5}=fine particulate matter; PM₁₀=coarse particulate matter

4.2.1 Carbon Monoxide

CO is a colorless and odorless gas formed by the incomplete combustion of fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. CO is a non-reactive air pollutant that dissipates relatively quickly, so ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions; primarily wind speed, topography, and atmospheric stability. As identified in Table 4-1, the CO concentrations in the project area have not exceeded the federal or state standards in the past 3 years.

4.2.2 Ozone

O₃ is a colorless gas that is formed in the atmosphere when reactive organic gases (ROG), which includes volatile organic compounds (VOC), and NO_x react in the presence of ultraviolet sunlight. O₃ is not a primary pollutant; it is a secondary pollutant formed by complex interactions of two pollutants directly emitted into the atmosphere. The primary sources of ROG and NO_x, the components of O₃, are automobile exhaust and industrial sources. Meteorology and terrain play major roles in O₃ formation. Ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. The greatest source of smog-producing gases is the automobile. Short-term exposure (lasting for a few hours) to O₃ at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. As identified in Table 4-1, the 8-hour O₃ standards were not exceeded in the past 3 years.

4.2.3 Oxides of Sulfur

SO₂ is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Main sources of SO₂ are coal and oil used in power plants and industries. Generally, the highest levels of SO₂ are found near large industrial complexes. In recent years, SO₂ concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO₂ and limits on the sulfur content of fuels. SO₂ is an irritant gas that attacks the throat and lungs. It can cause acute respiratory symptoms and diminished ventilator function in children.

4.2.4 Coarse Particulate Matter

Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter also forms when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. Inhalable particulate matter, or PM₁₀, is about 1/7 the thickness of a human hair. Major sources of PM₁₀ include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. When inhaled, PM₁₀ particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. PM₁₀ can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. As identified in Table 4-1, the state and federal PM₁₀ standards were exceeded in 2015 and 2016.

4.2.5 Fine Particulate Matter

Fine particulate matter, or PM_{2.5}, is roughly 1/28 the diameter of a human hair. PM_{2.5} results from fuel combustion (e.g. motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, PM_{2.5} can be formed in the atmosphere from gases, such as SO₂, NO_x, and VOC. Very small particles of substances, such as lead, sulfates, and nitrates can cause lung damage directly. These substances can be absorbed into the blood stream and cause damage elsewhere in the body. These substances can transport absorbed gases, such as chlorides or ammonium, into the lungs and cause injury. Whereas PM₁₀ tends to collect in the upper portion of the respiratory system, PM_{2.5} is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility. As identified in Table 4-1, the federal PM_{2.5} standards were exceeded in 2015 and 2017.

4.2.6 Volatile Organic Compounds or Reactive Organic Gases

VOCs are carbon-containing compounds that evaporate into the air. VOCs contribute to the formation of smog and/or may be toxic. VOCs often have an odor, and examples include gasoline, alcohol, and the solvents used in paints. The SCAQMD does not directly monitor VOCs. There are no specific state or federal VOC thresholds, as they are regulated by individual air districts as O₃ precursors.

4.3 Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than the general population. Sensitive populations (sensitive receptors) that are in proximity to localized sources of toxics, particulate matter, and CO are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The majority of the land uses in the project area are commercial and industrial in nature. The Calvary Chapel – Signal Hill church is located to the east of the project site across Orange Avenue. The closest residences to the project site are the homes located 1,200 feet to the north across Interstate 405.

This page is intentionally blank.

5 Methods and Thresholds

The air quality and GHG analysis contained herein provides an evaluation of the project's short-term construction and long-term operation emissions using the methodologies and significance thresholds outlined in this chapter.

5.1 Methods

5.1.1 Criteria Air Pollutants

Emissions of criteria air pollutants were estimated using existing conditions information, project construction details, and project operations information, as well as a combination of emission factors from the following sources:

- CalEEMod (Version 2016.3.2) emission model for estimating exhaust emissions from off-road construction equipment and on-road motor vehicles
- CalEEMod (Version 2016.3.2) emission model for calculating the long-term mobile, energy, and area source emissions

5.1.2 Quantification of Greenhouse Gases

For the purposes of determining whether or not GHG emissions from affected projects are adverse, SCAQMD specifies that project emissions must include direct, indirect, and, to the extent information is available, life cycle emissions during construction and operation. Based on this direction, construction emissions were amortized over the life of the project (defined as 30 years), added to the operational emissions, and compared to the applicable GHG significance thresholds.

5.2 CEQA Significance Criteria

For the purposes of this air quality analysis, the project would have a significant impact on air quality or global climate change 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 nonattainment under an applicable federal or state ambient air quality standard
- Expose sensitive receptors to substantial pollutant concentrations
- Result in other emissions (such as those leading to odors) affecting a substantial number of people
- Generate GHG emissions, either directly or indirectly, that may have an adverse effect on the environment
- Conflict with applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs

5.3 South Coast Air Quality Management District Guidelines

Specific criteria for determining whether the potential air quality impacts of a project are significant are set forth in the *CEQA Air Quality Handbook* (SCAQMD 1993). Table 5-1 lists the daily thresholds for construction and operational emissions that have been established by the SCAQMD and would be used in the analysis of air quality impacts for the proposed project to determine significance.

Table 5-1. South Coast Air Quality Management District Air Quality Thresholds of Significance

Pollutant	Construction (pounds/day)	Operation (pounds/day)
NO _x	100	55
VOC	75	55
PM ₁₀	150	150
PM _{2.5}	55	55
SO _x	150	150
CO	550	550

Source: SCAQMD 1993

Notes:

CO=Carbon Monoxide; NO_x=Oxides of Nitrogen; PM_{2.5}=particles of 2.5 micrometers and smaller; PM₁₀=particles of 10 micrometers and smaller; SO_x=Oxides of Sulfur; VOC=Volatile Organic Compounds

5.3.1 Localized Significance Thresholds

SCAQMD has developed localized significance threshold (LST) methodology and mass rate look-up tables, by source receptor area, that can be used by public agencies to determine whether or not a project may generate significant adverse localized air quality impacts. LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area. LSTs are derived based on the location of the activity (i.e., the source receptor area); the emission rates of NO_x, CO, PM_{2.5}, and PM₁₀; the size of the project study area, and the distance to the nearest exposed individual. For this project, the appropriate source receptor area for the LST is the South Coastal Los Angeles County area (Area 4). Although the proposed project site is 7.8 acres less than 5 acres would be under development at any one time. Therefore, the 5-acre LST rates are used for this project. The nearest sensitive receptor to the project site is the church located to the east at a distance of approximately 160 feet (50 meters). Table 5-2 lists the LST emission rates for a 5-acre site located within 50 meters of a sensitive use.

Table 5-2. South Coast Air Quality Management District Localized Significance Thresholds

Pollutant	Construction (pounds/day)	Operation (pounds/day)
Oxides of Nitrogen (NOX)	165	165
CO	1,982	1,982
PM ₁₀	42	10
PM _{2.5}	10	3

Source: SCAQMD 1993

Notes:

CO=Carbon Monoxide; NO_x=Oxides of Nitrogen; PM_{2.5}=particles of 2.5 micrometers and smaller; PM₁₀=particles of 10 micrometers and smaller

5.3.2 Local Carbon Monoxide Concentrations

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below state and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a state or federal standard, project emissions are considered significant if they increase 1-hour CO concentrations by 1.0 parts per million (ppm) or more or 8-hour CO concentrations by 0.45 ppm or more. The following are applicable local emission concentration standards for CO:

- California state 1-hour CO standard of 20.0 ppm
- California state 8-hour CO standard of 9.0 ppm

5.3.3 Greenhouse Gas Emission Threshold

The SCAQMD's interim thresholds for commercial, residential, mixed use and industrial development projects are as follows:

- Industrial projects – 10,000 MT of carbon monoxide equivalent (CO₂e) per year
- Residential, commercial, and mixed use projects (including parks, warehouses, etc.) 3,000 MT CO₂e per year

The project includes the construction of three industrial/manufacturing buildings. Thus, for purposes of this analysis, both direct and indirect GHG emissions from the proposed project are discussed in the context of the 10,000 MT threshold levels.

This page is intentionally blank.

6 Project Impacts

Air pollutant emissions associated with the project would occur over the short term from construction activities, such as fugitive dust from site preparation and grading and emissions from equipment exhaust. There would be long-term regional emissions associated with project-related vehicular trips and stationary source emissions because of energy consumption, such as natural gas and electricity usage by the proposed project.

6.1 Air Quality Emissions

6.1.1 Construction Impacts

Construction activities associated with implementation of the project have the potential to create air quality impacts through the use of heavy-duty construction equipment, construction worker vehicle trips, material delivery trips, and heavy-duty haul truck trips generated from construction activities. In addition, earthwork activities would result in fugitive dust emissions and paving operations and would also release ROG from off-gassing. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources.

Equipment Exhaust and Related Construction Activities

The construction emissions for each phase of construction were calculated using the CalEEMod model. The total exhaust emissions generated during the entire construction period are listed in Table 6-1. The construction emission estimates are also detailed in Appendix A. As identified in Table 6-1, the daily construction emissions would not exceed the SCAQMD's thresholds.

Table 6-1. Construction Emissions

Phase	CO	ROGs	NO _x	PM ₁₀	PM _{2.5}
Site Preparation	22.9	4.4	45.7	10.7	6.8
Grading	14.6	2.7	31.6	4.3	2.7
Building Construction	27.2	3.7	33.2	3.5	2.0
Paving	15.3	1.5	14.1	1.0	0.7
Architectural Coating	4.9	18.7	3.5	0.5	0.3
Peak Day (pound/day)	30.8	22.1	45.6	10.7	6.7
SCAQMD Thresholds	550	75	100	150	55
Exceedance	No	No	No	No	No

Notes:

CO=Carbon Monoxide; NO_x=Oxides of Nitrogen; PM₁₀=particles of 10 micrometers and smaller; PM_{2.5}=particles of 2.5 micrometers and smaller; ROG=Volatile Organic Gases; SCAQMD= South Coast Air Quality Management District

Fugitive Dust

Fugitive dust emissions are generally associated with land clearing, exposure, and cut-and-fill operations. Dust generated daily during construction would vary substantially, depending on the level of activity, the specific operations, and weather conditions. Nearby sensitive receptors and on-site workers may be exposed to blowing dust, depending upon prevailing wind conditions. Fugitive dust also would be generated as construction equipment or trucks travel on unpaved areas of the construction site.

PM_{2.5} and PM₁₀ emissions from construction operations were calculated using the CalEEMod model and are included in the emissions listed in Table 6-1. SCAQMD has established Rule 403 for reducing fugitive dust emissions through the use of best available control measures. As identified in Table 6-1, the proposed project's PM₁₀ emissions would not exceed the SCAQMD's significance thresholds. These estimates assume compliance with SCAQMD Rule 403.

Naturally Occurring Asbestos

All project construction is located in Los Angeles County, which is among the counties listed as containing serpentine and ultramafic rock (Department of Conservation, Division of Mines and Geology 2000). However, the portion of the county in which the project lies is not known to contain serpentine or ultramafic rock. Therefore, the impact from naturally occurring asbestos during project construction would be minimal to none. The project site is free of existing structures; therefore, no impact from building materials containing asbestos would occur.

Odors

Construction of the project could result in emission of odors from construction equipment and vehicles (e.g., diesel exhaust). It is anticipated that these odors would be short-term, limited in extent at any given time, and distributed throughout the project study area during the duration of construction, and, therefore, would not affect a substantial number of individuals.

Localized Significance Threshold Analysis

Table 6-2 show the construction-related emissions of CO, NO_x, PM₁₀, and PM_{2.5} compared to the LSTs for the South Coastal Los Angeles County area at a distance of 50 meters. As required by the SCAQMD's *Localized Significance Threshold Methodology* (2008), only the on-site construction emissions are included in Table 6-2. As identified, the calculated emissions rates for the proposed on-site construction activities would not exceed the SCAQMD's LSTs.

Table 6-2. Summary of On-Site Construction Emissions, Localized Significance

Project Phase	Emission Rates (pounds/day)			
	CO	NOX	PM ₁₀	PM _{2.5}
Site Preparation	22.1	45.6	10.5	6.7
Grading	14.2	31.6	4.2	2.7
Building Construction	19.2	26.3	1.5	1.4
Paving	14.7	14.1	0.8	0.7
Architectural Coating	3.7	3.4	0.2	0.2
Peak Day (pound/day)	22.9	45.6	10.5	6.7
SCAQMD Thresholds	1,982	165	42	10
Exceeds Daily SCAQMD Threshold?	No	No	No	No

Notes:

CO=Carbon Monoxide; NO_x=Oxides of Nitrogen; PM₁₀=particles of 10 micrometers and smaller; PM_{2.5}=particles of 2.5 micrometers and smaller; SCAQMD= South Coast Air Quality Management District

6.1.2 Operation Impacts

Long-term air pollutant emission impacts are those associated with stationary sources and mobile sources involving any project-related changes. The proposed project would have potential long-term operational air quality impacts from mobile source emissions associated with vehicular trips in the project study area and stationary source emissions from on-site energy consumption.

On-Road, Energy, and Area Source Emissions

The CalEEMod model was used to calculate the operational emissions associated with the proposed Project. Table 6-3 identifies the peak daily emissions from operations of the proposed project.

Table 6-3. Daily Operational Emissions (pounds/day)

Source	CO	NOX	ROG	SOX	PM10	PM2.5
Area	0.02	0.0	3.7	0.0	0.0	0.0
Energy	0.7	0.8	0.1	0.0	0.1	0.1
Mobile	18.2	14.7	1.2	0.1	6.1	1.7
Total	18.9	15.5	5.0	0.1	6.2	1.8
SCAQMD Thresholds	550	55	55	150	150	55
Exceeds Daily SCAQMD Threshold?	No	No	No	No	No	No

Notes:

Columns may not add up due to rounding.

CO=Carbon Monoxide; NO_x=Oxides of Nitrogen; ROG=Volatile Organic Gases; SO_x=Oxides of Sulfur

PM₁₀=particles of 10 micrometers and smaller; PM_{2.5}=particles of 2.5 micrometers and smaller; SCAQMD= South Coast Air Quality Management District

Localized Significance Threshold Analysis

Table 6-4 identifies the operational emissions of CO, NO_x, PM₁₀, and PM_{2.5} compared to the LSTs for the South Coastal Los Angeles County area at a distance of 50 meters. As required by the SCAQMD's LST Methodology (Final Localized Significance Threshold Methodology, July 2008), only the on-site emissions are included in Table 6-4. Table 6-4 includes all of the area source and energy emissions, and 5 percent of the on-road emissions. As shown, the calculated emissions rates for the proposed on-site operation activities would not exceed the LSTs.

Table 6-4. Summary of On-Site Operation Emissions, Localized Significance

Project Phase	Emission Rates (pounds/day)			
	CO	NOX	PM ₁₀	PM _{2.5}
Area	0.02	0.0	0.0	0.0
Energy	0.7	0.8	0.1	0.1
Mobile	0.9	0.7	0.3	0.1
Total (pounds/day)	1.6	1.5	0.4	0.2
SCAQMD Thresholds	1,982	165	10	3
Exceeds Daily SCAQMD Threshold?	No	No	No	No

Notes:

CO=Carbon Monoxide; NO_x=Oxides of Nitrogen; PM₁₀=particles of 10 micrometers and smaller; PM_{2.5}=particles of 2.5 micrometers and smaller; SCAQMD= South Coast Air Quality Management District

Long-Term Microscale (Carbon Monoxide Hot Spot) Analysis

Vehicular trips associated with the proposed project would contribute to congestion at intersections and along roadway segments in the project vicinity. Localized air quality impacts would occur when emissions from vehicular traffic increase as a result of the proposed project. The primary mobile

source pollutant of local concern is CO, which is a direct function of vehicle idling time and, thus, of traffic flow conditions. CO transport is extremely limited; under normal meteorological conditions, it disperses rapidly with distance from the source. However, under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthy levels, affecting local sensitive receptors (residents, schoolchildren, the elderly, and hospital patients, etc.).

Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended, to determine a project's effect on local CO levels.

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate project vicinity are not available. Ambient CO levels monitored in the Long Beach station showed a highest recorded 1-hour concentration of 3.9 ppm (state standard is 20 ppm) and a highest 8-hour concentration of 2.6 ppm (state standard is 9 ppm) during the past 3 years (Table 4-1). The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis.

Given the extremely low level of CO concentrations in the project area, project-related vehicles are not expected to result in the CO concentrations exceeding the state or federal CO standards. Because no CO hot spot would occur, there would be no project-related impacts on CO concentrations if the project was constructed on the project site.

6.2 Greenhouse Gas Emissions

The analysis of GHG emissions, unlike air quality analysis, which is a 'per day' threshold, is an aggregate quantity requiring summation over the total estimated number of work days (i.e., the total number of days that any construction grading vehicle would have an engine running).

6.2.1 Construction Emissions

Construction of the proposed project would result in temporary emissions associated with diesel engine combustion from mass grading, and site preparation construction equipment would be assumed to occur for engines running at the correct fuel-to-air ratios (the ratio whereby complete combustion of the diesel fuel occurs). Construction-related GHG emissions include site preparation, excavation, and associated construction of the proposed business park complex.

The most recent version of the CalEEMod model (Version 2016.3.2) was used to calculate the construction emissions. Table 6-5 quantifies the expected GHG emissions from construction activities. As shown, construction of the proposed project would generate 745 MT of CO₂e. Amortized over a 30-year period, the approximate life of the project, the yearly contribution to GHG from the construction of the project would be 24.9 MT of CO₂e per year.

Table 6-5. Construction Greenhouse Gas Emissions

Year	Pollutant Emissions (metric tons/year)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
2019	334.1	0.06	0.0	335.6
2020	410.5	0.06	0.0	412.1
Total	744.6	0.12	0.0	747.7

Notes:

CH₄=methane; CO₂=carbon dioxide; CO₂e=carbon monoxide equivalent; N₂O= nitrous oxide

6.2.2 Operational Emissions

The operational GHG emission estimates were also calculated using CalEEMod. The following activities associated with the proposed project could directly or indirectly contribute to the generation of GHG emissions:

Gas, Electricity, and Water Use: Natural gas use results in the emissions of two GHGs: CH₄ (the major component of natural gas) and CO₂ (from the combustion of natural gas). Electricity use can result in GHG production if the electricity is generated by combusting fossil fuel. Annual electricity emissions were estimated using the reported GHG emissions per kilowatt-hour for Southern California Edison. The supplier would provide electricity for the project.

Solid Waste Disposal: Solid waste generated by the project could contribute to GHG emissions in a variety of ways. Landfilling and other methods of disposal use energy for transporting and managing the waste, and they produce additional GHGs to varying degrees. Landfilling, the most common waste management practice, results in the release of CH₄ from the anaerobic decomposition of organic materials. CH₄ is 21 times more potent a GHG than CO₂. However, landfill CH₄ can also be a source of energy. In addition, many materials in landfills do not decompose fully, and the carbon that remains is sequestered in the landfill and not released into the atmosphere.

Motor Vehicle Use: Transportation associated with the proposed project would result in GHG emissions from the combustion of fossil fuels in vehicle trips. The proposed project would result in GHG emissions through the vehicular traffic generated by the proposed project (Linscott Law & Greenspan 2019).

Combined Emissions: The GHG emission estimates presented in Table 6-6 show the emissions associated with the level of development at build-out. Appendix A includes the annual CalEEMod calculations for GHG emissions. Table 6-6 shows that project operations would result in average annual emissions of 2,290 metric tons of CO₂e per year.

The total annual GHG emissions of 2,290 MT of CO₂e is less than the SCAQMD's threshold of 10,000 MT of CO₂e per year. Therefore, the proposed project would have a less than significant individual and cumulative impact for GHG emissions.

Table 6-6. Annual Greenhouse Gas Emissions

Source	Pollutant Emissions (metric tons/year)					
	Bio-CO ₂	NBio-CO ₂	CO ₂	CH ₄	N ₂ O	CO ₂ e
Construction Emissions Amortized over 30 Years	0.0	24.8	24.8	0.004	0.0	24.9
Operational Emissions						
Area Sources	0.0	0.0	0.0	0.0	0.0	0.0
Energy Sources	0.0	743.4	743.4	0.03	0.0	746.4
Mobile Sources	0.0	1,212.4	1,212.4	0.05	0.0	1,213.5
Waste Sources	40.4	0.0	40.4	2.4	0.0	100.2
Water Usage	11.8	154.1	165.9	1.2	0.03	205.3
Total Operational Emissions	52.2	2,109.9	2,162.2	3.7	0.04	2,265.4
Total Project Emissions	52.2	2,134.7	2,187.0	3.7	0.04	2,290.3

Notes:

Columns may not add up due to rounding.

Bio-CO₂=biogenic carbon dioxide; CH₄=methane; CO₂=carbon dioxide; CO₂e=carbon dioxide equivalent; NBio-CO₂=non-biogenic carbon dioxide; N₂O= nitrous oxide

6.3 Air Quality Management Plan Consistency

An AQMP describes air pollution control strategies to be taken by a city/county or region classified as a nonattainment area. The main purpose of an AQMP is to bring the area into compliance with the requirements of federal and state air quality standards. CEQA requires that certain proposed projects be analyzed for consistency with the AQMP. For a project to be consistent with the 2016 AQMP, the pollutants emitted from the project should not exceed the SCAQMD daily threshold or cause a significant impact on air quality. However, if feasible mitigation measures are implemented and shown to reduce the impact level from significant to less than significant, the project is deemed consistent with the AQMP. As discussed in Section 6.1, the project's short-term construction and long-term operational emissions would not exceed the SCAQMD's significance thresholds. Therefore, implementation of the project would not conflict with the 2016 AQMP, and no significant impacts would result.

6.4 Cumulative Impact

The proposed project area is currently in nonattainment for O₃, PM₁₀, and PM_{2.5}. As shown in Table 6-1 and Table 6-2, the proposed project's construction emissions would not exceed the SCAQMD's significance thresholds. Construction of the project would not contribute cumulatively to the local and regional air pollutants, together with other projects under construction. Therefore, construction of the proposed project would not contribute to significant cumulative air quality impacts.

As shown in Table 6-3 and Table 6-4, the proposed project's operational emissions would not exceed the SCAQMD's long-term emission thresholds. In addition, as shown in Table 6-6, the proposed project's GHG emissions would be less than the SCAQMD's interim threshold. Therefore, the project would not contribute to a long-term cumulative air quality impact.

7 Mitigation Measures

The following mitigation measures would be implemented during construction activities:

AQ-1 During clearing, grading, earthmoving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering or other dust preventive measures using the following procedures, as specified in the SCAQMD Rule 403. All material excavated or graded shall be sufficiently watered in sufficient quantities to prevent the generation of visible dust plumes. Watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. All material transported on-site or off-site shall be securely covered to prevent excessive amounts of dust. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized so as to prevent excessive amounts of dust. These control techniques shall be indicated in project specifications.

In addition, where feasible, the following measures shall be implemented to reduce fugitive dust emissions;

- Minimize land disturbance
- Use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas
- Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes
- Cover trucks when hauling dirt
- Stabilize the surface of dirt piles if not removed immediately
- Limit vehicular paths on unpaved surfaces and stabilize any temporary roads
- Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway
- Revegetate disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities
- Provide an operational water truck on-site at all times and use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas

The following measures would be implemented as best management practices to minimize construction emissions:

- Minimize unnecessary vehicular and machinery activities
- Ensure that all construction equipment is properly tuned and maintained
- Minimize idling time to 5 minutes, which saves fuel and reduces emissions
- Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators

This page is intentionally blank.

8 Conclusion

Regional emissions during project construction, calculated with the CalEEMod (Version 2016.3.2) model, would not exceed criteria pollutant thresholds established by the SCAQMD. Compliance with SCAQMD Rules and Regulations during construction would reduce construction-related air quality impacts from fugitive dust emissions and construction equipment emissions. The proposed project's long-term operational emissions are below the SCAQMD thresholds. Therefore, the proposed project's air quality impacts are less than significant.

The project's total annual GHG emissions of 2,290 metric tons of CO₂e are less than the SCAQMD's threshold of 10,000 MT of CO₂e per year. Therefore, the proposed project would have a less than significant individual and cumulative impact for GHG emissions.

This page is intentionally blank.

9 References

- Air Resources Board (ARB).2016. *Ambient Air Quality Standards*.
www.arb.ca.gov/research/aaqs/aaqs2.pdf
- 2019. *Area Designations*. <http://www.arb.ca.gov/desig/desig.htm>
- Department of Conservation, Division of Mines and Geology. 2000. *A General Location Guide for Ultramafic Rocks in California—Areas More Likely to Contain Naturally Occurring Asbestos*.
ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/ofr_2000-019.pdf
- Intergovernmental Panel on Climate Change. 2007. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC.
- Linscott Law & Greenspan. 2019. Spring Street Industrial Traffic Impact Analysis. February.
- Signal Hill Petroleum. 2018. City Application: Site Plan. August
- South Coast Air Quality Management District (SCAQMD). 1993. CEQA Air Quality Handbook.
[http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-\(1993\)](http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993))
- 2016. *Air Quality Management Plan*.
<https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15>.

This page is intentionally blank.



Appendix A. CalEEMod Results

This page is intentionally blank.

Spring Street - South Coast AQMD Air District, Annual

Spring Street

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	160.67	1000sqft	3.69	160,673.00	0
Parking Lot	4.11	Acre	4.11	179,031.60	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	9			Operational Year	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Spring Street - South Coast AQMD Air District, Annual

Project Characteristics -

Land Use -

Construction Phase - Architectural Coating will overlap with the construction of the buildings.

Vehicle Trips - Trip rates from traffic report

Construction Off-road Equipment Mitigation -

Fleet Mix - Fleet mix of trucks adjusted to 20% (default is 7.6%)

Off-road Equipment - Input from developer

Off-road Equipment - Input from developer

Off-road Equipment - Input from developer

Off-road Equipment -

Grading - project site is 7.8 acres

Spring Street - South Coast AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	85.00
tblFleetMix	HHD	0.03	0.09
tblFleetMix	LDA	0.55	0.48
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.20	0.18
tblFleetMix	LHD1	0.02	0.04
tblFleetMix	LHD2	5.8510e-003	0.02
tblFleetMix	MCY	4.8170e-003	0.00
tblFleetMix	MDV	0.12	0.11
tblFleetMix	MH	9.2500e-004	0.00
tblFleetMix	MHD	0.02	0.05
tblFleetMix	OBUS	2.0700e-003	0.00
tblFleetMix	SBUS	7.0700e-004	0.00
tblFleetMix	UBUS	1.8770e-003	0.00
tblGrading	AcresOfGrading	30.00	7.80
tblLandUse	LandUseSquareFeet	160,670.00	160,673.00
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblVehicleTrips	ST_TR	1.49	1.53
tblVehicleTrips	SU_TR	0.62	0.64
tblVehicleTrips	WD_TR	3.82	3.93

2.0 Emissions Summary

Spring Street - South Coast AQMD Air District, Annual

2.1 Overall Construction**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2387	2.2483	1.6245	3.7000e-003	0.2546	0.1050	0.3596	0.1101	0.0980	0.2081	0.0000	334.1295	334.1295	0.0578	0.0000	335.5750
2020	1.0293	2.2321	1.9927	4.5900e-003	0.1382	0.1037	0.2418	0.0372	0.0976	0.1349	0.0000	410.5439	410.5439	0.0623	0.0000	412.1008
Maximum	1.0293	2.2483	1.9927	4.5900e-003	0.2546	0.1050	0.3596	0.1101	0.0980	0.2081	0.0000	410.5439	410.5439	0.0623	0.0000	412.1008

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2387	2.2483	1.6245	3.7000e-003	0.1695	0.1050	0.2745	0.0644	0.0980	0.1624	0.0000	334.1293	334.1293	0.0578	0.0000	335.5748
2020	1.0293	2.2321	1.9927	4.5900e-003	0.1382	0.1037	0.2418	0.0372	0.0976	0.1349	0.0000	410.5437	410.5437	0.0623	0.0000	412.1005
Maximum	1.0293	2.2483	1.9927	4.5900e-003	0.1695	0.1050	0.2745	0.0644	0.0980	0.1624	0.0000	410.5437	410.5437	0.0623	0.0000	412.1005

	ROG	NOx	CO	SO2	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	0.00	0.00	0.00	0.00	21.66	0.00	14.15	31.06	0.01	13.34	0.00	0.00	0.00	0.00	0.00	0.00

Spring Street - South Coast AQMD Air District, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	7-1-2019	9-30-2019	1.1930	1.1930
2	10-1-2019	12-31-2019	1.2181	1.2181
3	1-1-2020	3-31-2020	1.3320	1.3320
4	4-1-2020	6-30-2020	1.7435	1.7435
5	7-1-2020	9-30-2020	0.1378	0.1378
		Highest	1.7435	1.7435

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6693	2.0000e-005	2.1100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.0900e-003	4.0900e-003	1.0000e-005	0.0000	4.3600e-003
Energy	0.0157	0.1426	0.1198	8.6000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	743.4086	743.4086	0.0273	7.8700e-003	746.4352
Mobile	0.1678	2.1833	2.4854	0.0130	0.8573	0.0107	0.8680	0.2314	0.0101	0.2414	0.0000	1,212.3485	1,212.3485	0.0468	0.0000	1,213.5177
Waste						0.0000	0.0000		0.0000	0.0000	40.4419	0.0000	40.4419	2.3901	0.0000	100.1931
Water						0.0000	0.0000		0.0000	0.0000	11.7876	154.1473	165.9348	1.2171	0.0299	205.2726
Total	0.8528	2.3259	2.6073	0.0138	0.8573	0.0215	0.8789	0.2314	0.0209	0.2523	52.2294	2,109.9085	2,162.1379	3.6812	0.0378	2,265.4230

Spring Street - South Coast AQMD Air District, Annual

2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6693	2.0000e-005	2.1100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.0900e-003	4.0900e-003	1.0000e-005	0.0000	4.3600e-003
Energy	0.0157	0.1426	0.1198	8.6000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	743.4086	743.4086	0.0273	7.8700e-003	746.4352
Mobile	0.1678	2.1833	2.4854	0.0130	0.8573	0.0107	0.8680	0.2314	0.0101	0.2414	0.0000	1,212.3485	1,212.3485	0.0468	0.0000	1,213.5177
Waste						0.0000	0.0000		0.0000	0.0000	40.4419	0.0000	40.4419	2.3901	0.0000	100.1931
Water						0.0000	0.0000		0.0000	0.0000	11.7876	154.1473	165.9348	1.2171	0.0299	205.2726
Total	0.8528	2.3259	2.6073	0.0138	0.8573	0.0215	0.8789	0.2314	0.0209	0.2523	52.2294	2,109.9085	2,162.1379	3.6812	0.0378	2,265.4230

	ROG	NOx	CO	SO2	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Spring Street - South Coast AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2019	7/12/2019	5	10	
2	Grading	Grading	7/15/2019	8/9/2019	5	20	
3	Building Construction	Building Construction	8/12/2019	6/26/2020	5	230	
4	Architectural Coating	Architectural Coating	3/2/2020	6/26/2020	5	85	
5	Paving	Paving	6/29/2020	7/24/2020	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7.8

Acres of Paving: 4.11

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 241,010; Non-Residential Outdoor: 80,337; Striped Parking Area: 10,742 (Architectural Coating – sqft)

OffRoad Equipment

Spring Street - South Coast AQMD Air District, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	2	6.00	78	0.48
Grading	Scrapers	1	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	143.00	56.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	29.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Spring Street - South Coast AQMD Air District, Annual

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	0.0217	0.2279	0.1103	1.9000e-004	0.0903	0.0120	0.1023	0.0497	0.0110	0.0607	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195

Spring Street - South Coast AQMD Air District, Annual

3.2 Site Preparation - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	3.5000e-004	3.7500e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9174	0.9174	3.0000e-005	0.0000	0.9181
Total	4.3000e-004	3.5000e-004	3.7500e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9174	0.9174	3.0000e-005	0.0000	0.9181

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0407	0.0000	0.0407	0.0223	0.0000	0.0223	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	0.0217	0.2279	0.1103	1.9000e-004	0.0407	0.0120	0.0526	0.0223	0.0110	0.0333	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195

Spring Street - South Coast AQMD Air District, Annual

3.2 Site Preparation - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	3.5000e-004	3.7500e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9174	0.9174	3.0000e-005	0.0000	0.9181
Total	4.3000e-004	3.5000e-004	3.7500e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9174	0.9174	3.0000e-005	0.0000	0.9181

3.3 Grading - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0644	0.0000	0.0644	0.0336	0.0000	0.0336	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0269	0.3157	0.1418	3.0000e-004		0.0131	0.0131		0.0120	0.0120	0.0000	27.2416	27.2416	8.6200e-003	0.0000	27.4571
Total	0.0269	0.3157	0.1418	3.0000e-004	0.0644	0.0131	0.0774	0.0336	0.0120	0.0456	0.0000	27.2416	27.2416	8.6200e-003	0.0000	27.4571

Spring Street - South Coast AQMD Air District, Annual

3.3 Grading - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	3.1000e-004	3.3400e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.8154	0.8154	3.0000e-005	0.0000	0.8161
Total	3.9000e-004	3.1000e-004	3.3400e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.8154	0.8154	3.0000e-005	0.0000	0.8161

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0290	0.0000	0.0290	0.0151	0.0000	0.0151	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0269	0.3157	0.1418	3.0000e-004		0.0131	0.0131		0.0120	0.0120	0.0000	27.2416	27.2416	8.6200e-003	0.0000	27.4570
Total	0.0269	0.3157	0.1418	3.0000e-004	0.0290	0.0131	0.0420	0.0151	0.0120	0.0271	0.0000	27.2416	27.2416	8.6200e-003	0.0000	27.4570

Spring Street - South Coast AQMD Air District, Annual

3.3 Grading - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	3.1000e-004	3.3400e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.8154	0.8154	3.0000e-005	0.0000	0.8161
Total	3.9000e-004	3.1000e-004	3.3400e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.8154	0.8154	3.0000e-005	0.0000	0.8161

3.4 Building Construction - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1429	1.3431	0.9777	1.6300e-003		0.0772	0.0772		0.0723	0.0723	0.0000	143.0275	143.0275	0.0365	0.0000	143.9407
Total	0.1429	1.3431	0.9777	1.6300e-003		0.0772	0.0772		0.0723	0.0723	0.0000	143.0275	143.0275	0.0365	0.0000	143.9407

Spring Street - South Coast AQMD Air District, Annual

3.4 Building Construction - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.3330	0.0835	7.3000e-004	0.0180	2.1800e-003	0.0202	5.1900e-003	2.0800e-003	7.2800e-003	0.0000	70.7063	70.7063	4.8900e-003	0.0000	70.8286
Worker	0.0352	0.0280	0.3041	8.2000e-004	0.0800	6.3000e-004	0.0807	0.0213	5.8000e-004	0.0218	0.0000	74.3370	74.3370	2.3200e-003	0.0000	74.3951
Total	0.0464	0.3610	0.3876	1.5500e-003	0.0980	2.8100e-003	0.1008	0.0264	2.6600e-003	0.0291	0.0000	145.0433	145.0433	7.2100e-003	0.0000	145.2237

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1429	1.3431	0.9777	1.6300e-003		0.0772	0.0772		0.0723	0.0723	0.0000	143.0274	143.0274	0.0365	0.0000	143.9405
Total	0.1429	1.3431	0.9777	1.6300e-003		0.0772	0.0772		0.0723	0.0723	0.0000	143.0274	143.0274	0.0365	0.0000	143.9405

Spring Street - South Coast AQMD Air District, Annual

3.4 Building Construction - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.3330	0.0835	7.3000e-004	0.0180	2.1800e-003	0.0202	5.1900e-003	2.0800e-003	7.2800e-003	0.0000	70.7063	70.7063	4.8900e-003	0.0000	70.8286
Worker	0.0352	0.0280	0.3041	8.2000e-004	0.0800	6.3000e-004	0.0807	0.0213	5.8000e-004	0.0218	0.0000	74.3370	74.3370	2.3200e-003	0.0000	74.3951
Total	0.0464	0.3610	0.3876	1.5500e-003	0.0980	2.8100e-003	0.1008	0.0264	2.6600e-003	0.0291	0.0000	145.0433	145.0433	7.2100e-003	0.0000	145.2237

3.4 Building Construction - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1611	1.5298	1.1968	2.0500e-003		0.0839	0.0839		0.0787	0.0787	0.0000	176.6182	176.6182	0.0453	0.0000	177.7518
Total	0.1611	1.5298	1.1968	2.0500e-003		0.0839	0.0839		0.0787	0.0787	0.0000	176.6182	176.6182	0.0453	0.0000	177.7518

Spring Street - South Coast AQMD Air District, Annual

3.4 Building Construction - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0120	0.3825	0.0947	9.1000e-004	0.0226	1.8700e-003	0.0245	6.5200e-003	1.7900e-003	8.3100e-003	0.0000	88.1492	88.1492	5.7900e-003	0.0000	88.2938
Worker	0.0409	0.0313	0.3466	1.0000e-003	0.1004	7.8000e-004	0.1012	0.0267	7.1000e-004	0.0274	0.0000	90.3912	90.3912	2.5900e-003	0.0000	90.4560
Total	0.0529	0.4138	0.4414	1.9100e-003	0.1230	2.6500e-003	0.1257	0.0332	2.5000e-003	0.0357	0.0000	178.5404	178.5404	8.3800e-003	0.0000	178.7499

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1611	1.5298	1.1968	2.0500e-003		0.0839	0.0839		0.0787	0.0787	0.0000	176.6180	176.6180	0.0453	0.0000	177.7516
Total	0.1611	1.5298	1.1968	2.0500e-003		0.0839	0.0839		0.0787	0.0787	0.0000	176.6180	176.6180	0.0453	0.0000	177.7516

Spring Street - South Coast AQMD Air District, Annual

3.4 Building Construction - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0120	0.3825	0.0947	9.1000e-004	0.0226	1.8700e-003	0.0245	6.5200e-003	1.7900e-003	8.3100e-003	0.0000	88.1492	88.1492	5.7900e-003	0.0000	88.2938
Worker	0.0409	0.0313	0.3466	1.0000e-003	0.1004	7.8000e-004	0.1012	0.0267	7.1000e-004	0.0274	0.0000	90.3912	90.3912	2.5900e-003	0.0000	90.4560
Total	0.0529	0.4138	0.4414	1.9100e-003	0.1230	2.6500e-003	0.1257	0.0332	2.5000e-003	0.0357	0.0000	178.5404	178.5404	8.3800e-003	0.0000	178.7499

3.5 Architectural Coating - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7696					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0206	0.1431	0.1557	2.5000e-004		9.4300e-003	9.4300e-003		9.4300e-003	9.4300e-003	0.0000	21.7027	21.7027	1.6800e-003	0.0000	21.7447
Total	0.7902	0.1431	0.1557	2.5000e-004		9.4300e-003	9.4300e-003		9.4300e-003	9.4300e-003	0.0000	21.7027	21.7027	1.6800e-003	0.0000	21.7447

Spring Street - South Coast AQMD Air District, Annual

3.5 Architectural Coating - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-003	4.2200e-003	0.0467	1.3000e-004	0.0135	1.0000e-004	0.0136	3.5900e-003	1.0000e-004	3.6900e-003	0.0000	12.1730	12.1730	3.5000e-004	0.0000	12.1817
Total	5.5000e-003	4.2200e-003	0.0467	1.3000e-004	0.0135	1.0000e-004	0.0136	3.5900e-003	1.0000e-004	3.6900e-003	0.0000	12.1730	12.1730	3.5000e-004	0.0000	12.1817

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7696					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0206	0.1431	0.1557	2.5000e-004		9.4300e-003	9.4300e-003		9.4300e-003	9.4300e-003	0.0000	21.7026	21.7026	1.6800e-003	0.0000	21.7446
Total	0.7902	0.1431	0.1557	2.5000e-004		9.4300e-003	9.4300e-003		9.4300e-003	9.4300e-003	0.0000	21.7026	21.7026	1.6800e-003	0.0000	21.7446

Spring Street - South Coast AQMD Air District, Annual

3.5 Architectural Coating - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-003	4.2200e-003	0.0467	1.3000e-004	0.0135	1.0000e-004	0.0136	3.5900e-003	1.0000e-004	3.6900e-003	0.0000	12.1730	12.1730	3.5000e-004	0.0000	12.1817
Total	5.5000e-003	4.2200e-003	0.0467	1.3000e-004	0.0135	1.0000e-004	0.0136	3.5900e-003	1.0000e-004	3.6900e-003	0.0000	12.1730	12.1730	3.5000e-004	0.0000	12.1817

3.6 Paving - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0136	0.1407	0.1465	2.3000e-004		7.5300e-003	7.5300e-003		6.9300e-003	6.9300e-003	0.0000	20.0282	20.0282	6.4800e-003	0.0000	20.1902
Paving	5.3800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0190	0.1407	0.1465	2.3000e-004		7.5300e-003	7.5300e-003		6.9300e-003	6.9300e-003	0.0000	20.0282	20.0282	6.4800e-003	0.0000	20.1902

Spring Street - South Coast AQMD Air District, Annual

3.6 Paving - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	5.1000e-004	5.6800e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4815	1.4815	4.0000e-005	0.0000	1.4826
Total	6.7000e-004	5.1000e-004	5.6800e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4815	1.4815	4.0000e-005	0.0000	1.4826

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0136	0.1407	0.1465	2.3000e-004		7.5300e-003	7.5300e-003		6.9300e-003	6.9300e-003	0.0000	20.0282	20.0282	6.4800e-003	0.0000	20.1901
Paving	5.3800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0190	0.1407	0.1465	2.3000e-004		7.5300e-003	7.5300e-003		6.9300e-003	6.9300e-003	0.0000	20.0282	20.0282	6.4800e-003	0.0000	20.1901

Spring Street - South Coast AQMD Air District, Annual

3.6 Paving - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	5.1000e-004	5.6800e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4815	1.4815	4.0000e-005	0.0000	1.4826
Total	6.7000e-004	5.1000e-004	5.6800e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4815	1.4815	4.0000e-005	0.0000	1.4826

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Spring Street - South Coast AQMD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1678	2.1833	2.4854	0.0130	0.8573	0.0107	0.8680	0.2314	0.0101	0.2414	0.0000	1,212.3485	1,212.3485	0.0468	0.0000	1,213.5177
Unmitigated	0.1678	2.1833	2.4854	0.0130	0.8573	0.0107	0.8680	0.2314	0.0101	0.2414	0.0000	1,212.3485	1,212.3485	0.0468	0.0000	1,213.5177

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	631.43	245.83	102.83	2,217,820	2,217,820
Parking Lot	0.00	0.00	0.00		
Total	631.43	245.83	102.83	2,217,820	2,217,820

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
Manufacturing	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Manufacturing	0.480870	0.037879	0.175844	0.105406	0.042175	0.015298	0.054994	0.087533	0.000000	0.000000	0.000000	0.000000	0.000000
Parking Lot	0.548858	0.043235	0.200706	0.120309	0.016131	0.005851	0.021034	0.033479	0.002070	0.001877	0.004817	0.000707	0.000925

Spring Street - South Coast AQMD Air District, Annual

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	588.2170	588.2170	0.0243	5.0200e-003	590.3214
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	588.2170	588.2170	0.0243	5.0200e-003	590.3214
NaturalGas Mitigated	0.0157	0.1426	0.1198	8.6000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	155.1916	155.1916	2.9700e-003	2.8500e-003	156.1139
NaturalGas Unmitigated	0.0157	0.1426	0.1198	8.6000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	155.1916	155.1916	2.9700e-003	2.8500e-003	156.1139

Spring Street - South Coast AQMD Air District, Annual

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Manufacturing	2.90818e+006	0.0157	0.1426	0.1198	8.6000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	155.1916	155.1916	2.9700e-003	2.8500e-003	156.1139
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0157	0.1426	0.1198	8.6000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	155.1916	155.1916	2.9700e-003	2.8500e-003	156.1139

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Manufacturing	2.90818e+006	0.0157	0.1426	0.1198	8.6000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	155.1916	155.1916	2.9700e-003	2.8500e-003	156.1139
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0157	0.1426	0.1198	8.6000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	155.1916	155.1916	2.9700e-003	2.8500e-003	156.1139

Spring Street - South Coast AQMD Air District, Annual

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Manufacturing	1.78347e+006	568.2519	0.0235	4.8500e-003	570.2848
Parking Lot	62661.1	19.9652	8.2000e-004	1.7000e-004	20.0366
Total		588.2170	0.0243	5.0200e-003	590.3214

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Manufacturing	1.78347e+006	568.2519	0.0235	4.8500e-003	570.2848
Parking Lot	62661.1	19.9652	8.2000e-004	1.7000e-004	20.0366
Total		588.2170	0.0243	5.0200e-003	590.3214

6.0 Area Detail**6.1 Mitigation Measures Area**

Spring Street - South Coast AQMD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6693	2.0000e-005	2.1100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.0900e-003	4.0900e-003	1.0000e-005	0.0000	4.3600e-003
Unmitigated	0.6693	2.0000e-005	2.1100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.0900e-003	4.0900e-003	1.0000e-005	0.0000	4.3600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0770					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5922					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-004	2.0000e-005	2.1100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.0900e-003	4.0900e-003	1.0000e-005	0.0000	4.3600e-003
Total	0.6693	2.0000e-005	2.1100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.0900e-003	4.0900e-003	1.0000e-005	0.0000	4.3600e-003

Spring Street - South Coast AQMD Air District, Annual

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0770					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5922					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-004	2.0000e-005	2.1100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.0900e-003	4.0900e-003	1.0000e-005	0.0000	4.3600e-003
Total	0.6693	2.0000e-005	2.1100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.0900e-003	4.0900e-003	1.0000e-005	0.0000	4.3600e-003

7.0 Water Detail**7.1 Mitigation Measures Water**

Spring Street - South Coast AQMD Air District, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	165.9348	1.2171	0.0299	205.2726
Unmitigated	165.9348	1.2171	0.0299	205.2726

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Manufacturing	37.1549 / 0	165.9348	1.2171	0.0299	205.2726
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		165.9348	1.2171	0.0299	205.2726

Spring Street - South Coast AQMD Air District, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Manufacturing	37.1549 / 0	165.9348	1.2171	0.0299	205.2726
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		165.9348	1.2171	0.0299	205.2726

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	40.4419	2.3901	0.0000	100.1931
Unmitigated	40.4419	2.3901	0.0000	100.1931

Spring Street - South Coast AQMD Air District, Annual

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Manufacturing	199.23	40.4419	2.3901	0.0000	100.1931
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		40.4419	2.3901	0.0000	100.1931

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Manufacturing	199.23	40.4419	2.3901	0.0000	100.1931
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		40.4419	2.3901	0.0000	100.1931

9.0 Operational Offroad

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

Spring Street - South Coast AQMD Air District, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Spring Street - South Coast AQMD Air District, Winter

Spring Street
South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	160.67	1000sqft	3.69	160,673.00	0
Parking Lot	4.11	Acre	4.11	179,031.60	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	9			Operational Year	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Spring Street - South Coast AQMD Air District, Winter

Project Characteristics -

Land Use -

Construction Phase - Architectural Coating will overlap with the construction of the buildings.

Vehicle Trips - Trip rates from traffic report

Construction Off-road Equipment Mitigation -

Fleet Mix - Fleet mix of trucks adjusted to 20% (default is 7.6%)

Off-road Equipment - Input from developer

Off-road Equipment - Input from developer

Off-road Equipment - Input from developer

Off-road Equipment -

Grading - project site is 7.8 acres

Spring Street - South Coast AQMD Air District, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	85.00
tblFleetMix	HHD	0.03	0.09
tblFleetMix	LDA	0.55	0.48
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.20	0.18
tblFleetMix	LHD1	0.02	0.04
tblFleetMix	LHD2	5.8510e-003	0.02
tblFleetMix	MCY	4.8170e-003	0.00
tblFleetMix	MDV	0.12	0.11
tblFleetMix	MH	9.2500e-004	0.00
tblFleetMix	MHD	0.02	0.05
tblFleetMix	OBUS	2.0700e-003	0.00
tblFleetMix	SBUS	7.0700e-004	0.00
tblFleetMix	UBUS	1.8770e-003	0.00
tblGrading	AcresOfGrading	30.00	7.80
tblLandUse	LandUseSquareFeet	160,670.00	160,673.00
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblVehicleTrips	ST_TR	1.49	1.53
tblVehicleTrips	SU_TR	0.62	0.64
tblVehicleTrips	WD_TR	3.82	3.93

2.0 Emissions Summary

Spring Street - South Coast AQMD Air District, Winter

2.1 Overall Construction (Maximum Daily Emission)**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.4310	45.6399	26.6923	0.0619	18.2675	2.3919	20.6594	9.9840	2.2006	12.1846	0.0000	6,173.618 2	6,173.618 2	1.1979	0.0000	6,197.338 3
2020	22.1509	33.7144	30.2535	0.0704	2.2810	1.5775	3.8585	0.6131	1.4928	2.1059	0.0000	6,938.399 5	6,938.399 5	0.9810	0.0000	6,962.924 6
Maximum	22.1509	45.6399	30.2535	0.0704	18.2675	2.3919	20.6594	9.9840	2.2006	12.1846	0.0000	6,938.399 5	6,938.399 5	1.1979	0.0000	6,962.924 6

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.4310	45.6399	26.6923	0.0619	8.3310	2.3919	10.7229	4.5222	2.2006	6.7227	0.0000	6,173.618 2	6,173.618 2	1.1979	0.0000	6,197.338 3
2020	22.1509	33.7144	30.2535	0.0704	2.2810	1.5775	3.8585	0.6131	1.4928	2.1059	0.0000	6,938.399 5	6,938.399 5	0.9810	0.0000	6,962.924 6
Maximum	22.1509	45.6399	30.2535	0.0704	8.3310	2.3919	10.7229	4.5222	2.2006	6.7227	0.0000	6,938.399 5	6,938.399 5	1.1979	0.0000	6,962.924 6

	ROG	NOx	CO	SO2	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	0.00	0.00	0.00	0.00	48.36	0.00	40.53	51.54	0.00	38.22	0.00	0.00	0.00	0.00	0.00	0.00

Spring Street - South Coast AQMD Air District, Winter

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.6680	1.5000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	1.0000e-004		0.0385
Energy	0.0859	0.7811	0.6562	4.6900e-003		0.0594	0.0594		0.0594	0.0594		937.3671	937.3671	0.0180	0.0172	942.9374
Mobile	1.1848	14.8690	17.0003	0.0888	6.0468	0.0745	6.1213	1.6292	0.0701	1.6993		9,140.9327	9,140.9327	0.3631		9,150.0103
Total	4.9388	15.6503	17.6733	0.0935	6.0468	0.1339	6.1807	1.6292	0.1296	1.7587		10,078.3358	10,078.3358	0.3812	0.0172	10,092.9861

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	3.6680	1.5000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	1.0000e-004		0.0385
Energy	0.0859	0.7811	0.6562	4.6900e-003		0.0594	0.0594		0.0594	0.0594		937.3671	937.3671	0.0180	0.0172	942.9374
Mobile	1.1848	14.8690	17.0003	0.0888	6.0468	0.0745	6.1213	1.6292	0.0701	1.6993		9,140.9327	9,140.9327	0.3631		9,150.0103
Total	4.9388	15.6503	17.6733	0.0935	6.0468	0.1339	6.1807	1.6292	0.1296	1.7587		10,078.3358	10,078.3358	0.3812	0.0172	10,092.9861

Spring Street - South Coast AQMD Air District, 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2019	7/12/2019	5	10	
2	Grading	Grading	7/15/2019	8/9/2019	5	20	
3	Building Construction	Building Construction	8/12/2019	6/26/2020	5	230	
4	Architectural Coating	Architectural Coating	3/2/2020	6/26/2020	5	85	
5	Paving	Paving	6/29/2020	7/24/2020	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7.8

Acres of Paving: 4.11

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 241,010; Non-Residential Outdoor: 80,337; Striped Parking Area: 10,742 (Architectural Coating – sqft)

OffRoad Equipment

Spring Street - South Coast AQMD Air District, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	2	6.00	78	0.48
Grading	Scrapers	1	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	143.00	56.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	29.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Spring Street - South Coast AQMD Air District, Winter

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298		3,766.4529	3,766.4529	1.1917		3,796.2445

Spring Street - South Coast AQMD Air District, Winter

3.2 Site Preparation - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0960	0.0672	0.7297	2.0000e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4400e-003	0.0548		198.8380	198.8380	6.2100e-003		198.9933
Total	0.0960	0.0672	0.7297	2.0000e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4400e-003	0.0548		198.8380	198.8380	6.2100e-003		198.9933

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					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	8.1298	2.3904	10.5202	4.4688	2.1991	6.6679	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445

Spring Street - South Coast AQMD Air District, Winter

3.2 Site Preparation - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0960	0.0672	0.7297	2.0000e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4400e-003	0.0548		198.8380	198.8380	6.2100e-003		198.9933
Total	0.0960	0.0672	0.7297	2.0000e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4400e-003	0.0548		198.8380	198.8380	6.2100e-003		198.9933

3.3 Grading - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.4357	0.0000	6.4357	3.3549	0.0000	3.3549			0.0000			0.0000
Off-Road	2.6866	31.5679	14.1836	0.0303		1.3059	1.3059		1.2014	1.2014		3,002.8701	3,002.8701	0.9501		3,026.6220
Total	2.6866	31.5679	14.1836	0.0303	6.4357	1.3059	7.7416	3.3549	1.2014	4.5563		3,002.8701	3,002.8701	0.9501		3,026.6220

Spring Street - South Coast AQMD Air District, Winter

3.3 Grading - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0427	0.0299	0.3243	8.9000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		88.3725	88.3725	2.7600e-003		88.4415
Total	0.0427	0.0299	0.3243	8.9000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		88.3725	88.3725	2.7600e-003		88.4415

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					2.8961	0.0000	2.8961	1.5097	0.0000	1.5097			0.0000			0.0000
Off-Road	2.6866	31.5679	14.1836	0.0303		1.3059	1.3059		1.2014	1.2014	0.0000	3,002.8701	3,002.8701	0.9501		3,026.6220
Total	2.6866	31.5679	14.1836	0.0303	2.8961	1.3059	4.2020	1.5097	1.2014	2.7111	0.0000	3,002.8701	3,002.8701	0.9501		3,026.6220

Spring Street - South Coast AQMD Air District, Winter

3.3 Grading - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0427	0.0299	0.3243	8.9000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		88.3725	88.3725	2.7600e-003		88.4415
Total	0.0427	0.0299	0.3243	8.9000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		88.3725	88.3725	2.7600e-003		88.4415

3.4 Building Construction - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8022	26.3349	19.1702	0.0320		1.5127	1.5127		1.4177	1.4177		3,091.3894	3,091.3894	0.7895		3,111.1261
Total	2.8022	26.3349	19.1702	0.0320		1.5127	1.5127		1.4177	1.4177		3,091.3894	3,091.3894	0.7895		3,111.1261

Spring Street - South Coast AQMD Air District, Winter

3.4 Building Construction - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2255	6.4123	1.7251	0.0141	0.3584	0.0431	0.4015	0.1032	0.0412	0.1444		1,502.5711	1,502.5711	0.1100		1,505.3207
Worker	0.7625	0.5338	5.7970	0.0159	1.5984	0.0124	1.6108	0.4239	0.0115	0.4354		1,579.6577	1,579.6577	0.0494		1,580.8915
Total	0.9881	6.9460	7.5221	0.0300	1.9568	0.0556	2.0124	0.5271	0.0527	0.5798		3,082.2288	3,082.2288	0.1593		3,086.2122

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8022	26.3349	19.1702	0.0320		1.5127	1.5127		1.4177	1.4177	0.0000	3,091.3894	3,091.3894	0.7895		3,111.1261
Total	2.8022	26.3349	19.1702	0.0320		1.5127	1.5127		1.4177	1.4177	0.0000	3,091.3894	3,091.3894	0.7895		3,111.1261

Spring Street - South Coast AQMD Air District, Winter

3.4 Building Construction - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2255	6.4123	1.7251	0.0141	0.3584	0.0431	0.4015	0.1032	0.0412	0.1444		1,502.5711	1,502.5711	0.1100		1,505.3207
Worker	0.7625	0.5338	5.7970	0.0159	1.5984	0.0124	1.6108	0.4239	0.0115	0.4354		1,579.6577	1,579.6577	0.0494		1,580.8915
Total	0.9881	6.9460	7.5221	0.0300	1.9568	0.0556	2.0124	0.5271	0.0527	0.5798		3,082.2288	3,082.2288	0.1593		3,086.2122

3.4 Building Construction - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5166	23.9036	18.6994	0.0320		1.3115	1.3115		1.2293	1.2293		3,042.0040	3,042.0040	0.7810		3,061.5287
Total	2.5166	23.9036	18.6994	0.0320		1.3115	1.3115		1.2293	1.2293		3,042.0040	3,042.0040	0.7810		3,061.5287

Spring Street - South Coast AQMD Air District, Winter

3.4 Building Construction - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1926	5.8703	1.5601	0.0140	0.3584	0.0296	0.3880	0.1032	0.0283	0.1315		1,492.471 7	1,492.471 7	0.1036		1,495.062 6
Worker	0.7057	0.4762	5.2637	0.0154	1.5984	0.0121	1.6105	0.4239	0.0112	0.4351		1,530.621 9	1,530.621 9	0.0439		1,531.719 3
Total	0.8983	6.3465	6.8237	0.0294	1.9568	0.0417	1.9985	0.5271	0.0394	0.5665		3,023.093 6	3,023.093 6	0.1475		3,026.781 9

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5166	23.9036	18.6994	0.0320		1.3115	1.3115		1.2293	1.2293	0.0000	3,042.004 0	3,042.004 0	0.7810		3,061.528 7
Total	2.5166	23.9036	18.6994	0.0320		1.3115	1.3115		1.2293	1.2293	0.0000	3,042.004 0	3,042.004 0	0.7810		3,061.528 7

Spring Street - South Coast AQMD Air District, Winter

3.4 Building Construction - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1926	5.8703	1.5601	0.0140	0.3584	0.0296	0.3880	0.1032	0.0283	0.1315		1,492.4717	1,492.4717	0.1036		1,495.0626
Worker	0.7057	0.4762	5.2637	0.0154	1.5984	0.0121	1.6105	0.4239	0.0112	0.4351		1,530.6219	1,530.6219	0.0439		1,531.7193
Total	0.8983	6.3465	6.8237	0.0294	1.9568	0.0417	1.9985	0.5271	0.0394	0.5665		3,023.0936	3,023.0936	0.1475		3,026.7819

3.5 Architectural Coating - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	18.1086					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4844	3.3677	3.6628	5.9400e-003		0.2219	0.2219		0.2219	0.2219		562.8961	562.8961	0.0436		563.9856
Total	18.5930	3.3677	3.6628	5.9400e-003		0.2219	0.2219		0.2219	0.2219		562.8961	562.8961	0.0436		563.9856

Spring Street - South Coast AQMD Air District, Winter

3.5 Architectural Coating - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1431	0.0966	1.0675	3.1200e-003	0.3242	2.4600e-003	0.3266	0.0860	2.2600e-003	0.0882		310.4058	310.4058	8.9000e-003		310.6284
Total	0.1431	0.0966	1.0675	3.1200e-003	0.3242	2.4600e-003	0.3266	0.0860	2.2600e-003	0.0882		310.4058	310.4058	8.9000e-003		310.6284

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	18.1086					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4844	3.3677	3.6628	5.9400e-003		0.2219	0.2219		0.2219	0.2219	0.0000	562.8961	562.8961	0.0436		563.9856
Total	18.5930	3.3677	3.6628	5.9400e-003		0.2219	0.2219		0.2219	0.2219	0.0000	562.8961	562.8961	0.0436		563.9856

Spring Street - South Coast AQMD Air District, Winter

3.5 Architectural Coating - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1431	0.0966	1.0675	3.1200e-003	0.3242	2.4600e-003	0.3266	0.0860	2.2600e-003	0.0882		310.4058	310.4058	8.9000e-003		310.6284
Total	0.1431	0.0966	1.0675	3.1200e-003	0.3242	2.4600e-003	0.3266	0.0860	2.2600e-003	0.0882		310.4058	310.4058	8.9000e-003		310.6284

3.6 Paving - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.5384					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.8950	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841

Spring Street - South Coast AQMD Air District, Winter

3.6 Paving - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0740	0.0500	0.5521	1.6100e-003	0.1677	1.2700e-003	0.1689	0.0445	1.1700e-003	0.0456		160.5547	160.5547	4.6000e-003		160.6699
Total	0.0740	0.0500	0.5521	1.6100e-003	0.1677	1.2700e-003	0.1689	0.0445	1.1700e-003	0.0456		160.5547	160.5547	4.6000e-003		160.6699

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.5384					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.8950	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841

Spring Street - South Coast AQMD Air District, Winter

3.6 Paving - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0740	0.0500	0.5521	1.6100e-003	0.1677	1.2700e-003	0.1689	0.0445	1.1700e-003	0.0456		160.5547	160.5547	4.6000e-003		160.6699
Total	0.0740	0.0500	0.5521	1.6100e-003	0.1677	1.2700e-003	0.1689	0.0445	1.1700e-003	0.0456		160.5547	160.5547	4.6000e-003		160.6699

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Spring Street - South Coast AQMD Air District, 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	1.1848	14.8690	17.0003	0.0888	6.0468	0.0745	6.1213	1.6292	0.0701	1.6993		9,140.9327	9,140.9327	0.3631		9,150.0103
Unmitigated	1.1848	14.8690	17.0003	0.0888	6.0468	0.0745	6.1213	1.6292	0.0701	1.6993		9,140.9327	9,140.9327	0.3631		9,150.0103

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	631.43	245.83	102.83	2,217,820	2,217,820
Parking Lot	0.00	0.00	0.00		
Total	631.43	245.83	102.83	2,217,820	2,217,820

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
Manufacturing	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Manufacturing	0.480870	0.037879	0.175844	0.105406	0.042175	0.015298	0.054994	0.087533	0.000000	0.000000	0.000000	0.000000	0.000000
Parking Lot	0.548858	0.043235	0.200706	0.120309	0.016131	0.005851	0.021034	0.033479	0.002070	0.001877	0.004817	0.000707	0.000925

Spring Street - South Coast AQMD Air District, Winter

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0859	0.7811	0.6562	4.6900e-003		0.0594	0.0594		0.0594	0.0594		937.3671	937.3671	0.0180	0.0172	942.9374
NaturalGas Unmitigated	0.0859	0.7811	0.6562	4.6900e-003		0.0594	0.0594		0.0594	0.0594		937.3671	937.3671	0.0180	0.0172	942.9374

Spring Street - South Coast AQMD Air District, Winter

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Manufacturing	7967.62	0.0859	0.7811	0.6562	4.6900e-003		0.0594	0.0594		0.0594	0.0594		937.3671	937.3671	0.0180	0.0172	942.9374
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		0.0859	0.7811	0.6562	4.6900e-003		0.0594	0.0594		0.0594	0.0594		937.3671	937.3671	0.0180	0.0172	942.9374

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Manufacturing	7.96762	0.0859	0.7811	0.6562	4.6900e-003		0.0594	0.0594		0.0594	0.0594		937.3671	937.3671	0.0180	0.0172	942.9374
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		0.0859	0.7811	0.6562	4.6900e-003		0.0594	0.0594		0.0594	0.0594		937.3671	937.3671	0.0180	0.0172	942.9374

6.0 Area Detail**6.1 Mitigation Measures Area**

Spring Street - South Coast AQMD Air District, 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	3.6680	1.5000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	1.0000e-004		0.0385
Unmitigated	3.6680	1.5000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	1.0000e-004		0.0385

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	0.4217					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2447					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5800e-003	1.5000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	1.0000e-004		0.0385
Total	3.6680	1.5000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	1.0000e-004		0.0385

Spring Street - South Coast AQMD Air District, Winter

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4217					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2447					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5800e-003	1.5000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	1.0000e-004		0.0385
Total	3.6680	1.5000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	1.0000e-004		0.0385

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

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

10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Spring Street - South Coast AQMD Air District, Winter

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

Boilers

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

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Spring Street - South Coast AQMD Air District, Summer

Spring Street

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	160.67	1000sqft	3.69	160,673.00	0
Parking Lot	4.11	Acre	4.11	179,031.60	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	9			Operational Year	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Spring Street - South Coast AQMD Air District, Summer

Project Characteristics -

Land Use -

Construction Phase - Architectural Coating will overlap with the construction of the buildings.

Vehicle Trips - Trip rates from traffic report

Construction Off-road Equipment Mitigation -

Fleet Mix - Fleet mix of trucks adjusted to 20% (default is 7.6%)

Off-road Equipment - Input from developer

Off-road Equipment - Input from developer

Off-road Equipment - Input from developer

Off-road Equipment -

Grading - project site is 7.8 acres

Spring Street - South Coast AQMD Air District, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	85.00
tblFleetMix	HHD	0.03	0.09
tblFleetMix	LDA	0.55	0.48
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.20	0.18
tblFleetMix	LHD1	0.02	0.04
tblFleetMix	LHD2	5.8510e-003	0.02
tblFleetMix	MCY	4.8170e-003	0.00
tblFleetMix	MDV	0.12	0.11
tblFleetMix	MH	9.2500e-004	0.00
tblFleetMix	MHD	0.02	0.05
tblFleetMix	OBUS	2.0700e-003	0.00
tblFleetMix	SBUS	7.0700e-004	0.00
tblFleetMix	UBUS	1.8770e-003	0.00
tblGrading	AcresOfGrading	30.00	7.80
tblLandUse	LandUseSquareFeet	160,670.00	160,673.00
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblVehicleTrips	ST_TR	1.49	1.53
tblVehicleTrips	SU_TR	0.62	0.64
tblVehicleTrips	WD_TR	3.82	3.93

2.0 Emissions Summary

Spring Street - South Coast AQMD Air District, Summer

2.1 Overall Construction (Maximum Daily Emission)**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.4232	45.6341	27.1447	0.0634	18.2675	2.3919	20.6594	9.9840	2.2006	12.1846	0.0000	6,327.034 1	6,327.034 1	1.1983	0.0000	6,350.649 9
2020	22.0717	33.6708	30.7932	0.0721	2.2810	1.5771	3.8581	0.6131	1.4924	2.1055	0.0000	7,110.2095	7,110.2095	0.9777	0.0000	7,134.650 9
Maximum	22.0717	45.6341	30.7932	0.0721	18.2675	2.3919	20.6594	9.9840	2.2006	12.1846	0.0000	7,110.209 5	7,110.209 5	1.1983	0.0000	7,134.650 9

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.4232	45.6341	27.1447	0.0634	8.3310	2.3919	10.7229	4.5222	2.2006	6.7227	0.0000	6,327.034 1	6,327.034 1	1.1983	0.0000	6,350.649 9
2020	22.0717	33.6708	30.7932	0.0721	2.2810	1.5771	3.8581	0.6131	1.4924	2.1055	0.0000	7,110.2094	7,110.2094	0.9777	0.0000	7,134.650 9
Maximum	22.0717	45.6341	30.7932	0.0721	8.3310	2.3919	10.7229	4.5222	2.2006	6.7227	0.0000	7,110.209 4	7,110.209 4	1.1983	0.0000	7,134.650 9

	ROG	NOx	CO	SO2	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	0.00	0.00	0.00	0.00	48.36	0.00	40.53	51.54	0.00	38.22	0.00	0.00	0.00	0.00	0.00	0.00

Spring Street - South Coast AQMD Air District, 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	3.6680	1.5000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	1.0000e-004		0.0385
Energy	0.0859	0.7811	0.6562	4.6900e-003		0.0594	0.0594		0.0594	0.0594		937.3671	937.3671	0.0180	0.0172	942.9374
Mobile	1.2274	14.6510	18.1651	0.0927	6.0468	0.0738	6.1206	1.6292	0.0695	1.6986		9,541.6512	9,541.6512	0.3576		9,550.5915
Total	4.9814	15.4322	18.8381	0.0974	6.0468	0.1333	6.1801	1.6292	0.1289	1.7581		10,479.0544	10,479.0544	0.3757	0.0172	10,493.5673

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	3.6680	1.5000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	1.0000e-004		0.0385
Energy	0.0859	0.7811	0.6562	4.6900e-003		0.0594	0.0594		0.0594	0.0594		937.3671	937.3671	0.0180	0.0172	942.9374
Mobile	1.2274	14.6510	18.1651	0.0927	6.0468	0.0738	6.1206	1.6292	0.0695	1.6986		9,541.6512	9,541.6512	0.3576		9,550.5915
Total	4.9814	15.4322	18.8381	0.0974	6.0468	0.1333	6.1801	1.6292	0.1289	1.7581		10,479.0544	10,479.0544	0.3757	0.0172	10,493.5673

Spring Street - South Coast AQMD Air District, 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2019	7/12/2019	5	10	
2	Grading	Grading	7/15/2019	8/9/2019	5	20	
3	Building Construction	Building Construction	8/12/2019	6/26/2020	5	230	
4	Architectural Coating	Architectural Coating	3/2/2020	6/26/2020	5	85	
5	Paving	Paving	6/29/2020	7/24/2020	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7.8

Acres of Paving: 4.11

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 241,010; Non-Residential Outdoor: 80,337; Striped Parking Area: 10,742 (Architectural Coating – sqft)

OffRoad Equipment

Spring Street - South Coast AQMD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	2	6.00	78	0.48
Grading	Scrapers	1	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	143.00	56.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	29.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Spring Street - South Coast AQMD Air District, Summer

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298		3,766.4529	3,766.4529	1.1917		3,796.2445

Spring Street - South Coast AQMD Air District, Summer

3.2 Site Preparation - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0882	0.0613	0.8088	2.1400e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4400e-003	0.0548		212.5780	212.5780	6.6500e-003		212.7442
Total	0.0882	0.0613	0.8088	2.1400e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4400e-003	0.0548		212.5780	212.5780	6.6500e-003		212.7442

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					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	8.1298	2.3904	10.5202	4.4688	2.1991	6.6679	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445

Spring Street - South Coast AQMD Air District, Summer

3.2 Site Preparation - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0882	0.0613	0.8088	2.1400e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4400e-003	0.0548		212.5780	212.5780	6.6500e-003		212.7442
Total	0.0882	0.0613	0.8088	2.1400e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4400e-003	0.0548		212.5780	212.5780	6.6500e-003		212.7442

3.3 Grading - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.4357	0.0000	6.4357	3.3549	0.0000	3.3549			0.0000			0.0000
Off-Road	2.6866	31.5679	14.1836	0.0303		1.3059	1.3059		1.2014	1.2014		3,002.8701	3,002.8701	0.9501		3,026.6220
Total	2.6866	31.5679	14.1836	0.0303	6.4357	1.3059	7.7416	3.3549	1.2014	4.5563		3,002.8701	3,002.8701	0.9501		3,026.6220

Spring Street - South Coast AQMD Air District, Summer

3.3 Grading - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0392	0.0273	0.3595	9.5000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		94.4791	94.4791	2.9500e-003		94.5530
Total	0.0392	0.0273	0.3595	9.5000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		94.4791	94.4791	2.9500e-003		94.5530

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					2.8961	0.0000	2.8961	1.5097	0.0000	1.5097			0.0000			0.0000
Off-Road	2.6866	31.5679	14.1836	0.0303		1.3059	1.3059		1.2014	1.2014	0.0000	3,002.8701	3,002.8701	0.9501		3,026.6220
Total	2.6866	31.5679	14.1836	0.0303	2.8961	1.3059	4.2020	1.5097	1.2014	2.7111	0.0000	3,002.8701	3,002.8701	0.9501		3,026.6220

Spring Street - South Coast AQMD Air District, Summer

3.3 Grading - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0392	0.0273	0.3595	9.5000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		94.4791	94.4791	2.9500e-003		94.5530
Total	0.0392	0.0273	0.3595	9.5000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		94.4791	94.4791	2.9500e-003		94.5530

3.4 Building Construction - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8022	26.3349	19.1702	0.0320		1.5127	1.5127		1.4177	1.4177		3,091.3894	3,091.3894	0.7895		3,111.1261
Total	2.8022	26.3349	19.1702	0.0320		1.5127	1.5127		1.4177	1.4177		3,091.3894	3,091.3894	0.7895		3,111.1261

Spring Street - South Coast AQMD Air District, Summer

3.4 Building Construction - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2159	6.4077	1.5490	0.0145	0.3584	0.0424	0.4009	0.1032	0.0406	0.1438		1,546.830 3	1,546.830 3	0.1024		1,549.389 1
Worker	0.7003	0.4874	6.4255	0.0170	1.5984	0.0124	1.6108	0.4239	0.0115	0.4354		1,688.814 3	1,688.814 3	0.0528		1,690.134 8
Total	0.9162	6.8951	7.9745	0.0315	1.9568	0.0549	2.0117	0.5271	0.0521	0.5792		3,235.644 7	3,235.644 7	0.1552		3,239.523 8

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8022	26.3349	19.1702	0.0320		1.5127	1.5127		1.4177	1.4177	0.0000	3,091.389 4	3,091.389 4	0.7895		3,111.1261
Total	2.8022	26.3349	19.1702	0.0320		1.5127	1.5127		1.4177	1.4177	0.0000	3,091.389 4	3,091.389 4	0.7895		3,111.1261

Spring Street - South Coast AQMD Air District, Summer

3.4 Building Construction - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2159	6.4077	1.5490	0.0145	0.3584	0.0424	0.4009	0.1032	0.0406	0.1438		1,546.830 3	1,546.830 3	0.1024		1,549.389 1
Worker	0.7003	0.4874	6.4255	0.0170	1.5984	0.0124	1.6108	0.4239	0.0115	0.4354		1,688.814 3	1,688.814 3	0.0528		1,690.134 8
Total	0.9162	6.8951	7.9745	0.0315	1.9568	0.0549	2.0117	0.5271	0.0521	0.5792		3,235.644 7	3,235.644 7	0.1552		3,239.523 8

3.4 Building Construction - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5166	23.9036	18.6994	0.0320		1.3115	1.3115		1.2293	1.2293		3,042.004 0	3,042.004 0	0.7810		3,061.528 7
Total	2.5166	23.9036	18.6994	0.0320		1.3115	1.3115		1.2293	1.2293		3,042.004 0	3,042.004 0	0.7810		3,061.528 7

Spring Street - South Coast AQMD Air District, Summer

3.4 Building Construction - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1839	5.8764	1.3993	0.0144	0.3584	0.0291	0.3875	0.1032	0.0279	0.1310		1,536.9114	1,536.9114	0.0965		1,539.3237
Worker	0.6470	0.4349	5.8461	0.0164	1.5984	0.0121	1.6105	0.4239	0.0112	0.4351		1,636.5170	1,636.5170	0.0471		1,637.6932
Total	0.8309	6.3113	7.2454	0.0308	1.9568	0.0412	1.9981	0.5271	0.0390	0.5661		3,173.4283	3,173.4283	0.1435		3,177.0170

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5166	23.9036	18.6994	0.0320		1.3115	1.3115		1.2293	1.2293	0.0000	3,042.0040	3,042.0040	0.7810		3,061.5287
Total	2.5166	23.9036	18.6994	0.0320		1.3115	1.3115		1.2293	1.2293	0.0000	3,042.0040	3,042.0040	0.7810		3,061.5287

Spring Street - South Coast AQMD Air District, Summer

3.4 Building Construction - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1839	5.8764	1.3993	0.0144	0.3584	0.0291	0.3875	0.1032	0.0279	0.1310		1,536.9114	1,536.9114	0.0965		1,539.3237
Worker	0.6470	0.4349	5.8461	0.0164	1.5984	0.0121	1.6105	0.4239	0.0112	0.4351		1,636.5170	1,636.5170	0.0471		1,637.6932
Total	0.8309	6.3113	7.2454	0.0308	1.9568	0.0412	1.9981	0.5271	0.0390	0.5661		3,173.4283	3,173.4283	0.1435		3,177.0170

3.5 Architectural Coating - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	18.1086					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4844	3.3677	3.6628	5.9400e-003		0.2219	0.2219		0.2219	0.2219		562.8961	562.8961	0.0436		563.9856
Total	18.5930	3.3677	3.6628	5.9400e-003		0.2219	0.2219		0.2219	0.2219		562.8961	562.8961	0.0436		563.9856

Spring Street - South Coast AQMD Air District, Summer

3.5 Architectural Coating - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1312	0.0882	1.1856	3.3300e-003	0.3242	2.4600e-003	0.3266	0.0860	2.2600e-003	0.0882		331.8811	331.8811	9.5400e-003		332.1196
Total	0.1312	0.0882	1.1856	3.3300e-003	0.3242	2.4600e-003	0.3266	0.0860	2.2600e-003	0.0882		331.8811	331.8811	9.5400e-003		332.1196

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	18.1086					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4844	3.3677	3.6628	5.9400e-003		0.2219	0.2219		0.2219	0.2219	0.0000	562.8961	562.8961	0.0436		563.9856
Total	18.5930	3.3677	3.6628	5.9400e-003		0.2219	0.2219		0.2219	0.2219	0.0000	562.8961	562.8961	0.0436		563.9856

Spring Street - South Coast AQMD Air District, Summer

3.5 Architectural Coating - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1312	0.0882	1.1856	3.3300e-003	0.3242	2.4600e-003	0.3266	0.0860	2.2600e-003	0.0882		331.8811	331.8811	9.5400e-003		332.1196
Total	0.1312	0.0882	1.1856	3.3300e-003	0.3242	2.4600e-003	0.3266	0.0860	2.2600e-003	0.0882		331.8811	331.8811	9.5400e-003		332.1196

3.6 Paving - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.5384					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.8950	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841

Spring Street - South Coast AQMD Air District, Summer

3.6 Paving - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0679	0.0456	0.6132	1.7200e-003	0.1677	1.2700e-003	0.1689	0.0445	1.1700e-003	0.0456		171.6626	171.6626	4.9400e-003		171.7860
Total	0.0679	0.0456	0.6132	1.7200e-003	0.1677	1.2700e-003	0.1689	0.0445	1.1700e-003	0.0456		171.6626	171.6626	4.9400e-003		171.7860

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.5384					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.8950	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841

Spring Street - South Coast AQMD Air District, Summer

3.6 Paving - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0679	0.0456	0.6132	1.7200e-003	0.1677	1.2700e-003	0.1689	0.0445	1.1700e-003	0.0456		171.6626	171.6626	4.9400e-003		171.7860
Total	0.0679	0.0456	0.6132	1.7200e-003	0.1677	1.2700e-003	0.1689	0.0445	1.1700e-003	0.0456		171.6626	171.6626	4.9400e-003		171.7860

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Spring Street - South Coast AQMD Air District, 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	1.2274	14.6510	18.1651	0.0927	6.0468	0.0738	6.1206	1.6292	0.0695	1.6986		9,541.6512	9,541.6512	0.3576		9,550.5915
Unmitigated	1.2274	14.6510	18.1651	0.0927	6.0468	0.0738	6.1206	1.6292	0.0695	1.6986		9,541.6512	9,541.6512	0.3576		9,550.5915

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	631.43	245.83	102.83	2,217,820	2,217,820
Parking Lot	0.00	0.00	0.00		
Total	631.43	245.83	102.83	2,217,820	2,217,820

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
Manufacturing	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Manufacturing	0.480870	0.037879	0.175844	0.105406	0.042175	0.015298	0.054994	0.087533	0.000000	0.000000	0.000000	0.000000	0.000000
Parking Lot	0.548858	0.043235	0.200706	0.120309	0.016131	0.005851	0.021034	0.033479	0.002070	0.001877	0.004817	0.000707	0.000925

Spring Street - South Coast AQMD Air District, Summer

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0859	0.7811	0.6562	4.6900e-003		0.0594	0.0594		0.0594	0.0594		937.3671	937.3671	0.0180	0.0172	942.9374
NaturalGas Unmitigated	0.0859	0.7811	0.6562	4.6900e-003		0.0594	0.0594		0.0594	0.0594		937.3671	937.3671	0.0180	0.0172	942.9374

Spring Street - South Coast AQMD Air District, Summer

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Manufacturing	7967.62	0.0859	0.7811	0.6562	4.6900e-003		0.0594	0.0594		0.0594	0.0594		937.3671	937.3671	0.0180	0.0172	942.9374
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		0.0859	0.7811	0.6562	4.6900e-003		0.0594	0.0594		0.0594	0.0594		937.3671	937.3671	0.0180	0.0172	942.9374

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Manufacturing	7.96762	0.0859	0.7811	0.6562	4.6900e-003		0.0594	0.0594		0.0594	0.0594		937.3671	937.3671	0.0180	0.0172	942.9374
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		0.0859	0.7811	0.6562	4.6900e-003		0.0594	0.0594		0.0594	0.0594		937.3671	937.3671	0.0180	0.0172	942.9374

6.0 Area Detail**6.1 Mitigation Measures Area**

Spring Street - South Coast AQMD Air District, 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	3.6680	1.5000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	1.0000e-004		0.0385
Unmitigated	3.6680	1.5000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	1.0000e-004		0.0385

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	0.4217					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2447					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5800e-003	1.5000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	1.0000e-004		0.0385
Total	3.6680	1.5000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	1.0000e-004		0.0385

Spring Street - South Coast AQMD Air District, Summer

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4217					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2447					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5800e-003	1.5000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	1.0000e-004		0.0385
Total	3.6680	1.5000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	1.0000e-004		0.0385

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

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

10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Spring Street - South Coast AQMD Air District, Summer

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

Boilers

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

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

This page is intentionally blank.