



# Draft Air Quality/Greenhouse Gas Technical Memorandum

Laserfiche Office Project

*City of Long Beach, California*

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# 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.

# 2 Project Location and Description

## 2.1 Project Location

The project site is approximately 2.1 acres and consists of ten parcels located between Locust Avenue and Long Beach Boulevard, south of East 35th Street, and north of Interstate (I-) 405 in the central portion of the City of Long Beach (Figure 1). A description of the project site and current uses is provided below:

- The five parcels along Locust Avenue comprise the western portion of the project site. These five parcels are currently vacant.
- The five parcels along Long Beach Boulevard comprise the eastern portion of the project site. These five parcels are currently vacant.

## 2.2 Project Description

The Laserfiche Office Project (project) consists of a new four--story office building and separate three-story parking garage. Table 1 summarizes the key elements associated with the office building and parking garage, and Figure 2 depicts the project site plan. The project includes the following primary components:

- Office building – The project includes a new 102,848-square-foot office building that is up to 74 feet in height (maximum four stories) above ground level. The building includes offset terraces and mezzanine design features.
- Parking garage – The project includes a separate three-story parking garage with one rooftop level of parking with a total of 343 parking spaces. Access to the parking garage would occur from East 35th Street west of the existing alley entrance in the center of the project site.
- Offsite improvements – The project includes modification of the 35<sup>th</sup> Street intersection from a two-way stop-controlled intersection to a signalized intersection.
- Entitlements and project approvals – The project requires the following entitlements and discretionary actions:
  - Zone Change of five existing lots (assessor parcel numbers [APN]: 7141-004-033, 034, 019, and 020) fronting on Long Beach Boulevard from

Community Commercial Automobile-Oriented (CCA) District to Community R-4-N Commercial (CCN) District

- Zone Change of five existing lots (APNs: 7141-004-027, 028, 029, 030, and 031) fronting on Locust Street from Single-Family Residential District (R-1-N) to CCN District in conjunction with a General Plan Amendment from LUD 1 to LUD 8
- Zoning Code Amendment to permit the averaging of setbacks for the proposed office building within the High-Rise Overlay (HR-4) District.
- Site plan review of a four-story office building up to 74 feet in height and containing 102,848 square feet of floor area and a three-story parking garage with one rooftop level of parking
- Tentative Tract Map to create a single lot for development, including vacation of a portion of the alley that runs north-to-south (between Long Beach Boulevard and Locust Street)
  - The alley easement will be maintained
- General Plan Conformity Finding for the vacation of the northern 250 feet of the unnamed alley, which runs north to south between East 35th Street and Wardlow Road

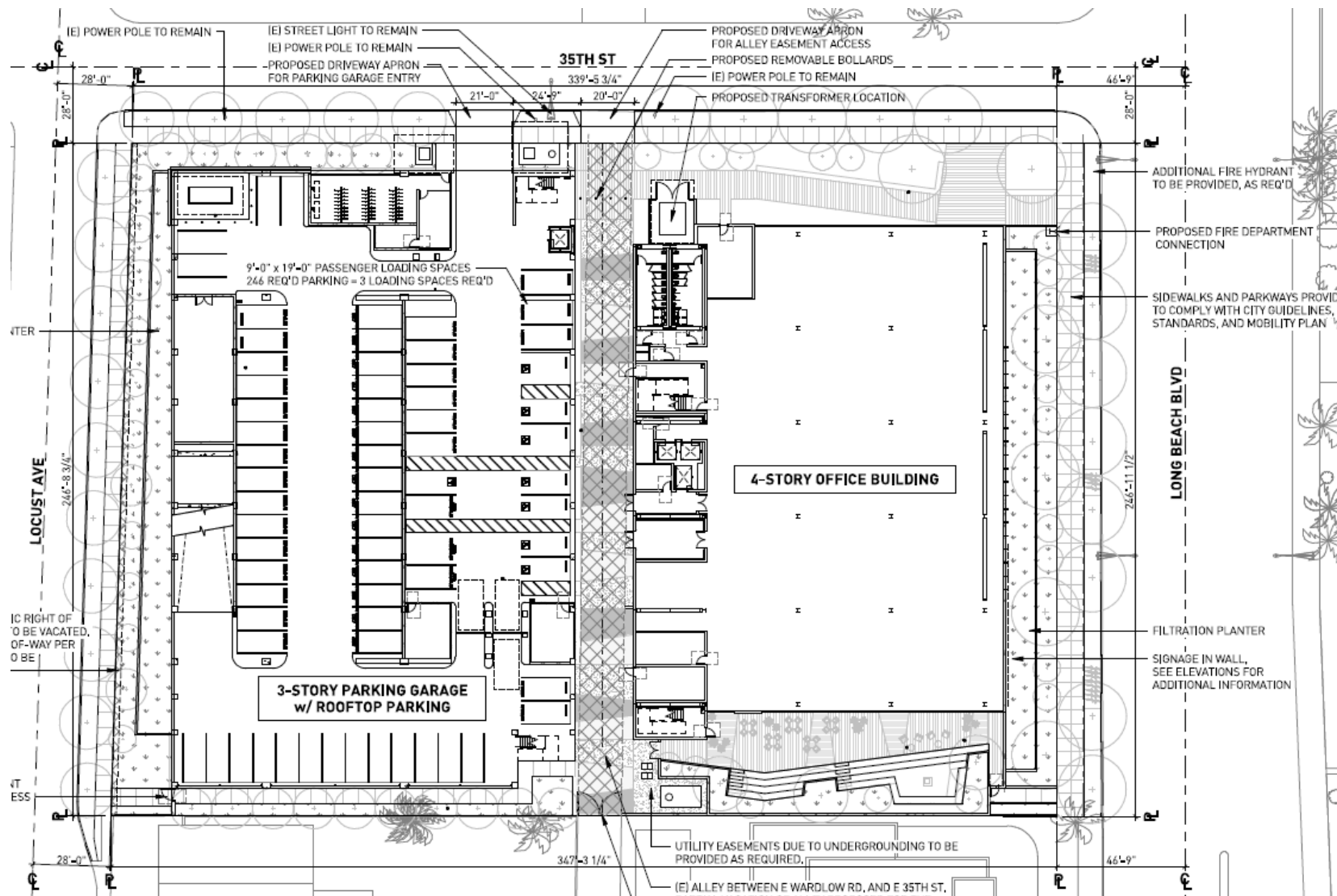


Figure 1. Regional Vicinity and Project Location





Figure 2. Project Site Plan



Source: 888-5 Partners, LLC 2018



**Table 1. Laserfiche Office Project - Building and Site Characteristics**

Project Element	Office Building			Parking Garage		
Project Site Summary						
Project Address	3443 Long Beach Boulevard			210 E. 35th Street		
Lot Area	84,761 SF (for both office and parking)			84,761 SF (for both office and parking)		
APN #	7141-004-019, 020, 033, 034			7141-004-027, 028, 029, 030, 031		
Zone	Existing: CCA with HR-4 Overlay / Proposed: CCN with HR-4			Existing: R-1-N / Proposed: CCN		
General Plan	Existing: LUD 8 (Major Commercial Corridor) / Proposed: LUD 8			Existing: LUD 1 (Single Family District) / Proposed: LUD 8		
Project Summary						
Proposed Stories	4 Stories			3 Stories with Rooftop Parking		
Proposed Building Height	74'-0" to top of parapet			38'-0" to top of parapet		
Setbacks	Location	Required (per HR overlay)	Proposed*	Location	Required (per CCN)	Proposed*
	Long Beach Avenue (front)	20'-0"	18'-6" minimum (Level 1) / 21'-3" average setback**	Locust Avenue (front)	15'-0"	15'-0" minimum
	E. 35th Street	20'-0"	30'-0" (Level 1) / 20'-2" average setback**	E. 35th Street (side)	10'-0"	10'-0" minimum
	Adjacent property	Underlying (5'-0" per CCN)	37'-0" (to stair) / 25'-0" (to building face)	Adjacent property (residential rear yard)	20'-0"	20'-0" minimum
	Locust Avenue	N/A	See parking	Adjacent property (residential side yard)	10'-0"	10'-0" minimum
				Long Beach Boulevard	N/A	See Office

**Table 1. Laserfiche Office Project - Building and Site Characteristics**

Project Element	Office Building			Parking Garage		
Proposed Building Area	Level	Building Area (SF)	Notes	Level	Building Area (SF)	Notes
	1	24,072	6,300 SF Outdoor Patio	1	33,108	
	2	25,609		2	33,108	
	3	27,261	410 SF Balcony	3	33,108	
	4	25,906	1,500 SF Balcony	Roof	N/A	33,108 SF Rooftop Parking
	Total	102,848		Total	99,324	
Lot Coverage (Allowed / Proposed)	35.4% 30,018 SF / 84,761 SF)			39.1% (33,108 SF / 84,761 SF)		
Parking Summary						
Proposed Vehicular Spaces	See Parking Garage			343		
Proposed Bicycle Spaces	See Parking Garage			54		

\* See plans and elevations for addition information

\*\* Zoning code amendment to high rise overlay district allowing the averaging of setbacks

## 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 U.S. 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 (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter, which is broken down for regulatory purposes into particles of 10 micrometers and smaller (PM<sub>10</sub>) and particles of 2.5 micrometers and smaller (PM<sub>2.5</sub>), and sulfur dioxide (SO<sub>2</sub>). 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 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 2. The U.S. EPA has classified the South Coast Air Basin (SCAB) as attainment/maintenance for CO, PM<sub>10</sub>, and NO<sub>2</sub>, and nonattainment for O<sub>3</sub>, and PM<sub>2.5</sub>. 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 (CAAQS). The CCAA, as amended in 1992, requires all air districts in the state to endeavor to achieve and maintain the CAAQS. CAAQS 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 2. The CCAA requires ARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous 3 calendar

**Table 2. Federal and State Criteria Air Pollutant Standards, Effects, and Sources**

Pollutant	Averaging Time	State Standard <sup>8</sup>	Federal Standard <sup>9</sup>	Principal Health and Atmospheric Effects	Typical Sources	SCAB Attainment Status
Ozone (O <sub>3</sub> ) <sup>2</sup>	1 hour 8 hours	0.09 ppm 0.070 ppm	--- 0.070 ppm <sup>4</sup>  (4th highest in 3 years)	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 reactive organic gases/volatile organic compounds (ROG or VOC) and nitrogen oxides (NOX) 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)  State: Nonattainment (1-hour and 8-hour)
Carbon Monoxide (CO)	1 hour 8 hours 8 hours (Lake Tahoe)	20 ppm 9.0 ppm <sup>1</sup> 6 ppm	35 ppm 9 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  State: Attainment
Respirable Particulate Matter (PM <sub>10</sub> ) <sup>2</sup>	24 hours Annual	50 µg/m <sup>3</sup> 20 µg/m <sup>3</sup>	150 µg/m <sup>3</sup> --- <sup>2</sup>  (expected number of days above standard < or equal to 1)	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 <sub>10</sub> .	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  State: Nonattainment
Fine Particulate Matter (PM <sub>2.5</sub> ) <sup>2</sup>	24 hours Annual Secondary  Standard (annual)	--- 12 µg/m <sup>3</sup> ---	35 µg/m <sup>3</sup> 12.0 µg/m <sup>3</sup> 15 µg/m <sup>3</sup>  (98th percentile over 3 years)	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 <sub>2.5</sub> size range. Many toxic and other aerosol and solid compounds are part of PM <sub>2.5</sub> .	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical (including photochemical) reactions involving other pollutants including NOX, sulfur oxides (SO <sub>x</sub> ), ammonia, and ROG.	Federal: Nonattainment  State: Nonattainment

**Table 2. Federal and State Criteria Air Pollutant Standards, Effects, and Sources**

Pollutant	Averaging Time	State Standard <sup>8</sup>	Federal Standard <sup>9</sup>	Principal Health and Atmospheric Effects	Typical Sources	SCAB Attainment Status
Nitrogen Dioxide (NO <sub>2</sub> )	1 hour	0.18 ppm	100 ppb <sup>6</sup> (98th percentile over 3 years)	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain. Part of the "NOX" 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
Sulfur Dioxide (SO <sub>2</sub> )	1 hour	0.25 ppm	75 ppb <sup>7</sup> (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 24 hours Annual Arithmetic Mean	--- 0.04 ppm ---	0.5 ppm <sup>9</sup> 0.14 ppm 0.03 ppm			State: Attainment/Unclassified
Lead (Pb) <sup>3</sup>	Monthly Calendar Quarter	1.5 µg/m <sup>3</sup> ---	--- 1.5 µg/m <sup>3</sup>	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 <sup>3</sup> <sup>10</sup>			State: Attainment
Sulfate	24 hours	25 µg/m <sup>3</sup>	---	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
Hydrogen Sulfide (H <sub>2</sub> 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

**Table 2. Federal and State Criteria Air Pollutant Standards, Effects, and Sources**

Pollutant	Averaging Time	State Standard <sup>8</sup>	Federal Standard <sup>9</sup>	Principal Health and Atmospheric Effects	Typical Sources	SCAB Attainment Status
Visibility Reducing Particles (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 <sup>3</sup>	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 2. Federal and State Criteria Air Pollutant Standards, Effects, and Sources**

Pollutant	Averaging Time	State Standard <sup>8</sup>	Federal Standard <sup>9</sup>	Principal Health and Atmospheric Effects	Typical Sources	SCAB Attainment Status
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Source 1: California Air Resources Board (ARB). Website: [www.arb.ca.gov/research/aaqs/aaqs2.pdf](http://www.arb.ca.gov/research/aaqs/aaqs2.pdf) (May 4, 2016).

Source 2: ARB, Area Designations. Website: <http://www.arb.ca.gov/desig/desig.htm> (accessed July 2018).

- <sup>1</sup> Rounding to an integer value is not allowed for the State 8-hour CO standard. Violation occurs at or above 9.05 ppm.
- <sup>2</sup> Annual PM<sub>10</sub> NAAQS revoked October 2006; was 50 µg/m<sup>3</sup>. 24-hour PM<sub>2.5</sub> NAAQS tightened October 2006; was 65 µg/m<sup>3</sup>. Annual PM<sub>2.5</sub> NAAQS tightened from 15 µg/m<sup>3</sup> to 12 µg/m<sup>3</sup> December 2012, and secondary standard set at 15 µg/m<sup>3</sup>.
- <sup>3</sup> 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 PM<sub>10</sub> and, in larger proportion, PM<sub>2.5</sub>. Both the ARB and the EPA have identified lead and various organic compounds that are precursors to ozone and PM<sub>2.5</sub> 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.
- <sup>4</sup> 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.
- <sup>5</sup> 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, 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.
- <sup>6</sup> Final 1-hour NO<sub>2</sub> 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.
- <sup>7</sup> The EPA finalized a 1-hour SO<sub>2</sub> standard of 75 ppb in June 2010. Nonattainment areas have not yet been designated as of September 2012.
- <sup>8</sup> California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, 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.
- <sup>9</sup> National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than one. For PM<sub>2.5</sub>, 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.
- <sup>10</sup> Lead NAAQS are not considered in Transportation Conformity analysis



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<sub>3</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub>.

### 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<sub>2.5</sub>) 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 will 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 the 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 will 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 (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), tetrafluoromethane,

hexafluoroethane, sulfur hexafluoride (SF<sub>6</sub>), 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, however, 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 CO<sub>2</sub>, 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 CO<sub>2</sub>, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO<sub>2</sub> over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO<sub>2</sub> equivalents" (CO<sub>2</sub>e). Table 3 shows the GWPs for each type of GHG. For example, SF<sub>6</sub> is 23,900 times more potent at contributing to global warming than CO<sub>2</sub>.

**Table 3. Global Warming Potential of Greenhouse Gases**

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

Source: Intergovernmental Panel on Climate Change 2007

### 3.5.1 State Regulations

#### Executive Order S-3-05 – Statewide GHG 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 and on 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.

#### 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 CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>. 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 CO<sub>2</sub>e, 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 CO<sub>2</sub>e.

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 CO<sub>2</sub>e would have required a 28 percent reduction to reach the 1990 level of 427 million MT of CO<sub>2</sub>e.

#### 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 will 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 will 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 CO<sub>2</sub>e requires the reduction of 169 million MT of CO<sub>2</sub>e, or approximately 28.3 percent, from the state's projected 2020 BAU emissions level of 596 million MT of CO<sub>2</sub>e.

However, 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 CO<sub>2</sub>e, 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.

However, 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 (UNFCCC), 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 CO<sub>2</sub>e; therefore, the 2020 GHG emissions limit established in response to AB 32 is now slightly higher than the 427 million MT of CO<sub>2</sub>e 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 CO<sub>2</sub>e requires the reduction of 129 million MT of CO<sub>2</sub>e, or approximately 33.2 percent, from the state's projected 2030 BAU emissions level of 389 million MT of CO<sub>2</sub>e.

## Assembly Bill 1493 – Light-duty Vehicle GHG 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 EOs S-14-08 and 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 CO<sub>2</sub>e. In 2010, ARB revised this number upwards to 24.0 million MT of CO<sub>2</sub>e.

### Senate Bill 97 – California Environmental Quality Act 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.

### 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 will 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.

## 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 CH<sub>4</sub>
  - 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.

# 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 O<sub>3</sub> formation. O<sub>3</sub> 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. PM<sub>10</sub> 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<sub>x</sub>) 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<sub>x</sub> 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 East Pacific Coast Highway. Table 4 shows pollutant levels, the state and federal standards, and the number of exceedances recorded at these stations from 2014 to 2016.

### 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, the CO concentrations in the project area have not exceeded the federal or state standards in the past 3 years.

### 4.2.2 Ozone

O<sub>3</sub> is a colorless gas that is formed in the atmosphere when ROG, which includes reactive organic gases (VOC), and NO<sub>x</sub> react in the presence of ultraviolet sunlight. O<sub>3</sub> 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<sub>x</sub>, the components of O<sub>3</sub>, are automobile exhaust and industrial sources. Meteorology and terrain play major roles in O<sub>3</sub> 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 O<sub>3</sub> 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, the 8-hour O<sub>3</sub> standards were exceeded in 2014.

### 4.2.3 Oxides of Sulfur

SO<sub>2</sub> is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Main sources of SO<sub>2</sub> are coal and oil used in power plants and industries. Generally, the highest levels of SO<sub>2</sub> are found near large industrial complexes. In recent years, SO<sub>2</sub> concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO<sub>2</sub> and limits on the sulfur content of fuels. SO<sub>2</sub> is an irritant gas that attacks the throat and lungs. It can cause acute respiratory symptoms and diminished ventilator function in children.



**Table 4. Ambient Air Quality Monitoring Concentrations**

Pollutant	Pollutant Concentration and Standard	Maximum Concentration		
		2014	2015	2016
Carbon Monoxide	Maximum 1-hour Concentration (ppm)	3.7	3.3	3.3
	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)	2.6	2.2	2.2
	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	0.087	0.079
	Days> 0.09 ppm (state 1-hr standard)	0	0	0
	Maximum 8-hour Concentration (ppm)	0.072	0.066	0.059
	Days> 0.070 ppm (state 8-hr standard)	0	0	0
	Days> 0.070 ppm (federal 8-hr standard)	1	0	0
Nitrogen Dioxide	Maximum 1-hour Concentration (ppm)	0.136	0.102	0.076
	Days> 0.18 ppm (state 1-hr standard)	0	0	0
	Days> 0.10 ppm (federal 1-hr standard)	0	1	0
	Annual Arithmetic Mean (ppm)	0.021	0.021	0.021
	Exceed 0.030 ppm? (state Annual Standard)	No	No	No
	Exceed 0.053 ppm? (federal Annual Standard)	No	No	No
Coarse Particulate Matter (PM <sub>10</sub> )	Maximum 24-hour Concentration (µg/m <sup>3</sup> )	59	62	56
	Days> 50 µg/m <sup>3</sup> (state 24-hr standard)	2	2	3
	Days> 150 µg/m <sup>3</sup> (federal 24-hr standard)	0	0	0
	Annual Arithmetic Mean (µg/m <sup>3</sup> )	26.6	26.5	27.8
	Exceed 20 µg/m <sup>3</sup> ? (state Annual Standard)	Yes	Yes	NA
Fine Particulate Matter (PM <sub>2.5</sub> )	Maximum 24-hour Concentration (µg/m <sup>3</sup> )	52.2	48.3	28.9
	Days> 35 µg/m <sup>3</sup> (federal 24-hr standard)	2	4	0
	Annual Arithmetic Mean (µg/m <sup>3</sup> )	NA	10.2	9.5
	Exceed 12 µg/m <sup>3</sup> ? (state Annual Standard)	NA	No	No
	Exceed 12 µg/m <sup>3</sup> ? (federal Annual Standard)	NA	No	No

#### 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  $PM_{10}$ , is about 1/7 the thickness of a human hair. Major sources of  $PM_{10}$  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,  $PM_{10}$  particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract.  $PM_{10}$  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, the state and federal  $PM_{10}$  standards were exceeded in each of the past 3 years.

#### 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  $SO_2$ ,  $NO_x$ , 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  $PM_{10}$  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, the federal  $PM_{2.5}$  standards were exceeded in 2014 and 2015.

#### 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  $O_3$  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 sensitive receptors adjacent to the project site are residential land uses.

## 5 Methods and Thresholds

The air quality and GHG analysis contained herein provides an evaluation 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 California Environmental Quality Act 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
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation
- Expose sensitive receptors to substantial pollutant concentrations
- 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

- Create objectionable odors affecting a substantial number of people
- 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 (including releasing emissions which exceed quantitative thresholds for O<sub>3</sub> precursors)

## 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 lists the daily thresholds for construction and operational emissions that have been established by the SCAQMD and will be used in the analysis of air quality impacts for the proposed Project to determine significance.

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

Pollutant	Construction (pounds/day)	Operation (pounds/day)
Oxides of Nitrogen (NOX)	100	55
Volatile Organic Compounds (VOC)	75	55
PM <sub>10</sub>	150	150
PM <sub>2.5</sub>	55	55
Oxides of Sulfur (SOX)	150	150
CO	550	550

Source: SCAQMD 1993

### 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 will 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<sub>x</sub>, CO, PM<sub>2.5</sub>, and PM<sub>10</sub>; 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 L.A. County area (Area 4). The nearest sensitive receptors are the homes located immediately south of the project site. Table 6 lists the LST emission rates for a 2-acre site located within 25 meters of a sensitive use.

**Table 6. South Coast Air Quality Management District Localized Significance Thresholds**

Pollutant	Construction (pounds/day)	Operation (pounds/day)
Oxides of Nitrogen (NOX)	131	131
PM <sub>10</sub>	842	845
PM <sub>2.5</sub>	7	2
CO	5	1

Source: SCAQMD 1993

### 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 (CO<sub>2</sub>e) per year
- Residential, commercial, and mixed use projects (including parks, warehouses, etc.) 3,000 MT CO<sub>2</sub>e per year

The project is a commercial office building. Thus, for purposes of this analysis, both direct and indirect GHG emissions from the proposed project are discussed in the context of the 3,000 MT threshold levels.

## 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 ROGs 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 7. The construction emission estimates are also detailed in Appendix A. As identified in Table 7, the daily construction emissions would not exceed the SCAQMD's thresholds.

**Table 7. Construction Emissions**

Phase	CO	ROGs	NOX	PM <sub>10</sub>	PM <sub>2.5</sub>
Site Preparation	12.3	1.8	21.5	1.3	0.8
Grading	10.6	2.1	22.8	4.1	2.5
Building Construction	20.5	3.2	23.7	2.4	1.4
Paving	12.6	1.3	12.6	0.9	0.7
Architectural Coating	2.6	18.4	1.9	0.3	0.2
<b>Peak Day (pound/day)</b>	<b>23.1</b>	<b>21.5</b>	<b>25.6</b>	<b>4.1</b>	<b>2.5</b>
<b>SCAQMD Thresholds</b>	<b>550</b>	<b>75</b>	<b>100</b>	<b>150</b>	<b>55</b>
<b>Exceedance</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

#### 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<sub>2.5</sub> and PM<sub>10</sub> emissions from construction operations were calculated using the CalEEMod model and are included in the emissions listed in Table 7. SCAQMD has established Rule 403 for reducing fugitive dust emissions through the use of best available control measures. As identified in Table 7, the proposed project's PM<sub>10</sub>



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. All structures have been removed from the project site, 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 8 show the construction-related emissions of CO, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> compared to the LSTs for the South Coastal L.A. County area at a distance of 25 meters. As required by the SCAQMD's *Localized Significance Threshold Methodology* (2008), only the on-site construction emissions are included in Table 8. As identified, the calculated emissions rates for the proposed on-site construction activities would not exceed the SCAQMD's LSTs.

**Table 8. Summary of On-Site Construction Emissions, Localized Significance**

Project Phase	Emission Rates (pounds/day)			
	CO	NOX	PM <sub>10</sub>	PM <sub>2.5</sub>
Site Preparation	11.9	21.5	1.2	0.8
Grading	10.2	22.7	3.9	2.5
Building Construction	15.3	18.9	1.1	1.0
Paving	11.9	12.6	0.7	0.7
Architectural Coating	1.8	1.8	0.1	0.1
<b>Peak Day (pound/day)</b>	<b>18.9</b>	<b>22.7</b>	<b>3.9</b>	<b>2.5</b>
<b>SCAQMD Thresholds</b>	<b>842</b>	<b>131</b>	<b>7</b>	<b>5</b>
<b>Exceeds Daily SCAQMD Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

### 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 9 identifies the peak daily emissions from operations of the proposed project.

**Table 9. Daily Operational Emissions**

(pounds/day)

Source	CO	NOX	ROG	SOX	PM10	PM2.5
Area	0.05	0.00	2.36	0.00	0.00	0.00
Energy	0.24	0.29	0.03	0.00	0.02	0.02
Mobile	25.90	9.44	1.95	0.09	6.94	1.92
Total	26.19	9.73	4.35	0.09	6.97	1.94
<b>SCAQMD Thresholds</b>	<b>550</b>	<b>55</b>	<b>55</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Daily SCAQMD Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Note: Columns may not add up due to rounding.

## Localized Significance Threshold Analysis

Table 10 identifies the operational emissions of CO, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> compared to the localized significance thresholds (LSTs) for the South Coastal L.A. County area at a distance of 25 m. As required by the SCAQMD's LST Methodology (Final Localized Significance Threshold Methodology, July 2008), only the on-site emissions are included in Table 10. Table 10 includes all of the area source and energy emissions, and five 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 10. Summary of On-Site Operation Emissions, Localized Significance**

Project Phase	Emission Rates (pounds/day)			
	CO	NOX	PM <sub>10</sub>	PM <sub>2.5</sub>
Area	0.05	0.00	0.00	0.0
Energy	0.24	0.29	0.02	0.02
Mobile	1.30	0.47	0.35	0.10
<b>Total (pounds/day)</b>	<b>1.59</b>	<b>0.76</b>	<b>0.37</b>	<b>0.12</b>
<b>SCAQMD Thresholds</b>	<b>842</b>	<b>131</b>	<b>2</b>	<b>1</b>
<b>Exceeds Daily SCAQMD Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

## 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 unhealthful 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 3.7 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). 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 will 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 office facilities.

The most recent version of the CalEEMod model (Version 2016.3.2) was used to calculate the construction emissions. Table 11 quantifies the expected GHG emissions from construction activities. As shown, construction of the proposed project would generate 495 MT of CO<sub>2</sub>e. Amortized over a 30-year period, the approximate life of the project, the yearly contribution to GHG from the construction of the build alternatives with an at-grade concourse would be 16.5 MT of CO<sub>2</sub>e per year.

**Table 11. Construction Greenhouse Gas Emissions**

Year	Pollutant Emissions (Metric Tons/year)			
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
2019	493.0	0.07	0.00	494.8

### 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: CH<sub>4</sub> (the major component of natural gas) and CO<sub>2</sub> 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 CH<sub>4</sub> from the anaerobic decomposition of organic materials. CH<sub>4</sub> is 21 times more potent a GHG than CO<sub>2</sub>. However, landfill CH<sub>4</sub> 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.

**Combined Emissions:** The GHG emission estimates presented in Table 12 show the emissions associated with the level of development at build-out. Appendix A includes the annual CalEEMod calculations for GHG emissions. Table 12 shows that project operations would result in average annual emissions of 2,018 metric tons of CO<sub>2</sub>e per year.

The total annual GHG emissions of 2,018 MT of CO<sub>2</sub>e is less than the county's screening threshold of 3,000 MT of CO<sub>2</sub>e per year. Therefore, the proposed project will have a less than significant individual and cumulative impact for GHG emissions.

**Table 12. Annual Greenhouse Gas Emissions**

Source	Pollutant Emissions (metric tons/year)					
	Bio-CO <sub>2</sub>	NBio-CO <sub>2</sub>	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
Construction Emissions Amortized over 30 Years	0.0	16.4	16.4	0.002	0.00	16.5
<b>Operational Emissions</b>						
Area Sources	0.00	0.01	0.01	0.00	0.00	0.01
Energy Sources	0.00	730.7	730.7	0.03	0.00	733.4
Mobile Sources	0.00	1,078.0	1,078.0	0.06	0.00	1,079.4
Waste Sources	19.4	0.00	19.4	1.15	0.00	48.1
Water Usage	5.8	115.5	121.3	0.60	0.02	140.8
Total Operational Emissions	25.2	1,924.2	1,949.4	1.83	0.02	2,001.7
Total Project Emissions	25.2	1,940.6	1,965.8	1.83	0.02	2,018.2

Note: Columns may not add up due to rounding.

## 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 will not conflict with the 2016 AQMP, and no significant impacts will result.

## 6.4 Cumulative Impact

The proposed project area is currently in nonattainment for O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. As shown in Table 7 and Table 8, 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 9 and Table 10, the proposed project's operational emissions would not exceed the SCAQMD's long-term emission thresholds. In addition, as shown in Table 12, 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 Standard Conditions

The following measures will be implemented during construction activities:

AQ-1 During clearing, grading, earthmoving, or excavation operations, excessive fugitive dust emissions will 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 will be sufficiently watered in sufficient quantities to prevent the generation of visible dust plumes. Watering will 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 will be securely covered to prevent excessive amounts of dust. The area disturbed by clearing, grading, earth moving, or excavation operations will be minimized so as to prevent excessive amounts of dust. These control techniques will be indicated in Project specifications.

In addition, where feasible, the following measures will be implemented to reduce construction 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
- Minimize unnecessary vehicular and machinery activities
- 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
- Ensure that all construction equipment is properly tuned and maintained
- Minimize idling time to 5 minutes, which saves fuel and reduces emissions
- 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
- Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators

## 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 will 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 2,112 metric tons of CO<sub>2</sub>e are less than the SCAQMD's interim threshold of 3,000 MT of CO<sub>2</sub>e per year. Therefore, the proposed project will have a less than significant individual and cumulative impact for GHG emissions.



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## Appendix A. CalEEMod Results

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## Laserfiche Office - South Coast Air Basin, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2019	3-31-2019	0.8445	0.8445
2	4-1-2019	6-30-2019	0.8726	0.8726
3	7-1-2019	9-30-2019	0.8894	0.8894
		Highest	0.8894	0.8894

## 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	0.4306	5.0000e-005	5.7300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0111	0.0111	3.0000e-005	0.0000	0.0118
Energy	5.7700e-003	0.0525	0.0441	3.1000e-004		3.9900e-003	3.9900e-003		3.9900e-003	3.9900e-003	0.0000	730.6833	730.6833	0.0289	6.8000e-003	733.4324
Mobile	0.2556	1.3731	3.4551	0.0117	0.9386	0.0120	0.9505	0.2515	0.0112	0.2627	0.0000	1,077.9790	1,077.9790	0.0554	0.0000	1,079.3630
Waste						0.0000	0.0000		0.0000	0.0000	19.4161	0.0000	19.4161	1.1475	0.0000	48.1025
Water						0.0000	0.0000		0.0000	0.0000	5.7994	115.4994	121.2988	0.6004	0.0151	140.7945
<b>Total</b>	<b>0.6920</b>	<b>1.4256</b>	<b>3.5050</b>	<b>0.0120</b>	<b>0.9386</b>	<b>0.0160</b>	<b>0.9545</b>	<b>0.2515</b>	<b>0.0152</b>	<b>0.2667</b>	<b>25.2155</b>	<b>1,924.1727</b>	<b>1,949.3881</b>	<b>1.8322</b>	<b>0.0219</b>	<b>2,001.7043</b>

## Laserfiche Office - South Coast Air Basin, 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	0.4306	5.0000e-005	5.7300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0111	0.0111	3.0000e-005	0.0000	0.0118
Energy	5.7700e-003	0.0525	0.0441	3.1000e-004		3.9900e-003	3.9900e-003		3.9900e-003	3.9900e-003	0.0000	730.6833	730.6833	0.0289	6.8000e-003	733.4324
Mobile	0.2556	1.3731	3.4551	0.0117	0.9386	0.0120	0.9505	0.2515	0.0112	0.2627	0.0000	1,077.9790	1,077.9790	0.0554	0.0000	1,079.3630
Waste						0.0000	0.0000		0.0000	0.0000	19.4161	0.0000	19.4161	1.1475	0.0000	48.1025
Water						0.0000	0.0000		0.0000	0.0000	5.7994	115.4994	121.2988	0.6004	0.0151	140.7945
<b>Total</b>	<b>0.6920</b>	<b>1.4256</b>	<b>3.5050</b>	<b>0.0120</b>	<b>0.9386</b>	<b>0.0160</b>	<b>0.9545</b>	<b>0.2515</b>	<b>0.0152</b>	<b>0.2667</b>	<b>25.2155</b>	<b>1,924.1727</b>	<b>1,949.3881</b>	<b>1.8322</b>	<b>0.0219</b>	<b>2,001.7043</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**3.0 Construction Detail****Construction Phase**

## Laserfiche Office - South Coast Air Basin, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/28/2019	5	20	
2	Site Preparation	Site Preparation	1/29/2019	1/31/2019	5	3	
3	Grading	Grading	2/1/2019	2/8/2019	5	6	
4	Building Construction	Building Construction	2/9/2019	12/13/2019	5	220	
5	Paving	Paving	12/14/2019	12/27/2019	5	10	
6	Architectural Coating	Architectural Coating	9/30/2019	12/13/2019	5	55	

**Acres of Grading (Site Preparation Phase): 2.1**

**Acres of Grading (Grading Phase): 2.1**

**Acres of Paving: 1.05**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 154,275; Non-Residential Outdoor: 51,425; Striped Parking Area: 8,232 (Architectural Coating – sqft)**

**OffRoad Equipment**

## Laserfiche Office - South Coast Air Basin, Annual

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

Trips and VMT



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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	45.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	91.00	39.00	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	1	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

## 3.1 Mitigation Measures Construction

Water Exposed Area

## 3.2 Demolition - 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					4.9200e-003	0.0000	4.9200e-003	7.5000e-004	0.0000	7.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0230	0.2268	0.1489	2.4000e-004		0.0129	0.0129		0.0120	0.0120	0.0000	21.4161	21.4161	5.4500e-003	0.0000	21.5524
<b>Total</b>	<b>0.0230</b>	<b>0.2268</b>	<b>0.1489</b>	<b>2.4000e-004</b>	<b>4.9200e-003</b>	<b>0.0129</b>	<b>0.0178</b>	<b>7.5000e-004</b>	<b>0.0120</b>	<b>0.0128</b>	<b>0.0000</b>	<b>21.4161</b>	<b>21.4161</b>	<b>5.4500e-003</b>	<b>0.0000</b>	<b>21.5524</b>

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**3.2 Demolition - 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	2.0000e-004	6.9200e-003	1.3800e-003	2.0000e-005	3.9000e-004	3.0000e-005	4.1000e-004	1.1000e-004	2.0000e-005	1.3000e-004	0.0000	1.7246	1.7246	1.3000e-004	0.0000	1.7277
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	6.3000e-004	5.0000e-004	5.4300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.3263	1.3263	4.0000e-005	0.0000	1.3274
<b>Total</b>	<b>8.3000e-004</b>	<b>7.4200e-003</b>	<b>6.8100e-003</b>	<b>3.0000e-005</b>	<b>1.8200e-003</b>	<b>4.0000e-005</b>	<b>1.8500e-003</b>	<b>4.9000e-004</b>	<b>3.0000e-005</b>	<b>5.2000e-004</b>	<b>0.0000</b>	<b>3.0509</b>	<b>3.0509</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>3.0551</b>

**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					2.2100e-003	0.0000	2.2100e-003	3.4000e-004	0.0000	3.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0230	0.2268	0.1489	2.4000e-004		0.0129	0.0129		0.0120	0.0120	0.0000	21.4161	21.4161	5.4500e-003	0.0000	21.5524
<b>Total</b>	<b>0.0230</b>	<b>0.2268</b>	<b>0.1489</b>	<b>2.4000e-004</b>	<b>2.2100e-003</b>	<b>0.0129</b>	<b>0.0151</b>	<b>3.4000e-004</b>	<b>0.0120</b>	<b>0.0124</b>	<b>0.0000</b>	<b>21.4161</b>	<b>21.4161</b>	<b>5.4500e-003</b>	<b>0.0000</b>	<b>21.5524</b>

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**3.2 Demolition - 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	2.0000e-004	6.9200e-003	1.3800e-003	2.0000e-005	3.9000e-004	3.0000e-005	4.1000e-004	1.1000e-004	2.0000e-005	1.3000e-004	0.0000	1.7246	1.7246	1.3000e-004	0.0000	1.7277
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	6.3000e-004	5.0000e-004	5.4300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.3263	1.3263	4.0000e-005	0.0000	1.3274
<b>Total</b>	<b>8.3000e-004</b>	<b>7.4200e-003</b>	<b>6.8100e-003</b>	<b>3.0000e-005</b>	<b>1.8200e-003</b>	<b>4.0000e-005</b>	<b>1.8500e-003</b>	<b>4.9000e-004</b>	<b>3.0000e-005</b>	<b>5.2000e-004</b>	<b>0.0000</b>	<b>3.0509</b>	<b>3.0509</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>3.0551</b>

**3.3 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					1.1100e-003	0.0000	1.1100e-003	1.2000e-004	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6300e-003	0.0323	0.0179	4.0000e-005		1.2800e-003	1.2800e-003		1.1800e-003	1.1800e-003	0.0000	3.3020	3.3020	1.0400e-003	0.0000	3.3281
<b>Total</b>	<b>2.6300e-003</b>	<b>0.0323</b>	<b>0.0179</b>	<b>4.0000e-005</b>	<b>1.1100e-003</b>	<b>1.2800e-003</b>	<b>2.3900e-003</b>	<b>1.2000e-004</b>	<b>1.1800e-003</b>	<b>1.3000e-003</b>	<b>0.0000</b>	<b>3.3020</b>	<b>3.3020</b>	<b>1.0400e-003</b>	<b>0.0000</b>	<b>3.3281</b>

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**3.3 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	6.0000e-005	5.0000e-005	5.0000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1224	0.1224	0.0000	0.0000	0.1225
<b>Total</b>	<b>6.0000e-005</b>	<b>5.0000e-005</b>	<b>5.0000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.1224</b>	<b>0.1224</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.1225</b>

**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					5.0000e-004	0.0000	5.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6300e-003	0.0323	0.0179	4.0000e-005		1.2800e-003	1.2800e-003		1.1800e-003	1.1800e-003	0.0000	3.3020	3.3020	1.0400e-003	0.0000	3.3281
<b>Total</b>	<b>2.6300e-003</b>	<b>0.0323</b>	<b>0.0179</b>	<b>4.0000e-005</b>	<b>5.0000e-004</b>	<b>1.2800e-003</b>	<b>1.7800e-003</b>	<b>5.0000e-005</b>	<b>1.1800e-003</b>	<b>1.2300e-003</b>	<b>0.0000</b>	<b>3.3020</b>	<b>3.3020</b>	<b>1.0400e-003</b>	<b>0.0000</b>	<b>3.3281</b>

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**3.3 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	6.0000e-005	5.0000e-005	5.0000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1224	0.1224	0.0000	0.0000	0.1225
<b>Total</b>	<b>6.0000e-005</b>	<b>5.0000e-005</b>	<b>5.0000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.1224</b>	<b>0.1224</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.1225</b>

**3.4 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					0.0192	0.0000	0.0192	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0900e-003	0.0682	0.0305	6.0000e-005		3.2200e-003	3.2200e-003		2.9600e-003	2.9600e-003	0.0000	5.5554	5.5554	1.7600e-003	0.0000	5.5993
<b>Total</b>	<b>6.0900e-003</b>	<b>0.0682</b>	<b>0.0305</b>	<b>6.0000e-005</b>	<b>0.0192</b>	<b>3.2200e-003</b>	<b>0.0224</b>	<b>0.0101</b>	<b>2.9600e-003</b>	<b>0.0130</b>	<b>0.0000</b>	<b>5.5554</b>	<b>5.5554</b>	<b>1.7600e-003</b>	<b>0.0000</b>	<b>5.5993</b>

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**3.4 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	1.4000e-004	1.2000e-004	1.2500e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3061	0.3061	1.0000e-005	0.0000	0.3063
<b>Total</b>	<b>1.4000e-004</b>	<b>1.2000e-004</b>	<b>1.2500e-003</b>	<b>0.0000</b>	<b>3.3000e-004</b>	<b>0.0000</b>	<b>3.3000e-004</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>0.3061</b>	<b>0.3061</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3063</b>

**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					8.6300e-003	0.0000	8.6300e-003	4.5200e-003	0.0000	4.5200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0900e-003	0.0682	0.0305	6.0000e-005		3.2200e-003	3.2200e-003		2.9600e-003	2.9600e-003	0.0000	5.5554	5.5554	1.7600e-003	0.0000	5.5993
<b>Total</b>	<b>6.0900e-003</b>	<b>0.0682</b>	<b>0.0305</b>	<b>6.0000e-005</b>	<b>8.6300e-003</b>	<b>3.2200e-003</b>	<b>0.0119</b>	<b>4.5200e-003</b>	<b>2.9600e-003</b>	<b>7.4800e-003</b>	<b>0.0000</b>	<b>5.5554</b>	<b>5.5554</b>	<b>1.7600e-003</b>	<b>0.0000</b>	<b>5.5993</b>

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**3.4 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	1.4000e-004	1.2000e-004	1.2500e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3061	0.3061	1.0000e-005	0.0000	0.3063
<b>Total</b>	<b>1.4000e-004</b>	<b>1.2000e-004</b>	<b>1.2500e-003</b>	<b>0.0000</b>	<b>3.3000e-004</b>	<b>0.0000</b>	<b>3.3000e-004</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>0.3061</b>	<b>0.3061</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3063</b>

**3.5 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	0.2814	2.0801	1.6780	2.7500e-003		0.1199	0.1199		0.1149	0.1149	0.0000	230.7297	230.7297	0.0480	0.0000	231.9297
<b>Total</b>	<b>0.2814</b>	<b>2.0801</b>	<b>1.6780</b>	<b>2.7500e-003</b>		<b>0.1199</b>	<b>0.1199</b>		<b>0.1149</b>	<b>0.1149</b>	<b>0.0000</b>	<b>230.7297</b>	<b>230.7297</b>	<b>0.0480</b>	<b>0.0000</b>	<b>231.9297</b>



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**3.5 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	0.0170	0.5023	0.1281	1.0900e-003	0.0270	3.2900e-003	0.0303	7.8000e-003	3.1400e-003	0.0109	0.0000	105.6301	105.6301	7.4100e-003	0.0000	105.8154
Worker	0.0482	0.0384	0.4180	1.1300e-003	0.1098	8.8000e-004	0.1107	0.0292	8.1000e-004	0.0300	0.0000	102.1270	102.1270	3.2000e-003	0.0000	102.2070
<b>Total</b>	<b>0.0652</b>	<b>0.5408</b>	<b>0.5461</b>	<b>2.2200e-003</b>	<b>0.1369</b>	<b>4.1700e-003</b>	<b>0.1410</b>	<b>0.0370</b>	<b>3.9500e-003</b>	<b>0.0409</b>	<b>0.0000</b>	<b>207.7571</b>	<b>207.7571</b>	<b>0.0106</b>	<b>0.0000</b>	<b>208.0224</b>

**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	0.2814	2.0801	1.6780	2.7500e-003		0.1199	0.1199		0.1149	0.1149	0.0000	230.7295	230.7295	0.0480	0.0000	231.9294
<b>Total</b>	<b>0.2814</b>	<b>2.0801</b>	<b>1.6780</b>	<b>2.7500e-003</b>		<b>0.1199</b>	<b>0.1199</b>		<b>0.1149</b>	<b>0.1149</b>	<b>0.0000</b>	<b>230.7295</b>	<b>230.7295</b>	<b>0.0480</b>	<b>0.0000</b>	<b>231.9294</b>

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**3.5 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	0.0170	0.5023	0.1281	1.0900e-003	0.0270	3.2900e-003	0.0303	7.8000e-003	3.1400e-003	0.0109	0.0000	105.6301	105.6301	7.4100e-003	0.0000	105.8154
Worker	0.0482	0.0384	0.4180	1.1300e-003	0.1098	8.8000e-004	0.1107	0.0292	8.1000e-004	0.0300	0.0000	102.1270	102.1270	3.2000e-003	0.0000	102.2070
<b>Total</b>	<b>0.0652</b>	<b>0.5408</b>	<b>0.5461</b>	<b>2.2200e-003</b>	<b>0.1369</b>	<b>4.1700e-003</b>	<b>0.1410</b>	<b>0.0370</b>	<b>3.9500e-003</b>	<b>0.0409</b>	<b>0.0000</b>	<b>207.7571</b>	<b>207.7571</b>	<b>0.0106</b>	<b>0.0000</b>	<b>208.0224</b>

**3.6 Paving - 2019****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.2300e-003	0.0628	0.0593	9.0000e-005		3.6500e-003	3.6500e-003		3.3600e-003	3.3600e-003	0.0000	7.9208	7.9208	2.4600e-003	0.0000	7.9823
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>6.2300e-003</b>	<b>0.0628</b>	<b>0.0593</b>	<b>9.0000e-005</b>		<b>3.6500e-003</b>	<b>3.6500e-003</b>		<b>3.3600e-003</b>	<b>3.3600e-003</b>	<b>0.0000</b>	<b>7.9208</b>	<b>7.9208</b>	<b>2.4600e-003</b>	<b>0.0000</b>	<b>7.9823</b>

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**3.6 Paving - 2019****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.9000e-004	3.1300e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7652	0.7652	2.0000e-005	0.0000	0.7658
<b>Total</b>	<b>3.6000e-004</b>	<b>2.9000e-004</b>	<b>3.1300e-003</b>	<b>1.0000e-005</b>	<b>8.2000e-004</b>	<b>1.0000e-005</b>	<b>8.3000e-004</b>	<b>2.2000e-004</b>	<b>1.0000e-005</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>0.7652</b>	<b>0.7652</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.7658</b>

**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	6.2300e-003	0.0628	0.0593	9.0000e-005		3.6500e-003	3.6500e-003		3.3600e-003	3.3600e-003	0.0000	7.9208	7.9208	2.4600e-003	0.0000	7.9823
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>6.2300e-003</b>	<b>0.0628</b>	<b>0.0593</b>	<b>9.0000e-005</b>		<b>3.6500e-003</b>	<b>3.6500e-003</b>		<b>3.3600e-003</b>	<b>3.3600e-003</b>	<b>0.0000</b>	<b>7.9208</b>	<b>7.9208</b>	<b>2.4600e-003</b>	<b>0.0000</b>	<b>7.9823</b>

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**3.6 Paving - 2019****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.9000e-004	3.1300e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7652	0.7652	2.0000e-005	0.0000	0.7658
<b>Total</b>	<b>3.6000e-004</b>	<b>2.9000e-004</b>	<b>3.1300e-003</b>	<b>1.0000e-005</b>	<b>8.2000e-004</b>	<b>1.0000e-005</b>	<b>8.3000e-004</b>	<b>2.2000e-004</b>	<b>1.0000e-005</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>0.7652</b>	<b>0.7652</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.7658</b>

**3.7 Architectural Coating - 2019****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4958					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.3300e-003	0.0505	0.0506	8.0000e-005		3.5400e-003	3.5400e-003		3.5400e-003	3.5400e-003	0.0000	7.0215	7.0215	5.9000e-004	0.0000	7.0363
<b>Total</b>	<b>0.5031</b>	<b>0.0505</b>	<b>0.0506</b>	<b>8.0000e-005</b>		<b>3.5400e-003</b>	<b>3.5400e-003</b>		<b>3.5400e-003</b>	<b>3.5400e-003</b>	<b>0.0000</b>	<b>7.0215</b>	<b>7.0215</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>7.0363</b>

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**3.7 Architectural Coating - 2019****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3800e-003	1.9000e-003	0.0207	6.0000e-005	5.4300e-003	4.0000e-005	5.4700e-003	1.4400e-003	4.0000e-005	1.4800e-003	0.0000	5.0502	5.0502	1.6000e-004	0.0000	5.0542
<b>Total</b>	<b>2.3800e-003</b>	<b>1.9000e-003</b>	<b>0.0207</b>	<b>6.0000e-005</b>	<b>5.4300e-003</b>	<b>4.0000e-005</b>	<b>5.4700e-003</b>	<b>1.4400e-003</b>	<b>4.0000e-005</b>	<b>1.4800e-003</b>	<b>0.0000</b>	<b>5.0502</b>	<b>5.0502</b>	<b>1.6000e-004</b>	<b>0.0000</b>	<b>5.0542</b>

**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	0.4958					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.3300e-003	0.0505	0.0506	8.0000e-005		3.5400e-003	3.5400e-003		3.5400e-003	3.5400e-003	0.0000	7.0214	7.0214	5.9000e-004	0.0000	7.0363
<b>Total</b>	<b>0.5031</b>	<b>0.0505</b>	<b>0.0506</b>	<b>8.0000e-005</b>		<b>3.5400e-003</b>	<b>3.5400e-003</b>		<b>3.5400e-003</b>	<b>3.5400e-003</b>	<b>0.0000</b>	<b>7.0214</b>	<b>7.0214</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>7.0363</b>

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**3.7 Architectural Coating - 2019****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3800e-003	1.9000e-003	0.0207	6.0000e-005	5.4300e-003	4.0000e-005	5.4700e-003	1.4400e-003	4.0000e-005	1.4800e-003	0.0000	5.0502	5.0502	1.6000e-004	0.0000	5.0542
<b>Total</b>	<b>2.3800e-003</b>	<b>1.9000e-003</b>	<b>0.0207</b>	<b>6.0000e-005</b>	<b>5.4300e-003</b>	<b>4.0000e-005</b>	<b>5.4700e-003</b>	<b>1.4400e-003</b>	<b>4.0000e-005</b>	<b>1.4800e-003</b>	<b>0.0000</b>	<b>5.0502</b>	<b>5.0502</b>	<b>1.6000e-004</b>	<b>0.0000</b>	<b>5.0542</b>

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

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2556	1.3731	3.4551	0.0117	0.9386	0.0120	0.9505	0.2515	0.0112	0.2627	0.0000	1,077.9790	1,077.9790	0.0554	0.0000	1,079.3630
Unmitigated	0.2556	1.3731	3.4551	0.0117	0.9386	0.0120	0.9505	0.2515	0.0112	0.2627	0.0000	1,077.9790	1,077.9790	0.0554	0.0000	1,079.3630

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	1,001.76	253.01	107.99	2,471,228	2,471,228
Enclosed Parking Structure	0.00	0.00	0.00		
Total	1,001.76	253.01	107.99	2,471,228	2,471,228

## 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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Enclosed Parking Structure	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
General Office Building	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Enclosed Parking Structure	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955



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**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	673.5483	673.5483	0.0278	5.7500e-003	675.9580
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	673.5483	673.5483	0.0278	5.7500e-003	675.9580
NaturalGas Mitigated	5.7700e-003	0.0525	0.0441	3.1000e-004		3.9900e-003	3.9900e-003		3.9900e-003	3.9900e-003	0.0000	57.1350	57.1350	1.1000e-003	1.0500e-003	57.4745
NaturalGas Unmitigated	5.7700e-003	0.0525	0.0441	3.1000e-004		3.9900e-003	3.9900e-003		3.9900e-003	3.9900e-003	0.0000	57.1350	57.1350	1.1000e-003	1.0500e-003	57.4745

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking Structure	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
General Office Building	1.07067e+006	5.7700e-003	0.0525	0.0441	3.1000e-004		3.9900e-003	3.9900e-003		3.9900e-003	3.9900e-003	0.0000	57.1350	57.1350	1.1000e-003	1.0500e-003	57.4745
<b>Total</b>		<b>5.7700e-003</b>	<b>0.0525</b>	<b>0.0441</b>	<b>3.1000e-004</b>		<b>3.9900e-003</b>	<b>3.9900e-003</b>		<b>3.9900e-003</b>	<b>3.9900e-003</b>	<b>0.0000</b>	<b>57.1350</b>	<b>57.1350</b>	<b>1.1000e-003</b>	<b>1.0500e-003</b>	<b>57.4745</b>

**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					
Enclosed Parking Structure	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
General Office Building	1.07067e+006	5.7700e-003	0.0525	0.0441	3.1000e-004		3.9900e-003	3.9900e-003		3.9900e-003	3.9900e-003	0.0000	57.1350	57.1350	1.1000e-003	1.0500e-003	57.4745
<b>Total</b>		<b>5.7700e-003</b>	<b>0.0525</b>	<b>0.0441</b>	<b>3.1000e-004</b>		<b>3.9900e-003</b>	<b>3.9900e-003</b>		<b>3.9900e-003</b>	<b>3.9900e-003</b>	<b>0.0000</b>	<b>57.1350</b>	<b>57.1350</b>	<b>1.1000e-003</b>	<b>1.0500e-003</b>	<b>57.4745</b>

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking Structure	777924	247.8633	0.0102	2.1200e-003	248.7500
General Office Building	1.33602e+006	425.6851	0.0176	3.6400e-003	427.2080
<b>Total</b>		<b>673.5483</b>	<b>0.0278</b>	<b>5.7600e-003</b>	<b>675.9580</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking Structure	777924	247.8633	0.0102	2.1200e-003	248.7500
General Office Building	1.33602e+006	425.6851	0.0176	3.6400e-003	427.2080
<b>Total</b>		<b>673.5483</b>	<b>0.0278</b>	<b>5.7600e-003</b>	<b>675.9580</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4306	5.0000e-005	5.7300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0111	0.0111	3.0000e-005	0.0000	0.0118
Unmitigated	0.4306	5.0000e-005	5.7300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0111	0.0111	3.0000e-005	0.0000	0.0118

## 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	0.0496					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3805					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.4000e-004	5.0000e-005	5.7300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0111	0.0111	3.0000e-005	0.0000	0.0118
<b>Total</b>	<b>0.4306</b>	<b>5.0000e-005</b>	<b>5.7300e-003</b>	<b>0.0000</b>		<b>2.0000e-005</b>	<b>2.0000e-005</b>		<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0111</b>	<b>0.0111</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.0118</b>

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**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0496					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3805					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.4000e-004	5.0000e-005	5.7300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0111	0.0111	3.0000e-005	0.0000	0.0118
<b>Total</b>	<b>0.4306</b>	<b>5.0000e-005</b>	<b>5.7300e-003</b>	<b>0.0000</b>		<b>2.0000e-005</b>	<b>2.0000e-005</b>		<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0111</b>	<b>0.0111</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.0118</b>

**7.0 Water Detail****7.1 Mitigation Measures Water**

## Laserfiche Office - South Coast Air Basin, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	121.2988	0.6004	0.0151	140.7945
Unmitigated	121.2988	0.6004	0.0151	140.7945

## 7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	18.2799 / 11.2038	121.2988	0.6004	0.0151	140.7945
<b>Total</b>		<b>121.2988</b>	<b>0.6004</b>	<b>0.0151</b>	<b>140.7945</b>

## Laserfiche Office - South Coast Air Basin, Annual

**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	18.2799 / 11.2038	121.2988	0.6004	0.0151	140.7945
<b>Total</b>		<b>121.2988</b>	<b>0.6004</b>	<b>0.0151</b>	<b>140.7945</b>

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

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	19.4161	1.1475	0.0000	48.1025
Unmitigated	19.4161	1.1475	0.0000	48.1025

## Laserfiche Office - South Coast Air Basin, Annual

**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
General Office Building	95.65	19.4161	1.1475	0.0000	48.1025
<b>Total</b>		<b>19.4161</b>	<b>1.1475</b>	<b>0.0000</b>	<b>48.1025</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
General Office Building	95.65	19.4161	1.1475	0.0000	48.1025
<b>Total</b>		<b>19.4161</b>	<b>1.1475</b>	<b>0.0000</b>	<b>48.1025</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## Laserfiche Office - South Coast Air Basin, Annual

## 10.0 Stationary Equipment

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### Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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## 11.0 Vegetation

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## Laserfiche Office - South Coast Air Basin, Summer

**Laserfiche Office**  
**South Coast Air Basin, Summer**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	102.85	1000sqft	1.05	102,850.00	0
Enclosed Parking Structure	343.00	Space	1.05	137,200.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	9			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total site area = 2.1 acres

Construction Phase - Architectural Coating will overlap with Building Construction

Demolition -

Grading - Project site is 2.1 Acres

Vehicle Trips - Trip rate from traffic analysis

Construction Off-road Equipment Mitigation -

## Laserfiche Office - South Coast Air Basin, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	55.00
tblConstructionPhase	PhaseEndDate	1/10/2020	12/13/2019
tblConstructionPhase	PhaseStartDate	12/28/2019	9/30/2019
tblGrading	AcresOfGrading	3.00	2.10
tblGrading	AcresOfGrading	4.50	2.10
tblLandUse	LotAcreage	2.36	1.05
tblLandUse	LotAcreage	3.09	1.05
tblVehicleTrips	WD_TR	11.03	9.74

## 2.0 Emissions Summary

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## Laserfiche Office - South Coast Air Basin, 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	21.5343	25.5929	23.0822	0.0509	6.5050	1.2899	7.5789	3.3800	1.2109	4.3679	0.0000	4,950.785 0	4,950.785 0	0.7707	0.0000	4,966.213 2
Maximum	21.5343	25.5929	23.0822	0.0509	6.5050	1.2899	7.5789	3.3800	1.2109	4.3679	0.0000	4,950.785 0	4,950.785 0	0.7707	0.0000	4,966.213 2

**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	21.5343	25.5929	23.0822	0.0509	2.9888	1.2899	4.0626	1.5373	1.2109	2.5252	0.0000	4,950.785 0	4,950.785 0	0.7707	0.0000	4,966.213 2
Maximum	21.5343	25.5929	23.0822	0.0509	2.9888	1.2899	4.0626	1.5373	1.2109	2.5252	0.0000	4,950.785 0	4,950.785 0	0.7707	0.0000	4,966.213 2

	ROG	NOx	CO	SO2	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	54.05	0.00	46.40	54.52	0.00	42.19	0.00	0.00	0.00	0.00	0.00	0.00

## Laserfiche Office - South Coast Air Basin, 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	2.3610	4.2000e-004	0.0458	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0976	0.0976	2.6000e-004		0.1041
Energy	0.0316	0.2876	0.2416	1.7300e-003		0.0219	0.0219		0.0219	0.0219		345.0986	345.0986	6.6100e-003	6.3300e-003	347.1494
Mobile	1.9547	9.4384	25.9003	0.0873	6.8588	0.0858	6.9446	1.8351	0.0805	1.9156		8,868.773 2	8,868.773 2	0.4415		8,879.810 3
<b>Total</b>	<b>4.3473</b>	<b>9.7264</b>	<b>26.1876</b>	<b>0.0890</b>	<b>6.8588</b>	<b>0.1078</b>	<b>6.9666</b>	<b>1.8351</b>	<b>0.1025</b>	<b>1.9376</b>		<b>9,213.969 4</b>	<b>9,213.969 4</b>	<b>0.4484</b>	<b>6.3300e-003</b>	<b>9,227.063 8</b>

**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	2.3610	4.2000e-004	0.0458	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0976	0.0976	2.6000e-004		0.1041
Energy	0.0316	0.2876	0.2416	1.7300e-003		0.0219	0.0219		0.0219	0.0219		345.0986	345.0986	6.6100e-003	6.3300e-003	347.1494
Mobile	1.9547	9.4384	25.9003	0.0873	6.8588	0.0858	6.9446	1.8351	0.0805	1.9156		8,868.773 2	8,868.773 2	0.4415		8,879.810 3
<b>Total</b>	<b>4.3473</b>	<b>9.7264</b>	<b>26.1876</b>	<b>0.0890</b>	<b>6.8588</b>	<b>0.1078</b>	<b>6.9666</b>	<b>1.8351</b>	<b>0.1025</b>	<b>1.9376</b>		<b>9,213.969 4</b>	<b>9,213.969 4</b>	<b>0.4484</b>	<b>6.3300e-003</b>	<b>9,227.063 8</b>

## Laserfiche Office - South Coast Air Basin, 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

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#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/28/2019	5	20	
2	Site Preparation	Site Preparation	1/29/2019	1/31/2019	5	3	
3	Grading	Grading	2/1/2019	2/8/2019	5	6	
4	Building Construction	Building Construction	2/9/2019	12/13/2019	5	220	
5	Paving	Paving	12/14/2019	12/27/2019	5	10	
6	Architectural Coating	Architectural Coating	9/30/2019	12/13/2019	5	55	

**Acres of Grading (Site Preparation Phase): 2.1**

**Acres of Grading (Grading Phase): 2.1**

**Acres of Paving: 1.05**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 154,275; Non-Residential Outdoor: 51,425; Striped Parking Area: 8,232 (Architectural Coating – sqft)**

#### OffRoad Equipment

## Laserfiche Office - South Coast Air Basin, Summer

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

Trips and VMT

## Laserfiche Office - South Coast Air Basin, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	45.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	91.00	39.00	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	1	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

## 3.1 Mitigation Measures Construction

Water Exposed Area

## 3.2 Demolition - 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					0.4922	0.0000	0.4922	0.0745	0.0000	0.0745			0.0000			0.0000
Off-Road	2.2950	22.6751	14.8943	0.0241		1.2863	1.2863		1.2017	1.2017		2,360.7198	2,360.7198	0.6011		2,375.7475
<b>Total</b>	<b>2.2950</b>	<b>22.6751</b>	<b>14.8943</b>	<b>0.0241</b>	<b>0.4922</b>	<b>1.2863</b>	<b>1.7785</b>	<b>0.0745</b>	<b>1.2017</b>	<b>1.2763</b>		<b>2,360.7198</b>	<b>2,360.7198</b>	<b>0.6011</b>		<b>2,375.7475</b>



## Laserfiche Office - South Coast Air Basin, Summer

**3.2 Demolition - 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	0.0194	0.6699	0.1340	1.7700e-003	0.0393	2.5000e-003	0.0418	0.0108	2.4000e-003	0.0132		191.4524	191.4524	0.0137		191.7957
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	0.0631	0.0442	0.5823	1.5400e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		153.4470	153.4470	4.8100e-003		153.5672
<b>Total</b>	<b>0.0825</b>	<b>0.7141</b>	<b>0.7163</b>	<b>3.3100e-003</b>	<b>0.1846</b>	<b>3.6400e-003</b>	<b>0.1883</b>	<b>0.0493</b>	<b>3.4500e-003</b>	<b>0.0527</b>		<b>344.8994</b>	<b>344.8994</b>	<b>0.0185</b>		<b>345.3629</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2215	0.0000	0.2215	0.0335	0.0000	0.0335			0.0000			0.0000
Off-Road	2.2950	22.6751	14.8943	0.0241		1.2863	1.2863		1.2017	1.2017	0.0000	2,360.7197	2,360.7197	0.6011		2,375.7475
<b>Total</b>	<b>2.2950</b>	<b>22.6751</b>	<b>14.8943</b>	<b>0.0241</b>	<b>0.2215</b>	<b>1.2863</b>	<b>1.5078</b>	<b>0.0335</b>	<b>1.2017</b>	<b>1.2353</b>	<b>0.0000</b>	<b>2,360.7197</b>	<b>2,360.7197</b>	<b>0.6011</b>		<b>2,375.7475</b>

## Laserfiche Office - South Coast Air Basin, Summer

**3.2 Demolition - 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	0.0194	0.6699	0.1340	1.7700e-003	0.0393	2.5000e-003	0.0418	0.0108	2.4000e-003	0.0132		191.4524	191.4524	0.0137		191.7957
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	0.0631	0.0442	0.5823	1.5400e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		153.4470	153.4470	4.8100e-003		153.5672
<b>Total</b>	<b>0.0825</b>	<b>0.7141</b>	<b>0.7163</b>	<b>3.3100e-003</b>	<b>0.1846</b>	<b>3.6400e-003</b>	<b>0.1883</b>	<b>0.0493</b>	<b>3.4500e-003</b>	<b>0.0527</b>		<b>344.8994</b>	<b>344.8994</b>	<b>0.0185</b>		<b>345.3629</b>

**3.3 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					0.7424	0.0000	0.7424	0.0802	0.0000	0.0802			0.0000			0.0000
Off-Road	1.7557	21.5386	11.9143	0.0245		0.8537	0.8537		0.7854	0.7854		2,426.5408	2,426.5408	0.7677		2,445.7341
<b>Total</b>	<b>1.7557</b>	<b>21.5386</b>	<b>11.9143</b>	<b>0.0245</b>	<b>0.7424</b>	<b>0.8537</b>	<b>1.5961</b>	<b>0.0802</b>	<b>0.7854</b>	<b>0.8656</b>		<b>2,426.5408</b>	<b>2,426.5408</b>	<b>0.7677</b>		<b>2,445.7341</b>

## Laserfiche Office - South Coast Air Basin, Summer

**3.3 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	0.0388	0.0272	0.3584	9.5000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		94.4289	94.4289	2.9600e-003		94.5029
<b>Total</b>	<b>0.0388</b>	<b>0.0272</b>	<b>0.3584</b>	<b>9.5000e-004</b>	<b>0.0894</b>	<b>7.0000e-004</b>	<b>0.0901</b>	<b>0.0237</b>	<b>6.4000e-004</b>	<b>0.0244</b>		<b>94.4289</b>	<b>94.4289</b>	<b>2.9600e-003</b>		<b>94.5029</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3341	0.0000	0.3341	0.0361	0.0000	0.0361			0.0000			0.0000
Off-Road	1.7557	21.5386	11.9143	0.0245		0.8537	0.8537		0.7854	0.7854	0.0000	2,426.5408	2,426.5408	0.7677		2,445.7341
<b>Total</b>	<b>1.7557</b>	<b>21.5386</b>	<b>11.9143</b>	<b>0.0245</b>	<b>0.3341</b>	<b>0.8537</b>	<b>1.1878</b>	<b>0.0361</b>	<b>0.7854</b>	<b>0.8215</b>	<b>0.0000</b>	<b>2,426.5408</b>	<b>2,426.5408</b>	<b>0.7677</b>		<b>2,445.7341</b>

## Laserfiche Office - South Coast Air Basin, Summer

**3.3 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	0.0388	0.0272	0.3584	9.5000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		94.4289	94.4289	2.9600e-003		94.5029
<b>Total</b>	<b>0.0388</b>	<b>0.0272</b>	<b>0.3584</b>	<b>9.5000e-004</b>	<b>0.0894</b>	<b>7.0000e-004</b>	<b>0.0901</b>	<b>0.0237</b>	<b>6.4000e-004</b>	<b>0.0244</b>		<b>94.4289</b>	<b>94.4289</b>	<b>2.9600e-003</b>		<b>94.5029</b>

**3.4 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					6.3933	0.0000	6.3933	3.3503	0.0000	3.3503			0.0000			0.0000
Off-Road	2.0287	22.7444	10.1518	0.0206		1.0730	1.0730		0.9871	0.9871		2,041.2539	2,041.2539	0.6458		2,057.3997
<b>Total</b>	<b>2.0287</b>	<b>22.7444</b>	<b>10.1518</b>	<b>0.0206</b>	<b>6.3933</b>	<b>1.0730</b>	<b>7.4662</b>	<b>3.3503</b>	<b>0.9871</b>	<b>4.3374</b>		<b>2,041.2539</b>	<b>2,041.2539</b>	<b>0.6458</b>		<b>2,057.3997</b>

## Laserfiche Office - South Coast Air Basin, Summer

**3.4 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	0.0486	0.0340	0.4479	1.1900e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		118.0362	118.0362	3.7000e-003		118.1286
<b>Total</b>	<b>0.0486</b>	<b>0.0340</b>	<b>0.4479</b>	<b>1.1900e-003</b>	<b>0.1118</b>	<b>8.7000e-004</b>	<b>0.1127</b>	<b>0.0296</b>	<b>8.1000e-004</b>	<b>0.0305</b>		<b>118.0362</b>	<b>118.0362</b>	<b>3.7000e-003</b>		<b>118.1286</b>

**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					2.8770	0.0000	2.8770	1.5076	0.0000	1.5076			0.0000			0.0000
Off-Road	2.0287	22.7444	10.1518	0.0206		1.0730	1.0730		0.9871	0.9871	0.0000	2,041.253 9	2,041.253 9	0.6458		2,057.399 7
<b>Total</b>	<b>2.0287</b>	<b>22.7444</b>	<b>10.1518</b>	<b>0.0206</b>	<b>2.8770</b>	<b>1.0730</b>	<b>3.9499</b>	<b>1.5076</b>	<b>0.9871</b>	<b>2.4948</b>	<b>0.0000</b>	<b>2,041.253 9</b>	<b>2,041.253 9</b>	<b>0.6458</b>		<b>2,057.399 7</b>

## Laserfiche Office - South Coast Air Basin, Summer

**3.4 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	0.0486	0.0340	0.4479	1.1900e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		118.0362	118.0362	3.7000e-003		118.1286
<b>Total</b>	<b>0.0486</b>	<b>0.0340</b>	<b>0.4479</b>	<b>1.1900e-003</b>	<b>0.1118</b>	<b>8.7000e-004</b>	<b>0.1127</b>	<b>0.0296</b>	<b>8.1000e-004</b>	<b>0.0305</b>		<b>118.0362</b>	<b>118.0362</b>	<b>3.7000e-003</b>		<b>118.1286</b>

**3.5 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	2.5581	18.9103	15.2545	0.0250		1.0901	1.0901		1.0449	1.0449		2,312.1454	2,312.1454	0.4810		2,324.1705
<b>Total</b>	<b>2.5581</b>	<b>18.9103</b>	<b>15.2545</b>	<b>0.0250</b>		<b>1.0901</b>	<b>1.0901</b>		<b>1.0449</b>	<b>1.0449</b>		<b>2,312.1454</b>	<b>2,312.1454</b>	<b>0.4810</b>		<b>2,324.1705</b>

## Laserfiche Office - South Coast Air Basin, Summer

**3.5 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	0.1520	4.4769	1.1040	0.0100	0.2496	0.0297	0.2792	0.0718	0.0284	0.1002		1,070.597 5	1,070.597 5	0.0720		1,072.398 3
Worker	0.4418	0.3092	4.0762	0.0108	1.0172	7.9600e-003	1.0251	0.2698	7.3400e-003	0.2771		1,074.128 9	1,074.128 9	0.0337		1,074.970 6
<b>Total</b>	<b>0.5938</b>	<b>4.7861</b>	<b>5.1801</b>	<b>0.0208</b>	<b>1.2667</b>	<b>0.0376</b>	<b>1.3044</b>	<b>0.3416</b>	<b>0.0357</b>	<b>0.3773</b>		<b>2,144.726 4</b>	<b>2,144.726 4</b>	<b>0.1057</b>		<b>2,147.368 9</b>

**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	2.5581	18.9103	15.2545	0.0250		1.0901	1.0901		1.0449	1.0449	0.0000	2,312.145 4	2,312.145 4	0.4810		2,324.170 5
<b>Total</b>	<b>2.5581</b>	<b>18.9103</b>	<b>15.2545</b>	<b>0.0250</b>		<b>1.0901</b>	<b>1.0901</b>		<b>1.0449</b>	<b>1.0449</b>	<b>0.0000</b>	<b>2,312.145 4</b>	<b>2,312.145 4</b>	<b>0.4810</b>		<b>2,324.170 5</b>

## Laserfiche Office - South Coast Air Basin, Summer

**3.5 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	0.1520	4.4769	1.1040	0.0100	0.2496	0.0297	0.2792	0.0718	0.0284	0.1002		1,070.597 5	1,070.597 5	0.0720		1,072.398 3
Worker	0.4418	0.3092	4.0762	0.0108	1.0172	7.9600e-003	1.0251	0.2698	7.3400e-003	0.2771		1,074.128 9	1,074.128 9	0.0337		1,074.970 6
<b>Total</b>	<b>0.5938</b>	<b>4.7861</b>	<b>5.1801</b>	<b>0.0208</b>	<b>1.2667</b>	<b>0.0376</b>	<b>1.3044</b>	<b>0.3416</b>	<b>0.0357</b>	<b>0.3773</b>		<b>2,144.726 4</b>	<b>2,144.726 4</b>	<b>0.1057</b>		<b>2,147.368 9</b>

**3.6 Paving - 2019****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2453	12.5685	11.8507	0.0178		0.7301	0.7301		0.6728	0.6728		1,746.243 2	1,746.243 2	0.5418		1,759.787 0
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.2453</b>	<b>12.5685</b>	<b>11.8507</b>	<b>0.0178</b>		<b>0.7301</b>	<b>0.7301</b>		<b>0.6728</b>	<b>0.6728</b>		<b>1,746.243 2</b>	<b>1,746.243 2</b>	<b>0.5418</b>		<b>1,759.787 0</b>



## Laserfiche Office - South Coast Air Basin, Summer

**3.6 Paving - 2019****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0728	0.0510	0.6719	1.7800e-003	0.1677	1.3100e-003	0.1690	0.0445	1.2100e-003	0.0457		177.0542	177.0542	5.5500e-003		177.1930
<b>Total</b>	<b>0.0728</b>	<b>0.0510</b>	<b>0.6719</b>	<b>1.7800e-003</b>	<b>0.1677</b>	<b>1.3100e-003</b>	<b>0.1690</b>	<b>0.0445</b>	<b>1.2100e-003</b>	<b>0.0457</b>		<b>177.0542</b>	<b>177.0542</b>	<b>5.5500e-003</b>		<b>177.1930</b>

**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	1.2453	12.5685	11.8507	0.0178		0.7301	0.7301		0.6728	0.6728	0.0000	1,746.2432	1,746.2432	0.5418		1,759.7870
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.2453</b>	<b>12.5685</b>	<b>11.8507</b>	<b>0.0178</b>		<b>0.7301</b>	<b>0.7301</b>		<b>0.6728</b>	<b>0.6728</b>	<b>0.0000</b>	<b>1,746.2432</b>	<b>1,746.2432</b>	<b>0.5418</b>		<b>1,759.7870</b>

## Laserfiche Office - South Coast Air Basin, Summer

**3.6 Paving - 2019****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0728	0.0510	0.6719	1.7800e-003	0.1677	1.3100e-003	0.1690	0.0445	1.2100e-003	0.0457		177.0542	177.0542	5.5500e-003		177.1930
<b>Total</b>	<b>0.0728</b>	<b>0.0510</b>	<b>0.6719</b>	<b>1.7800e-003</b>	<b>0.1677</b>	<b>1.3100e-003</b>	<b>0.1690</b>	<b>0.0445</b>	<b>1.2100e-003</b>	<b>0.0457</b>		<b>177.0542</b>	<b>177.0542</b>	<b>5.5500e-003</b>		<b>177.1930</b>

**3.7 Architectural Coating - 2019****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	18.0286					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
<b>Total</b>	<b>18.2951</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>

## Laserfiche Office - South Coast Air Basin, Summer

**3.7 Architectural Coating - 2019****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0874	0.0612	0.8063	2.1300e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4500e-003	0.0548		212.4651	212.4651	6.6600e-003		212.6315
<b>Total</b>	<b>0.0874</b>	<b>0.0612</b>	<b>0.8063</b>	<b>2.1300e-003</b>	<b>0.2012</b>	<b>1.5700e-003</b>	<b>0.2028</b>	<b>0.0534</b>	<b>1.4500e-003</b>	<b>0.0548</b>		<b>212.4651</b>	<b>212.4651</b>	<b>6.6600e-003</b>		<b>212.6315</b>

**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	18.0286					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
<b>Total</b>	<b>18.2951</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>

## Laserfiche Office - South Coast Air Basin, Summer

**3.7 Architectural Coating - 2019****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0874	0.0612	0.8063	2.1300e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4500e-003	0.0548		212.4651	212.4651	6.6600e-003		212.6315
<b>Total</b>	<b>0.0874</b>	<b>0.0612</b>	<b>0.8063</b>	<b>2.1300e-003</b>	<b>0.2012</b>	<b>1.5700e-003</b>	<b>0.2028</b>	<b>0.0534</b>	<b>1.4500e-003</b>	<b>0.0548</b>		<b>212.4651</b>	<b>212.4651</b>	<b>6.6600e-003</b>		<b>212.6315</b>

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

## Laserfiche Office - South Coast Air Basin, 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	1.9547	9.4384	25.9003	0.0873	6.8588	0.0858	6.9446	1.8351	0.0805	1.9156		8,868.773 2	8,868.773 2	0.4415		8,879.810 3
Unmitigated	1.9547	9.4384	25.9003	0.0873	6.8588	0.0858	6.9446	1.8351	0.0805	1.9156		8,868.773 2	8,868.773 2	0.4415		8,879.810 3

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	1,001.76	253.01	107.99	2,471,228	2,471,228
Enclosed Parking Structure	0.00	0.00	0.00		
Total	1,001.76	253.01	107.99	2,471,228	2,471,228

## 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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Enclosed Parking Structure	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
General Office Building	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Enclosed Parking Structure	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955

## Laserfiche Office - South Coast Air Basin, 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	0.0316	0.2876	0.2416	1.7300e-003		0.0219	0.0219		0.0219	0.0219		345.0986	345.0986	6.6100e-003	6.3300e-003	347.1494
NaturalGas Unmitigated	0.0316	0.2876	0.2416	1.7300e-003		0.0219	0.0219		0.0219	0.0219		345.0986	345.0986	6.6100e-003	6.3300e-003	347.1494

## Laserfiche Office - South Coast Air Basin, 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					
Enclosed Parking Structure	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
General Office Building	2933.34	0.0316	0.2876	0.2416	1.7300e-003		0.0219	0.0219		0.0219	0.0219		345.0986	345.0986	6.6100e-003	6.3300e-003	347.1494
<b>Total</b>		<b>0.0316</b>	<b>0.2876</b>	<b>0.2416</b>	<b>1.7300e-003</b>		<b>0.0219</b>	<b>0.0219</b>		<b>0.0219</b>	<b>0.0219</b>		<b>345.0986</b>	<b>345.0986</b>	<b>6.6100e-003</b>	<b>6.3300e-003</b>	<b>347.1494</b>

**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					
Enclosed Parking Structure	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
General Office Building	2.93334	0.0316	0.2876	0.2416	1.7300e-003		0.0219	0.0219		0.0219	0.0219		345.0986	345.0986	6.6100e-003	6.3300e-003	347.1494
<b>Total</b>		<b>0.0316</b>	<b>0.2876</b>	<b>0.2416</b>	<b>1.7300e-003</b>		<b>0.0219</b>	<b>0.0219</b>		<b>0.0219</b>	<b>0.0219</b>		<b>345.0986</b>	<b>345.0986</b>	<b>6.6100e-003</b>	<b>6.3300e-003</b>	<b>347.1494</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## Laserfiche Office - South Coast Air Basin, 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	2.3610	4.2000e-004	0.0458	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0976	0.0976	2.6000e-004		0.1041
Unmitigated	2.3610	4.2000e-004	0.0458	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0976	0.0976	2.6000e-004		0.1041

## 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	0.2717					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.3100e-003	4.2000e-004	0.0458	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0976	0.0976	2.6000e-004		0.1041
<b>Total</b>	<b>2.3610</b>	<b>4.2000e-004</b>	<b>0.0458</b>	<b>0.0000</b>		<b>1.6000e-004</b>	<b>1.6000e-004</b>		<b>1.6000e-004</b>	<b>1.6000e-004</b>		<b>0.0976</b>	<b>0.0976</b>	<b>2.6000e-004</b>		<b>0.1041</b>



## Laserfiche Office - South Coast Air Basin, 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	0.2717					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.3100e-003	4.2000e-004	0.0458	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0976	0.0976	2.6000e-004		0.1041
<b>Total</b>	<b>2.3610</b>	<b>4.2000e-004</b>	<b>0.0458</b>	<b>0.0000</b>		<b>1.6000e-004</b>	<b>1.6000e-004</b>		<b>1.6000e-004</b>	<b>1.6000e-004</b>		<b>0.0976</b>	<b>0.0976</b>	<b>2.6000e-004</b>		<b>0.1041</b>

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

## Laserfiche Office - South Coast Air Basin, Summer

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

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

Equipment Type	Number
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**11.0 Vegetation**

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Laserfiche Office - South Coast Air Basin, Winter

**Laserfiche Office**  
**South Coast Air Basin, Winter**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	102.85	1000sqft	1.05	102,850.00	0
Enclosed Parking Structure	343.00	Space	1.05	137,200.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	9			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total site area = 2.1 acres

Construction Phase - Architectural Coating will overlap with Building Construction

Demolition -

Grading - Project site is 2.1 Acres

Vehicle Trips - Trip rate from traffic analysis

Construction Off-road Equipment Mitigation -

## Laserfiche Office - South Coast Air Basin, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	55.00
tblConstructionPhase	PhaseEndDate	1/10/2020	12/13/2019
tblConstructionPhase	PhaseStartDate	12/28/2019	9/30/2019
tblGrading	AcresOfGrading	3.00	2.10
tblGrading	AcresOfGrading	4.50	2.10
tblLandUse	LotAcreage	2.36	1.05
tblLandUse	LotAcreage	3.09	1.05
tblVehicleTrips	WD_TR	11.03	9.74

## 2.0 Emissions Summary

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## Laserfiche Office - South Coast Air Basin, 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	21.5929	25.6350	22.7544	0.0499	6.5050	1.2900	7.5789	3.3800	1.2113	4.3679	0.0000	4,842.247 7	4,842.247 7	0.7705	0.0000	4,857.739 0
Maximum	21.5929	25.6350	22.7544	0.0499	6.5050	1.2900	7.5789	3.3800	1.2113	4.3679	0.0000	4,842.247 7	4,842.247 7	0.7705	0.0000	4,857.739 0

**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	21.5929	25.6350	22.7544	0.0499	2.9888	1.2900	4.0626	1.5373	1.2113	2.5252	0.0000	4,842.247 7	4,842.247 7	0.7705	0.0000	4,857.739 0
Maximum	21.5929	25.6350	22.7544	0.0499	2.9888	1.2900	4.0626	1.5373	1.2113	2.5252	0.0000	4,842.247 7	4,842.247 7	0.7705	0.0000	4,857.739 0

	ROG	NOx	CO	SO2	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	54.05	0.00	46.40	54.52	0.00	42.19	0.00	0.00	0.00	0.00	0.00	0.00

## Laserfiche Office - South Coast Air Basin, 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	2.3610	4.2000e-004	0.0458	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0976	0.0976	2.6000e-004		0.1041
Energy	0.0316	0.2876	0.2416	1.7300e-003		0.0219	0.0219		0.0219	0.0219		345.0986	345.0986	6.6100e-003	6.3300e-003	347.1494
Mobile	1.8815	9.6693	24.4403	0.0828	6.8588	0.0862	6.9450	1.8351	0.0809	1.9160		8,412.9183	8,412.9183	0.4400		8,423.9194
<b>Total</b>	<b>4.2742</b>	<b>9.9573</b>	<b>24.7276</b>	<b>0.0845</b>	<b>6.8588</b>	<b>0.1082</b>	<b>6.9670</b>	<b>1.8351</b>	<b>0.1029</b>	<b>1.9380</b>		<b>8,758.1146</b>	<b>8,758.1146</b>	<b>0.4469</b>	<b>6.3300e-003</b>	<b>8,771.1729</b>

**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	2.3610	4.2000e-004	0.0458	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0976	0.0976	2.6000e-004		0.1041
Energy	0.0316	0.2876	0.2416	1.7300e-003		0.0219	0.0219		0.0219	0.0219		345.0986	345.0986	6.6100e-003	6.3300e-003	347.1494
Mobile	1.8815	9.6693	24.4403	0.0828	6.8588	0.0862	6.9450	1.8351	0.0809	1.9160		8,412.9183	8,412.9183	0.4400		8,423.9194
<b>Total</b>	<b>4.2742</b>	<b>9.9573</b>	<b>24.7276</b>	<b>0.0845</b>	<b>6.8588</b>	<b>0.1082</b>	<b>6.9670</b>	<b>1.8351</b>	<b>0.1029</b>	<b>1.9380</b>		<b>8,758.1146</b>	<b>8,758.1146</b>	<b>0.4469</b>	<b>6.3300e-003</b>	<b>8,771.1729</b>

## Laserfiche Office - South Coast Air Basin, 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

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#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/28/2019	5	20	
2	Site Preparation	Site Preparation	1/29/2019	1/31/2019	5	3	
3	Grading	Grading	2/1/2019	2/8/2019	5	6	
4	Building Construction	Building Construction	2/9/2019	12/13/2019	5	220	
5	Paving	Paving	12/14/2019	12/27/2019	5	10	
6	Architectural Coating	Architectural Coating	9/30/2019	12/13/2019	5	55	

**Acres of Grading (Site Preparation Phase): 2.1**

**Acres of Grading (Grading Phase): 2.1**

**Acres of Paving: 1.05**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 154,275; Non-Residential Outdoor: 51,425; Striped Parking Area: 8,232 (Architectural Coating – sqft)**

#### OffRoad Equipment

## Laserfiche Office - South Coast Air Basin, Winter

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

Trips and VMT



## Laserfiche Office - South Coast Air Basin, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	45.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	91.00	39.00	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	1	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 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					0.4922	0.0000	0.4922	0.0745	0.0000	0.0745			0.0000			0.0000
Off-Road	2.2950	22.6751	14.8943	0.0241		1.2863	1.2863		1.2017	1.2017		2,360.7198	2,360.7198	0.6011		2,375.7475
<b>Total</b>	<b>2.2950</b>	<b>22.6751</b>	<b>14.8943</b>	<b>0.0241</b>	<b>0.4922</b>	<b>1.2863</b>	<b>1.7785</b>	<b>0.0745</b>	<b>1.2017</b>	<b>1.2763</b>		<b>2,360.7198</b>	<b>2,360.7198</b>	<b>0.6011</b>		<b>2,375.7475</b>

## Laserfiche Office - South Coast Air Basin, Winter

**3.2 Demolition - 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	0.0199	0.6790	0.1438	1.7400e-003	0.0393	2.5500e-003	0.0419	0.0108	2.4400e-003	0.0132		188.2335	188.2335	0.0143		188.5906
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	0.0693	0.0485	0.5291	1.4500e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		143.9318	143.9318	4.5100e-003		144.0446
<b>Total</b>	<b>0.0892</b>	<b>0.7276</b>	<b>0.6729</b>	<b>3.1900e-003</b>	<b>0.1846</b>	<b>3.6900e-003</b>	<b>0.1883</b>	<b>0.0493</b>	<b>3.4900e-003</b>	<b>0.0528</b>		<b>332.1653</b>	<b>332.1653</b>	<b>0.0188</b>		<b>332.6352</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2215	0.0000	0.2215	0.0335	0.0000	0.0335			0.0000			0.0000
Off-Road	2.2950	22.6751	14.8943	0.0241		1.2863	1.2863		1.2017	1.2017	0.0000	2,360.7197	2,360.7197	0.6011		2,375.7475
<b>Total</b>	<b>2.2950</b>	<b>22.6751</b>	<b>14.8943</b>	<b>0.0241</b>	<b>0.2215</b>	<b>1.2863</b>	<b>1.5078</b>	<b>0.0335</b>	<b>1.2017</b>	<b>1.2353</b>	<b>0.0000</b>	<b>2,360.7197</b>	<b>2,360.7197</b>	<b>0.6011</b>		<b>2,375.7475</b>

## Laserfiche Office - South Coast Air Basin, Winter

**3.2 Demolition - 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	0.0199	0.6790	0.1438	1.7400e-003	0.0393	2.5500e-003	0.0419	0.0108	2.4400e-003	0.0132		188.2335	188.2335	0.0143		188.5906
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	0.0693	0.0485	0.5291	1.4500e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		143.9318	143.9318	4.5100e-003		144.0446
<b>Total</b>	<b>0.0892</b>	<b>0.7276</b>	<b>0.6729</b>	<b>3.1900e-003</b>	<b>0.1846</b>	<b>3.6900e-003</b>	<b>0.1883</b>	<b>0.0493</b>	<b>3.4900e-003</b>	<b>0.0528</b>		<b>332.1653</b>	<b>332.1653</b>	<b>0.0188</b>		<b>332.6352</b>

**3.3 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					0.7424	0.0000	0.7424	0.0802	0.0000	0.0802			0.0000			0.0000
Off-Road	1.7557	21.5386	11.9143	0.0245		0.8537	0.8537		0.7854	0.7854		2,426.5408	2,426.5408	0.7677		2,445.7341
<b>Total</b>	<b>1.7557</b>	<b>21.5386</b>	<b>11.9143</b>	<b>0.0245</b>	<b>0.7424</b>	<b>0.8537</b>	<b>1.5961</b>	<b>0.0802</b>	<b>0.7854</b>	<b>0.8656</b>		<b>2,426.5408</b>	<b>2,426.5408</b>	<b>0.7677</b>		<b>2,445.7341</b>

## Laserfiche Office - South Coast Air Basin, Winter

**3.3 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	0.0427	0.0299	0.3256	8.9000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		88.5734	88.5734	2.7800e-003		88.6428
<b>Total</b>	<b>0.0427</b>	<b>0.0299</b>	<b>0.3256</b>	<b>8.9000e-004</b>	<b>0.0894</b>	<b>7.0000e-004</b>	<b>0.0901</b>	<b>0.0237</b>	<b>6.4000e-004</b>	<b>0.0244</b>		<b>88.5734</b>	<b>88.5734</b>	<b>2.7800e-003</b>		<b>88.6428</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3341	0.0000	0.3341	0.0361	0.0000	0.0361			0.0000			0.0000
Off-Road	1.7557	21.5386	11.9143	0.0245		0.8537	0.8537		0.7854	0.7854	0.0000	2,426.5408	2,426.5408	0.7677		2,445.7341
<b>Total</b>	<b>1.7557</b>	<b>21.5386</b>	<b>11.9143</b>	<b>0.0245</b>	<b>0.3341</b>	<b>0.8537</b>	<b>1.1878</b>	<b>0.0361</b>	<b>0.7854</b>	<b>0.8215</b>	<b>0.0000</b>	<b>2,426.5408</b>	<b>2,426.5408</b>	<b>0.7677</b>		<b>2,445.7341</b>

## Laserfiche Office - South Coast Air Basin, Winter

**3.3 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	0.0427	0.0299	0.3256	8.9000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		88.5734	88.5734	2.7800e-003		88.6428
<b>Total</b>	<b>0.0427</b>	<b>0.0299</b>	<b>0.3256</b>	<b>8.9000e-004</b>	<b>0.0894</b>	<b>7.0000e-004</b>	<b>0.0901</b>	<b>0.0237</b>	<b>6.4000e-004</b>	<b>0.0244</b>		<b>88.5734</b>	<b>88.5734</b>	<b>2.7800e-003</b>		<b>88.6428</b>

**3.4 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					6.3933	0.0000	6.3933	3.3503	0.0000	3.3503			0.0000			0.0000
Off-Road	2.0287	22.7444	10.1518	0.0206		1.0730	1.0730		0.9871	0.9871		2,041.2539	2,041.2539	0.6458		2,057.3997
<b>Total</b>	<b>2.0287</b>	<b>22.7444</b>	<b>10.1518</b>	<b>0.0206</b>	<b>6.3933</b>	<b>1.0730</b>	<b>7.4662</b>	<b>3.3503</b>	<b>0.9871</b>	<b>4.3374</b>		<b>2,041.2539</b>	<b>2,041.2539</b>	<b>0.6458</b>		<b>2,057.3997</b>

## Laserfiche Office - South Coast Air Basin, Winter

**3.4 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	0.0533	0.0373	0.4070	1.1100e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		110.7167	110.7167	3.4700e-003		110.8035
<b>Total</b>	<b>0.0533</b>	<b>0.0373</b>	<b>0.4070</b>	<b>1.1100e-003</b>	<b>0.1118</b>	<b>8.7000e-004</b>	<b>0.1127</b>	<b>0.0296</b>	<b>8.1000e-004</b>	<b>0.0305</b>		<b>110.7167</b>	<b>110.7167</b>	<b>3.4700e-003</b>		<b>110.8035</b>

**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					2.8770	0.0000	2.8770	1.5076	0.0000	1.5076			0.0000			0.0000
Off-Road	2.0287	22.7444	10.1518	0.0206		1.0730	1.0730		0.9871	0.9871	0.0000	2,041.2539	2,041.2539	0.6458		2,057.3997
<b>Total</b>	<b>2.0287</b>	<b>22.7444</b>	<b>10.1518</b>	<b>0.0206</b>	<b>2.8770</b>	<b>1.0730</b>	<b>3.9499</b>	<b>1.5076</b>	<b>0.9871</b>	<b>2.4948</b>	<b>0.0000</b>	<b>2,041.2539</b>	<b>2,041.2539</b>	<b>0.6458</b>		<b>2,057.3997</b>

## Laserfiche Office - South Coast Air Basin, Winter

**3.4 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	0.0533	0.0373	0.4070	1.1100e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		110.7167	110.7167	3.4700e-003		110.8035
<b>Total</b>	<b>0.0533</b>	<b>0.0373</b>	<b>0.4070</b>	<b>1.1100e-003</b>	<b>0.1118</b>	<b>8.7000e-004</b>	<b>0.1127</b>	<b>0.0296</b>	<b>8.1000e-004</b>	<b>0.0305</b>		<b>110.7167</b>	<b>110.7167</b>	<b>3.4700e-003</b>		<b>110.8035</b>

**3.5 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	2.5581	18.9103	15.2545	0.0250		1.0901	1.0901		1.0449	1.0449		2,312.1454	2,312.1454	0.4810		2,324.1705
<b>Total</b>	<b>2.5581</b>	<b>18.9103</b>	<b>15.2545</b>	<b>0.0250</b>		<b>1.0901</b>	<b>1.0901</b>		<b>1.0449</b>	<b>1.0449</b>		<b>2,312.1454</b>	<b>2,312.1454</b>	<b>0.4810</b>		<b>2,324.1705</b>

## Laserfiche Office - South Coast Air Basin, Winter

**3.5 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	0.1586	4.4824	1.2226	9.7600e-003	0.2496	0.0302	0.2797	0.0718	0.0288	0.1007		1,041.8418	1,041.8418	0.0770		1,043.7679
Worker	0.4852	0.3397	3.7034	0.0101	1.0172	7.9600e-003	1.0251	0.2698	7.3400e-003	0.2771		1,007.5223	1,007.5223	0.0316		1,008.3120
<b>Total</b>	<b>0.6438</b>	<b>4.8221</b>	<b>4.9261</b>	<b>0.0199</b>	<b>1.2667</b>	<b>0.0381</b>	<b>1.3048</b>	<b>0.3416</b>	<b>0.0362</b>	<b>0.3778</b>		<b>2,049.3641</b>	<b>2,049.3641</b>	<b>0.1086</b>		<b>2,052.0799</b>

**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	2.5581	18.9103	15.2545	0.0250		1.0901	1.0901		1.0449	1.0449	0.0000	2,312.1454	2,312.1454	0.4810		2,324.1705
<b>Total</b>	<b>2.5581</b>	<b>18.9103</b>	<b>15.2545</b>	<b>0.0250</b>		<b>1.0901</b>	<b>1.0901</b>		<b>1.0449</b>	<b>1.0449</b>	<b>0.0000</b>	<b>2,312.1454</b>	<b>2,312.1454</b>	<b>0.4810</b>		<b>2,324.1705</b>



## Laserfiche Office - South Coast Air Basin, Winter

**3.5 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	0.1586	4.4824	1.2226	9.7600e-003	0.2496	0.0302	0.2797	0.0718	0.0288	0.1007		1,041.8418	1,041.8418	0.0770		1,043.7679
Worker	0.4852	0.3397	3.7034	0.0101	1.0172	7.9600e-003	1.0251	0.2698	7.3400e-003	0.2771		1,007.5223	1,007.5223	0.0316		1,008.3120
<b>Total</b>	<b>0.6438</b>	<b>4.8221</b>	<b>4.9261</b>	<b>0.0199</b>	<b>1.2667</b>	<b>0.0381</b>	<b>1.3048</b>	<b>0.3416</b>	<b>0.0362</b>	<b>0.3778</b>		<b>2,049.3641</b>	<b>2,049.3641</b>	<b>0.1086</b>		<b>2,052.0799</b>

**3.6 Paving - 2019****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2453	12.5685	11.8507	0.0178		0.7301	0.7301		0.6728	0.6728		1,746.2432	1,746.2432	0.5418		1,759.7870
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.2453</b>	<b>12.5685</b>	<b>11.8507</b>	<b>0.0178</b>		<b>0.7301</b>	<b>0.7301</b>		<b>0.6728</b>	<b>0.6728</b>		<b>1,746.2432</b>	<b>1,746.2432</b>	<b>0.5418</b>		<b>1,759.7870</b>

## Laserfiche Office - South Coast Air Basin, Winter

**3.6 Paving - 2019****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0800	0.0560	0.6105	1.6700e-003	0.1677	1.3100e-003	0.1690	0.0445	1.2100e-003	0.0457		166.0751	166.0751	5.2100e-003		166.2053
<b>Total</b>	<b>0.0800</b>	<b>0.0560</b>	<b>0.6105</b>	<b>1.6700e-003</b>	<b>0.1677</b>	<b>1.3100e-003</b>	<b>0.1690</b>	<b>0.0445</b>	<b>1.2100e-003</b>	<b>0.0457</b>		<b>166.0751</b>	<b>166.0751</b>	<b>5.2100e-003</b>		<b>166.2053</b>

**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	1.2453	12.5685	11.8507	0.0178		0.7301	0.7301		0.6728	0.6728	0.0000	1,746.2432	1,746.2432	0.5418		1,759.7870
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.2453</b>	<b>12.5685</b>	<b>11.8507</b>	<b>0.0178</b>		<b>0.7301</b>	<b>0.7301</b>		<b>0.6728</b>	<b>0.6728</b>	<b>0.0000</b>	<b>1,746.2432</b>	<b>1,746.2432</b>	<b>0.5418</b>		<b>1,759.7870</b>

## Laserfiche Office - South Coast Air Basin, Winter

**3.6 Paving - 2019****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0800	0.0560	0.6105	1.6700e-003	0.1677	1.3100e-003	0.1690	0.0445	1.2100e-003	0.0457		166.0751	166.0751	5.2100e-003		166.2053
<b>Total</b>	<b>0.0800</b>	<b>0.0560</b>	<b>0.6105</b>	<b>1.6700e-003</b>	<b>0.1677</b>	<b>1.3100e-003</b>	<b>0.1690</b>	<b>0.0445</b>	<b>1.2100e-003</b>	<b>0.0457</b>		<b>166.0751</b>	<b>166.0751</b>	<b>5.2100e-003</b>		<b>166.2053</b>

**3.7 Architectural Coating - 2019****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	18.0286					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
<b>Total</b>	<b>18.2951</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>

## Laserfiche Office - South Coast Air Basin, Winter

**3.7 Architectural Coating - 2019****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0960	0.0672	0.7326	2.0000e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4500e-003	0.0548		199.2901	199.2901	6.2500e-003		199.4463
<b>Total</b>	<b>0.0960</b>	<b>0.0672</b>	<b>0.7326</b>	<b>2.0000e-003</b>	<b>0.2012</b>	<b>1.5700e-003</b>	<b>0.2028</b>	<b>0.0534</b>	<b>1.4500e-003</b>	<b>0.0548</b>		<b>199.2901</b>	<b>199.2901</b>	<b>6.2500e-003</b>		<b>199.4463</b>

**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	18.0286					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
<b>Total</b>	<b>18.2951</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>

## Laserfiche Office - South Coast Air Basin, Winter

**3.7 Architectural Coating - 2019****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0960	0.0672	0.7326	2.0000e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4500e-003	0.0548		199.2901	199.2901	6.2500e-003		199.4463
<b>Total</b>	<b>0.0960</b>	<b>0.0672</b>	<b>0.7326</b>	<b>2.0000e-003</b>	<b>0.2012</b>	<b>1.5700e-003</b>	<b>0.2028</b>	<b>0.0534</b>	<b>1.4500e-003</b>	<b>0.0548</b>		<b>199.2901</b>	<b>199.2901</b>	<b>6.2500e-003</b>		<b>199.4463</b>

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

## Laserfiche Office - South Coast Air Basin, 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	1.8815	9.6693	24.4403	0.0828	6.8588	0.0862	6.9450	1.8351	0.0809	1.9160		8,412.918 <sub>3</sub>	8,412.918 <sub>3</sub>	0.4400		8,423.919 <sub>4</sub>
Unmitigated	1.8815	9.6693	24.4403	0.0828	6.8588	0.0862	6.9450	1.8351	0.0809	1.9160		8,412.918 <sub>3</sub>	8,412.918 <sub>3</sub>	0.4400		8,423.919 <sub>4</sub>

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	1,001.76	253.01	107.99	2,471,228	2,471,228
Enclosed Parking Structure	0.00	0.00	0.00		
Total	1,001.76	253.01	107.99	2,471,228	2,471,228

## 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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Enclosed Parking Structure	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
General Office Building	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955
Enclosed Parking Structure	0.550339	0.043800	0.200255	0.122233	0.016799	0.005871	0.020633	0.029727	0.002027	0.001932	0.004726	0.000704	0.000955

## Laserfiche Office - South Coast Air Basin, 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	0.0316	0.2876	0.2416	1.7300e-003		0.0219	0.0219		0.0219	0.0219		345.0986	345.0986	6.6100e-003	6.3300e-003	347.1494
NaturalGas Unmitigated	0.0316	0.2876	0.2416	1.7300e-003		0.0219	0.0219		0.0219	0.0219		345.0986	345.0986	6.6100e-003	6.3300e-003	347.1494

## Laserfiche Office - South Coast Air Basin, 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					
Enclosed Parking Structure	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
General Office Building	2933.34	0.0316	0.2876	0.2416	1.7300e-003		0.0219	0.0219		0.0219	0.0219		345.0986	345.0986	6.6100e-003	6.3300e-003	347.1494
<b>Total</b>		<b>0.0316</b>	<b>0.2876</b>	<b>0.2416</b>	<b>1.7300e-003</b>		<b>0.0219</b>	<b>0.0219</b>		<b>0.0219</b>	<b>0.0219</b>		<b>345.0986</b>	<b>345.0986</b>	<b>6.6100e-003</b>	<b>6.3300e-003</b>	<b>347.1494</b>

**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					
Enclosed Parking Structure	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
General Office Building	2.93334	0.0316	0.2876	0.2416	1.7300e-003		0.0219	0.0219		0.0219	0.0219		345.0986	345.0986	6.6100e-003	6.3300e-003	347.1494
<b>Total</b>		<b>0.0316</b>	<b>0.2876</b>	<b>0.2416</b>	<b>1.7300e-003</b>		<b>0.0219</b>	<b>0.0219</b>		<b>0.0219</b>	<b>0.0219</b>		<b>345.0986</b>	<b>345.0986</b>	<b>6.6100e-003</b>	<b>6.3300e-003</b>	<b>347.1494</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**



## Laserfiche Office - South Coast Air Basin, 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	2.3610	4.2000e-004	0.0458	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0976	0.0976	2.6000e-004		0.1041
Unmitigated	2.3610	4.2000e-004	0.0458	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0976	0.0976	2.6000e-004		0.1041

## 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	0.2717					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.3100e-003	4.2000e-004	0.0458	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0976	0.0976	2.6000e-004		0.1041
<b>Total</b>	<b>2.3610</b>	<b>4.2000e-004</b>	<b>0.0458</b>	<b>0.0000</b>		<b>1.6000e-004</b>	<b>1.6000e-004</b>		<b>1.6000e-004</b>	<b>1.6000e-004</b>		<b>0.0976</b>	<b>0.0976</b>	<b>2.6000e-004</b>		<b>0.1041</b>

## Laserfiche Office - South Coast Air Basin, 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	0.2717					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.3100e-003	4.2000e-004	0.0458	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0976	0.0976	2.6000e-004		0.1041
<b>Total</b>	<b>2.3610</b>	<b>4.2000e-004</b>	<b>0.0458</b>	<b>0.0000</b>		<b>1.6000e-004</b>	<b>1.6000e-004</b>		<b>1.6000e-004</b>	<b>1.6000e-004</b>		<b>0.0976</b>	<b>0.0976</b>	<b>2.6000e-004</b>		<b>0.1041</b>

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

## Laserfiche Office - South Coast Air Basin, Winter

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

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

Equipment Type	Number
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**11.0 Vegetation**

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