

Appendix 2.0

Air Quality Assessment

AIR QUALITY ASSESSMENT

ST. FRANCES OF ROME 21591 LEMON STREET

CITY OF WILDOMAR, RIVERSIDE COUNTY, CALIFORNIA

Submitted to:

City of Wildomar
23873 Clinton Keith Road, Suite 201
Wildomar, California 92595

Prepared for:

David Meier
Diocese of San Bernardino
Office of Construction and Real Estate
1201 East Highland Avenue
San Bernardino, California 92404

Prepared by:

Jeremy Loudon
Ldn Consulting, Inc.
c/o Brian F. Smith and Associates, Inc.
14010 Poway Road, Suite A
Poway, California 92064



June 3, 2019

AIR QUALITY ASSESSMENT

**St Frances of Rome
21591 Lemon Street
City of Wildomar, CA**

Prepared By:

Ldn Consulting, Inc.

**42428 Chisolm Trail
Murrieta, CA 92562**

Project For:

**Brian F. Smith and Associates, Inc.
14010 Poway Road, Suite A
Poway, CA 92064**

June 3, 2019

TABLE OF CONTENTS

TABLE OF CONTENTS	II
LIST OF FIGURES	III
LIST OF TABLES	III
APPENDIX	III
EXECUTIVE SUMMARY	IV
1.0 INTRODUCTION	1
1.1 PURPOSE OF THIS STUDY	1
1.2 PROJECT LOCATION	1
1.3 PROJECT DESCRIPTION	1
2.0 EXISTING ENVIRONMENTAL SETTING	4
2.1 EXISTING SETTING	4
2.2 CLIMATE AND METEOROLOGY	4
2.3 REGULATORY STANDARDS.....	4
2.3.1 FEDERAL STANDARDS AND DEFINITIONS	4
2.3.2 STATE STANDARDS AND DEFINITIONS.....	6
2.3.3 REGIONAL STANDARDS.....	8
2.4 CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) SIGNIFICANCE THRESHOLDS.....	9
2.5 AIR QUALITY IMPACT ASSESSMENT SCREENING THRESHOLDS	9
2.6 LOCAL AIR QUALITY.....	11
2.7 LOCALIZED SIGNIFICANCE THRESHOLDS	14
3.0 METHODOLOGY	15
3.1 CONSTRUCTION EMISSIONS CALCULATIONS.....	15
3.2 CONSTRUCTION ASSUMPTIONS.....	16
3.3 OPERATIONAL EMISSIONS.....	17
3.4 ODOR IMPACTS (ONSITE)	18
4.0 FINDINGS	19
4.1 CONSTRUCTION FINDINGS	19
4.2 OPERATIONAL FINDINGS.....	19
4.3 LOCALIZED SIGNIFICANCE THRESHOLDS	20
4.4 HEALTH RISK.....	21
4.5 ODOR IMPACT FINDINGS	21
4.6 CONCLUSION OF FINDINGS.....	21
5.0 REFERENCES	23

List of Figures

FIGURE 1-A: PROJECT VICINITY MAP	2
FIGURE 1-B: SITE PLAN MAP	3
FIGURE 2-A: AMBIENT AIR QUALITY MONITORING STATIONS WITHIN SCAB – CARB	13

List of Tables

TABLE 2.1: AMBIENT AIR QUALITY STANDARDS	7
TABLE 2.2: SOUTH COAST AIR BASIN ATTAINMENT STATUS BY POLLUTANT	9
TABLE 2.3: SCREENING THRESHOLD FOR CRITERIA POLLUTANTS	10
TABLE 2.4: THREE-YEAR AMBIENT AIR QUALITY SUMMARY NEAR THE PROJECT SITE	12
TABLE 2.5: LST EMISSION THRESHOLDS (5-ACRE SITE)	14
TABLE 3.1: EXPECTED CONSTRUCTION EQUIPMENT	17
TABLE 4.1: EXPECTED CONSTRUCTION EMISSIONS SUMMARY	19
TABLE 4.2: EXPECTED DAILY POLLUTANT GENERATION	20
TABLE 4.3: ON-SITE DAILY EMISSIONS FOR COMPARISON TO LSTS (UNMITIGATED)	21

Appendix

CALLEEMOD 2016.3.2.....	24
AERSCREEN – TIER IV EQUIPMENT	99
CANCER RISK CALCULATION SPREADSHEET	104

EXECUTIVE SUMMARY

This air quality impact study has been completed to determine the air quality impacts associated with the development of the proposed Saint Frances of Rome Church development. The proposed Project site is located within the City of Wildomar, within the southern portion of Riverside County. The Project proposes to construct a 1,200-seat church facility and an office/classroom facility with a total area of roughly 27,400 SF. The project would also add 263 parking spaces. It's expected that the project would be completed late 2020 and be fully operational in 2021.

During construction of the proposed Project, fugitive dust emissions would be expected but would not exceed thresholds established by the South Coast Air Quality Management District (SCAQMD). Given this, no construction mitigation will require mitigation. Furthermore, the project would not generate localized significance threshold impacts. It should be noted that the project will only utilize Tier IV construction equipment and was analyzed as such. Based on this, Tier IV construction equipment would be required and would be a condition to this project's approval.

Additionally, emissions will be generated from both project area and operational sources once the project is fully operational in 2020 though no air quality impacts would be expected. The project was analyzed under localized significance thresholds for both construction and operations and was found to generate less than significant impacts.

Finally, the proposed Project would not be expected to generate offensive odors and would therefore not impact any sensitive receptors.

The proposed project was found to add vehicular trips impacted intersections and would be required to contribute traffic impact fees to mitigate these future cumulative impacts. Based on this, no cumulative impacts would be expected for air quality. Based on this, the project would not generate any significant air quality cumulative impacts. No additional mitigation measures are necessary per CEQA guidelines.

1.0 INTRODUCTION

1.1 Purpose of this Study

The purpose of this Air Quality study is to determine potential air quality impacts (if any) that may be created by construction, area or operational emissions (short term or long term) from the proposed Project. Should impacts be determined, the intent of this study would be to recommend suitable mitigation measures to bring those impacts to a level that would be considered less than significant.

1.2 Project Location

The proposed development is located in the City of Wildomar which is located within the boundaries of the County of Riverside California within the South Coast Air Basin (SCAB). The project is located at 21591 Lemon Street, in the City of Wildomar. A general project vicinity map is shown in Figure 1-A on the next page.

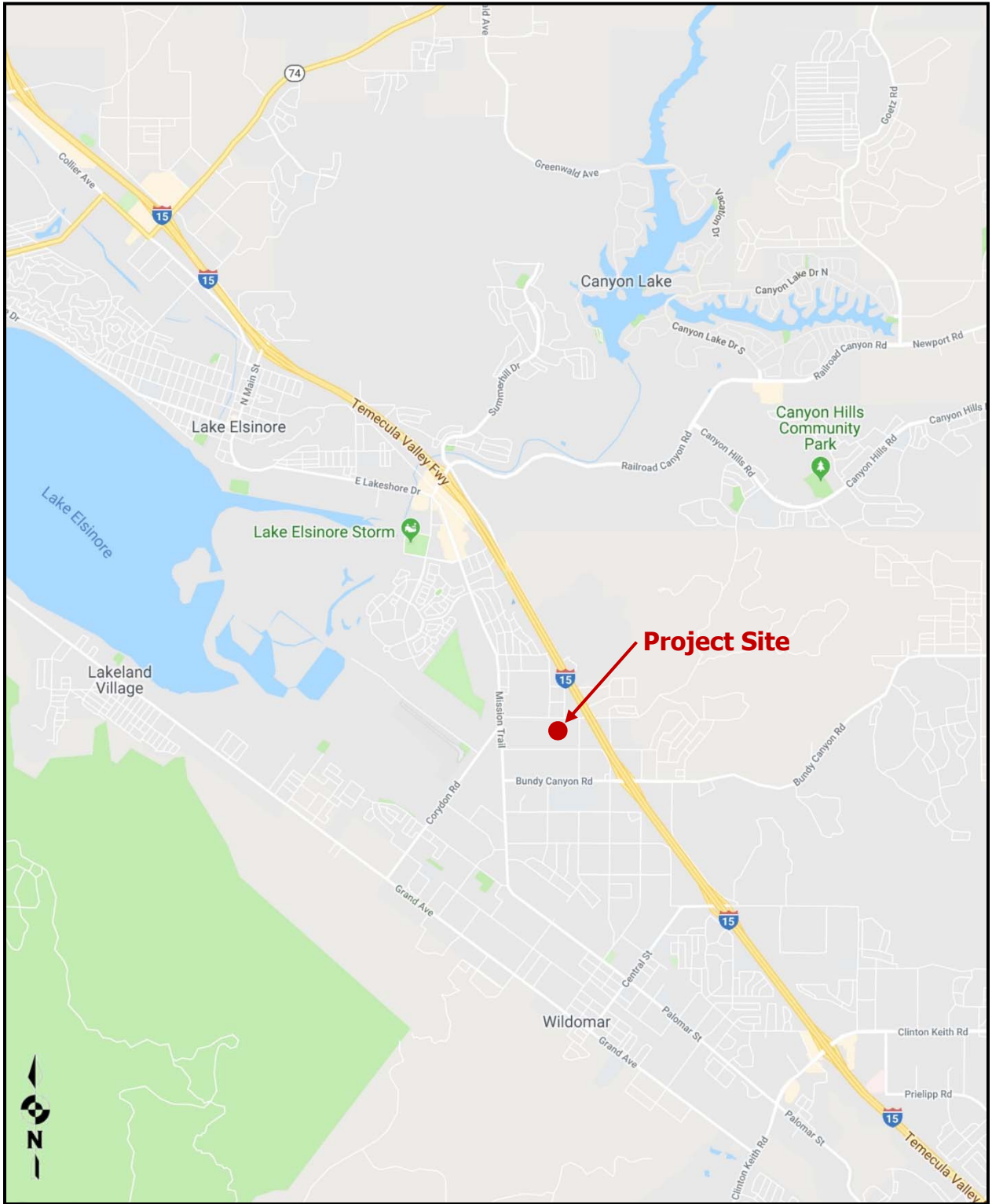
1.3 Project Description

Existing facilities include a one-story Multipurpose Room (9,589 s.f.) to remain, a one-story Office (2,092 s.f.) to become a rectory, and a one-story Classroom (1,443 s.f.) to remain. Two access points are provided to the main parking lot from Lemon Street. Secondary access from Mojonier Way is provided to the south to the existing secondary parking lot. The existing parking will be increased from 174 spaces to 437 total parking spaces between the main parking lot and the secondary parking lot. This effort would require removal roughly 1,100 cy of asphalt and exported offsite for recycling.

The total site is 10.5 acres however construction project area would encompass roughly 5 acres total and would be spread out over the site. A Conditional Use Permit (CUP) is required for the proposed improvements which will be constructed in multiple phases. For purposes of analysis however, construction was assumed to be simultaneous for a worst-case analysis.

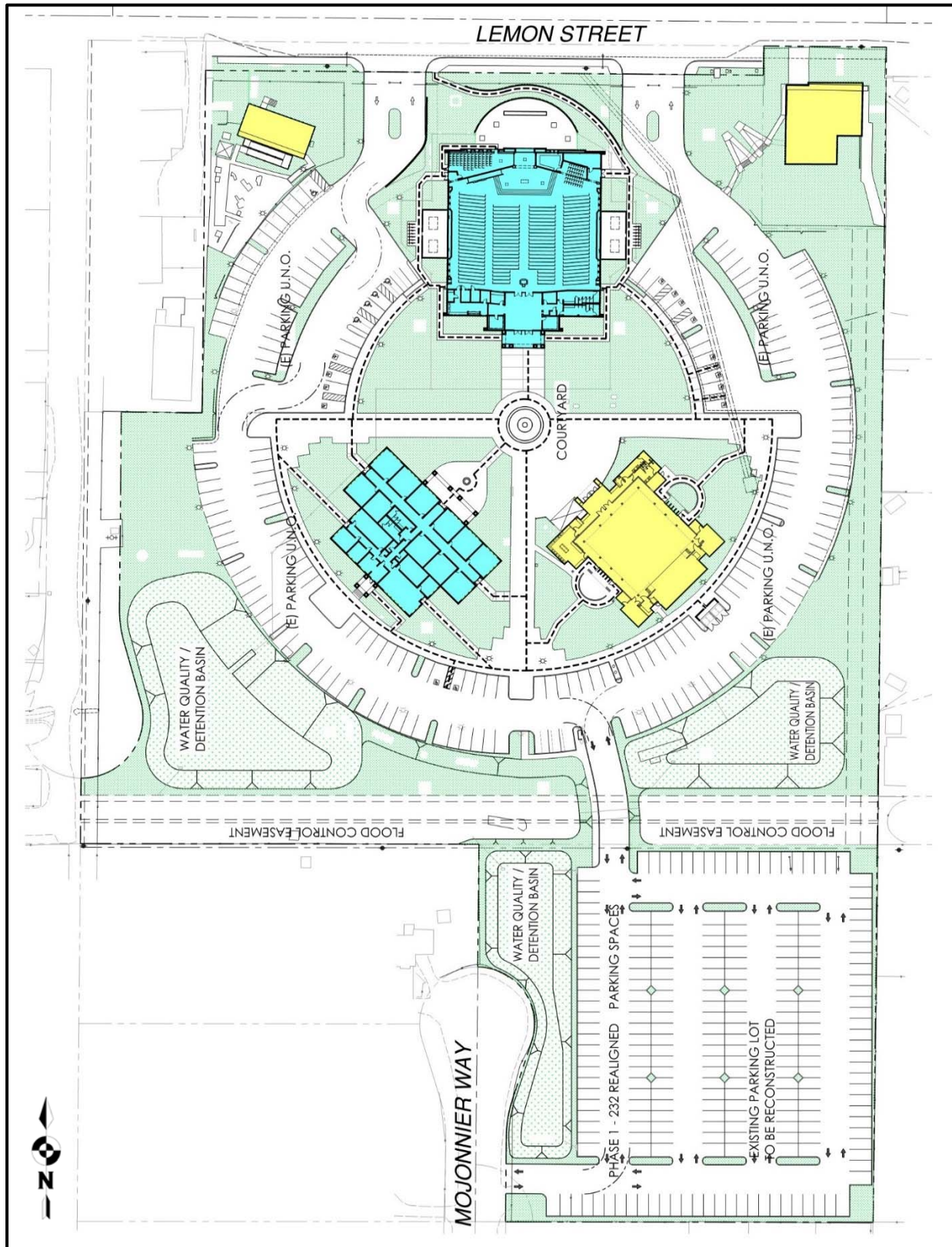
The proposed development includes a new one-story Church (17,601 s.f.) a new Office and Classroom Addition (9,792 s.f.), and various storm water and surface improvements. A site plan map is shown in Figure 1-B of this report.

Figure 1-A: Project Vicinity Map



Source: (Google, 2018)

Figure 1-B: Site Plan Map



Source: (Charls Brown Architect, 2018)

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Existing Setting

The existing Project site consist of a church pre-school facility. The proposed use will remain the same but would add an additional 303 seats to the project. The existing preschool operation will remain unchanged. Adjacent surrounding land uses are mostly residential in nature. The site topography is characterized by rolling hills with elevations ranging from approximately 1,340 to 1,350 feet above mean sea level with the highest elevation towards the north of the project site.

2.2 Climate and Meteorology

Climate within the SCAB area often varies dramatically over short geographical distances due to the size and topography. Most of southern California is dominated by high-pressure systems for much of the year, which keeps Wildomar mostly sunny and warm. Typically, during the winter months, the high-pressure system drops to the south and brings cooler, moister weather from the north.

It is common for inversion layers to develop within high-pressure areas, which mostly define pressure patterns over the SCAB. These inversions are caused when a thin layer of the atmosphere increases in temperature with height. An inversion acts like a lid preventing vertical mixing of air through convective overturning.

Daytime temperature highs within the City of Wildomar typically range between 66 °F in the winter to approximately 99 °F in the summer with the month of August usually being the hottest month. Wildomar usually receives an average seasonal precipitation of 12.45 inches of rain per year with the month of January usually being the wettest month of the year (U.S. Climate Data, 2018).

2.3 Regulatory Standards

2.3.1 Federal Standards and Definitions

The Federal Air Quality Standards were developed per the requirements of The Federal Clean Air Act, which is a federal law that was passed in 1970 and further amended in 1990. This law provides the basis for the national air pollution control effort. An important element of the act included the development of national ambient air quality standards (NAAQS) for major air pollutants. The Clean Air Act established two types of air quality standards otherwise known as primary and secondary standards. **Primary Standards** set limits for the intention

of protecting public health, which includes sensitive populations such as asthmatics, children and elderly. **Secondary Standards** set limits to protect public welfare to include the protection against decreased visibility, damage to animals, crops, vegetation and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards for principal pollutants, which are called "criteria" pollutants. These pollutants are defined below:

1. **Carbon Monoxide (CO):** *is a colorless, odorless, and tasteless gas and is produced from the partial combustion of carbon-containing compounds, notably in internal-combustion engines. Carbon monoxide usually forms when there is a reduced availability of oxygen present during the combustion process. Exposure to CO near the levels of the ambient air quality standards can lead to fatigue, headaches, confusion, and dizziness. CO interferes with the blood's ability to carry oxygen.*
2. **Lead (Pb):** *is a potent neurotoxin that accumulates in soft tissues and bone over time. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Because lead is only slowly excreted, exposures to small amounts of lead from a variety of sources can accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms can include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children.*
3. **Nitrogen Dioxide (NO₂):** *is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract and is one of the nitrogen oxides emitted from high-temperature combustion, such as those occurring in trucks, cars, power plants, home heaters, and gas stoves. In the presence of other air contaminants, NO₂ is usually visible as a reddish-brown air layer over urban areas. NO₂ along with other traffic-related pollutants is associated with respiratory symptoms, respiratory illness and respiratory impairment. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO₂ above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO₂ exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children.*
4. **Particulate Matter (PM₁₀ or PM_{2.5}):** *is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary in shape, size and chemical composition, and can be made up of multiple materials such as metal, soot, soil, and dust. PM₁₀ particles are 10 microns (µm) or less and PM_{2.5} particles are 2.5 (µm) or less. These particles can contribute significantly to regional haze and reduction of visibility in California. Exposure to PM levels exceeding current air quality standards increases the risk of allergies such as asthma and respiratory illness.*

5. **Ozone (O₃):** *is a highly oxidative unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Exposure to ozone above ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung functioning. Ozone can also damage materials such as rubber, fabrics and plastics.*
6. **Sulfur Dioxide (SO₂):** *is a gaseous compound of sulfur and oxygen and is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO₂ is also emitted from several industrial processes, such as petroleum refining and metal processing. Effects from SO₂ exposures at levels near the one-hour standard include bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Children, the elderly, and people with asthma, cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most susceptible to these symptoms. Continued exposure at elevated levels of SO₂ results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.*

2.3.2 State Standards and Definitions

The State of California Air Resources Board (ARB) sets the laws and regulations for air quality on the state level. The California Ambient Air Quality Standards (CAAQS) are either the same as or more restrictive than the NAAQS and also restrict four additional contaminants. Table 2.1 on the following page identifies both the NAAQS and CAAQS. The additional contaminants as regulated by the CAAQS are defined below:

1. **Visibility Reducing Particles:** *Particles in the Air that obstruct the visibility.*
2. **Sulfates:** *are salts of Sulfuric Acid. Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. They increase the acidity of the atmosphere and form acid rain.*
3. **Hydrogen Sulfide (H₂S):** *is a colorless, toxic and flammable gas with a recognizable smell of rotten eggs or flatulence. H₂S occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. Usually, H₂S is formed from bacterial breakdown of organic matter. Exposure to low concentrations of hydrogen sulfide may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Brief exposures to high concentrations of hydrogen sulfide (greater than 500 ppm) can cause a loss of consciousness and possibly death.*
4. **Vinyl Chloride:** *also known as chloroethene and is a toxic, carcinogenic, colorless gas with a sweet odor. It is an industrial chemical mainly used to produce its polymer, polyvinyl chloride (PVC).*

Table 2.1: Ambient Air Quality Standards

Ambient Air Quality Standards							
Pollutant	Average Time	California Standards ¹		Federal Standards ²			
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷	
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry	
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)			
Respirable Particulate Matter (PM ₁₀) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	20 µg/m ³		-			
Fine Particulate Matter (PM _{2.5}) ⁹	24 Hour	No Separate State Standard		35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³			15 µg/m ³
Carbon Monoxide (CO)	8 hour	9.0 ppm (10mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	-	Non-Dispersive Infrared Photometry	
	1 hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)			
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		-			-
Nitrogen Dioxide (NO ₂) ¹⁰	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³) ⁸	Same as Primary Standard	Gas Phase Chemiluminescence	
	1 Hour	0.18 ppm (339 µg/m ³)		0.100 ppm ⁸ (188/ µg/m ³)			
Sulfur Dioxide (SO ₂) ¹¹	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.030 ppm ¹⁰ (for Certain Areas)	-	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method) ⁹	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm ¹⁰ (for Certain Areas) (See Footnote 9)			
	3 Hour	-		-			0.5 ppm (1300 µg/m ³)
	1 Hour	0.25 ppm (655 µg/m ³)		75 ppb (196 µg/m ³)			-
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	-	Same as Primary Standard	High Volume Sampler and Atomic Absorption	
	Calendar Quarter	-		1.5 µg/m ³			
	Rolling 3-Month Average	-		0.15 µg/m ³			
Visibility Reducing Particles	8 Hour	See footnote 14					
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography				
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence				
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography				

- California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
- Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- Any equivalent procedure which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.
- National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
- On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
- The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
- In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: (California Air Resources Board, 5/4/2016)

2.3.3 Regional Standards

The State of California has 35 specific air districts, which are each responsible for ensuring that the criteria pollutants are below the NAAQS and CAAQS. Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants for designated periods defined in the footnote of Table 2.1 above are designated as “non-attainment areas” for that pollutant. Currently, there are 15 non-attainment areas for the federal ozone standard and two non-attainment areas for the PM_{2.5} standard. The state therefore created the California State Implementation Plan (SIP), which is designed to provide control measures needed for California Air basins to attain ambient air quality standards.

The SCAQMD has jurisdiction over an area of approximately 10,743 square miles, consisting of the South Coast Air Basin, and the Riverside County portions of the Salton Sea Air Basin (SSAB) and Mojave Desert Air Basin (MDAB). The district prepares Air Quality Management Plans (AQMP) to demonstrate how the region will reduce air pollution emissions to meet the federal and state health-based standards to comply with Clean Air Act requirements and will be ultimately a part of the SIP. Currently the SCAQMD is in the process of updating the latest adopted Air Quality Management Plan (signed December 7, 2012), and is expected to be signed mid to late 2016 (SCAQMD, 2016).

More specifically, the AQMP identifies the path South Coast Air Basin must take for the attainment of federal PM and ozone standards, and highlights the significant amount of reductions needed and the urgent need to engage in interagency coordinated planning to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria pollutant standards within the timeframes allowed under the federal Clean Air Act.

The City of Wildomar lies within the SCAB. The SCAQMD is the government agency, which regulates sources of air pollution within the City of Wildomar. A complete listing of the current attainment status by pollutants for the SCAB is shown on Table 2.2 on the following page.

Table 2.2: South Coast Air Basin Attainment Status by Pollutant

County Air Basin Attainment Status by Pollutant			
Pollutant	Average Time	California Standards	Federal Standards
Ozone (O ₃)	1 Hour	Non-attainment	No Federal Standard
	8 Hour		Extreme Nonattainment
Respirable Particulate Matter (PM ₁₀)	24 Hour	Non-attainment	Serious Nonattainment
	Annual Arithmetic Mean	No State Standard	Serious Nonattainment
Fine Particulate Matter PM _{2.5}	24 Hour	No State Standard	Non-attainment
	Annual Arithmetic Mean	Non-attainment	Non-attainment
Carbon Monoxide (CO)	8 hour	Attainment	Attainment Maintenance ¹
	1 hour		
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	No State Standard	Attainment
	1 Hour	Non-attainment	No Federal Standard
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	No State Standard	Attainment
	24 Hour	Attainment	Attainment
	1 Hour	Attainment	No Federal Standard
Lead	30 Day Average	Attainment	No Federal Standard
	Calendar Quarter	No State Standard	Attainment

1. Maintenance Area (defined by U.S. Department of Transportation) is any geographic region of the United States previously designated nonattainment pursuant to the CAA Amendments of 1990 and subsequently redesignated to attainment subject to the requirement to develop a maintenance plan under section 175A of the CAA, as amended.

2.4 California Environmental Quality Act (CEQA) Significance Thresholds

The California Environmental Quality Act has provided a checklist to identify the significance of air quality impacts. These guidelines are found in a 2018 updated Appendix G of the CEQA guidelines (California, 2018) :

AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:

- A:* Conflict with or obstruct implementation of the SCAQMD AQMP or applicable portions of the State Implementation Plan (SIP)?
- B:* Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable Federal or State ambient air quality standard.
- C:* Expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, or day-care centers) to substantial pollutant concentrations?
- D:* Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

2.5 Air Quality Impact Assessment Screening Thresholds

To determine whether a project would create potential air quality impacts, the City of Murrieta uses South Coast Air Quality Management District's (SCAQMD) Air Quality Thresholds. The screening thresholds for construction and daily operations are shown in Table 2.3 below. Demonstrating a projects compliance with SCAQMD Screening thresholds are a significant part of demonstrating compliance with SCAQMDs AQMP and is critical to insuring less than significant impacts to questions A and B identified in section 2.4 above.

Table 2.3: Screening Threshold for Criteria Pollutants

Pollutant	Total Emissions (Pounds per Day)
Construction Emissions	
Respirable Particulate Matter (PM ₁₀ and PM _{2.5})	150 and 55
Nitrogen Oxide (NO _x)	100
Sulfur Oxide (SO _x)	150
Carbon Monoxide (CO)	550
Volatile Organic Compounds (VOCs)	75
Operational Emissions	
Respirable Particulate Matter (PM ₁₀ and PM _{2.5})	150 and 55
Nitrogen Oxide (NO _x)	55
Sulfur Oxide (SO _x)	150
Carbon Monoxide (CO)	550
Lead and Lead Compounds	3.2
Volatile Organic Compounds (VOCs)	55

In 1987, the California legislature adopted the Air Toxics "Hot Spots" Information and Assessment Act; also known as Assembly Bill 2588 (or AB 2588). The goals of the Assembly Bill are to collect emissions data, identify facilities having localized impacts to determine health risks, and notify affected individuals. High priority facilities must prepare a Health Risk Assessment (HRA). This Assembly bill is primarily geared toward mitigating long term fixed sources health risks above the action risk levels. SCAQMD has a number of rules which were prepared to meet AB 2588 goals (i.e. Rules 1401, 1402 and 212) (SCAQMD, 2015) but none specific to short term construction projects. Projects or facilities found to increase action risk levels require mitigation and reporting.

Toxic Air Contaminants (TACs) are regulated by the SCAQMD under Rule 1401, 1402 and 212 which were developed to identify requirements for reporting and requires evaluation of potential health risks for any new, relocated, or modified emission units (fixed sources) which may increase emissions of one or more toxic air contaminants. The rule requires that projects

that propose to increase cancer risk to greater than one in one million need to implement toxics best available control technology (T-BACT) or impose the most effective emission limitation, emission control device or control technique to reduce the cancer risk.

Diesel particulate matter emissions were identified as a TAC by California Air Resources Board (CARB) in 1998, and were added to SCAQMD Rule 1401 list of compounds on March 7, 2008. Under the current AB2588 Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines Regulation, facility operators are required to include health risk impacts of any diesel exhaust particulate emissions from stationary emergency and prime compression ignition internal combustion engines, as well as portable diesel engines. The SCAQMD Governing Board has adopted risk levels for purposes of notification pursuant to the AB2588 program. Based on this guidance, if the cancer risk is Greater than 10 in a million the public must be notified. If the risk is Greater than 25 in one million the risk shall be mitigated.

The State of California's Office of Environmental Health Hazard Assessment (OEHHA) published revised health risk assessment guidance that places greater emphasis on early childhood exposure and suggests that construction projects as short as 2-6 months may warrant evaluation (OEHHA, 2015). Based on this guidance, this report assumes that if the cancer risks from TACs is Greater than 10 in a million the public must be notified. If the risk is Greater than 25 in one million the risk shall be mitigated. Risks below 10 in a million would be considered less than significant.

2.6 Local Air Quality

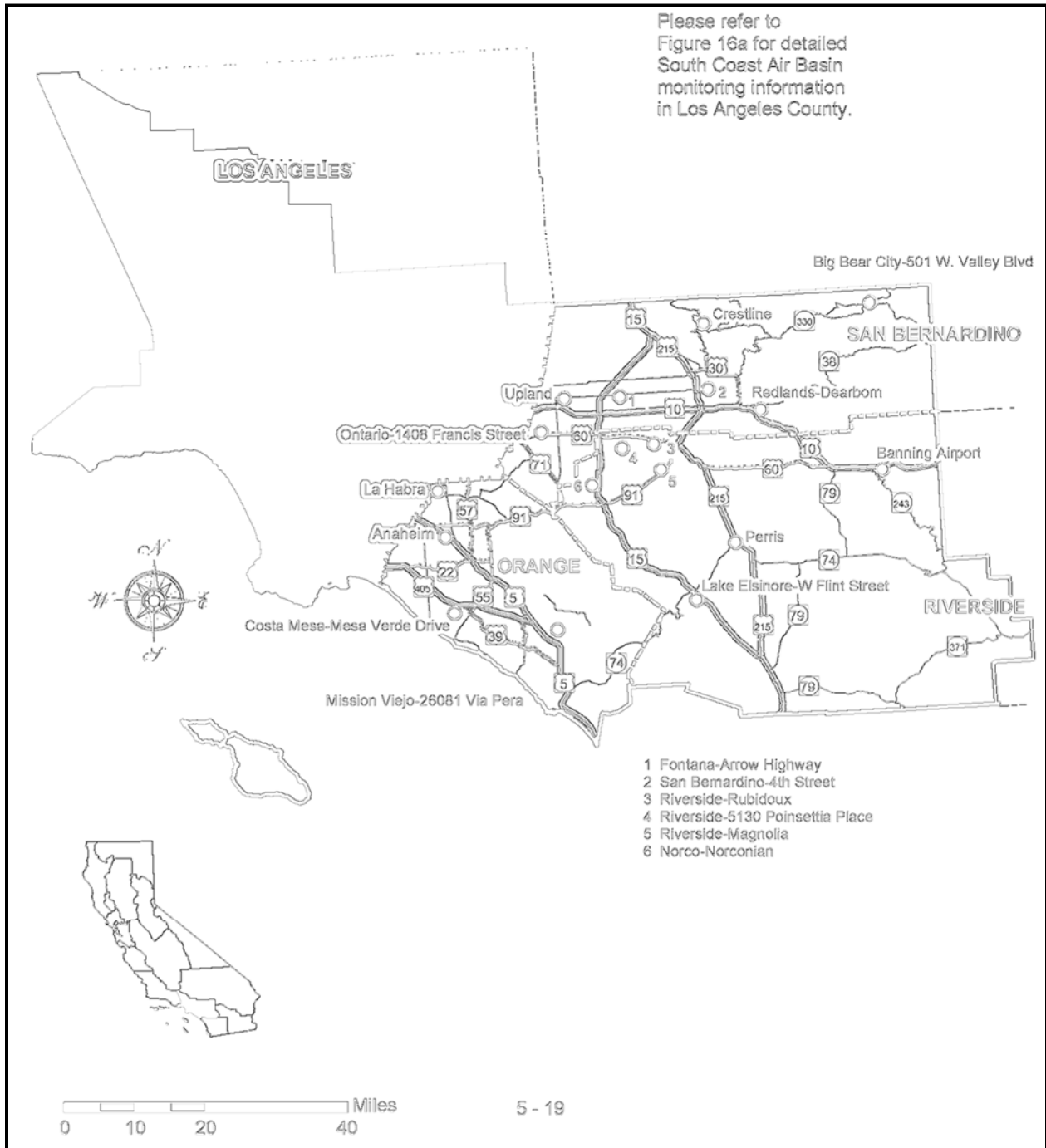
Criteria pollutants are measured continuously throughout the SCAB. This data is used to track ambient air quality patterns throughout the surrounding area. As mentioned earlier, this data is also used to determine attainment status when compared to the NAAQS and CAAQS. The SCAQMD is responsible for monitoring and reporting monitoring data. The District operates approximately 30 monitoring sites that collected data on criteria pollutants within the SCAB.

Ambient Data was obtained from the California Environmental Protection Agency's Air Resources Board Website (California Air Resources Board, 2018). Table 2.4 identifies the closest criteria pollutants monitored to the project as well as identifies the relative distance to the project site. The Lake Elsinore monitoring station is located approximately 8.76 miles from the proposed project site and is identified on Figure 2-A below.

Table 2.4: Three-Year Ambient Air Quality Summary near the Project Site

Pollutant	Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2015	2016	2017
O ₃ (ppm)	Lake Elsinore	1 Hour	0.09 ppm	-	0.131	0.124	0.121
	Lake Elsinore	8 Hour	0.070 ppm	0.075 ppm	0.098	0.093	0.098
PM ₁₀ (µg/m ³)	Lake Elsinore	24 Hour	50 µg/m ³	150 µg/m ³	90.7	99.7	134.1
	Lake Elsinore	Annual Arithmetic Mean	20 µg/m ³	-	20.1	22.4	23.6
PM _{2.5} (µg/m ³)	Lake Elsinore	24 Hour	-	35 µg/m ³	41.7	31.5	27.2
	Lake Elsinore	Annual Arithmetic Mean	12 µg/m ³	15 µg/m ³	-	9.7	11.3
NO ₂ (ppm)	Lake Elsinore	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.008	0.008	0.008
	Lake Elsinore	1 Hour	0.18 ppm	-	0.047	0.051	0.049
All ambient emissions reported are assumed to be taken by the district in compliance with both the NAAQS and CAAQS. Methodologies for those measurements are discussed in Table 2.1 of this report.							

Figure 2-A: Ambient Air Quality Monitoring Stations within SCAB – CARB



2.7 Localized Significance Thresholds

In June 2003 the SCAQMD proposed a methodology for calculating Localized Significance Thresholds (LSTs) for NO₂, CO, PM_{2.5} and PM₁₀. The LST methodology was developed to be used as a tool to assist lead agencies to analyze localized impacts associated with project-specific level proposed projects and would not be applicable to regional projects such as general plans. The LST methodology was last updated to incorporate the most recent ambient air quality standards (July 2008). (South Coast Air Quality Management District, 2008). The LST methodology is often utilized by most agencies governed under SCAQMD CEQA review.

SCAQMD developed mass rate look-up tables for projects less than five acres to assist agencies with development of LSTs, however LST guidelines recommend project specific air quality dispersion modeling for projects greater than five acres (South Coast Air Quality Management District, 2014).

Per the requirements of SCAQMDs LSTs methodology, emissions for gases in attainment such as NO₂ and CO are calculated by adding emission impacts from the project development to the peak background ambient NO₂ and CO concentrations and comparing the total concentration to the most stringent ambient air quality standards. Also, according to SCAQMD Rule 403, emissions for non-attainment particulate matter such as PM 10 and PM 2.5 can produce no more than 10.4 µg/m³. The LSTs derived by SCAQMD differentiated by Source Receptor area for which the proposed project is would be represented by SRA #25 within the Lake Elsinore area. The project was analyzed using a worst-case construction schedule where all three buildings and the parking are construction simultaneously using the appropriate equipment and quantities for this scenario and would be expected to have at least a 5 acres disturbed over the 10.5 acre site. Based on the lookup tables, thresholds are listed in Table 2.5 below (SCAQMD, 2009). The 25 meter distance was utilized as it is the worst-case LST.

Table 2.5: LST Emission Thresholds (5-Acre Site)

Pollutant	LST @ 25 meters (lb/day)
CO	1,965
PM ₁₀ (Construction)	13
PM ₁₀ (Operation)	4
PM _{2.5} (Construction)	8
PM _{2.5} (Operation)	2
NO ₂ (Corrected utilizing NO ₂ /NO _x Ratio) Construction and Operation	371

3.0 METHODOLOGY

3.1 Construction Emissions Calculations

Air Quality impacts related to construction and daily operations were calculated using the latest CalEEMod air quality model, which was developed by ENVIRON International Corporation for SCAQMD. The construction module in CalEEMod is used to calculate the emissions associated with the construction of the project and uses methodologies presented in the US EPA AP-42 document with emphasis on Chapter 11.9. The CalEEMod input/output model is shown in **Attachment A** to this report.

Air dispersion modeling for diesel exhaust will be completed uses AERSCREEN. The worst case annual exhaust emissions generated from the Project from construction was calculated within the CalEEMod model as reported within the annual outputs.

Once the dispersed concentrations of diesel particulates are estimated in the surrounding air, they are used to evaluate estimated exposure to people. Exposure is evaluated by calculating the dose in milligrams per kilogram body weight per day (mg/kg/d). For residential exposure, the breathing rates are determined for specific age groups, so inhalation dose (Dose-air) is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. The following algorithms calculate this dose for exposure through the inhalation pathways. The worst case cancer risk dose calculation is defined in Equation 1 below (OEHHA, 2015).

Equation 1

$$Dose_{air} = C_{air} * (BR/BW) * A * EF * (1 \times 10^{-6})$$

Dose _{air}	=	Dose through inhalation (mg/kg/d)
C _{air}	=	Concentration in air (µg/m ³) Annual average DPM concentration in µg/m ³ - AERSCREEN predicts a 1-hr concentration and is corrected to an annual average by multiplying the 1-hr average by 0.08 (US EPA, 1992)
BR/BW	=	Daily breathing rate normalized to body weight (L/kg BW-day). See Table I.2 for the daily breathing rate for each age range.
A	=	Inhalation absorption factor (assumed to be 1)
EF	=	Exposure frequency (unitless, days/365 days)
1x10 ⁻⁶	=	Milligrams to micrograms conversion (10 ⁻³ mg/ µg), cubic meters to liters conversion (10 ⁻³ m ³ /l)

Once the dose is determined then you must calculate the cancer risk. The average daily inhalation dose (mg/kg-day) multiplied by the cancer potency factor (mg/kg-day)⁻¹ will give the inhalation cancer risk (unitless), which is an expression of the chemical's cancer risk during a 70-year lifespan of exposure. For example, an inhalation cancer risk of 5 x 10⁻⁶ is the same as stating that an individual has an estimated probability of developing cancer from their exposure of 5 chances per million people exposed.

Cancer risk is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor, the frequency of time spent at home and the exposure duration divided by averaging time, to yield the excess cancer risk. As described below, the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk for any given location. Specific factors as modeled are shown within the project models attached to this report. The worst case cancer risk calculation is defined in Equation 2 below (OEHHA, 2015).

Equation 2 $RISK_{inh-res} = DOSE_{air} \times CPF \times ASF \times ED/AT \times FAH$

RISK _{inh-res}	=	Residential inhalation cancer risk
DOSE _{air}	=	Daily inhalation dose (mg/kg-day)
CPF	=	Inhalation cancer potency factor (mg/kg-day ⁻¹)
ASF	=	Age sensitivity factor for a specified age group (unitless)
ED	=	Exposure duration (in years) for a specified age group
AT	=	Averaging time for lifetime cancer risk (years)
FAH	=	Fraction of time spent at home (unitless)

OEHHA recommends that an exposure duration (residency time) of 30 years be used to estimate individual cancer risk for the Maximally Exposed Individual Resident (MEIR). OEHHA also recommends that the 30-year exposure duration be used as the basis for public notification and risk reduction audits and plans.

Exposure durations of 9-years and 70-years are also recommended to be evaluated for the MEIR to show the range of cancer risk based on residency periods. If a facility is notifying the public regarding cancer risk, the 9-and 70-year cancer risk estimates are useful for people who have resided in their current residence for periods shorter and longer than 30 years.

Demonstrating a projects compliance with OEHHA Cancer Risk thresholds are a significant part of demonstrating compliance with SCAQMDs AQMP and is critical to insuring less than significant impacts to question D identified in Section 2.4 above.

3.2 Construction Assumptions

The Project construction dates were estimated based on a construction kickoff starting in early 2020 and completing the project roughly one year later. Construction of the project is likely to be phased however, for purposes of this air quality analysis, a worst-case scenario was used assuming all construction operations would occur simultaneously. Based on the site review including the parking area, roughly 5 acres of the 10.5-acre project site would be disturbed. Table 3.1 on the following page shows the expected timeframes as well as the expected number of pieces of equipment to complete the project for the scenario identified.

As part of the project, some of the existing asphalt will be removed and replaced. It's expected that no more than 1,100 CY of materials will be exported with roughly 109 hauling trips. All asphalt materials exported will be recycled offsite.

Table 3.1: Expected Construction Equipment

Equipment Identification	Start Dates	Completion Dates	Quantity
Site Preparation	01/01/2020	01/07/2020	
Tractors/Loaders/Backhoes			3
Grading	01/08/2020	01/17/2020	
Excavators			1
Graders			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			3
Paving	01/18/2020	02/12/2020	
Pavers			1
Paving Equipment			2
Rollers			2
Building Construction	02/13/2020	12/30/2020	
Cranes			1
Forklifts			3
Generator Sets			1
Tractors/Loaders/Backhoes			3
Welders			1
Architectural Coating	04/23/2020	12/30/2020	
Air Compressors			1
This equipment list is based upon equipment inventory within CALLEEMOD 2016.3.2. The quantity and types are based upon discussions with the project applicant.			

3.3 Operational Emissions

Once construction is completed the proposed project would generate emissions from daily operations which would include sources such as Area, Energy, Mobile, Waste and Water uses, which are also calculated within CalEEMod. Area Sources include consumer products, landscaping and architectural coatings as part of regular maintenance. Energy sources would be from uses such as electricity and natural gas. Finally, mobile or transportation related emissions are calculated in CalEEMod through the use of EMFAC2014 and is based on trip generation rates provided by the project traffic engineer. Based on that study, the proposed project would generate 300 trips on Saturday and 367 trips on Sunday (RK Engineering Group, Inc., 2018). These trips were added into the model. The operational model is also included in CalEEMod **Attachments A** at the end of this report.

In the EMFAC model, the emission rates are multiplied with vehicle activity data provided by the regional transportation agencies to calculate the statewide or regional emission inventories. An emission inventory is based on the emission rate (e.g., grams per pollutant emitted over a mile) and vehicle activity (e.g., miles driven per day). Area sources originate from daily onsite uses, which require either burning fuel to generate energy (i.e. natural gas fireplaces, gas furnaces, gas water heaters and small engines) or the evaporation of organic gases such as from paints (architectural coatings).

The CalEEMod model estimates emission predictions for ROG, NO_x, CO, SO₂, PM₁₀ and PM_{2.5} for area source assumptions. It is assumed that 100% of the facilities will have access to Natural Gas as opposed to propane. Additionally, it was assumed that 10% of the structural surface area will be re-painted each year.

Consumer product emissions are generated by a wide range of product categories, including air fresheners, automotive products, household cleaners, and personal care products. Emissions associated with these products primarily depend on the increased population associated with residential development.

3.4 Odor Impacts (Onsite)

Potential onsite odor generators would include short term construction odors from activities such as paving and possibly painting. The construction odors would be considered short term and would not be considered an impact. Given this the Project will not have a potential to create offensive odors and would therefore not be considered an impact under CEQA.

4.0 FINDINGS

4.1 Construction Findings

Based on the input parameters identified in Section 3.2 of this report, no significant construction impacts are expected. Table 4.1 below shows the calculated emissions from construction.

Table 4.1: Expected Construction Emissions Summary

Year	ROG	NO_x	CO	SO₂	PM₁₀ (Dust)	PM₁₀ (Exhaust)	PM₁₀ (Total)	PM_{2.5} (Dust)	PM_{2.5} (Exhaust)	PM_{2.5} (Total)
2020 (lb/day)	2.33	5.68	22.41	0.04	6.72	0.06	6.77	3.41	0.06	3.46
Significance Threshold (lb/day)	75	100	550	150	-	-	150	-	-	55
Exceeds Screening Threshold	No	No	No	No	-	-	No	-	-	No

4.2 Operational Findings

Once construction is completed the proposed project would generate air quality emissions from daily operations which would include sources such as Area, Energy, Mobile, Solid Waste and Water uses, which are calculated within CalEEMod. Area sources are from consumer products, landscaping and architectural coatings which can be attributed to regular maintenance. Energy sources would be from uses such as electricity and natural gas. Based on the input parameters identified in Section 3.3 of this report no operational impacts would be expected. Operational emissions for the first assumed operational year 2021 are shown in Table 4.2 on the following page.

Table 4.2: Expected Daily Pollutant Generation

	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Summer Scenario						
Area Source Emission Estimates (Lb/Day)	0.660	0.000	0.030	0.000	0.000	0.000
Energy Source Emissions (Lb/Day)	0.026	0.239	0.201	0.001	0.018	0.018
Operational Vehicle Emissions (Lb/Day)	0.649	4.427	6.090	0.025	1.686	0.462
Total with Design Features (Lb/Day)	1.336	4.667	6.321	0.026	1.704	0.481
SCAQMD Thresholds	55	55	550	150	150	55
Significant?	Yes	No	No	No	No	No
Winter Scenario						
Area Source Emission Estimates (Lb/Day)	0.660	0.000	0.030	0.000	0.000	0.000
Energy Source Emissions (Lb/Day)	0.026	0.239	0.201	0.001	0.018	0.018
Operational Vehicle Emissions (Lb/Day)	0.544	4.393	5.448	0.023	1.686	0.4625
Total with Design Features (Lb/Day)	1.230	4.632	5.679	0.024	1.704	0.481
Significant?	No	No	No	No	No	No
Daily pollutant generation assumes trip distances within CALLEEMOD 2016.3.2						

4.3 Localized Significance Thresholds

SCAQMD also recommends using LST methodology which incorporates background ambient air quality data. Table 4.3 shows the modeled estimates for both construction and operations excluding offsite mobile emissions. Furthermore, the worst case LST is at 25 meters from the project centroid and will be utilized for this project. Since this is worst case, if the project complies at 25 meters, it will comply at all locations beyond this distance. Based on the modeling results, no LST impacts are expected.

Table 4.3: On-Site Daily Emissions for Comparison to LSTs (Unmitigated)

Pollutant	Project without Offsite mobile emissions (lb/day)	LST SRA 25 5-Acre (lb/day)	Significant?
CO (Construction)	55.26	1,965	No
CO (Operation)	0.23	1,965	No
PM ₁₀ (Construction)	7.53	13	No
PM ₁₀ (Operation)	0.02	4	No
PM _{2.5} (Construction)	3.59	8	No
PM _{2.5} (Operation)	0.02	2	No
NO _x (Construction)	5.27	371	No
NO _x (Operation)	0.24	371	No

4.4 Health Risk

Based upon the air quality modeling, worst-case onsite PM₁₀ from onsite construction equipment would cumulatively produce 0.0055 tons over the construction duration (364-working days) or an average of 0.000158 grams/second. It should be noted the project would utilize Tier IV equipment.

Utilizing the AERSCREEN dispersion model, we find that the peak maximum concentration is 0.2959 µg/m³ during construction. Therefore, utilizing the risk equation identified above in Section 3.1, the inhalation cancer risk for 70 years is 4.22 which will not exceed the 10 in one million thresholds. It should be noted that the design feature to utilize Tier IV diesel construction equipment during construction will be a condition to this project. Given this, the construction scenario as analyzed would be considered less than significant under CEQA and would be in compliance. The PM₁₀ exhaust AERSCREEN input/output is provided in **Attachment B**. Also, the Cancer Risk calculations is provided in **Attachment C**.

4.5 Odor Impact Findings

Odor impacts from construction operations would be considered short term events and would not be considered an impact. Long term operations will not create offensive odors and would not create any operational odor impacts.

4.6 Conclusion of Findings

During construction of the proposed Project, fugitive dust emissions would be expected but would not exceed thresholds established by the South Coast Air Quality Management District

(SCAQMD). Given this, no construction mitigation will require mitigation. Furthermore, the project would not generate localized significance threshold impacts. It should be noted that the project will only utilize Tier IV construction equipment and was analyzed as such. Based on this, Tier IV construction equipment would be required and would be a condition to this project's approval.

Additionally, emissions will be generated from both project area and operational sources once the project is fully operational in 2020 though no air quality impacts would be expected. The project was analyzed under localized significance thresholds for both construction and operations and was found to generate less than significant impacts.

Finally, the proposed Project would not be expected to generate offensive odors and would therefore not impact any sensitive receptors.

The proposed project was found to add vehicular trips impacted intersections and would be required to contribute traffic impact fees to mitigate these future cumulative impacts. Based on this, no cumulative impacts would be expected for air quality. Based on this, the project would not generate any significant air quality cumulative impacts. No additional mitigation measures are necessary per CEQA guidelines.

5.0 REFERENCES

- California Air Resources Board. (2018). *www.arb.gov*. Retrieved from iADAM: Air Quality Data Statistics: <https://www.arb.ca.gov/adam/topfour/topfourdisplay.php>
- California Air Resources Board. (5/4/2016). *www.arb.ca.gov*. Retrieved from Ambient Air Quality Standards: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>
- Charls Brown Architect. (2018). *ST. FRANCES OF ROME CATHOLIC CHURCH*.
- Google. (2018). Retrieved from www.maps.google.com
- OEHHA. (2015). *Risk Assessment Guidelines - Guidance Manual for Preparation of Health Risk Assessments*. OEHHHA. Retrieved from http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf
- RK Engineering Group, Inc. (2018). *St. Francis of Rome - Traffic Impact Analysis*.
- SCAQMD. (2009, Oct 21). *Localized Significance Thresholds Lookup Tables*. Retrieved 2015, from <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2>
- SCAQMD. (2015). Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics “Hot Spots” Information and Assessment Act. Diamond Bar: South Coast Air Quality Management District. Retrieved 2016, from <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588-risk-assessment-guidelines.pdf?sfvrsn=6>
- SCAQMD. (2016). Air Quality Management Plan (AQMP). CA. Retrieved June 6, 2016, from <http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp>
- South Coast Air Quality Management District. (2008, July). *Finalized Localized Significance Threshold Methodology*. Retrieved from <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf>
- South Coast Air Quality Management District. (2014). *Localized Significance Thresholds*. Retrieved 2014, from <http://aqmd.gov/ceqa/handbook/LST/LST.html>
- U.S. Climate Data. (2018). *Wildomar Climate Data*. Retrieved 2017, from <https://www.usclimatedata.com/climate/lake-elsinore/california/united-states/usca1648>
- US EPA. (1992). *Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised*. US EPA. Retrieved from http://www.epa.gov/scram001/guidance/guide/EPA-454R-92-019_OCR.pdf

ATTACHMENT A

CALLEEMOD 2016.3.2

St. Frances of Rome - Riverside-South Coast County, Summer

St. Frances of Rome
Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	27.40	1000sqft	2.50	27,400.00	0
Parking Lot	263.00	Space	2.37	105,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

St. Frances of Rome - Riverside-South Coast County, Summer

Project Characteristics -

Land Use - 17.6 for church 9.8 for offices

Construction Phase - estimated construction schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - ce

Off-road Equipment - ce

Trips and VMT -

Grading - During Site Prep, the existing 2 acre paving (approx 1,100 CY) will be removed and exported offsite for recycling.

Vehicle Trips - Per TS

Construction Off-road Equipment Mitigation - Tier IV

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

St. Frances of Rome - Riverside-South Coast County, Summer

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	180.00
tblGrading	MaterialExported	0.00	1,100.00
tblLandUse	LotAcreage	0.63	2.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblVehicleTrips	ST_TR	10.37	10.94
tblVehicleTrips	SU_TR	36.63	13.39
tblVehicleTrips	WD_TR	9.11	0.00

2.0 Emissions Summary

St. Frances of Rome - Riverside-South Coast County, Summer

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6602	2.7000e-004	0.0298	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0636	0.0636	1.7000e-004		0.0678
Energy	0.0263	0.2391	0.2009	1.4300e-003		0.0182	0.0182		0.0182	0.0182		286.9383	286.9383	5.5000e-003	5.2600e-003	288.6434
Mobile	0.6491	4.4274	6.0902	0.0246	1.6689	0.0168	1.6856	0.4465	0.0157	0.4623		2,508.4512	2,508.4512	0.1454		2,512.0861
Total	1.3355	4.6667	6.3208	0.0260	1.6689	0.0351	1.7039	0.4465	0.0340	0.4806		2,795.4530	2,795.4530	0.1511	5.2600e-003	2,800.7973

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6602	2.7000e-004	0.0298	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0636	0.0636	1.7000e-004		0.0678
Energy	0.0263	0.2391	0.2009	1.4300e-003		0.0182	0.0182		0.0182	0.0182		286.9383	286.9383	5.5000e-003	5.2600e-003	288.6434
Mobile	0.6491	4.4274	6.0902	0.0246	1.6689	0.0168	1.6856	0.4465	0.0157	0.4623		2,508.4512	2,508.4512	0.1454		2,512.0861
Total	1.3355	4.6667	6.3208	0.0260	1.6689	0.0351	1.7039	0.4465	0.0340	0.4806		2,795.4530	2,795.4530	0.1511	5.2600e-003	2,800.7973

St. Frances of Rome - Riverside-South Coast County, Summer

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2020	1/7/2020	5	5	
2	Grading	Grading	1/8/2020	1/17/2020	5	8	
3	Paving	Paving	1/18/2020	2/12/2020	5	18	
4	Building Construction	Building Construction	2/13/2020	12/30/2020	5	230	
5	Architectural Coating	Architectural Coating	4/23/2020	12/30/2020	5	180	

Acres of Grading (Site Preparation Phase): 4

Acres of Grading (Grading Phase): 4

Acres of Paving: 2.37

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 41,100; Non-Residential Outdoor: 13,700; Striped Parking Area: 6,312 (Architectural Coating – sqft)

OffRoad Equipment

St. Frances of Rome - Riverside-South Coast County, Summer

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	109.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	56.00	22.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

St. Frances of Rome - Riverside-South Coast County, Summer

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8484	0.0000	0.8484	0.0916	0.0000	0.0916			0.0000			0.0000
Off-Road	0.6285	6.3154	6.8391	9.3200e-003		0.3994	0.3994		0.3674	0.3674		902.3055	902.3055	0.2918		909.6011
Total	0.6285	6.3154	6.8391	9.3200e-003	0.8484	0.3994	1.2478	0.0916	0.3674	0.4590		902.3055	902.3055	0.2918		909.6011

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	0.1121	5.1619	0.6369	0.0166	0.3814	0.0165	0.3978	0.1045	0.0157	0.1203		1,760.9326	1,760.9326	0.1049		1,763.5562
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	0.0407	0.0241	0.3226	8.8000e-004	0.0894	5.4000e-004	0.0900	0.0237	5.0000e-004	0.0242		88.1276	88.1276	2.2600e-003		88.1840
Total	0.1528	5.1860	0.9595	0.0175	0.4708	0.0170	0.4878	0.1283	0.0162	0.1445		1,849.0602	1,849.0602	0.1072		1,851.7402

St. Frances of Rome - Riverside-South Coast County, Summer

3.2 Site Preparation - 2020

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					0.8484	0.0000	0.8484	0.0916	0.0000	0.0916			0.0000			0.0000
Off-Road	0.1139	0.4937	7.0262	9.3200e-003		0.0152	0.0152		0.0152	0.0152	0.0000	902.3055	902.3055	0.2918		909.6011
Total	0.1139	0.4937	7.0262	9.3200e-003	0.8484	0.0152	0.8636	0.0916	0.0152	0.1068	0.0000	902.3055	902.3055	0.2918		909.6011

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	0.1121	5.1619	0.6369	0.0166	0.3814	0.0165	0.3978	0.1045	0.0157	0.1203		1,760.9326	1,760.9326	0.1049		1,763.5562
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	0.0407	0.0241	0.3226	8.8000e-004	0.0894	5.4000e-004	0.0900	0.0237	5.0000e-004	0.0242		88.1276	88.1276	2.2600e-003		88.1840
Total	0.1528	5.1860	0.9595	0.0175	0.4708	0.0170	0.4878	0.1283	0.0162	0.1445		1,849.0602	1,849.0602	0.1072		1,851.7402

St. Frances of Rome - Riverside-South Coast County, Summer

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.4851	2,872.4851	0.9290		2,895.7106
Total	2.4288	26.3859	16.0530	0.0297	6.5523	1.2734	7.8258	3.3675	1.1716	4.5390		2,872.4851	2,872.4851	0.9290		2,895.7106

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0763	0.0451	0.6048	1.6600e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		165.2392	165.2392	4.2400e-003		165.3451
Total	0.0763	0.0451	0.6048	1.6600e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		165.2392	165.2392	4.2400e-003		165.3451

St. Frances of Rome - Riverside-South Coast County, Summer

3.3 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106
Total	0.3632	1.5737	17.7527	0.0297	6.5523	0.0484	6.6008	3.3675	0.0484	3.4159	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0763	0.0451	0.6048	1.6600e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		165.2392	165.2392	4.2400e-003		165.3451
Total	0.0763	0.0451	0.6048	1.6600e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		165.2392	165.2392	4.2400e-003		165.3451

St. Frances of Rome - Riverside-South Coast County, Summer

3.4 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8861	9.1440	9.5399	0.0148		0.4963	0.4963		0.4566	0.4566		1,428.1640	1,428.1640	0.4619		1,439.7115
Paving	0.3450					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2311	9.1440	9.5399	0.0148		0.4963	0.4963		0.4566	0.4566		1,428.1640	1,428.1640	0.4619		1,439.7115

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	0.0662	0.0391	0.5242	1.4400e-003	0.1453	8.8000e-004	0.1462	0.0385	8.1000e-004	0.0394		143.2073	143.2073	3.6700e-003		143.2991
Total	0.0662	0.0391	0.5242	1.4400e-003	0.1453	8.8000e-004	0.1462	0.0385	8.1000e-004	0.0394		143.2073	143.2073	3.6700e-003		143.2991

St. Frances of Rome - Riverside-South Coast County, Summer

3.4 Paving - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1815	0.7863	11.1902	0.0148		0.0242	0.0242		0.0242	0.0242	0.0000	1,428.1640	1,428.1640	0.4619		1,439.7115
Paving	0.3450					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.5264	0.7863	11.1902	0.0148		0.0242	0.0242		0.0242	0.0242	0.0000	1,428.1640	1,428.1640	0.4619		1,439.7115

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	0.0662	0.0391	0.5242	1.4400e-003	0.1453	8.8000e-004	0.1462	0.0385	8.1000e-004	0.0394		143.2073	143.2073	3.6700e-003		143.2991
Total	0.0662	0.0391	0.5242	1.4400e-003	0.1453	8.8000e-004	0.1462	0.0385	8.1000e-004	0.0394		143.2073	143.2073	3.6700e-003		143.2991

St. Frances of Rome - Riverside-South Coast County, Summer

3.5 Building Construction - 2020

Unmitigated Construction On-Site

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

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	0.0613	2.2636	0.4141	5.7500e-003	0.1409	0.0129	0.1538	0.0406	0.0123	0.0529		605.8600	605.8600	0.0454		606.9961
Worker	0.2850	0.1685	2.2580	6.1900e-003	0.6260	3.7900e-003	0.6297	0.1660	3.4900e-003	0.1695		616.8929	616.8929	0.0158		617.2883
Total	0.3463	2.4322	2.6721	0.0119	0.7668	0.0167	0.7835	0.2066	0.0158	0.2224		1,222.7530	1,222.7530	0.0613		1,224.2843

St. Frances of Rome - Riverside-South Coast County, Summer

3.5 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5

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	0.0613	2.2636	0.4141	5.7500e-003	0.1409	0.0129	0.1538	0.0406	0.0123	0.0529		605.8600	605.8600	0.0454		606.9961
Worker	0.2850	0.1685	2.2580	6.1900e-003	0.6260	3.7900e-003	0.6297	0.1660	3.4900e-003	0.1695		616.8929	616.8929	0.0158		617.2883
Total	0.3463	2.4322	2.6721	0.0119	0.7668	0.0167	0.7835	0.2066	0.0158	0.2224		1,222.753 0	1,222.753 0	0.0613		1,224.284 3

St. Frances of Rome - Riverside-South Coast County, Summer

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.5736					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	1.8158	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

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	0.0560	0.0331	0.4435	1.2200e-003	0.1230	7.4000e-004	0.1237	0.0326	6.9000e-004	0.0333		121.1754	121.1754	3.1100e-003		121.2531
Total	0.0560	0.0331	0.4435	1.2200e-003	0.1230	7.4000e-004	0.1237	0.0326	6.9000e-004	0.0333		121.1754	121.1754	3.1100e-003		121.2531

St. Frances of Rome - Riverside-South Coast County, Summer

3.6 Architectural Coating - 2020

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	1.5736					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0218		281.9928
Total	1.6033	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0218		281.9928

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	0.0560	0.0331	0.4435	1.2200e-003	0.1230	7.4000e-004	0.1237	0.0326	6.9000e-004	0.0333		121.1754	121.1754	3.1100e-003		121.2531
Total	0.0560	0.0331	0.4435	1.2200e-003	0.1230	7.4000e-004	0.1237	0.0326	6.9000e-004	0.0333		121.1754	121.1754	3.1100e-003		121.2531

4.0 Operational Detail - Mobile

St. Frances of Rome - Riverside-South Coast County, Summer

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6491	4.4274	6.0902	0.0246	1.6689	0.0168	1.6856	0.4465	0.0157	0.4623		2,508.451 2	2,508.451 2	0.1454		2,512.086 1
Unmitigated	0.6491	4.4274	6.0902	0.0246	1.6689	0.0168	1.6856	0.4465	0.0157	0.4623		2,508.451 2	2,508.451 2	0.1454		2,512.086 1

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Place of Worship	0.00	299.76	366.89	203,115	203,115
Total	0.00	299.76	366.89	203,115	203,115

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
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	64	25	11

4.4 Fleet Mix

St. Frances of Rome - Riverside-South Coast County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038
Place of Worship	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0263	0.2391	0.2009	1.4300e-003		0.0182	0.0182		0.0182	0.0182		286.9383	286.9383	5.5000e-003	5.2600e-003	288.6434
NaturalGas Unmitigated	0.0263	0.2391	0.2009	1.4300e-003		0.0182	0.0182		0.0182	0.0182		286.9383	286.9383	5.5000e-003	5.2600e-003	288.6434

St. Frances of Rome - Riverside-South Coast County, 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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	2438.98	0.0263	0.2391	0.2009	1.4300e-003		0.0182	0.0182		0.0182	0.0182		286.9383	286.9383	5.5000e-003	5.2600e-003	288.6434
Total		0.0263	0.2391	0.2009	1.4300e-003		0.0182	0.0182		0.0182	0.0182		286.9383	286.9383	5.5000e-003	5.2600e-003	288.6434

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	2.43898	0.0263	0.2391	0.2009	1.4300e-003		0.0182	0.0182		0.0182	0.0182		286.9383	286.9383	5.5000e-003	5.2600e-003	288.6434
Total		0.0263	0.2391	0.2009	1.4300e-003		0.0182	0.0182		0.0182	0.0182		286.9383	286.9383	5.5000e-003	5.2600e-003	288.6434

6.0 Area Detail

6.1 Mitigation Measures Area

St. Frances of Rome - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6602	2.7000e-004	0.0298	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0636	0.0636	1.7000e-004		0.0678
Unmitigated	0.6602	2.7000e-004	0.0298	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0636	0.0636	1.7000e-004		0.0678

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	0.0776					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5798					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7800e-003	2.7000e-004	0.0298	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0636	0.0636	1.7000e-004		0.0678
Total	0.6602	2.7000e-004	0.0298	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0636	0.0636	1.7000e-004		0.0678

St. Frances of Rome - Riverside-South Coast County, 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	0.0776					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5798					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7800e-003	2.7000e-004	0.0298	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0636	0.0636	1.7000e-004		0.0678
Total	0.6602	2.7000e-004	0.0298	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0636	0.0636	1.7000e-004		0.0678

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

St. Frances of Rome - Riverside-South Coast County, Summer

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

Boilers

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

User Defined Equipment

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

11.0 Vegetation

St. Frances of Rome - Riverside-South Coast County, Winter

St. Frances of Rome
Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	27.40	1000sqft	2.50	27,400.00	0
Parking Lot	263.00	Space	2.37	105,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

St. Frances of Rome - Riverside-South Coast County, Winter

Project Characteristics -

Land Use - 17.6 for church 9.8 for offices

Construction Phase - estimated construction schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - ce

Off-road Equipment - ce

Trips and VMT -

Grading - During Site Prep, the existing 2 acre paving (approx 1,100 CY) will be removed and exported offsite for recycling.

Vehicle Trips - Per TS

Construction Off-road Equipment Mitigation - Tier IV

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

St. Frances of Rome - Riverside-South Coast County, Winter

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	180.00
tblGrading	MaterialExported	0.00	1,100.00
tblLandUse	LotAcreage	0.63	2.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblVehicleTrips	ST_TR	10.37	10.94
tblVehicleTrips	SU_TR	36.63	13.39
tblVehicleTrips	WD_TR	9.11	0.00

2.0 Emissions Summary

St. Frances of Rome - Riverside-South Coast County, Winter

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6602	2.7000e-004	0.0298	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0636	0.0636	1.7000e-004		0.0678
Energy	0.0263	0.2391	0.2009	1.4300e-003		0.0182	0.0182		0.0182	0.0182		286.9383	286.9383	5.5000e-003	5.2600e-003	288.6434
Mobile	0.5436	4.3927	5.4480	0.0226	1.6689	0.0170	1.6859	0.4465	0.0160	0.4625		2,310.0334	2,310.0334	0.1533		2,313.8656
Total	1.2300	4.6320	5.6786	0.0240	1.6689	0.0353	1.7042	0.4465	0.0343	0.4808		2,597.0352	2,597.0352	0.1590	5.2600e-003	2,602.5768

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6602	2.7000e-004	0.0298	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0636	0.0636	1.7000e-004		0.0678
Energy	0.0263	0.2391	0.2009	1.4300e-003		0.0182	0.0182		0.0182	0.0182		286.9383	286.9383	5.5000e-003	5.2600e-003	288.6434
Mobile	0.5436	4.3927	5.4480	0.0226	1.6689	0.0170	1.6859	0.4465	0.0160	0.4625		2,310.0334	2,310.0334	0.1533		2,313.8656
Total	1.2300	4.6320	5.6786	0.0240	1.6689	0.0353	1.7042	0.4465	0.0343	0.4808		2,597.0352	2,597.0352	0.1590	5.2600e-003	2,602.5768

St. Frances of Rome - Riverside-South Coast County, Winter

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2020	1/7/2020	5	5	
2	Grading	Grading	1/8/2020	1/17/2020	5	8	
3	Paving	Paving	1/18/2020	2/12/2020	5	18	
4	Building Construction	Building Construction	2/13/2020	12/30/2020	5	230	
5	Architectural Coating	Architectural Coating	4/23/2020	12/30/2020	5	180	

Acres of Grading (Site Preparation Phase): 4

Acres of Grading (Grading Phase): 4

Acres of Paving: 2.37

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 41,100; Non-Residential Outdoor: 13,700; Striped Parking Area: 6,312 (Architectural Coating – sqft)

OffRoad Equipment

St. Frances of Rome - Riverside-South Coast County, Winter

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	109.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	56.00	22.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

St. Frances of Rome - Riverside-South Coast County, Winter

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8484	0.0000	0.8484	0.0916	0.0000	0.0916			0.0000			0.0000
Off-Road	0.6285	6.3154	6.8391	9.3200e-003		0.3994	0.3994		0.3674	0.3674		902.3055	902.3055	0.2918		909.6011
Total	0.6285	6.3154	6.8391	9.3200e-003	0.8484	0.3994	1.2478	0.0916	0.3674	0.4590		902.3055	902.3055	0.2918		909.6011

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	0.1179	5.2071	0.7460	0.0162	0.3814	0.0167	0.3980	0.1045	0.0160	0.1205		1,716.8760	1,716.8760	0.1149		1,719.7477
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	0.0399	0.0249	0.2609	7.9000e-004	0.0894	5.4000e-004	0.0900	0.0237	5.0000e-004	0.0242		79.0589	79.0589	1.9600e-003		79.1080
Total	0.1578	5.2320	1.0069	0.0170	0.4708	0.0172	0.4880	0.1283	0.0165	0.1447		1,795.9349	1,795.9349	0.1168		1,798.8556

St. Frances of Rome - Riverside-South Coast County, Winter

3.2 Site Preparation - 2020

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					0.8484	0.0000	0.8484	0.0916	0.0000	0.0916			0.0000			0.0000
Off-Road	0.1139	0.4937	7.0262	9.3200e-003		0.0152	0.0152		0.0152	0.0152	0.0000	902.3055	902.3055	0.2918		909.6011
Total	0.1139	0.4937	7.0262	9.3200e-003	0.8484	0.0152	0.8636	0.0916	0.0152	0.1068	0.0000	902.3055	902.3055	0.2918		909.6011

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	0.1179	5.2071	0.7460	0.0162	0.3814	0.0167	0.3980	0.1045	0.0160	0.1205		1,716.8760	1,716.8760	0.1149		1,719.7477
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	0.0399	0.0249	0.2609	7.9000e-004	0.0894	5.4000e-004	0.0900	0.0237	5.0000e-004	0.0242		79.0589	79.0589	1.9600e-003		79.1080
Total	0.1578	5.2320	1.0069	0.0170	0.4708	0.0172	0.4880	0.1283	0.0165	0.1447		1,795.9349	1,795.9349	0.1168		1,798.8556

St. Frances of Rome - Riverside-South Coast County, Winter

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.4851	2,872.4851	0.9290		2,895.7106
Total	2.4288	26.3859	16.0530	0.0297	6.5523	1.2734	7.8258	3.3675	1.1716	4.5390		2,872.4851	2,872.4851	0.9290		2,895.7106

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	0.0748	0.0467	0.4893	1.4900e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		148.2354	148.2354	3.6800e-003		148.3274
Total	0.0748	0.0467	0.4893	1.4900e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		148.2354	148.2354	3.6800e-003		148.3274

St. Frances of Rome - Riverside-South Coast County, Winter

3.3 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484	0.0000	2,872.485 1	2,872.485 1	0.9290		2,895.710 6
Total	0.3632	1.5737	17.7527	0.0297	6.5523	0.0484	6.6008	3.3675	0.0484	3.4159	0.0000	2,872.485 1	2,872.485 1	0.9290		2,895.710 6

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	0.0748	0.0467	0.4893	1.4900e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		148.2354	148.2354	3.6800e-003		148.3274
Total	0.0748	0.0467	0.4893	1.4900e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		148.2354	148.2354	3.6800e-003		148.3274

St. Frances of Rome - Riverside-South Coast County, Winter

3.4 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8861	9.1440	9.5399	0.0148		0.4963	0.4963		0.4566	0.4566		1,428.1640	1,428.1640	0.4619		1,439.7115
Paving	0.3450					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2311	9.1440	9.5399	0.0148		0.4963	0.4963		0.4566	0.4566		1,428.1640	1,428.1640	0.4619		1,439.7115

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	0.0648	0.0405	0.4240	1.2900e-003	0.1453	8.8000e-004	0.1462	0.0385	8.1000e-004	0.0394		128.4707	128.4707	3.1900e-003		128.5504
Total	0.0648	0.0405	0.4240	1.2900e-003	0.1453	8.8000e-004	0.1462	0.0385	8.1000e-004	0.0394		128.4707	128.4707	3.1900e-003		128.5504

St. Frances of Rome - Riverside-South Coast County, Winter

3.4 Paving - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1815	0.7863	11.1902	0.0148		0.0242	0.0242		0.0242	0.0242	0.0000	1,428.1640	1,428.1640	0.4619		1,439.7115
Paving	0.3450					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.5264	0.7863	11.1902	0.0148		0.0242	0.0242		0.0242	0.0242	0.0000	1,428.1640	1,428.1640	0.4619		1,439.7115

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	0.0648	0.0405	0.4240	1.2900e-003	0.1453	8.8000e-004	0.1462	0.0385	8.1000e-004	0.0394		128.4707	128.4707	3.1900e-003		128.5504
Total	0.0648	0.0405	0.4240	1.2900e-003	0.1453	8.8000e-004	0.1462	0.0385	8.1000e-004	0.0394		128.4707	128.4707	3.1900e-003		128.5504

St. Frances of Rome - Riverside-South Coast County, Winter

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5

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	0.0647	2.2518	0.4849	5.5300e-003	0.1409	0.0130	0.1539	0.0406	0.0125	0.0530		583.0941	583.0941	0.0506		584.3583
Worker	0.2791	0.1744	1.8266	5.5500e-003	0.6260	3.7900e-003	0.6297	0.1660	3.4900e-003	0.1695		553.4121	553.4121	0.0138		553.7557
Total	0.3438	2.4261	2.3115	0.0111	0.7668	0.0168	0.7837	0.2066	0.0160	0.2225		1,136.506 1	1,136.506 1	0.0643		1,138.114 0

St. Frances of Rome - Riverside-South Coast County, Winter

3.5 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5

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	0.0647	2.2518	0.4849	5.5300e-003	0.1409	0.0130	0.1539	0.0406	0.0125	0.0530		583.0941	583.0941	0.0506		584.3583
Worker	0.2791	0.1744	1.8266	5.5500e-003	0.6260	3.7900e-003	0.6297	0.1660	3.4900e-003	0.1695		553.4121	553.4121	0.0138		553.7557
Total	0.3438	2.4261	2.3115	0.0111	0.7668	0.0168	0.7837	0.2066	0.0160	0.2225		1,136.506 1	1,136.506 1	0.0643		1,138.114 0

St. Frances of Rome - Riverside-South Coast County, Winter

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.5736					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	1.8158	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

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	0.0548	0.0343	0.3588	1.0900e-003	0.1230	7.4000e-004	0.1237	0.0326	6.9000e-004	0.0333		108.7059	108.7059	2.7000e-003		108.7734
Total	0.0548	0.0343	0.3588	1.0900e-003	0.1230	7.4000e-004	0.1237	0.0326	6.9000e-004	0.0333		108.7059	108.7059	2.7000e-003		108.7734

St. Frances of Rome - Riverside-South Coast County, Winter

3.6 Architectural Coating - 2020

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	1.5736					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0218		281.9928
Total	1.6033	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0218		281.9928

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	0.0548	0.0343	0.3588	1.0900e-003	0.1230	7.4000e-004	0.1237	0.0326	6.9000e-004	0.0333		108.7059	108.7059	2.7000e-003		108.7734
Total	0.0548	0.0343	0.3588	1.0900e-003	0.1230	7.4000e-004	0.1237	0.0326	6.9000e-004	0.0333		108.7059	108.7059	2.7000e-003		108.7734

4.0 Operational Detail - Mobile

St. Frances of Rome - Riverside-South Coast County, Winter

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5436	4.3927	5.4480	0.0226	1.6689	0.0170	1.6859	0.4465	0.0160	0.4625		2,310.0334	2,310.0334	0.1533		2,313.8656
Unmitigated	0.5436	4.3927	5.4480	0.0226	1.6689	0.0170	1.6859	0.4465	0.0160	0.4625		2,310.0334	2,310.0334	0.1533		2,313.8656

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Place of Worship	0.00	299.76	366.89	203,115	203,115
Total	0.00	299.76	366.89	203,115	203,115

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
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	64	25	11

4.4 Fleet Mix

St. Frances of Rome - Riverside-South Coast County, Winter

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038
Place of Worship	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0263	0.2391	0.2009	1.4300e-003		0.0182	0.0182		0.0182	0.0182		286.9383	286.9383	5.5000e-003	5.2600e-003	288.6434
NaturalGas Unmitigated	0.0263	0.2391	0.2009	1.4300e-003		0.0182	0.0182		0.0182	0.0182		286.9383	286.9383	5.5000e-003	5.2600e-003	288.6434

St. Frances of Rome - Riverside-South Coast County, 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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	2438.98	0.0263	0.2391	0.2009	1.4300e-003		0.0182	0.0182		0.0182	0.0182		286.9383	286.9383	5.5000e-003	5.2600e-003	288.6434
Total		0.0263	0.2391	0.2009	1.4300e-003		0.0182	0.0182		0.0182	0.0182		286.9383	286.9383	5.5000e-003	5.2600e-003	288.6434

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	2.43898	0.0263	0.2391	0.2009	1.4300e-003		0.0182	0.0182		0.0182	0.0182		286.9383	286.9383	5.5000e-003	5.2600e-003	288.6434
Total		0.0263	0.2391	0.2009	1.4300e-003		0.0182	0.0182		0.0182	0.0182		286.9383	286.9383	5.5000e-003	5.2600e-003	288.6434

6.0 Area Detail

6.1 Mitigation Measures Area

St. Frances of Rome - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6602	2.7000e-004	0.0298	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0636	0.0636	1.7000e-004		0.0678
Unmitigated	0.6602	2.7000e-004	0.0298	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0636	0.0636	1.7000e-004		0.0678

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	0.0776					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5798					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7800e-003	2.7000e-004	0.0298	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0636	0.0636	1.7000e-004		0.0678
Total	0.6602	2.7000e-004	0.0298	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0636	0.0636	1.7000e-004		0.0678

St. Frances of Rome - Riverside-South Coast County, 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	0.0776					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5798					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7800e-003	2.7000e-004	0.0298	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0636	0.0636	1.7000e-004		0.0678
Total	0.6602	2.7000e-004	0.0298	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0636	0.0636	1.7000e-004		0.0678

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

St. Frances of Rome - Riverside-South Coast County, Winter

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

Boilers

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

User Defined Equipment

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

11.0 Vegetation

St. Frances of Rome - Riverside-South Coast County, Annual

**St. Frances of Rome
Riverside-South Coast County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	27.40	1000sqft	2.50	27,400.00	0
Parking Lot	263.00	Space	2.37	105,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

St. Frances of Rome - Riverside-South Coast County, Annual

Project Characteristics -

Land Use - 17.6 for church 9.8 for offices

Construction Phase - estimated construction schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - ce

Off-road Equipment - ce

Trips and VMT -

Grading - During Site Prep, the existing 2 acre paving (approx 1,100 CY) will be removed and exported offsite for recycling.

Vehicle Trips - Per TS

Construction Off-road Equipment Mitigation - Tier IV

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

St. Frances of Rome - Riverside-South Coast County, Annual

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	180.00
tblGrading	MaterialExported	0.00	1,100.00
tblLandUse	LotAcreage	0.63	2.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblVehicleTrips	ST_TR	10.37	10.94
tblVehicleTrips	SU_TR	36.63	13.39
tblVehicleTrips	WD_TR	9.11	0.00

2.0 Emissions Summary

St. Frances of Rome - Riverside-South Coast County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
3	1-1-2020	3-31-2020	0.6442	0.1269
4	4-1-2020	6-30-2020	0.8712	0.2185
5	7-1-2020	9-30-2020	0.9093	0.2353
		Highest	0.9093	0.2353

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	0.1203	3.0000e-005	3.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2100e-003	7.2100e-003	2.0000e-005	0.0000	7.6900e-003
Energy	4.8000e-003	0.0436	0.0367	2.6000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	147.8493	147.8493	5.0500e-003	1.7300e-003	148.4906
Mobile	0.0257	0.2114	0.2626	1.0900e-003	0.0776	8.0000e-004	0.0784	0.0208	7.5000e-004	0.0215	0.0000	101.5629	101.5629	6.3200e-003	0.0000	101.7211
Waste						0.0000	0.0000		0.0000	0.0000	31.7031	0.0000	31.7031	1.8736	0.0000	78.5432
Water						0.0000	0.0000		0.0000	0.0000	0.2720	8.3035	8.5755	0.0283	7.3000e-004	9.5002
Total	0.1508	0.2550	0.3030	1.3500e-003	0.0776	4.1300e-003	0.0817	0.0208	4.0800e-003	0.0249	31.9751	257.7230	289.6981	1.9133	2.4600e-003	338.2627

St. Frances of Rome - Riverside-South Coast County, 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	0.1203	3.0000e-005	3.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2100e-003	7.2100e-003	2.0000e-005	0.0000	7.6900e-003
Energy	4.8000e-003	0.0436	0.0367	2.6000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	147.8493	147.8493	5.0500e-003	1.7300e-003	148.4906
Mobile	0.0257	0.2114	0.2626	1.0900e-003	0.0776	8.0000e-004	0.0784	0.0208	7.5000e-004	0.0215	0.0000	101.5629	101.5629	6.3200e-003	0.0000	101.7211
Waste						0.0000	0.0000		0.0000	0.0000	31.7031	0.0000	31.7031	1.8736	0.0000	78.5432
Water						0.0000	0.0000		0.0000	0.0000	0.2720	8.3035	8.5755	0.0283	7.3000e-004	9.5002
Total	0.1508	0.2550	0.3030	1.3500e-003	0.0776	4.1300e-003	0.0817	0.0208	4.0800e-003	0.0249	31.9751	257.7230	289.6981	1.9133	2.4600e-003	338.2627

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

3.0 Construction Detail

Construction Phase

St. Frances of Rome - Riverside-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2020	1/7/2020	5	5	
2	Grading	Grading	1/8/2020	1/17/2020	5	8	
3	Paving	Paving	1/18/2020	2/12/2020	5	18	
4	Building Construction	Building Construction	2/13/2020	12/30/2020	5	230	
5	Architectural Coating	Architectural Coating	4/23/2020	12/30/2020	5	180	

Acres of Grading (Site Preparation Phase): 4

Acres of Grading (Grading Phase): 4

Acres of Paving: 2.37

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 41,100; Non-Residential Outdoor: 13,700; Striped Parking Area: 6,312 (Architectural Coating – sqft)

OffRoad Equipment

St. Frances of Rome - Riverside-South Coast County, Annual

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	109.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	56.00	22.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

St. Frances of Rome - Riverside-South Coast County, Annual

3.2 Site Preparation - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.1200e-003	0.0000	2.1200e-003	2.3000e-004	0.0000	2.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5700e-003	0.0158	0.0171	2.0000e-005		1.0000e-003	1.0000e-003		9.2000e-004	9.2000e-004	0.0000	2.0464	2.0464	6.6000e-004	0.0000	2.0629
Total	1.5700e-003	0.0158	0.0171	2.0000e-005	2.1200e-003	1.0000e-003	3.1200e-003	2.3000e-004	9.2000e-004	1.1500e-003	0.0000	2.0464	2.0464	6.6000e-004	0.0000	2.0629

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	2.9000e-004	0.0132	1.7100e-003	4.0000e-005	9.4000e-004	4.0000e-005	9.8000e-004	2.6000e-004	4.0000e-005	3.0000e-004	0.0000	3.9518	3.9518	2.5000e-004	0.0000	3.9580
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	9.0000e-005	6.0000e-005	6.9000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1839	0.1839	0.0000	0.0000	0.1840
Total	3.8000e-004	0.0133	2.4000e-003	4.0000e-005	1.1600e-003	4.0000e-005	1.2000e-003	3.2000e-004	4.0000e-005	3.6000e-004	0.0000	4.1357	4.1357	2.5000e-004	0.0000	4.1420

St. Frances of Rome - Riverside-South Coast County, Annual

3.2 Site Preparation - 2020

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					2.1200e-003	0.0000	2.1200e-003	2.3000e-004	0.0000	2.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8000e-004	1.2300e-003	0.0176	2.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.0464	2.0464	6.6000e-004	0.0000	2.0629
Total	2.8000e-004	1.2300e-003	0.0176	2.0000e-005	2.1200e-003	4.0000e-005	2.1600e-003	2.3000e-004	4.0000e-005	2.7000e-004	0.0000	2.0464	2.0464	6.6000e-004	0.0000	2.0629

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	2.9000e-004	0.0132	1.7100e-003	4.0000e-005	9.4000e-004	4.0000e-005	9.8000e-004	2.6000e-004	4.0000e-005	3.0000e-004	0.0000	3.9518	3.9518	2.5000e-004	0.0000	3.9580
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	9.0000e-005	6.0000e-005	6.9000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1839	0.1839	0.0000	0.0000	0.1840
Total	3.8000e-004	0.0133	2.4000e-003	4.0000e-005	1.1600e-003	4.0000e-005	1.2000e-003	3.2000e-004	4.0000e-005	3.6000e-004	0.0000	4.1357	4.1357	2.5000e-004	0.0000	4.1420

St. Frances of Rome - Riverside-South Coast County, Annual

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7200e-003	0.1055	0.0642	1.2000e-004		5.0900e-003	5.0900e-003		4.6900e-003	4.6900e-003	0.0000	10.4235	10.4235	3.3700e-003	0.0000	10.5078
Total	9.7200e-003	0.1055	0.0642	1.2000e-004	0.0262	5.0900e-003	0.0313	0.0135	4.6900e-003	0.0182	0.0000	10.4235	10.4235	3.3700e-003	0.0000	10.5078

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	2.8000e-004	1.9000e-004	2.0600e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5518	0.5518	1.0000e-005	0.0000	0.5521
Total	2.8000e-004	1.9000e-004	2.0600e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5518	0.5518	1.0000e-005	0.0000	0.5521

St. Frances of Rome - Riverside-South Coast County, Annual

3.3 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4500e-003	6.2900e-003	0.0710	1.2000e-004		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	10.4235	10.4235	3.3700e-003	0.0000	10.5078
Total	1.4500e-003	6.2900e-003	0.0710	1.2000e-004	0.0262	1.9000e-004	0.0264	0.0135	1.9000e-004	0.0137	0.0000	10.4235	10.4235	3.3700e-003	0.0000	10.5078

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	2.8000e-004	1.9000e-004	2.0600e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5518	0.5518	1.0000e-005	0.0000	0.5521
Total	2.8000e-004	1.9000e-004	2.0600e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5518	0.5518	1.0000e-005	0.0000	0.5521

St. Frances of Rome - Riverside-South Coast County, Annual

3.4 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.9700e-003	0.0823	0.0859	1.3000e-004		4.4700e-003	4.4700e-003		4.1100e-003	4.1100e-003	0.0000	11.6605	11.6605	3.7700e-003	0.0000	11.7548
Paving	3.1000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0111	0.0823	0.0859	1.3000e-004		4.4700e-003	4.4700e-003		4.1100e-003	4.1100e-003	0.0000	11.6605	11.6605	3.7700e-003	0.0000	11.7548

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	3.8000e-004	4.0200e-003	1.0000e-005	1.2900e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.0759	1.0759	3.0000e-005	0.0000	1.0766
Total	5.4000e-004	3.8000e-004	4.0200e-003	1.0000e-005	1.2900e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.0759	1.0759	3.0000e-005	0.0000	1.0766

St. Frances of Rome - Riverside-South Coast County, Annual

3.4 Paving - 2020

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	1.6300e-003	7.0800e-003	0.1007	1.3000e-004		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	11.6605	11.6605	3.7700e-003	0.0000	11.7547
Paving	3.1000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.7300e-003	7.0800e-003	0.1007	1.3000e-004		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	11.6605	11.6605	3.7700e-003	0.0000	11.7547

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	3.8000e-004	4.0200e-003	1.0000e-005	1.2900e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.0759	1.0759	3.0000e-005	0.0000	1.0766
Total	5.4000e-004	3.8000e-004	4.0200e-003	1.0000e-005	1.2900e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.0759	1.0759	3.0000e-005	0.0000	1.0766

St. Frances of Rome - Riverside-South Coast County, Annual

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2438	2.2064	1.9376	3.1000e-003		0.1285	0.1285		0.1208	0.1208	0.0000	266.3515	266.3515	0.0650	0.0000	267.9760
Total	0.2438	2.2064	1.9376	3.1000e-003		0.1285	0.1285		0.1208	0.1208	0.0000	266.3515	266.3515	0.0650	0.0000	267.9760

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	7.1900e-003	0.2632	0.0515	6.5000e-004	0.0160	1.4900e-003	0.0175	4.6100e-003	1.4200e-003	6.0300e-003	0.0000	62.2096	62.2096	4.9700e-003	0.0000	62.3339
Worker	0.0296	0.0207	0.2214	6.6000e-004	0.0708	4.4000e-004	0.0712	0.0188	4.0000e-004	0.0192	0.0000	59.2218	59.2218	1.4800e-003	0.0000	59.2588
Total	0.0368	0.2839	0.2729	1.3100e-003	0.0868	1.9300e-003	0.0887	0.0234	1.8200e-003	0.0252	0.0000	121.4313	121.4313	6.4500e-003	0.0000	121.5927

St. Frances of Rome - Riverside-South Coast County, Annual

3.5 Building Construction - 2020

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	0.0377	0.2570	2.0079	3.1000e-003		4.6900e-003	4.6900e-003		4.6900e-003	4.6900e-003	0.0000	266.3512	266.3512	0.0650	0.0000	267.9757
Total	0.0377	0.2570	2.0079	3.1000e-003		4.6900e-003	4.6900e-003		4.6900e-003	4.6900e-003	0.0000	266.3512	266.3512	0.0650	0.0000	267.9757

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	7.1900e-003	0.2632	0.0515	6.5000e-004	0.0160	1.4900e-003	0.0175	4.6100e-003	1.4200e-003	6.0300e-003	0.0000	62.2096	62.2096	4.9700e-003	0.0000	62.3339
Worker	0.0296	0.0207	0.2214	6.6000e-004	0.0708	4.4000e-004	0.0712	0.0188	4.0000e-004	0.0192	0.0000	59.2218	59.2218	1.4800e-003	0.0000	59.2588
Total	0.0368	0.2839	0.2729	1.3100e-003	0.0868	1.9300e-003	0.0887	0.0234	1.8200e-003	0.0252	0.0000	121.4313	121.4313	6.4500e-003	0.0000	121.5927

St. Frances of Rome - Riverside-South Coast County, Annual

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1416					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0218	0.1516	0.1648	2.7000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003	0.0000	22.9793	22.9793	1.7800e-003	0.0000	23.0238
Total	0.1634	0.1516	0.1648	2.7000e-004		9.9800e-003	9.9800e-003		9.9800e-003	9.9800e-003	0.0000	22.9793	22.9793	1.7800e-003	0.0000	23.0238

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5500e-003	3.1900e-003	0.0340	1.0000e-004	0.0109	7.0000e-005	0.0110	2.8900e-003	6.0000e-005	2.9500e-003	0.0000	9.1040	9.1040	2.3000e-004	0.0000	9.1097
Total	4.5500e-003	3.1900e-003	0.0340	1.0000e-004	0.0109	7.0000e-005	0.0110	2.8900e-003	6.0000e-005	2.9500e-003	0.0000	9.1040	9.1040	2.3000e-004	0.0000	9.1097

St. Frances of Rome - Riverside-South Coast County, Annual

3.6 Architectural Coating - 2020

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	0.1416					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6700e-003	0.0116	0.1649	2.7000e-004		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	22.9793	22.9793	1.7800e-003	0.0000	23.0237
Total	0.1443	0.0116	0.1649	2.7000e-004		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	22.9793	22.9793	1.7800e-003	0.0000	23.0237

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5500e-003	3.1900e-003	0.0340	1.0000e-004	0.0109	7.0000e-005	0.0110	2.8900e-003	6.0000e-005	2.9500e-003	0.0000	9.1040	9.1040	2.3000e-004	0.0000	9.1097
Total	4.5500e-003	3.1900e-003	0.0340	1.0000e-004	0.0109	7.0000e-005	0.0110	2.8900e-003	6.0000e-005	2.9500e-003	0.0000	9.1040	9.1040	2.3000e-004	0.0000	9.1097

4.0 Operational Detail - Mobile

St. Frances of Rome - Riverside-South Coast County, Annual

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0257	0.2114	0.2626	1.0900e-003	0.0776	8.0000e-004	0.0784	0.0208	7.5000e-004	0.0215	0.0000	101.5629	101.5629	6.3200e-003	0.0000	101.7211
Unmitigated	0.0257	0.2114	0.2626	1.0900e-003	0.0776	8.0000e-004	0.0784	0.0208	7.5000e-004	0.0215	0.0000	101.5629	101.5629	6.3200e-003	0.0000	101.7211

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Place of Worship	0.00	299.76	366.89	203,115	203,115
Total	0.00	299.76	366.89	203,115	203,115

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
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	64	25	11

4.4 Fleet Mix

St. Frances of Rome - Riverside-South Coast County, Annual

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038
Place of Worship	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	100.3435	100.3435	4.1400e-003	8.6000e-004	100.7024
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	100.3435	100.3435	4.1400e-003	8.6000e-004	100.7024
NaturalGas Mitigated	4.8000e-003	0.0436	0.0367	2.6000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	47.5059	47.5059	9.1000e-004	8.7000e-004	47.7882
NaturalGas Unmitigated	4.8000e-003	0.0436	0.0367	2.6000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	47.5059	47.5059	9.1000e-004	8.7000e-004	47.7882

St. Frances of Rome - Riverside-South Coast County, Annual

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	890226	4.8000e-003	0.0436	0.0367	2.6000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	47.5059	47.5059	9.1000e-004	8.7000e-004	47.7882
Total		4.8000e-003	0.0436	0.0367	2.6000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	47.5059	47.5059	9.1000e-004	8.7000e-004	47.7882

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	890226	4.8000e-003	0.0436	0.0367	2.6000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	47.5059	47.5059	9.1000e-004	8.7000e-004	47.7882
Total		4.8000e-003	0.0436	0.0367	2.6000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	47.5059	47.5059	9.1000e-004	8.7000e-004	47.7882

St. Frances of Rome - Riverside-South Coast County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	36820	11.7316	4.8000e-004	1.0000e-004	11.7736
Place of Worship	278110	88.6118	3.6600e-003	7.6000e-004	88.9288
Total		100.3434	4.1400e-003	8.6000e-004	100.7024

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	36820	11.7316	4.8000e-004	1.0000e-004	11.7736
Place of Worship	278110	88.6118	3.6600e-003	7.6000e-004	88.9288
Total		100.3434	4.1400e-003	8.6000e-004	100.7024

6.0 Area Detail

6.1 Mitigation Measures Area

St. Frances of Rome - Riverside-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1203	3.0000e-005	3.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2100e-003	7.2100e-003	2.0000e-005	0.0000	7.6900e-003
Unmitigated	0.1203	3.0000e-005	3.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2100e-003	7.2100e-003	2.0000e-005	0.0000	7.6900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0142					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1058					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.5000e-004	3.0000e-005	3.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2100e-003	7.2100e-003	2.0000e-005	0.0000	7.6900e-003
Total	0.1203	3.0000e-005	3.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2100e-003	7.2100e-003	2.0000e-005	0.0000	7.6900e-003

St. Frances of Rome - Riverside-South Coast County, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0142					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1058					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.5000e-004	3.0000e-005	3.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2100e-003	7.2100e-003	2.0000e-005	0.0000	7.6900e-003
Total	0.1203	3.0000e-005	3.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.2100e-003	7.2100e-003	2.0000e-005	0.0000	7.6900e-003

7.0 Water Detail

7.1 Mitigation Measures Water

St. Frances of Rome - Riverside-South Coast County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8.5755	0.0283	7.3000e-004	9.5002
Unmitigated	8.5755	0.0283	7.3000e-004	9.5002

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.857316 / 1.34093	8.5755	0.0283	7.3000e-004	9.5002
Total		8.5755	0.0283	7.3000e-004	9.5002

St. Frances of Rome - Riverside-South Coast County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.857316 / 1.34093	8.5755	0.0283	7.3000e-004	9.5002
Total		8.5755	0.0283	7.3000e-004	9.5002

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	31.7031	1.8736	0.0000	78.5432
Unmitigated	31.7031	1.8736	0.0000	78.5432

St. Frances of Rome - Riverside-South Coast County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	156.18	31.7031	1.8736	0.0000	78.5432
Total		31.7031	1.8736	0.0000	78.5432

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	156.18	31.7031	1.8736	0.0000	78.5432
Total		31.7031	1.8736	0.0000	78.5432

9.0 Operational Offroad

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

St. Frances of Rome - Riverside-South Coast County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

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

11.0 Vegetation

ATTACHMENT B

AERSCREEN – Tier IV Equipment

TITLE: ST. Francis of Rome T4 no DPF

***** AREA PARAMETERS *****

SOURCE EMISSION RATE: 0.158E-03 g/s 0.126E-02 lb/hr
 AREA EMISSION RATE: 0.783E-08 g/(s-m2) 0.622E-07 lb/(hr-m2)
 AREA HEIGHT: 3.00 meters 9.84 feet
 AREA SOURCE LONG SIDE: 142.24 meters 466.67 feet
 AREA SOURCE SHORT SIDE: 142.24 meters 466.67 feet
 INITIAL VERTICAL DIMENSION: 1.00 meters 3.28 feet
 RURAL OR URBAN: URBAN
 POPULATION: 36932
 FLAGPOLE RECEPTOR HEIGHT: 1.50 meters 4.92 feet
 INITIAL PROBE DISTANCE = 5000. meters 16404. feet

***** BUILDING DOWNWASH PARAMETERS *****

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

***** FLOW SECTOR ANALYSIS *****

25 meter receptor spacing: 1. meters - 5000. meters

MAXIMUM IMPACT RECEPTOR

Zo	SURFACE	1-HR CONC	RADIAL	DIST	TEMPORAL
SECTOR	ROUGHNESS	(ug/m3)	(deg)	(m)	PERIOD
1*	0.150	0.2955	45	100.0	WIN

* = worst case diagonal

***** MAKEMET METEOROLOGY PARAMETERS *****

MIN/MAX TEMPERATURE: 250.0 / 310.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Desert Shrubland
 DOMINANT CLIMATE TYPE: Average Moisture
 DOMINANT SEASON: Winter

ALBEDO: 0.45

BOWEN RATIO: 6.00

ROUGHNESS LENGTH: 0.150 (meters)

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR MO DY JDY HR

10 01 16 16 01

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS
-0.16	0.024	-9.000	0.020	-999.	8.	7.8	0.150	6.00	0.45	0.50		

HT	REF	TA	HT
10.0	310.0	2.0	

METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT

YR MO DY JDY HR

10 01 28 16 01

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS
-0.49	0.029	-9.000	0.020	-999.	11.	4.5	0.300	3.00	0.30	0.50		

HT	REF	TA	HT
10.0	310.0	2.0	

***** AERSCREEN AUTOMATED DISTANCES *****
OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
1.00	0.2012	2525.00	0.1037E-01
25.00	0.2276	2550.00	0.1024E-01
50.01	0.2525	2575.00	0.1011E-01
75.00	0.2753	2600.00	0.9980E-02
100.00	0.2955	2625.00	0.9856E-02
125.00	0.2300	2650.00	0.9734E-02
150.01	0.1861	2675.00	0.9616E-02
174.99	0.1594	2700.00	0.9500E-02
200.00	0.1409	2725.00	0.9387E-02
225.00	0.1267	2750.00	0.9277E-02
250.00	0.1153	2775.00	0.9169E-02
274.99	0.1059	2800.00	0.9064E-02
300.00	0.9797E-01	2825.00	0.8961E-02
325.00	0.9107E-01	2850.00	0.8861E-02
350.00	0.8487E-01	2875.00	0.8763E-02
375.01	0.7948E-01	2900.00	0.8667E-02
400.00	0.7478E-01	2925.00	0.8574E-02
425.00	0.7060E-01	2950.00	0.8482E-02
450.00	0.6685E-01	2975.00	0.8393E-02
475.01	0.6348E-01	3000.00	0.8305E-02
500.00	0.6042E-01	3025.00	0.8220E-02
525.00	0.5763E-01	3050.00	0.8136E-02
550.00	0.5507E-01	3075.00	0.8054E-02

575.01	0.5273E-01	3100.00	0.7974E-02
599.99	0.5055E-01	3125.00	0.7896E-02
625.00	0.4852E-01	3150.00	0.7820E-02
650.00	0.4664E-01	3174.99	0.7745E-02
675.00	0.4488E-01	3199.99	0.7671E-02
699.99	0.4325E-01	3225.00	0.7600E-02
725.00	0.4171E-01	3250.00	0.7529E-02
750.00	0.4026E-01	3275.00	0.7461E-02
775.00	0.3890E-01	3300.00	0.7393E-02
800.01	0.3762E-01	3325.00	0.7327E-02
825.00	0.3641E-01	3350.00	0.7263E-02
850.00	0.3526E-01	3375.00	0.7200E-02
875.00	0.3418E-01	3400.00	0.7138E-02
900.01	0.3315E-01	3425.00	0.7077E-02
924.99	0.3217E-01	3450.00	0.7018E-02
950.00	0.3124E-01	3475.00	0.6960E-02
975.00	0.3036E-01	3500.00	0.6902E-02
1000.00	0.2952E-01	3525.00	0.6847E-02
1024.99	0.2871E-01	3550.00	0.6792E-02
1050.00	0.2794E-01	3575.00	0.6738E-02
1075.00	0.2721E-01	3600.00	0.6685E-02
1100.00	0.2651E-01	3625.00	0.6634E-02
1125.01	0.2584E-01	3650.00	0.6583E-02
1150.00	0.2519E-01	3675.00	0.6533E-02
1175.00	0.2458E-01	3700.00	0.6485E-02
1200.00	0.2399E-01	3725.00	0.6437E-02
1225.01	0.2343E-01	3750.00	0.6390E-02
1250.00	0.2288E-01	3775.00	0.6344E-02
1275.00	0.2236E-01	3800.00	0.6299E-02
1300.00	0.2185E-01	3825.00	0.6256E-02
1325.01	0.2137E-01	3849.99	0.6226E-02
1349.99	0.2091E-01	3875.00	0.6197E-02
1375.00	0.2046E-01	3900.00	0.6168E-02
1400.00	0.2003E-01	3924.99	0.6140E-02
1425.00	0.1961E-01	3950.00	0.6112E-02
1450.00	0.1920E-01	3975.00	0.6084E-02
1475.00	0.1881E-01	4000.00	0.6057E-02
1500.00	0.1844E-01	4025.00	0.6030E-02
1525.00	0.1807E-01	4050.00	0.6003E-02
1550.01	0.1773E-01	4074.99	0.5977E-02
1575.00	0.1739E-01	4100.00	0.5950E-02
1600.00	0.1706E-01	4125.00	0.5925E-02
1625.00	0.1674E-01	4149.99	0.5899E-02
1650.00	0.1643E-01	4175.00	0.5874E-02
1675.00	0.1613E-01	4200.00	0.5849E-02
1700.00	0.1584E-01	4225.00	0.5824E-02
1725.00	0.1556E-01	4250.00	0.5800E-02
1750.00	0.1529E-01	4275.00	0.5776E-02
1774.99	0.1502E-01	4300.00	0.5752E-02
1800.00	0.1477E-01	4325.00	0.5728E-02
1825.00	0.1452E-01	4350.00	0.5705E-02
1850.00	0.1428E-01	4375.00	0.5682E-02
1875.01	0.1404E-01	4400.00	0.5659E-02
1900.00	0.1381E-01	4425.00	0.5636E-02
1925.00	0.1359E-01	4450.00	0.5614E-02
1950.00	0.1338E-01	4475.00	0.5591E-02
1975.00	0.1317E-01	4499.99	0.5569E-02
2000.00	0.1296E-01	4525.00	0.5548E-02
2025.00	0.1276E-01	4550.00	0.5526E-02
2050.00	0.1257E-01	4575.00	0.5505E-02
2075.00	0.1238E-01	4600.00	0.5484E-02
2099.99	0.1220E-01	4625.00	0.5463E-02
2125.00	0.1202E-01	4650.00	0.5442E-02
2150.00	0.1185E-01	4675.00	0.5421E-02
2175.00	0.1168E-01	4700.00	0.5401E-02
2199.99	0.1152E-01	4725.00	0.5381E-02
2225.00	0.1135E-01	4750.00	0.5361E-02
2250.00	0.1120E-01	4775.00	0.5341E-02
2275.00	0.1104E-01	4800.00	0.5322E-02

2300.00	0.1089E-01	4825.00	0.5302E-02
2325.00	0.1075E-01	4850.00	0.5283E-02
2350.00	0.1060E-01	4875.00	0.5264E-02
2375.00	0.1047E-01	4899.99	0.5245E-02
2400.01	0.1033E-01	4925.00	0.5226E-02
2425.00	0.1094E-01	4950.00	0.5208E-02
2450.00	0.1080E-01	4975.00	0.5189E-02
2475.00	0.1065E-01	5000.00	0.5171E-02
2500.00	0.1051E-01		

 ***** AERSCREEN MAXIMUM IMPACT SUMMARY *****

3-hour, 8-hour, and 24-hour scaled concentrations are equal to the 1-hour concentration as referenced in SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY IMPACT OF STATIONARY SOURCES, REVISED (Section 4.5.4)
 Report number EPA-454/R-92-019
http://www.epa.gov/scram001/guidance_permit.htm
 under Screening Guidance

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	0.2959	0.2959	0.2959	0.2959	N/A

DISTANCE FROM SOURCE 101.00 meters

IMPACT AT THE AMBIENT BOUNDARY	0.2012	0.2012	0.2012	0.2012	N/A
-----------------------------------	--------	--------	--------	--------	-----

DISTANCE FROM SOURCE 1.00 meters

ATTACHMENT C

Cancer Risk Calculation Spreadsheet

Air Quality Health Risk Calculations (Worst-Case)
Saint Frances of Rome - Tier 4

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	0.0055				
	Construction Start	7/1/2019				
	Construction Complete	6/29/2020				
	Days	364				
	Construction Emission per day (lb/day)	0.03021978				
	Annual Duration (Days)	365				
input to AERSCREEN	Annualized Emission Rate (Grams/Second)	0.000158444				
	Project Site Size (Acres)	5				
input to AERSCREEN	Project Site Size (meters^2)	20234.28211				
	Length of Smalles Side (meters)	142.247257				
From AERSCREEN	Concentration 1-HR (Ug/M^3)	0.2959				
	Concentration Annual (Ug/M^3)	0.023672				
	Days	Days to years				
Duration	364	0.997260274				
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From F15	0.023672	0.023672	0.023672	0.023672	0.023672	0.023672
Breathing Rate per agegroup BR/BW (Page 5-25)	361	1090	861	745	335	290
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96
10^-6 Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00000820	0.00002477	0.00001957	0.00001693	0.00000761	0.00000659
Construction Days	364	0.997260274				
potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor	10	10	3	3	1	1
ED	0.25	0.997260274	0.997260274	0.997260274	0.997260274	0.997260274
AT	70	70	70	70	70	70
FAH	0.85	0.85	0.72	0.72	0.73	0.73
Risk for Each Age Group	2.73947E-07	3.29955E-06	6.62318E-07	5.73085E-07	8.70917E-08	7.53929E-08
Risk per million Exposed	0.273947264	3.299550451	0.662317533	0.573085438	0.08709175	0.075392858
Cancer Risk Per Million 9-years	4.24					
Cancer Risk Per Million 30-years	4.23					
Cancer Risk Per Million 70-years	4.22					