

Appendix 2.0

Air Quality Assessment



MEMORANDUM

To: Kevin Thomas

From: Ace Malisos
Kimley-Horn and Associates, Inc.

Date: January 11, 2019

Subject: Response to Peer Review Comments on the Air Quality and Greenhouse Gas Assessment for the Faith Bible Church

Kimley-Horn has reviewed the comments from Placeworks on the Air Quality and Greenhouse Gas Assessment for the Faith Bible Church Project, dated December 5, 2018, and has prepared the following responses.

Comment 1: On behalf of the City of Wildomar, PlaceWorks has conducted a peer review of the air quality and greenhouse gas (GHG) assessment for the Faith Bible Church prepared by Michael Baker International (MBI), dated October 22, 2018. The air quality and GHG assessment is based on a previous site plan. If any comments below warrant updates to the model run, the technical report and figures should be updated to reflect the latest site plan. Additionally, modeling was conducted using and older version of the California Emissions Model (CalEEMod). Since the technical modeling was prepared, a new version of the CalEEMod was released. If any comments below warrant updates to the model run, modeling should be conducted using the latest version of CalEEMod. The analysis follows the South Coast Air Quality Management District's (SCAQMD) CEQA Guidelines. We offer the following technical comments on the air quality and GHG assessment:

Response: *Due to the age of the original studies and the project updates, the technical studies and modeling have been revised.*

Comment 2: AQMP Consistency Analysis. The technical assessment references SCAQMD's 2012 Air Quality Management Plan (AQMP). The most current AQMP is the 2016 AQMP, adopted by SCAQMD in March 2017. The regulatory setting and impact analysis discussion must be updated to reflect consistency with SCAQMD's latest AQMP. The AQMP consistency analysis also references an older version of the Southern California Association of Government's (SCAG) Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS). The technical assessment should also be updated to reflect the 2016 RTP/SCS adopted by SCAG.

Response: *The technical analysis has been updated to reflect the latest documents.*

Regional Construction Analysis

Comment 3: Phasing. The site plans for the Faith Bible Church show that the project would be developed in multiple phases. The impact assessment assumes construction of the entire project over a period of 16 months rather than the phased development, as identified in the latest site plan. The technical analyses needs to either (1) remodel construction emissions based on the phased construction assumptions identified in the project description site plans or (2) demonstrate that modeling is conservative.

Response: *The technical analysis has been updated to reflect the latest site plan. Project grading for the site is anticipated to occur in one phase, while individual buildings/areas would be developed in subsequent phases. As the timing of the phases is currently unknown, the analysis conservatively modeled construction occurring at once. The analysis includes an explanation as to why this is conservative.*

Comment 4: Acres Graded Per Day. The model calculates emissions from grading based on the amount of area each piece of equipment can cover on a daily basis. The default value in the grading module of CalEEMod was manually reset to the acreage of the site (24.30). This override to the model results in substantially lower fugitive dust emissions during the grading phases. This error should be corrected and the acreage disturbed based on equipment used in the model should be reset to the model default.

Response: *The modeling has been revised to not override the acreage.*

Comment 5: Soil Import/Export. It is unclear what assumptions were made regarding soil import/export. It appears that the CalEEMod runs may be overly conservative as they assume both an import and export of 103,500 cubic yards of soil (plus additional 55,000 cubic yards of import). Additionally, the haul trip length was changed from a CalEEMod default of 20 miles to 0.2-miles. If soil will be stockpiled onsite for future phases, scrapers would be used, not on-road trucks, to haul soil across the approximately 24-acre site. The amount of soil imported/exported and soil stockpiling to accommodate the subphasing should be part of the project description to ensure internal consistency in the Initial Study and technical studies. Please verify the modeling assumptions regarding soil import and export (per phase).

Response: *The site would require approximately 80,000 cubic yards of balanced earthwork. The analysis has been revised to note that the model includes an additional 15,000 CY of import to be*

conservative. Additional graders and scrapers were included in CalEEMod to accommodate the earthwork.

Comment 6: Grading Equipment Assumptions. The equipment mix should reflect the appropriate number of heavy grading equipment (scrapers/dozers) to move the quantities of soil identified. Currently, the model assumes only two scrapers onsite during the grading phase and eight pieces of equipment for the approximately 24-acre site. NOx emissions are very close to the 100 lbs/day threshold. Based on the amount of soil movement onsite proposed (over 103,500 cubic yards of soil), it is highly likely that additional scrapers would be needed to accommodate the soil movement. The number of scrapers and dozers during this phase should be verified by the Applicant.

Response: *Additional graders and scrapers were included in CalEEMod to accommodate the earthwork.*

Comment 7: Construction Schedule. Construction is based on a start date of August 2017. If comments above warrant remodeling, it is recommended that modeling be updated based on the latest construction schedule. Alternatively, the analysis should indicate why modeling using an older schedule is conservative.

Response: *The modeling has been updated based on the latest construction schedule.*

Comment 8: CalEEMod Version 2016.3.2. Modeling was also conducted using CalEEMod 2016.3.1. A new version of CalEEMod was released in October 2016. Any revised modeling should be modeled using the latest version of CalEEMod.

Response: *The updated modeling uses the latest version of CalEEMod.*

Comment 9: Localized Construction Analysis. The LST analysis is based on the acreage disturbed and distance to the nearest sensitive and non-sensitive receptors, consistent with SCAQMD methodology.

Response: *Noted. The analysis has been updated to reflect the revised modeling.*

Regional Operation Analysis

Comment 10: Weekday School Trip Generation. The air quality and GHG analysis is consistent with the traffic study, which evaluated impacts from operation of a 74,309 square foot church with a maximum of 1,112 seats. The ITE trip rate for a Church does not include weekday trip generation for K-8 school trips that may operate at the church. If the church proposes to operate a school campus during the weekdays, then the air quality and GHG analysis should consider the additional emissions

associated with weekday trip generation from operation of a school onsite. The project description should identify the square footage associated with the school and church separately.

Response: *The project includes classrooms for Sunday school and would not include a K-8 school. The vehicle trips modeled for the analysis maintain consistency with the traffic study.*

Comment 11: Solid Waste Generation. The solid waste generation assumptions were modified from the CalEEMod defaults. Please document the assumptions used to calculate 95 tons/yr of solid waste generation in the model.

Response: *The modeling uses default rates. Reduction justifications have been included in the model notes.*

Comment 12: CalEEMod Version 2016.3.2. Modeling was also conducted using CalEEMod 2016.3.1. A new version of CalEEMod was released in October 2016. Any revised modeling should be modeled using the latest version of CalEEMod.

Response: *The latest model has been used in the updated analysis.*

Comment 13: Operational LSTs, CO Hotspots, and Odors. The operational LST analysis is consistent with SCAQMD methodology. The qualitative findings regarding CO hotspots and odors as supported.

Response: *Noted.*

Comment 14: GHG Consistency Analysis. The consistency analysis should provide a brief qualitative assessment of consistency with the Scoping Plan and the RTP/SCS.

Response: *These consistency analyses have been included.*

Comment 15: Mitigation Measures. Mitigation Measure AQ-1 and AQ-2 are compliance with existing regulations. Compliance with existing regulations is not mitigation. It is recommended that these be labeled as a Project Design Features (PDF) or an existing Rules/Regulations (RR) rather than “Mitigation Measures” to avoid confusion that mitigation is needed to reduce a significant impact to less than significant levels.

Response: *The mitigation measures have been removed.*

Other Minor Updates

Comment 16: The CARB Scoping Plan section should be updated to reflect the adoption of the 2017 Scoping Plan that addresses GHG reduction targets under AB 32, SB 32, and the long-term goal of Executive Order S-03-05.

Response: *The analysis has been updated accordingly.*

Comment 17: The Climate Action Plan for Riverside County is not applicable to development in the City of Wildomar and it is recommended this discussion be removed.

Response: *The Riverside County Climate Action Plan discussion has been removed.*

Please do not hesitate to contact me at 714.705.1380 or ace.malisos@kimley-horn.com with any questions.

**Air Quality Assessment
for the proposed
Faith Bible Church
in the City of Wildomar, California**

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LIST OF ABBREVIATED TERMS

AQMP	air quality management plan
AB	Assembly Bill
ADAM	Aerometric Data Analysis and Measurement System
ADT	average daily traffic
APN	Assessor's Parcel Number
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CCAA	California Clean Air Act
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CO	carbon monoxide
cy	cubic yards
DPM	diesel particulate matter
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
H ₂ S	hydrogen sulfide
ITE	Institute of Transportation Engineers
Pb	lead
LST	local significance threshold
µg/m ³	micrograms per cubic meter
mg/m ³	milligrams per cubic meter
NAAQS	National Ambient Air Quality Standards
NO ₂	nitrogen dioxide
NO _x	nitrogen oxide
O ₃	ozone
PM ₁₀	particulate matter less than 10 microns in diameter
PM _{2.5}	particulate matter less than 2.5 microns in diameter
ppm	parts per million
ROG	reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SRA	source receptor area
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Governments
SF	square foot
SO ₄₋₂	sulfates
SO ₂	sulfur dioxide
TAC	toxic air contaminant
C ₂ H ₃ Cl	vinyl chloride
VOC	volatile organic compound

1 INTRODUCTION

This report documents the results of an Air Quality Assessment completed for the Faith Bible Church Project. The purpose of this Air Quality Assessment is to evaluate the potential construction and operational emissions associated with the proposed Project and determine the level of impact the Project would have on the environment.

1.1 PROJECT LOCATION

The Project is generally located south of State Route 91 (SR-91), east of Interstate 15 (I-15), and west of Interstate 215 (I-215) in the City of Wildomar, California; refer to [Exhibit 1: Regional Vicinity](#). More specifically, the Project is located east of I-15, south of Peggy Lane, and north of Glazebrook Road; refer to [Exhibit 2: Site Vicinity](#). The Project site includes Assessor Parcel Numbers (APN) 376-410-024 and 376-410-002 and currently consists of vacant and transportation land uses. Land uses surrounding the Project are mostly residential developments and vacant land. Areas to the southwest and west, west of I-15 freeway, and to the southeast of the Project are residential land uses. Vacant, undeveloped land with rural residential properties are located to the north of the Project. Vacant land can also be found to the east of the Project. The I-15 freeway runs adjacent to the western boundary of the Project site.

1.2 PROJECT DESCRIPTION

The Project proposes the development of a community church building that would seat up to 1,112 people; refer to [Exhibit 3: Site Plan](#). The Project also includes three detached single family residential units to house visiting missionaries and their families, a storage shed for maintenance equipment, restrooms, a future athletic facility, outdoor gathering area, open space, two water quality basins, and a leveled pad reserved for future development. Construction activities would include grading, construction of buildings, paving, and architectural coating. Site grading would disturb approximately 24.31 acres and would require approximately 80,000 cubic yards of balanced cut and fill.

[illegible]

Exhibit 2: Site Vicinity



Source: Google Maps, 2019.

[illegible]

Kimley»Horn

2 ENVIRONMENTAL SETTING

2.1 CLIMATE AND METEOROLOGY

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

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

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

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

Wind patterns across the basin are characterized by westerly or southwesterly on-shore winds during the day and easterly or northeasterly breezes at night. Wind speed is typically higher during the dry summer months than during the rainy winter.

Between periods of wind, air stagnation may occur in both the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During winter and fall, surface high-pressure systems over the basin, combined with other meteorological conditions, result in very strong, downslope Santa Ana winds. These winds normally continue for a few days before predominant meteorological conditions are reestablished.

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

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

In addition to the characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two distinct types of temperature inversions control the vertical depth through which air pollutants are mixed. These inversions are the marine inversion and the radiation inversion. The height of the base of the inversion at any given time is called the “mixing height.” The combination of winds and inversions is a critical determinant leading to highly degraded air quality for the basin in the summer and generally good air quality in the winter.

2.2 AIR POLLUTANTS OF CONCERN

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

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

Pollutant	Major Man-Made Sources	Human Health Effects
Particulate Matter (PM ₁₀ and PM _{2.5})	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O ₃)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC) ¹ and nitrogen oxides (NO _x) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Sulfur Dioxide (SO ₂)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.

Nitrogen Dioxide (NO ₂)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead (Pb)	Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.
Notes: ¹ Volatile Organic Compounds (VOCs or Reactive Organic Gases [ROG]) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROG and VOCs. Both ROG and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).		
Source: California Air Pollution Control Officers Association (CAPCOA), <i>Health Effects</i> , http://www.capcoa.org/health-effects/ , Accessed January 7, 2019.		

Toxic Air Contaminants

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

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

Ambient Air Quality

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

Ozone (O₃) and particulate matter (PM₁₀ and PM_{2.5}) are pollutants of concern in the SCAB. The closest air monitoring station to the proposed Project that monitors ambient concentrations of these pollutants is the Lake Elsinore-West Flint Street Monitoring Station (located approximately 6.6 miles to the northwest). Local air quality data from 2015 to 2017 are provided in [Table 2: Ambient Air Quality Data](#). [Table 2](#) lists the monitored maximum concentrations and number of exceedances of federal or state air quality standards for each year.

Table 2: Ambient Air Quality Data			
Pollutant	Lake Elsinore-West Flint Street Monitoring Station¹		
	2015	2016	2017
Ozone (O₃)			
1-hour Maximum Concentration (ppm)	0.131	0.124	0.121
8-hour Maximum Concentration (ppm)	0.098	0.093	0.098
<i>Number of Days Standard Exceeded</i>			
CAAQS 1-hour (>0.09 ppm)	18	15	23
NAAQS 8-hour (>0.070 ppm)	31	44	54
Carbon Monoxide (CO)			
1-hour Maximum Concentration (ppm)	0.825	1.219	1.152
<i>Number of Days Standard Exceeded</i>			
NAAQS 1-hour (>35 ppm)	0	0	0
CAAQS 1-hour (>20 ppm)	0	0	0
Nitrogen Dioxide (NO₂)			
1-hour Maximum Concentration (ppm)	47.2	51.3	49.0
<i>Number of Days Standard Exceeded</i>			
NAAQS 1-hour (>100 ppm)	39	38	38
CAAQS 1-hour (>0.18 ppm)	50	50	50
Particulate Matter Less Than 10 Microns (PM₁₀)			
National 24-hour Maximum Concentration	90.7	99.7	134.1
State 24-hour Maximum Concentration	–	–	–
State Annual Average Concentration (CAAQS=20 µg/m ³)	–	–	–
<i>Number of Days Standard Exceeded</i>			
NAAQS 24-hour (>150 µg/m ³)	0	0	0
CAAQS 24-hour (>50 µg/m ³)	–	–	–
Particulate Matter Less Than 2.5 Microns (PM_{2.5})			
National 24-hour Maximum Concentration	–	–	–
State 24-hour Maximum Concentration	41.7	31.5	27.2
<i>Number of Days Standard Exceeded</i>			
NAAQS 24-hour (>35 µg/m ³)	2	0	0
Notes: NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million; µg/m ³ = micrograms per cubic meter; NM = not measured			
(footnotes continued on next page)			

(footnotes continued from previous page)

Notes:

1. Measurements taken at the Lake Elsinore-West Flint Street Monitoring Station at 506 West Flint Street, Lake Elsinore, California 92530 (CARB# 33158).

Source: All pollutant measurements are from the CARB Aerometric Data Analysis and Management system database (<https://www.arb.ca.gov/adam>) except for CO, which were retrieved from the CARB Air Quality and Meteorological Information System (<https://www.arb.ca.gov/aqmis2/aqdselect.php>).

2.3 SENSITIVE RECEPTORS

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive receptors that are in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive land uses surrounding the Project consist mostly of single-family residences, educational institutions, and recreational facilities. Table 3: Sensitive Receptors, lists the distances and locations of sensitive receptors within the Project vicinity. The distances depicted in Table 3 are based on the distance from the Project site to the vicinity sensitive receptors.

Table 3: Sensitive Receptors	
Receptor Type/Description	Distance and Direction from the Project Site
Single-Family Residential Neighborhood	50 feet north
Single-Family Residential Neighborhood	50 feet south
Single-Family Residential Neighborhood	50 feet west
Single-Family Residential Neighborhood	650 feet east
Donald Graham Elementary	1,090 feet northwest
Ronald Reagan Elementary	1,410 feet northwest
Windsong Park	1,802 feet southeast
California Lutheran High School	4,440 feet northwest
Living Hope Lutheran Church	4,440 feet northwest
World Harvest Church	5,560 feet south

3 REGULATORY SETTING

3.1 FEDERAL

Federal Clean Air Act

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

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

3.2 STATE OF CALIFORNIA

California Air Resources Board

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

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

Table 4: State and Federal Ambient Air Quality Standards

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

Notes:

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

¹ California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM₁₀, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM₁₀ annual standard), then some measurements may be excluded. Measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe carbon monoxide standard is 6.0 ppm, a level one-half the national standard and two-thirds the state standard.

² National standards shown are the "primary standards" designed to protect public health. National standards other than for ozone, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm or less. The 24-hour PM₁₀ standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m³. The 24-hour PM_{2.5} standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m³.

³ Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM₁₀ is met if the 3-year average falls below the standard at every site. The annual PM_{2.5} standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard. NAAQS are set by the EPA at levels determined to be protective of public health with an adequate margin of safety.

⁴ On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the ozone level in the area.

⁵ The national 1-hour ozone standard was revoked by the EPA on June 15, 2005.

⁶ In June 2002, CARB established new annual standards for PM_{2.5} and PM₁₀.

⁷ The 8-hour California ozone standard was approved by the CARB on April 28, 2005 and became effective on May 17, 2006.

⁸ On June 2, 2010, the EPA established a new 1-hour SO₂ standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO₂ NAAQS however must continue to be used until one year following EPA initial designations of the new 1-hour SO₂ NAAQS.

⁹ In December 2012, EPA strengthened the annual PM_{2.5} NAAQS from 15.0 to 12.0 µg/m³. In December 2014, the EPA issued final area designations for the 2012 primary annual PM_{2.5} NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

¹⁰ CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.

¹¹ National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.

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

3.3 REGIONAL

South Coast Air Quality Management District

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

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

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

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

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

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

Table 5: South Coast Air Basin Attainment Status		
Pollutant	Federal	State
Ozone (O ₃) (1 Hour Standard)	Non-Attainment (Extreme)	Non-Attainment
Ozone (O ₃) (8 Hour Standard)	Non-Attainment (Extreme)	Non-Attainment
Particulate Matter (PM _{2.5}) (24 Hour Standard)	Non-Attainment (Serious)	–
Particulate Matter (PM _{2.5}) (Annual Standard)	Non-Attainment (Serious)	Non-Attainment
Particulate Matter (PM ₁₀) (24 Hour Standard)	Attainment (Maintenance)	Non-Attainment
Particulate Matter (PM ₁₀) (Annual Standard)	–	Non-Attainment
Carbon Monoxide (CO) (1 Hour Standard)	Attainment (Maintenance)	Attainment
Carbon Monoxide (CO) (8 Hour Standard)	Attainment (Maintenance)	Attainment
Nitrogen Dioxide (NO ₂) (1 Hour Standard)	Unclassifiable/Attainment	Attainment
Nitrogen Dioxide (NO ₂) (Annual Standard)	Attainment (Maintenance)	Attainment
Sulfur Dioxide (SO ₂) (1 Hour Standard)	Unclassifiable/Attainment	Attainment
Sulfur Dioxide (SO ₂) (24 Hour Standard)	Unclassifiable/Attainment	Attainment
Lead (Pb) (30 Day Standard)	–	Attainment
Lead (Pb) (3 Month Standard)	Nonattainment (Partial)	Attainment
Sulfates (SO ₄₋₂) (24 Hour Standard)	–	Attainment
Hydrogen Sulfide (H ₂ S) (1 Hour Standard)	–	Attainment
Source: South Coast Air Quality Management District, <i>Air Quality Management Plan</i> , 2016; U.S. EPA, <i>Nonattainment Areas for Criteria Pollutants (Green Book)</i> , January 7, 2019.		

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

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

- a) Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
 - b) All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.
 - c) All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
 - d) The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
 - e) Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the work day to remove soil tracked onto the paved surface.
- **Rule 1113 (Architectural Coatings)** – This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 AIR QUALITY THRESHOLDS

The air quality analysis in this section is modeled after the Initial Study Checklist recommended by CEQA Guidelines, as amended and prepared in accordance with the City of Wildomar's *Local California Environmental Quality Act Guidelines and Procedures* (dated August 12, 2015). The standards presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant impact if it causes one or more of the following to occur:

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

Based on these standards and thresholds, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts.

SCAQMD Thresholds

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

Table 6: South Coast Air Quality Management District Emissions Thresholds		
Criteria Air Pollutants and Precursors (Regional)	Construction-Related	Operational-Related
	Average Daily Emissions (pounds/day)	Average Daily Emission (pounds/day)
Reactive Organic Gases (ROG)	75	55
Carbon Monoxide (CO)	550	550
Nitrogen Oxides (NO _x)	100	55
Sulfur Oxides (SO _x)	150	150
Coarse Particulates (PM ₁₀)	150	150
Fine Particulates (PM _{2.5})	55	55

Source: South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993 (PM_{2.5} threshold adopted June 1, 2007).

Localized Carbon Monoxide

In addition to the daily thresholds listed above, development associated with the proposed Project would also be subject to the ambient air quality standards. These are addressed through an analysis of localized CO impacts. The California 1-hour and 8-hour CO standards are:

- 1-hour = 20 ppm
- 8-hour = 9 ppm

The significance of localized impacts depends on whether ambient CO levels near the Project site are above state and federal CO standards. The SCAB has been designated as attainment under the 1-hour and 8-hour standards.

Localized Significance Thresholds

In addition to the CO hotspot analysis, the SCAQMD developed LSTs for emissions of NO₂, CO, PM₁₀, and PM_{2.5} generated at new development sites (off-site mobile source emissions are not included in the LST analysis). LSTs represent the maximum emissions that can be generated at a Project site without expecting to cause or substantially contribute to an exceedance of the most stringent national or state ambient air quality standards. LSTs are based on the ambient concentrations of that pollutant within the Project source receptor area (SRA), as demarcated by the SCAQMD, and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects that disturb 5 acres or less on a single day. The City of Wildomar is located within SCAQMD SRA 25. Table 7: Local Significance Thresholds (Construction/Operations), shows the LSTs for a 1-acre, 2-acre, and 5-acre Project site in SRA 25 with sensitive receptors located within 25 meters of the Project site.

Table 7: Local Significance Thresholds (Construction/Operations)				
Project Size	Nitrogen Oxide (NO_x) – lbs/day	Carbon Monoxide (CO) – lbs/day	Coarse Particulates (PM₁₀) – lbs/day	Fine Particulates (PM_{2.5}) – lbs/day
1 Acre	162/162	661/661	4/1	3/1
2 Acres	234/234	970/970	7/2	4/1
5 Acres	371/371	1,732/1,732	13/4	8/2

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

4.2 METHODOLOGY

This air quality impact analysis considers construction and operational impacts associated with the proposed Project. Construction equipment, trucks, worker vehicles, and ground-disturbing activities associated with proposed Project construction would generate emissions of criteria air pollutants and precursors. Air quality impacts were assessed according to methodologies recommended by CARB and the SCAQMD. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod). CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 AIR QUALITY ANALYSIS

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

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

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

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

- **Consistency Criterion No. 1:** The proposed Project will not result in an increase in the frequency or severity of existing air quality violations, or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.
- **Consistency Criterion No. 2:** The proposed Project will not exceed the assumptions in the AQMP or increments based on the years of the Project build-out phase.

The violations to which Consistency Criterion No. 1 refers are CAAQS and NAAQS. As shown in [Table 8](#), [Table 9](#), and [Table 10](#) below, the Project would not exceed the short-term construction standards or long-term operational standards and would therefore not violate any air quality standards. Thus, no impact is expected, and the Project would be consistent with the first criterion.

Concerning Consistency Criterion No. 2, the AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local guidelines. The proposed project includes a General Plan Amendment to change the land use from Medium Density Residential (MDR) and Commercial Office (C-O) to Commercial Retail (CR) on two parcels (APN: 376-410-002 & 376-410-024) to match the existing zoning designation of C-1/C-P (General Commercial) on both parcels. Both designations are within the

Community Development Foundation Component. The project site is zoned General Commercial (C-1/C-P) by the *Zoning Map*. The project proposes development of a religious institution/community church. According to the *Municipal Code*, churches, temples, and other places of religious worship are permitted, together with outside storage and display of materials appurtenant to such use, provided a plot plan has been approved. Therefore, the proposed Project is considered consistent with the land use designation and development density presented in the RTP/SCS. The Project would not exceed the population or job growth projections used by the SCAQMD to develop the AQMP. Thus, no impact would occur, as the Project is also consistent with the second criterion.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 5.2 Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Construction Emissions

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

Project emissions were calculated using the California Emissions Estimator Model version 2016.3.2 (CalEEMod). Construction results in the temporary generation of emissions resulting from site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water. On-site earthwork for the project is designed to be balanced with approximately 80,000 cubic yards of cut and fill. To conservatively account for potential soil shrinkage and other adjustments, an additional 15,000 cubic yards of imported fill were included in CalEEMod. The Project is expected to be built in separate construction phases, but the funding and timing of these separate phases is unknown. Therefore, the emissions were modeled as if the entire Project was built in a single construction phase to conservatively capture the emissions of the full development.

The duration of construction activities associated with the Project is estimated to be approximately 18 months. Construction-generated emissions associated with the Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See [Appendix A](#) for more information regarding the construction assumptions used in this analysis. Predicted maximum daily construction-generated emissions for the proposed Project are summarized in [Table 8: Construction-Related Emissions](#).

Grading of Project site would occur at once; however, the remaining construction activities are anticipated to occur over several development phases. The timing of the subsequent development phases are

currently unknown. Therefore, construction activities were conservatively modeled to assume concurrent development of all Project phases. The emissions rates in CalEEMod decrease in future years due to improved emissions controls, fleet turnover, and inspection and maintenance programs. If future development phases occur in later years, the daily emissions would be lower than what is shown in [Table 8](#).

Table 8: Construction-Related Emissions (Maximum Pounds Per Day)						
Construction Year	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Sulfur Dioxide (SO₂)	Fine Particulate Matter (PM_{2.5})	Coarse Particulate Matter (PM₁₀)
2019	7.55	90.58	52.65	0.11	6.50	10.31
2020	16.07	83.41	49.90	0.13	4.73	7.87
2021	15.58	35.90	40.28	0.13	2.81	7.62
<i>SCAQMD Threshold</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>55</i>	<i>150</i>
Exceed SCAQMD Threshold?	No	No	No	No	No	No
Notes: SCAQMD Rule 403 Fugitive Dust applied. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. No mitigation was applied to construction equipment. Refer to Appendix A for Model Data Outputs.						
Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.						

As shown in [Table 8](#), all criteria pollutant emissions would remain below their respective thresholds. While impacts would be considered less than significant, the proposed Project would be subject to SCAQMD Rules 402, 403, and 1113, described in the Regulatory Framework subsection above, to further reduce specific construction-related emissions.

Operational Emissions

Project-generated emissions would be associated with motor vehicle use and area sources, such as the use of landscape maintenance equipment and architectural coatings. Long-term operational emissions attributable to the proposed Project are summarized in [Table 9: Long-Term Operational Emissions](#). Emissions rates differ from summer to winter because weather factors are dependent on the season and these factors affect pollutant mixing, dispersion, ozone formation, and other factors. As shown in [Table 9](#), the Project emissions would not exceed SCAQMD thresholds for any criteria air pollutants. Therefore, regional operations emissions would result in a less than significant long-term regional air quality impact.

Area Source Emissions

Area source emissions would be generated due to on-site equipment, architectural coating, and landscaping that were previously not present on the site. As shown in [Table 9](#), unmitigated area source emissions from the proposed project would not exceed SCAQMD thresholds for either the winter or summer seasons. Therefore, mitigation measures are not required to reduce criteria pollutants and no significant impacts are anticipated.

Table 9: Long-Term Operational Emissions (Maximum Pounds Per Day)						
Source	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Sulfur Dioxide (SO₂)	Fine Particulate Matter (PM_{2.5})	Coarse Particulate Matter (PM₁₀)
Summer Emissions						
Area Source Emissions	1.71	0.00	0.34	0.00	0.00	0.00
Energy Emissions	0.06	0.53	0.44	0.00	0.04	0.04
Mobile Emissions	3.64	24.82	34.15	0.14	2.59	9.45
Total Emissions	5.41	25.36	34.92	0.14	2.63	9.49
<i>SCAQMD Threshold</i>	<i>55</i>	<i>55</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
Exceeds Threshold?	No	No	No	No	No	No
Winter Emissions						
Area Source Emissions	1.71	0.00	0.34	0.00	0.00	0.00
Energy Emissions	0.06	0.53	0.44	0.00	0.04	0.04
Mobile Emissions	3.05	24.63	30.54	0.13	2.59	9.45
Total Emissions	4.82	25.16	31.32	0.13	2.64	9.49
<i>SCAQMD Threshold</i>	<i>55</i>	<i>55</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
Exceeds Threshold?	No	No	No	No	No	No
Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.						

Energy Source Emissions

Energy source emissions would be generated due to electricity and natural gas usage associated with the proposed Project. Primary uses of electricity and natural gas by the Project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. As shown in [Table 9](#), unmitigated energy source emissions from the proposed Project would not exceed SCAQMD thresholds for criteria pollutants. As such, the Project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation. As a result, impacts associated with operational air quality would be less than significant.

Mobile Source

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_x, PM₁₀, and PM_{2.5} are all pollutants of regional concern. NO_x and ROG react with sunlight to form O₃, known as photochemical smog. Additionally, wind currents readily transport PM₁₀ and PM_{2.5}. However, CO tends to be a localized pollutant, dispersing rapidly at the source.

The Project-generated vehicle emissions have been estimated using ITE trip generation rates as shown in the traffic data within the *Faith Bible Church Traffic Impact Analysis Report* prepared by Michael Baker International (September 12, 2016). The Project would generate approximately 2,057 daily trips on a Sunday and approximately 677 average daily trips during the weekday. As shown in [Table 9](#), the anticipated mobile source emissions do not exceed SCAQMD thresholds for criteria pollutants. Therefore, air quality impacts associated with mobile source emissions from the Project would be less than significant.

Cumulative Short-Term Emissions

The SCAB is designated nonattainment for O₃, PM₁₀, and PM_{2.5} for State standards and nonattainment for O₃ and PM_{2.5} for Federal standards. As discussed above, the Project construction-related emissions by themselves would not have the potential to exceed the SCAQMD significance thresholds for criteria pollutants. Since these thresholds indicate whether individual Project emissions have the potential to affect cumulative regional air quality, it can be expected that the Project-related construction emissions would not be cumulatively considerable. The SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the AQMP pursuant to the FCAA mandates. The analysis assumed fugitive dust controls would be utilized during construction, including frequent water applications.

SCAQMD rules, mandates, and compliance with adopted AQMP emissions control measures would also be imposed on construction projects throughout the Air Basin, which would include related projects. Compliance with SCAQMD rules and regulations would reduce the proposed Project construction-related impacts to a less than significant level. Therefore, Project-related construction emissions, in combination with those from other projects in the area, would not substantially deteriorate the local air quality. Construction emissions associated with the proposed Project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Cumulative Long-Term Impacts

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

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

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

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

Localized Construction Significance Analysis

The nearest sensitive receptors are the single-family residences located 50 feet (15 meters) north of the Project site. To identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice

Enhancement Initiative. The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003, revised 2008) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with Project-specific emissions.

Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, Table 10: Equipment-Specific Grading Rates, is used to determine the maximum daily disturbed acreage for comparison to LSTs. The appropriate SRA for the localized significance thresholds is the Lake Elsinore area (SRA 25) since this area includes the Project site. LSTs apply to CO, NO₂, PM₁₀, and PM_{2.5}. The SCAQMD produced look-up tables for projects that disturb areas less than or equal to 5 acres in size. Project construction is anticipated to disturb a maximum of 6.5 acres in a single day.

Table 10: Equipment-Specific Grading Rates					
Construction Phase	Equipment Type	Equipment Quantity	Acres Graded per 8-Hour Day	Operating Hours per Day	Acres Graded per Day
Grading	Graders	2	0.5	8	1.0
	Rubber Tired Dozers	1	0.5	8	0.5
	Scrapers	4	1.0	8	4.0
	Tractors/Loaders/Backhoes	2	0.5	8	1.0
Total Acres Graded per Day					6.5
Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.					

The SCAQMD's methodology states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs." Therefore, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered. The nearest sensitive receptors are the single-family residences located 50 feet (15 meters) north of the Project site. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. Therefore, LSTs for receptors located at 25 meters were utilized in this analysis. Table 11: Localized Significance of Construction Emissions, presents the results of localized emissions during construction.

Table 11: Localized Significance of Construction Emissions (Maximum Pounds Per Day)				
Construction Activity	Nitrogen Oxide (NO _x)	Carbon Monoxide (CO)	Fine Particulate Matter (PM _{2.5})	Coarse Particulate Matter (PM ₁₀)
Site Preparation (2019)	45.57	22.06	6.44	10.11
Grading (2019)	86.93	51.34	4.86	7.32
Grading (2020)	80.03	48.69	4.57	7.01
Building Construction (2020)	19.19	16.85	1.05	1.12
Building Construction (2021)	17.43	16.57	0.90	0.96
Architectural Coating (2020)	1.68	1.83	0.11	0.11
Architectural Coating (2021)	1.53	1.82	0.09	0.09
Paving (2021)	12.92	14.65	0.62	0.68
SCAQMD Localized Screening Threshold (adjusted for 5 acres at 25 meters)	371	1,732	8	13
Exceed SCAQMD Threshold?	No	No	No	No
Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.				

Table 11 shows that the emissions of these pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Therefore, significant impacts would not occur concerning LSTs during construction activities.

Localized Operational Significance Analysis

According to the SCAQMD localized significance threshold methodology, LSTs apply to on-site sources. LSTs for receptors located at 25 meters for SRA 25 were utilized in this analysis. LSTs are only provided for 1-, 2-, and 5-acre sites. As the LSTs increase with site acreage, the 5-acre LST thresholds were conservatively used for the 24.31-acre Project site.

The on-site operational emissions are compared to the LST thresholds in Table 12: Localized Significance of Operational Emissions. Table 12 shows that the maximum daily emissions of pollutants during operations would not exceed the SCAQMD's thresholds. Therefore, the project would not result in significant concentrations of pollutants at nearby sensitive receptors and operational LST impacts would be less than significant.

Table 12: Localized Significance of Operational Emissions (Maximum Pounds Per Day)				
Activity	Nitrogen Oxide (NO _x)	Carbon Monoxide (CO)	Fine Particulate Matter (PM _{2.5})	Coarse Particulate Matter (PM ₁₀)
On-Site Emissions	0.00	0.34	0.00	0.00
SCAQMD Localized Screening Threshold (adjusted for 5 acres at 25 meters)	371	1,732	2	4
Exceed SCAQMD Threshold?	No	No	No	No
Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.				

Carbon Monoxide Hotspots

An analysis of CO "hot spots" is needed to determine whether the change in the level of service of an intersection resulting from the proposed Project would have the potential to result in exceedances of the CAAQS or NAAQS. It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations have steadily declined.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. The 2016 AQMP is the most recent version that addresses CO concentrations. As part of the SCAQMD *CO Hotspot Analysis*, the Wilshire Boulevard/Veteran Avenue intersection, one of the most congested intersections in Southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day, was modeled for CO concentrations. This modeling effort identified a CO concentration high of 4.6 ppm, which is well below the 35-ppm Federal standard. The proposed Project considered herein would not produce the volume of traffic required to generate a CO hot spot in the context of SCAQMD's *CO Hotspot Analysis*. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection even as it accommodates 100,000 vehicles daily, it can be reasonably inferred that CO hotspots would not be experienced at any vicinity intersections resulting from

2,057 additional Sunday vehicle trips and 677 additional weekday vehicle trips attributable to the Project². Therefore, impacts would be less than significant.

Construction-Related Diesel Particulate Matter

Construction would result in the generation of DPM emissions from the use of off-road diesel equipment required. The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer.

The use of diesel-powered construction equipment would be temporary and episodic. The duration of exposure would be short and exhaust from construction equipment dissipates rapidly. Current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. The closest sensitive receptors are located approximately 50 feet from the property boundary and major Project construction areas.

California Office of Environmental Health Hazard Assessment has not identified short-term health effects from DPM. Construction is temporary and would be transient throughout the site (i.e., move from location to location) and would not generate emissions in a fixed location for extended periods of time. Construction would be subject to and would comply with California regulations limiting the idling of heavy-duty construction equipment to no more than 5 minutes to further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. For these reasons, DPM generated by construction activities, in and of itself, would not be expected to expose sensitive receptors to substantial amounts of air toxics and the Project would have a less than significant impact.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

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

Potential odors could arise from the diesel construction equipment used on-site, as well as from architectural coatings and asphalt off-gassing. Odors generated from the referenced sources are common in an urban environment and are not known to be substantially offensive to adjacent receptors. Additionally, odors generated during construction activities would be temporary and would disperse rapidly.

The SCAQMD *CEQA Air Quality Handbook* identifies certain land uses as sources of odors. These land uses include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The proposed Project would not include any of the land uses that have been identified by the SCAQMD as odor sources. Therefore, there would be no impacts from the proposed Project.

² Michael Baker International, *Faith Bible Church Traffic Impact Analysis Report*, 2016.

Mitigation Measures: No mitigation is required.

Level of Significance: No impact.

5.2 CUMULATIVE IMPACTS

Cumulative Setting

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

Cumulative Impacts and Mitigation Measures

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

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

6 REFERENCES

1. California Air Pollution Control Officers Association (CAPCOA), *Health Effects*, 2018.
2. California Air Pollution Control Officers Association (CAPCOA), *Health Risk Assessments for Proposed Land Use Projects*, 2009.
3. California Air Resources Board, *Aerometric Data Analysis and Measurement System (ADAM) Top Four Summaries from 2014 to 2016*, 2018.
4. California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*, 2005.
5. California Air Resources Board, *Current Air Quality Standards*, 2016.
6. California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, 2000.
7. Federal Highway Administration, *Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents*, 2016.
8. FM Civil Engineers, *Site Plan*, 2018.
9. Michael Baker International, *Faith Bible Church Traffic Impact Analysis Report*, 2016.
10. Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Risk Assessment Guidelines*, 2015.
11. Southern California Association of Governments, *Regional Transportation Plan/Sustainable Communities Strategy*, 2016.
12. South Coast Air Quality Management District, *Air Quality Management Plan*, 2016.
13. South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.
14. South Coast Air Quality Management District, *Localized Significance Threshold Methodology*, 2009.
15. South Coast Air Quality Management District, *High-Cube Warehouse Vehicle Trip Generation Analysis*, 2016.
16. United States Environmental Protection Agency, *National Ambient Air Quality Standards Table*, 2016.
17. United States Environmental Protection Agency, *Nonattainment Areas for Criteria Pollutants*, 2018.
18. United States Environmental Protection Agency, *Policy Assessment for the Review of the Lead National Ambient Air Quality Standards*, 2013.

Appendix A

Air Quality Modeling Data

Faith Bible Church Wildomar - Riverside-South Coast County, Summer

Faith Bible Church Wildomar
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	58.20	1000sqft	1.34	58,200.00	0
Single Family Housing	3.00	Dwelling Unit	0.97	5,400.00	9
Parking Lot	779.00	Space	7.01	311,600.00	0
Other Asphalt Surfaces	6.85	Acre	6.85	298,386.00	0
City Park	8.14	Acre	8.14	354,578.40	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

Project Characteristics -

Land Use - city park - ball field (1.28 acres) and open space

Construction Phase - anticipated construction schedule

Off-road Equipment -

Off-road Equipment - anticipated construction equipment

Off-road Equipment - anticipated construction equipment

Off-road Equipment -

Off-road Equipment -

Grading -

Vehicle Trips - trip generation based on traffic impact analysis from MBI

Road Dust -

Construction Off-road Equipment Mitigation - mitigation per Rule 403

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation - per AB 939

Woodstoves - per SCAQMD Rule 445

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	135.00
tblConstructionPhase	NumDays	370.00	215.00
tblConstructionPhase	NumDays	20.00	70.00
tblConstructionPhase	PhaseEndDate	12/2/2019	4/20/2020
tblConstructionPhase	PhaseEndDate	5/3/2021	2/15/2021
tblConstructionPhase	PhaseEndDate	6/28/2021	1/26/2021
tblConstructionPhase	PhaseEndDate	5/31/2021	3/15/2021
tblConstructionPhase	PhaseStartDate	12/3/2019	4/21/2020
tblConstructionPhase	PhaseStartDate	6/1/2021	10/21/2020
tblConstructionPhase	PhaseStartDate	5/4/2021	2/16/2021
tblFireplaces	NumberWood	0.15	0.00
tblGrading	AcresOfGrading	675.00	337.50
tblGrading	MaterialImported	0.00	15,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblTripsAndVMT	WorkerTripNumber	28.00	20.00
tblVehicleTrips	ST_TR	10.37	17.18
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	9.91	0.00
tblVehicleTrips	SU_TR	36.63	35.34
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	8.62	0.00
tblVehicleTrips	WD_TR	9.11	11.63
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	9.52	0.00
tblWoodstoves	NumberCatalytic	0.15	0.00
tblWoodstoves	NumberNoncatalytic	0.15	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	7.5443	90.5431	52.6529	0.1119	18.2675	3.6200	20.6591	9.9840	3.3309	12.1843	0.0000	11,158.1019	11,158.1019	3.1765	0.0000	11,237.5153
2020	16.0746	83.3761	49.9021	0.1310	9.2841	3.3047	12.5888	3.7565	3.0407	6.7972	0.0000	13,156.3224	13,156.3224	3.1717	0.0000	13,184.7635
2021	15.5765	35.9019	40.2806	0.1287	6.8546	1.1163	7.9710	1.8423	1.0550	2.8973	0.0000	12,930.1913	12,930.1913	1.0950	0.0000	12,957.5663
Maximum	16.0746	90.5431	52.6529	0.1310	18.2675	3.6200	20.6591	9.9840	3.3309	12.1843	0.0000	13,156.3224	13,156.3224	3.1765	0.0000	13,184.7635

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	7.5443	90.5431	52.6529	0.1119	7.9140	3.6200	10.3056	4.2962	3.3309	6.4964	0.0000	11,158.1019	11,158.1019	3.1765	0.0000	11,237.5153
2020	16.0746	83.3761	49.9021	0.1310	6.5072	3.3047	7.8685	1.7571	3.0407	4.7295	0.0000	13,156.3224	13,156.3224	3.1717	0.0000	13,184.7635
2021	15.5765	35.9019	40.2806	0.1287	6.5072	1.1163	7.6235	1.7570	1.0550	2.8121	0.0000	12,930.1913	12,930.1913	1.0950	0.0000	12,957.5663
Maximum	16.0746	90.5431	52.6529	0.1310	7.9140	3.6200	10.3056	4.2962	3.3309	6.4964	0.0000	13,156.3224	13,156.3224	3.1765	0.0000	13,184.7635

	ROG	NOx	CO	SO2	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	39.17	0.00	37.41	49.88	0.00	35.84	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.7178	0.0460	0.3534	2.9000e-004		5.1000e-003	5.1000e-003		5.1000e-003	5.1000e-003	0.0000	54.6322	54.6322	1.9600e-003	9.9000e-004	54.9762
Energy	0.0586	0.5311	0.4365	3.2000e-003		0.0405	0.0405		0.0405	0.0405		639.0674	639.0674	0.0123	0.0117	642.8650
Mobile	3.6391	24.8226	34.1456	0.1377	9.3566	0.0941	9.4507	2.5035	0.0882	2.5918		14,063.9811	14,063.9811	0.8152		14,084.3613
Total	5.4154	25.3996	34.9354	0.1412	9.3566	0.1396	9.4963	2.5035	0.1338	2.6373	0.0000	14,757.6807	14,757.6807	0.8294	0.0127	14,782.2025

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	1.7128	3.6600e-003	0.3354	2.0000e-005		1.6800e-003	1.6800e-003		1.6800e-003	1.6800e-003	0.0000	0.6322	0.6322	9.3000e-004	0.0000	0.6553
Energy	0.0586	0.5311	0.4365	3.2000e-003		0.0405	0.0405		0.0405	0.0405		639.0674	639.0674	0.0123	0.0117	642.8650
Mobile	3.6391	24.8226	34.1456	0.1377	9.3566	0.0941	9.4507	2.5035	0.0882	2.5918		14,063.9811	14,063.9811	0.8152		14,084.3613
Total	5.4105	25.3573	34.9174	0.1409	9.3566	0.1362	9.4928	2.5035	0.1304	2.6339	0.0000	14,703.6807	14,703.6807	0.8284	0.0117	14,727.8816

	ROG	NOx	CO	SO2	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	0.09	0.17	0.05	0.19	0.00	2.45	0.04	0.00	2.56	0.13	0.00	0.37	0.37	0.12	7.79	0.37

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	10/1/2019	10/14/2019	5	10	
2	Grading	Grading	10/15/2019	4/20/2020	5	135	
3	Building Construction	Building Construction	4/21/2020	2/15/2021	5	215	
4	Paving	Paving	2/16/2021	3/15/2021	5	20	
5	Architectural Coating	Architectural Coating	10/21/2020	1/26/2021	5	70	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 337.5

Acres of Paving: 13.86

Residential Indoor: 10,935; Residential Outdoor: 3,645; Non-Residential Indoor: 87,300; Non-Residential Outdoor: 29,100; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	4	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
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
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	11	20.00	0.00	1,875.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	431.00	168.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	86.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

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

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	0.0991	0.0608	0.7997	2.0600e-003	0.2012	1.2400e-003	0.2024	0.0534	1.1400e-003	0.0545		204.7540	204.7540	5.7300e-003		204.8973

Total	0.0991	0.0608	0.7997	2.0600e-003	0.2012	1.2400e-003	0.2024	0.0534	1.1400e-003	0.0545		204.7540	204.7540	5.7300e-003		204.8973
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	7.7233	2.3904	10.1137	4.2454	2.1991	6.4445	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445

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	0.0991	0.0608	0.7997	2.0600e-003	0.1907	1.2400e-003	0.1919	0.0508	1.1400e-003	0.0519		204.7540	204.7540	5.7300e-003		204.8973
Total	0.0991	0.0608	0.7997	2.0600e-003	0.1907	1.2400e-003	0.1919	0.0508	1.1400e-003	0.0519		204.7540	204.7540	5.7300e-003		204.8973

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6874	0.0000	8.6874	3.5986	0.0000	3.5986			0.0000			0.0000
Off-Road	7.3562	86.9275	51.3377	0.0989		3.6058	3.6058		3.3173	3.3173		9,797.2756	9,797.2756	3.0998		9,874.7695
Total	7.3562	86.9275	51.3377	0.0989	8.6874	3.6058	12.2932	3.5986	3.3173	6.9160		9,797.2756	9,797.2756	3.0998		9,874.7695

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	0.0780	3.5481	0.4267	0.0107	0.5020	0.0128	0.5149	0.1302	0.0123	0.1425		1,133.3219	1,133.3219	0.0704		1,135.0822
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	0.1101	0.0676	0.8885	2.2900e-003	0.2236	1.3800e-003	0.2249	0.0593	1.2700e-003	0.0606		227.5045	227.5045	6.3700e-003		227.6637
Total	0.1881	3.6156	1.3152	0.0130	0.7256	0.0142	0.7398	0.1895	0.0135	0.2030		1,360.8263	1,360.8263	0.0768		1,362.7459

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					3.7139	0.0000	3.7139	1.5384	0.0000	1.5384			0.0000			0.0000
Off-Road	7.3562	86.9275	51.3377	0.0989		3.6058	3.6058		3.3173	3.3173	0.0000	9,797.2756	9,797.2756	3.0998		9,874.7695
Total	7.3562	86.9275	51.3377	0.0989	3.7139	3.6058	7.3197	1.5384	3.3173	4.8558	0.0000	9,797.2756	9,797.2756	3.0998		9,874.7695

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	0.0780	3.5481	0.4267	0.0107	0.4755	0.0128	0.4883	0.1237	0.0123	0.1359		1,133.3219	1,133.3219	0.0704		1,135.0822
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	0.1101	0.0676	0.8885	2.2900e-003	0.2119	1.3800e-003	0.2133	0.0564	1.2700e-003	0.0577		227.5045	227.5045	6.3700e-003		227.6637
Total	0.1881	3.6156	1.3152	0.0130	0.6874	0.0142	0.7016	0.1801	0.0135	0.1936		1,360.8263	1,360.8263	0.0768		1,362.7459

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					8.6874	0.0000	8.6874	3.5986	0.0000	3.5986			0.0000			0.0000
Off-Road	6.9118	80.0272	48.6899	0.0989		3.2929	3.2929		3.0294	3.0294		9,582.6142	9,582.6142	3.0992		9,660.0945
Total	6.9118	80.0272	48.6899	0.0989	8.6874	3.2929	11.9803	3.5986	3.0294	6.6281		9,582.6142	9,582.6142	3.0992		9,660.0945

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	0.0714	3.2887	0.4058	0.0106	0.3731	0.0105	0.3836	0.0986	0.0100	0.1086		1,121.8990	1,121.8990	0.0669		1,123.5704
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1018	0.0602	0.8064	2.2100e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		220.3189	220.3189	5.6500e-003		220.4601
Total	0.1732	3.3489	1.2122	0.0128	0.5967	0.0118	0.6085	0.1578	0.0113	0.1691		1,342.2179	1,342.2179	0.0725		1,344.0305

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					3.7139	0.0000	3.7139	1.5384	0.0000	1.5384			0.0000			0.0000
Off-Road	6.9118	80.0272	48.6899	0.0989		3.2929	3.2929		3.0294	3.0294	0.0000	9,582.6142	9,582.6142	3.0992		9,660.0945
Total	6.9118	80.0272	48.6899	0.0989	3.7139	3.2929	7.0067	1.5384	3.0294	4.5678	0.0000	9,582.6142	9,582.6142	3.0992		9,660.0945

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	0.0714	3.2887	0.4058	0.0106	0.3543	0.0105	0.3648	0.0939	0.0100	0.1040		1,121.8990	1,121.8990	0.0669		1,123.5704
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1018	0.0602	0.8064	2.2100e-003	0.2119	1.3500e-003	0.2133	0.0564	1.2500e-003	0.0577		220.3189	220.3189	5.6500e-003		220.4601
Total	0.1732	3.3489	1.2122	0.0128	0.5662	0.0118	0.5780	0.1504	0.0113	0.1616		1,342.2179	1,342.2179	0.0725		1,344.0305

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	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	0.4683	17.2858	3.1623	0.0439	1.0758	0.0983	1.1741	0.3098	0.0941	0.4038		4,626.5675	4,626.5675	0.3470		4,635.2429
Worker	2.1933	1.2971	17.3786	0.0477	4.8176	0.0292	4.8467	1.2776	0.0269	1.3045		4,747.8725	4,747.8725	0.1217		4,750.9150
Total	2.6615	18.5829	20.5409	0.0916	5.8934	0.1275	6.0209	1.5874	0.1209	1.7083		9,374.4400	9,374.4400	0.4687		9,386.1578

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345

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	0.4683	17.2858	3.1623	0.0439	1.0298	0.0983	1.1282	0.2985	0.0941	0.3925		4,626.5675	4,626.5675	0.3470		4,635.2429
Worker	2.1933	1.2971	17.3786	0.0477	4.5663	0.0292	4.5954	1.2160	0.0269	1.2428		4,747.8725	4,747.8725	0.1217		4,750.9150
Total	2.6615	18.5829	20.5409	0.0916	5.5961	0.1275	5.7236	1.5144	0.1209	1.6353		9,374.4400	9,374.4400	0.4687		9,386.1578

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643

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	0.3922	15.5466	2.7738	0.0435	1.0758	0.0296	1.1053	0.3097	0.0283	0.3380		4,590.6172	4,590.6172	0.3284		4,598.8275
Worker	2.0434	1.1641	15.9346	0.0461	4.8176	0.0284	4.8460	1.2776	0.0261	1.3038		4,589.0764	4,589.0764	0.1094		4,591.8120
Total	2.4356	16.7107	18.7084	0.0896	5.8933	0.0580	5.9513	1.5874	0.0544	1.6418		9,179.6936	9,179.6936	0.4378		9,190.6395

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643

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	0.3922	15.5466	2.7738	0.0435	1.0298	0.0296	1.0594	0.2984	0.0283	0.3267		4,590.6172	4,590.6172	0.3284		4,598.8275
Worker	2.0434	1.1641	15.9346	0.0461	4.5663	0.0284	4.5947	1.2160	0.0261	1.2421		4,589.0764	4,589.0764	0.1094		4,591.8120
Total	2.4356	16.7107	18.7084	0.0896	5.5961	0.0580	5.6540	1.5144	0.0544	1.5688		9,179.6936	9,179.6936	0.4378		9,190.6395

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573

Paving	1.8157					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	3.0712	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573

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	0.0711	0.0405	0.5546	1.6000e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		159.7126	159.7126	3.8100e-003		159.8078
Total	0.0711	0.0405	0.5546	1.6000e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		159.7126	159.7126	3.8100e-003		159.8078

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	1.8157					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	3.0712	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573

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	0.0711	0.0405	0.5546	1.6000e-003	0.1589	9.9000e-004	0.1599	0.0423	9.1000e-004	0.0432		159.7126	159.7126	3.8100e-003		159.8078
Total	0.0711	0.0405	0.5546	1.6000e-003	0.1589	9.9000e-004	0.1599	0.0423	9.1000e-004	0.0432		159.7126	159.7126	3.8100e-003		159.8078

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	10.6134					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	10.8556	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
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Category	lb/day										lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.4376	0.2588	3.4677	9.5100e-003	0.9613	5.8200e-003	0.9671	0.2549	5.3600e-003	0.2603	947.3713	947.3713	0.0243	947.9784	
Total	0.4376	0.2588	3.4677	9.5100e-003	0.9613	5.8200e-003	0.9671	0.2549	5.3600e-003	0.2603	947.3713	947.3713	0.0243	947.9784	

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	10.6134					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	0.0000	281.4481	281.4481	0.0218		281.9928
Total	10.8556	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	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	0.4376	0.2588	3.4677	9.5100e-003	0.9111	5.8200e-003	0.9170	0.2426	5.3600e-003	0.2480		947.3713	947.3713	0.0243		947.9784
Total	0.4376	0.2588	3.4677	9.5100e-003	0.9111	5.8200e-003	0.9170	0.2426	5.3600e-003	0.2480		947.3713	947.3713	0.0243		947.9784

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.6134					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	10.8323	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

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	0.4077	0.2323	3.1795	9.1900e-003	0.9613	5.6600e-003	0.9669	0.2549	5.2200e-003	0.2602		915.6858	915.6858	0.0218		916.2316
Total	0.4077	0.2323	3.1795	9.1900e-003	0.9613	5.6600e-003	0.9669	0.2549	5.2200e-003	0.2602		915.6858	915.6858	0.0218		916.2316

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	10.6134					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	10.8323	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309

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	0.4077	0.2323	3.1795	9.1900e-003	0.9111	5.6600e-003	0.9168	0.2426	5.2200e-003	0.2478		915.6858	915.6858	0.0218		916.2316
Total	0.4077	0.2323	3.1795	9.1900e-003	0.9111	5.6600e-003	0.9168	0.2426	5.2200e-003	0.2478		915.6858	915.6858	0.0218		916.2316

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.6391	24.8226	34.1456	0.1377	9.3566	0.0941	9.4507	2.5035	0.0882	2.5918		14,063.9811	14,063.9811	0.8152		14,084.3613
Unmitigated	3.6391	24.8226	34.1456	0.1377	9.3566	0.0941	9.4507	2.5035	0.0882	2.5918		14,063.9811	14,063.9811	0.8152		14,084.3613

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Place of Worship	677.00	1,000.00	2057.00	1,962,774	1,962,774
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	677.00	1,000.00	2,057.00	1,962,774	1,962,774

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
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	64	25	11
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
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

City Park	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
Other Asphalt Surfaces	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
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
Single Family Housing	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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0586	0.5311	0.4365	3.2000e-003		0.0405	0.0405		0.0405	0.0405		639.0674	639.0674	0.0123	0.0117	642.8650
NaturalGas Unmitigated	0.0586	0.5311	0.4365	3.2000e-003		0.0405	0.0405		0.0405	0.0405		639.0674	639.0674	0.0123	0.0117	642.8650

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					
City Park	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

Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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	5180.6	0.0559	0.5079	0.4266	3.0500e-003		0.0386	0.0386		0.0386	0.0386		609.4820	609.4820	0.0117	0.0112	613.1039
Single Family Housing	251.475	2.7100e-003	0.0232	9.8600e-003	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.5853	29.5853	5.7000e-004	5.4000e-004	29.7611
Total		0.0586	0.5311	0.4365	3.2000e-003		0.0405	0.0405		0.0405	0.0405		639.0674	639.0674	0.0123	0.0117	642.8650

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					
City Park	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
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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	5.1806	0.0559	0.5079	0.4266	3.0500e-003		0.0386	0.0386		0.0386	0.0386		609.4820	609.4820	0.0117	0.0112	613.1039
Single Family Housing	0.251475	2.7100e-003	0.0232	9.8600e-003	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.5853	29.5853	5.7000e-004	5.4000e-004	29.7611
Total		0.0586	0.5311	0.4365	3.2000e-003		0.0405	0.0405		0.0405	0.0405		639.0674	639.0674	0.0123	0.0117	642.8650

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7128	3.6600e-003	0.3354	2.0000e-005		1.6800e-003	1.6800e-003		1.6800e-003	1.6800e-003	0.0000	0.6322	0.6322	9.3000e-004	0.0000	0.6553
Unmitigated	1.7178	0.0460	0.3534	2.9000e-004		5.1000e-003	5.1000e-003		5.1000e-003	5.1000e-003	0.0000	54.6322	54.6322	1.9600e-003	9.9000e-004	54.9762

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	0.2036					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4936					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	4.9500e-003	0.0423	0.0180	2.7000e-004		3.4200e-003	3.4200e-003		3.4200e-003	3.4200e-003	0.0000	54.0000	54.0000	1.0300e-003	9.9000e-004	54.3209
Landscaping	0.0157	3.6600e-003	0.3354	2.0000e-005		1.6800e-003	1.6800e-003		1.6800e-003	1.6800e-003		0.6322	0.6322	9.3000e-004		0.6553
Total	1.7178	0.0460	0.3534	2.9000e-004		5.1000e-003	5.1000e-003		5.1000e-003	5.1000e-003	0.0000	54.6322	54.6322	1.9600e-003	9.9000e-004	54.9762

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	0.2036					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4936					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0157	3.6600e-003	0.3354	2.0000e-005		1.6800e-003	1.6800e-003		1.6800e-003	1.6800e-003		0.6322	0.6322	9.3000e-004		0.6553
Total	1.7128	3.6600e-003	0.3354	2.0000e-005		1.6800e-003	1.6800e-003		1.6800e-003	1.6800e-003	0.0000	0.6322	0.6322	9.3000e-004	0.0000	0.6553

7.0 Water Detail

7.1 Mitigation Measures Water

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Faith Bible Church Wildomar - Riverside-South Coast County, Winter

Faith Bible Church Wildomar
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	58.20	1000sqft	1.34	58,200.00	0
Single Family Housing	3.00	Dwelling Unit	0.97	5,400.00	9
Parking Lot	779.00	Space	7.01	311,600.00	0
Other Asphalt Surfaces	6.85	Acre	6.85	298,386.00	0
City Park	8.14	Acre	8.14	354,578.40	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

Project Characteristics -

Land Use - city park - ball field (1.28 acres) and open space

Construction Phase - anticipated construction schedule

Off-road Equipment -

Off-road Equipment - anticipated construction equipment

Off-road Equipment - anticipated construction equipment

Off-road Equipment -

Off-road Equipment -

Grading -

Vehicle Trips - trip generation based on traffic impact analysis from MBI

Road Dust -

Construction Off-road Equipment Mitigation - mitigation per Rule 403

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation - per AB 939

Woodstoves - per SCAQMD Rule 445

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	135.00
tblConstructionPhase	NumDays	370.00	215.00
tblConstructionPhase	NumDays	20.00	70.00
tblConstructionPhase	PhaseEndDate	12/2/2019	4/20/2020
tblConstructionPhase	PhaseEndDate	5/3/2021	2/15/2021
tblConstructionPhase	PhaseEndDate	6/28/2021	1/26/2021
tblConstructionPhase	PhaseEndDate	5/31/2021	3/15/2021
tblConstructionPhase	PhaseStartDate	12/3/2019	4/21/2020
tblConstructionPhase	PhaseStartDate	6/1/2021	10/21/2020
tblConstructionPhase	PhaseStartDate	5/4/2021	2/16/2021
tblFireplaces	NumberWood	0.15	0.00
tblGrading	AcresOfGrading	675.00	337.50
tblGrading	MaterialImported	0.00	15,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblTripsAndVMT	WorkerTripNumber	28.00	20.00
tblVehicleTrips	ST_TR	10.37	17.18
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	9.91	0.00
tblVehicleTrips	SU_TR	36.63	35.34
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	8.62	0.00
tblVehicleTrips	WD_TR	9.11	11.63
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	9.52	0.00
tblWoodstoves	NumberCatalytic	0.15	0.00
tblWoodstoves	NumberNoncatalytic	0.15	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	7.5458	90.5812	52.5594	0.1114	18.2675	3.6202	20.6591	9.9840	3.3311	12.1843	0.0000	11,106.5960	11,106.5960	3.1824	0.0000	11,186.1557
2020	16.0458	83.4070	49.8175	0.1234	9.2841	3.3048	12.5889	3.7565	3.0408	6.7973	0.0000	12,396.4086	12,396.4086	3.1773	0.0000	12,425.3511
2021	15.5552	35.8157	37.1028	0.1213	6.8546	1.1172	7.9718	1.8423	1.0559	2.8982	0.0000	12,191.1127	12,191.1127	1.1154	0.0000	12,218.9972
Maximum	16.0458	90.5812	52.5594	0.1234	18.2675	3.6202	20.6591	9.9840	3.3311	12.1843	0.0000	12,396.4086	12,396.4086	3.1824	0.0000	12,425.3511

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	7.5458	90.5812	52.5594	0.1114	7.9140	3.6202	10.3056	4.2962	3.3311	6.4964	0.0000	11,106.5960	11,106.5960	3.1824	0.0000	11,186.1557
2020	16.0458	83.4070	49.8175	0.1234	6.5072	3.3048	7.8697	1.7571	3.0408	4.7296	0.0000	12,396.4086	12,396.4086	3.1773	0.0000	12,425.3511
2021	15.5552	35.8157	37.1028	0.1213	6.5072	1.1172	7.6244	1.7570	1.0559	2.8129	0.0000	12,191.1127	12,191.1127	1.1154	0.0000	12,218.9971
Maximum	16.0458	90.5812	52.5594	0.1234	7.9140	3.6202	10.3056	4.2962	3.3311	6.4964	0.0000	12,396.4086	12,396.4086	3.1824	0.0000	12,425.3511

	ROG	NOx	CO	SO2	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	39.17	0.00	37.41	49.88	0.00	35.84	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.7178	0.0460	0.3534	2.9000e-004		5.1000e-003	5.1000e-003		5.1000e-003	5.1000e-003	0.0000	54.6322	54.6322	1.9600e-003	9.9000e-004	54.9762
Energy	0.0586	0.5311	0.4365	3.2000e-003		0.0405	0.0405		0.0405	0.0405		639.0674	639.0674	0.0123	0.0117	642.8650
Mobile	3.0476	24.6280	30.5448	0.1267	9.3566	0.0955	9.4521	2.5035	0.0896	2.5931		12,951.5242	12,951.5242	0.8594		12,973.0100
Total	4.8239	25.2050	31.3347	0.1302	9.3566	0.1411	9.4977	2.5035	0.1352	2.6387	0.0000	13,645.2237	13,645.2237	0.8736	0.0127	13,670.8513

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	1.7128	3.6600e-003	0.3354	2.0000e-005		1.6800e-003	1.6800e-003		1.6800e-003	1.6800e-003	0.0000	0.6322	0.6322	9.3000e-004	0.0000	0.6553
Energy	0.0586	0.5311	0.4365	3.2000e-003		0.0405	0.0405		0.0405	0.0405		639.0674	639.0674	0.0123	0.0117	642.8650
Mobile	3.0476	24.6280	30.5448	0.1267	9.3566	0.0955	9.4521	2.5035	0.0896	2.5931		12,951.5242	12,951.5242	0.8594		12,973.0100
Total	4.8190	25.1627	31.3167	0.1299	9.3566	0.1376	9.4943	2.5035	0.1317	2.6353	0.0000	13,591.2237	13,591.2237	0.8726	0.0117	13,616.5304

	ROG	NOx	CO	SO2	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	0.10	0.17	0.06	0.21	0.00	2.42	0.04	0.00	2.53	0.13	0.00	0.40	0.40	0.12	7.79	0.40

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	10/1/2019	10/14/2019	5	10	
2	Grading	Grading	10/15/2019	4/20/2020	5	135	
3	Building Construction	Building Construction	4/21/2020	2/15/2021	5	215	
4	Paving	Paving	2/16/2021	3/15/2021	5	20	
5	Architectural Coating	Architectural Coating	10/21/2020	1/26/2021	5	70	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 337.5

Acres of Paving: 13.86

Residential Indoor: 10,935; Residential Outdoor: 3,645; Non-Residential Indoor: 87,300; Non-Residential Outdoor: 29,100; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	4	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
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
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	11	20.00	0.00	1,875.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	431.00	168.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	86.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

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

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	0.0968	0.0630	0.6481	1.8400e-003	0.2012	1.2400e-003	0.2024	0.0534	1.1400e-003	0.0545		183.6931	183.6931	4.9800e-003		183.8177

Total	0.0968	0.0630	0.6481	1.8400e-003	0.2012	1.2400e-003	0.2024	0.0534	1.1400e-003	0.0545		183.6931	183.6931	4.9800e-003		183.8177
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	7.7233	2.3904	10.1137	4.2454	2.1991	6.4445	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445

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	0.0968	0.0630	0.6481	1.8400e-003	0.1907	1.2400e-003	0.1919	0.0508	1.1400e-003	0.0519		183.6931	183.6931	4.9800e-003		183.8177
Total	0.0968	0.0630	0.6481	1.8400e-003	0.1907	1.2400e-003	0.1919	0.0508	1.1400e-003	0.0519		183.6931	183.6931	4.9800e-003		183.8177

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6874	0.0000	8.6874	3.5986	0.0000	3.5986			0.0000			0.0000
Off-Road	7.3562	86.9275	51.3377	0.0989		3.6058	3.6058		3.3173	3.3173		9,797.2756	9,797.2756	3.0998		9,874.7695
Total	7.3562	86.9275	51.3377	0.0989	8.6874	3.6058	12.2932	3.5986	3.3173	6.9160		9,797.2756	9,797.2756	3.0998		9,874.7695

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	0.0820	3.5838	0.5016	0.0104	0.5020	0.0131	0.5151	0.1302	0.0125	0.1427		1,105.2170	1,105.2170	0.0771		1,107.1444
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	0.1076	0.0700	0.7201	2.0500e-003	0.2236	1.3800e-003	0.2249	0.0593	1.2700e-003	0.0606		204.1034	204.1034	5.5400e-003		204.2419
Total	0.1896	3.6538	1.2217	0.0125	0.7256	0.0144	0.7400	0.1895	0.0138	0.2032		1,309.3204	1,309.3204	0.0826		1,311.3863

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					3.7139	0.0000	3.7139	1.5384	0.0000	1.5384			0.0000			0.0000
Off-Road	7.3562	86.9275	51.3377	0.0989		3.6058	3.6058		3.3173	3.3173	0.0000	9,797.2756	9,797.2756	3.0998		9,874.7695
Total	7.3562	86.9275	51.3377	0.0989	3.7139	3.6058	7.3197	1.5384	3.3173	4.8558	0.0000	9,797.2756	9,797.2756	3.0998		9,874.7695

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	0.0820	3.5838	0.5016	0.0104	0.4755	0.0131	0.4885	0.1237	0.0125	0.1362		1,105.2170	1,105.2170	0.0771		1,107.1444
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	0.1076	0.0700	0.7201	2.0500e-003	0.2119	1.3800e-003	0.2133	0.0564	1.2700e-003	0.0577		204.1034	204.1034	5.5400e-003		204.2419
Total	0.1896	3.6538	1.2217	0.0125	0.6874	0.0144	0.7018	0.1801	0.0138	0.1939		1,309.3204	1,309.3204	0.0826		1,311.3863

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					8.6874	0.0000	8.6874	3.5986	0.0000	3.5986			0.0000			0.0000
Off-Road	6.9118	80.0272	48.6899	0.0989		3.2929	3.2929		3.0294	3.0294		9,582.6142	9,582.6142	3.0992		9,660.0945
Total	6.9118	80.0272	48.6899	0.0989	8.6874	3.2929	11.9803	3.5986	3.0294	6.6281		9,582.6142	9,582.6142	3.0992		9,660.0945

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	0.0751	3.3175	0.4753	0.0103	0.3731	0.0106	0.3838	0.0986	0.0102	0.1087		1,093.8303	1,093.8303	0.0732		1,095.6598
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	0.0997	0.0623	0.6524	1.9800e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		197.6472	197.6472	4.9100e-003		197.7699
Total	0.1748	3.3797	1.1276	0.0123	0.5967	0.0120	0.6087	0.1578	0.0114	0.1693		1,291.4775	1,291.4775	0.0781		1,293.4297

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					3.7139	0.0000	3.7139	1.5384	0.0000	1.5384			0.0000			0.0000
Off-Road	6.9118	80.0272	48.6899	0.0989		3.2929	3.2929		3.0294	3.0294	0.0000	9,582.6142	9,582.6142	3.0992		9,660.0945
Total	6.9118	80.0272	48.6899	0.0989	3.7139	3.2929	7.0067	1.5384	3.0294	4.5678	0.0000	9,582.6142	9,582.6142	3.0992		9,660.0945

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	0.0751	3.3175	0.4753	0.0103	0.3543	0.0106	0.3649	0.0939	0.0102	0.1041		1,093.8303	1,093.8303	0.0732		1,095.6598
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	0.0997	0.0623	0.6524	1.9800e-003	0.2119	1.3500e-003	0.2133	0.0564	1.2500e-003	0.0577		197.6472	197.6472	4.9100e-003		197.7699
Total	0.1748	3.3797	1.1276	0.0123	0.5662	0.0120	0.5782	0.1504	0.0114	0.1618		1,291.4775	1,291.4775	0.0781		1,293.4297

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	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	0.4939	17.1953	3.7027	0.0422	1.0758	0.0995	1.1753	0.3098	0.0952	0.4049		4,452.7184	4,452.7184	0.3862		4,462.3722
Worker	2.1479	1.3419	14.0581	0.0427	4.8176	0.0292	4.8467	1.2776	0.0269	1.3045		4,259.2963	4,259.2963	0.1058		4,261.9411
Total	2.6418	18.5372	17.7608	0.0850	5.8934	0.1287	6.0220	1.5874	0.1220	1.7094		8,712.0147	8,712.0147	0.4919		8,724.3133

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345

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	0.4939	17.1953	3.7027	0.0422	1.0298	0.0995	1.1293	0.2985	0.0952	0.3936		4,452.7184	4,452.7184	0.3862		4,462.3722
Worker	2.1479	1.3419	14.0581	0.0427	4.5663	0.0292	4.5954	1.2160	0.0269	1.2428		4,259.2963	4,259.2963	0.1058		4,261.9411
Total	2.6418	18.5372	17.7608	0.0850	5.5961	0.1287	5.7248	1.5144	0.1220	1.6365		8,712.0147	8,712.0147	0.4919		8,724.3133

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643

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	0.4166	15.4127	3.2812	0.0419	1.0758	0.0305	1.1062	0.3097	0.0291	0.3389		4,417.9501	4,417.9501	0.3659		4,427.0984
Worker	2.0053	1.2039	12.8623	0.0413	4.8176	0.0284	4.8460	1.2776	0.0261	1.3038		4,116.8842	4,116.8842	0.0951		4,119.2625
Total	2.4218	16.6166	16.1435	0.0832	5.8933	0.0589	5.9522	1.5874	0.0553	1.6426		8,534.8343	8,534.8343	0.4611		8,546.3610

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643

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	0.4166	15.4127	3.2812	0.0419	1.0298	0.0305	1.0603	0.2984	0.0291	0.3276		4,417.9501	4,417.9501	0.3659		4,427.0984
Worker	2.0053	1.2039	12.8623	0.0413	4.5663	0.0284	4.5947	1.2160	0.0261	1.2421		4,116.8842	4,116.8842	0.0951		4,119.2625
Total	2.4218	16.6166	16.1435	0.0832	5.5961	0.0589	5.6549	1.5144	0.0553	1.5697		8,534.8343	8,534.8343	0.4611		8,546.3610

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573

Paving	1.8157					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	3.0712	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573

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	0.0698	0.0419	0.4476	1.4400e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		143.2790	143.2790	3.3100e-003		143.3618
Total	0.0698	0.0419	0.4476	1.4400e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		143.2790	143.2790	3.3100e-003		143.3618

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	1.8157					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	3.0712	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573

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	0.0698	0.0419	0.4476	1.4400e-003	0.1589	9.9000e-004	0.1599	0.0423	9.1000e-004	0.0432		143.2790	143.2790	3.3100e-003		143.3618
Total	0.0698	0.0419	0.4476	1.4400e-003	0.1589	9.9000e-004	0.1599	0.0423	9.1000e-004	0.0432		143.2790	143.2790	3.3100e-003		143.3618

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	10.6134					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	10.8556	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
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Category	lb/day										lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.4286	0.2678	2.8051	8.5300e-003	0.9613	5.8200e-003	0.9671	0.2549	5.3600e-003	0.2603	849.8828	849.8828	0.0211	850.4105	
Total	0.4286	0.2678	2.8051	8.5300e-003	0.9613	5.8200e-003	0.9671	0.2549	5.3600e-003	0.2603	849.8828	849.8828	0.0211	850.4105	

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	10.6134					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	0.0000	281.4481	281.4481	0.0218		281.9928
Total	10.8556	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	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	0.4286	0.2678	2.8051	8.5300e-003	0.9111	5.8200e-003	0.9170	0.2426	5.3600e-003	0.2480		849.8828	849.8828	0.0211		850.4105
Total	0.4286	0.2678	2.8051	8.5300e-003	0.9111	5.8200e-003	0.9170	0.2426	5.3600e-003	0.2480		849.8828	849.8828	0.0211		850.4105

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.6134					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	10.8323	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

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	0.4001	0.2402	2.5665	8.2400e-003	0.9613	5.6600e-003	0.9669	0.2549	5.2200e-003	0.2602		821.4665	821.4665	0.0190		821.9410
Total	0.4001	0.2402	2.5665	8.2400e-003	0.9613	5.6600e-003	0.9669	0.2549	5.2200e-003	0.2602		821.4665	821.4665	0.0190		821.9410

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	10.6134					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	10.8323	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309

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	0.4001	0.2402	2.5665	8.2400e-003	0.9111	5.6600e-003	0.9168	0.2426	5.2200e-003	0.2478		821.4665	821.4665	0.0190		821.9410
Total	0.4001	0.2402	2.5665	8.2400e-003	0.9111	5.6600e-003	0.9168	0.2426	5.2200e-003	0.2478		821.4665	821.4665	0.0190		821.9410

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.0476	24.6280	30.5448	0.1267	9.3566	0.0955	9.4521	2.5035	0.0896	2.5931		12,951.5242	12,951.5242	0.8594		12,973.0100
Unmitigated	3.0476	24.6280	30.5448	0.1267	9.3566	0.0955	9.4521	2.5035	0.0896	2.5931		12,951.5242	12,951.5242	0.8594		12,973.0100

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Place of Worship	677.00	1,000.00	2057.00	1,962,774	1,962,774
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	677.00	1,000.00	2,057.00	1,962,774	1,962,774

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
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	64	25	11
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
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

City Park	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
Other Asphalt Surfaces	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
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
Single Family Housing	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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0586	0.5311	0.4365	3.2000e-003		0.0405	0.0405		0.0405	0.0405		639.0674	639.0674	0.0123	0.0117	642.8650
NaturalGas Unmitigated	0.0586	0.5311	0.4365	3.2000e-003		0.0405	0.0405		0.0405	0.0405		639.0674	639.0674	0.0123	0.0117	642.8650

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					
City Park	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

Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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	5180.6	0.0559	0.5079	0.4266	3.0500e-003		0.0386	0.0386		0.0386	0.0386		609.4820	609.4820	0.0117	0.0112	613.1039
Single Family Housing	251.475	2.7100e-003	0.0232	9.8600e-003	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.5853	29.5853	5.7000e-004	5.4000e-004	29.7611
Total		0.0586	0.5311	0.4365	3.2000e-003		0.0405	0.0405		0.0405	0.0405		639.0674	639.0674	0.0123	0.0117	642.8650

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					
City Park	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
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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	5.1806	0.0559	0.5079	0.4266	3.0500e-003		0.0386	0.0386		0.0386	0.0386		609.4820	609.4820	0.0117	0.0112	613.1039
Single Family Housing	0.251475	2.7100e-003	0.0232	9.8600e-003	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.5853	29.5853	5.7000e-004	5.4000e-004	29.7611
Total		0.0586	0.5311	0.4365	3.2000e-003		0.0405	0.0405		0.0405	0.0405		639.0674	639.0674	0.0123	0.0117	642.8650

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7128	3.6600e-003	0.3354	2.0000e-005		1.6800e-003	1.6800e-003		1.6800e-003	1.6800e-003	0.0000	0.6322	0.6322	9.3000e-004	0.0000	0.6553
Unmitigated	1.7178	0.0460	0.3534	2.9000e-004		5.1000e-003	5.1000e-003		5.1000e-003	5.1000e-003	0.0000	54.6322	54.6322	1.9600e-003	9.9000e-004	54.9762

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	0.2036					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4936					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	4.9500e-003	0.0423	0.0180	2.7000e-004		3.4200e-003	3.4200e-003		3.4200e-003	3.4200e-003	0.0000	54.0000	54.0000	1.0300e-003	9.9000e-004	54.3209
Landscaping	0.0157	3.6600e-003	0.3354	2.0000e-005		1.6800e-003	1.6800e-003		1.6800e-003	1.6800e-003		0.6322	0.6322	9.3000e-004		0.6553
Total	1.7178	0.0460	0.3534	2.9000e-004		5.1000e-003	5.1000e-003		5.1000e-003	5.1000e-003	0.0000	54.6322	54.6322	1.9600e-003	9.9000e-004	54.9762

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	0.2036					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4936					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0157	3.6600e-003	0.3354	2.0000e-005		1.6800e-003	1.6800e-003		1.6800e-003	1.6800e-003		0.6322	0.6322	9.3000e-004		0.6553
Total	1.7128	3.6600e-003	0.3354	2.0000e-005		1.6800e-003	1.6800e-003		1.6800e-003	1.6800e-003	0.0000	0.6322	0.6322	9.3000e-004	0.0000	0.6553

7.0 Water Detail

7.1 Mitigation Measures Water

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation
