Appendix 7.0

Greenhouse Gas Emissions Assessment

Kimley»Horn

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 where 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 important/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 scrappers 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 scrappers 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 a 714.705.1380 or ace.malisos@kimley-horn.com with any questions.

Greenhouse Gas Emissions Assessment for the proposed Faith Bible Church in the City of Wildomar, California

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TABLE OF CONTENTS

LIST OF ABBREVIATED TERMS

AB	Assembly Bill
APN	Assessor's Parcel Number
CAP	Climate Action Plan
CARB	California Air Resource Board
CCR	California Code of Regulations
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CALGreen Code	California Green Building Standards Code
CPUC	California Public Utilities Commission
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CFC	chlorofluorocarbon
CPP	Clean Power Plan
CCSP	Climate Change Scoping Plan
cy	cubic yard
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
FR	Federal Register
GHG	greenhouse gas
HCFC	hydrochlorofluorocarbon
HFC	hydrofluorocarbon
HVAC	heating ventilation air conditioning
LCFS	Low Carbon Fuel Standard
CH_4	methane
$MMTCO_2e$	million metric tons of carbon dioxide equivalent
$MTCO_2e$	million tons of carbon dioxide equivalent
NHTSA	National Highway Traffic Safety Administration
NF_3	nitrogen trifluoride
N_2O	nitrous oxide
PFC	perfluorocarbon
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Governments
Sf	square foot
SF_6	sulfur hexafluoride
TAC	toxic air contaminants
WRCOG	Western Riverside Council of Governments

1 INTRODUCTION

This report documents the results of a Greenhouse Gas (GHG) Emissions Assessment completed for the Faith Bible Church Project. The purpose of this GHG Emissions 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

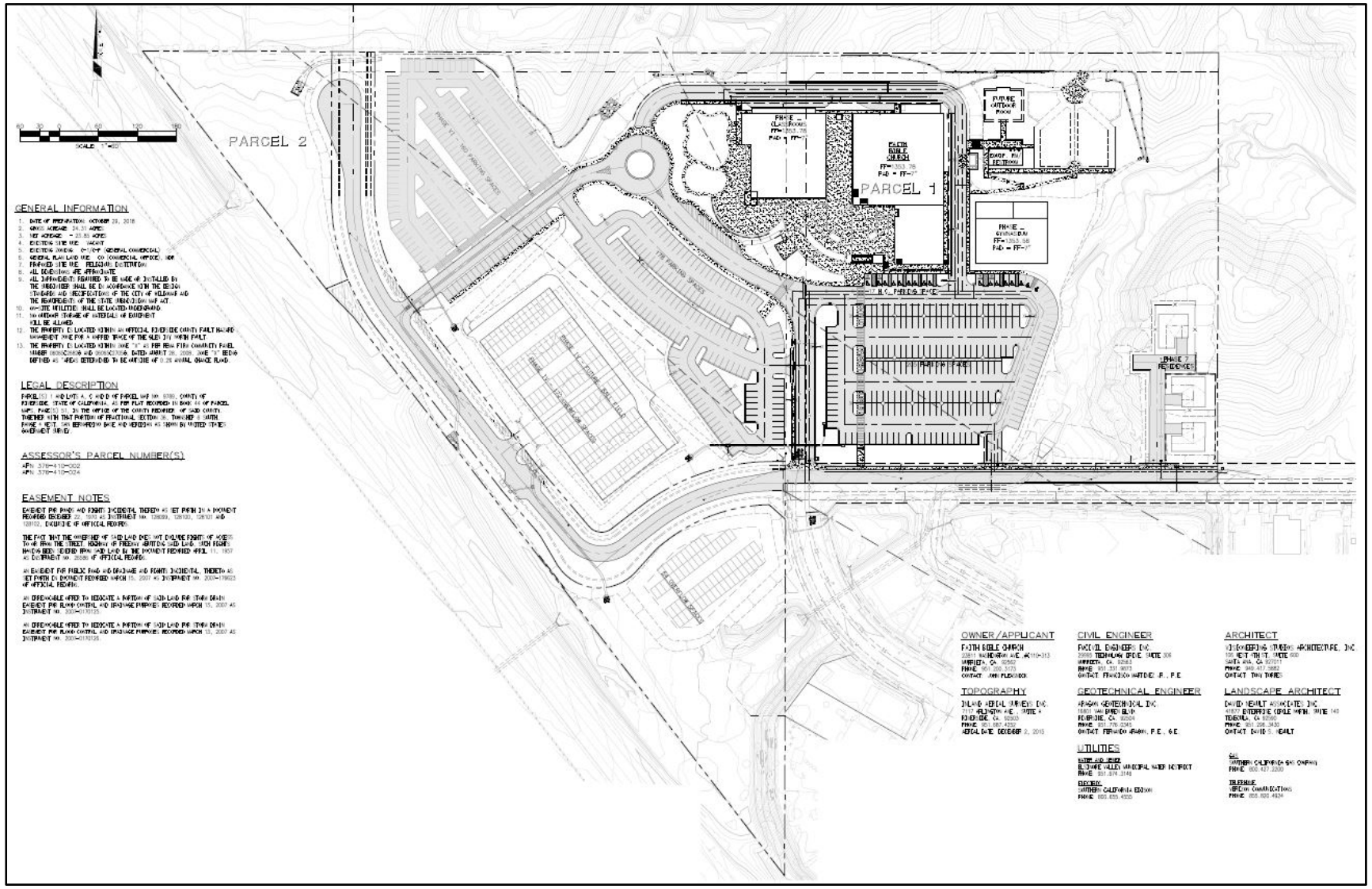
The Project proposes the development of a community church building that would seat up to 1,112 people; refer to Exhibit 3: Site Plan. The Project also includes three detached single family residential units to house visiting missionaries and their families, a storage shed for maintenance equipment, 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.

Exhibit 1: Regional Vicinity

Exhibit 2: Site Vicinity

Source: Google Maps, 2019.

Exhibit 3: Site Plan



Source: FM Civil Engineers, 2018

2 ENVIRONMENTAL SETTING

2.1 GREENHOUSE GASES AND CLIMATE CHANGE

Certain gases in the earth's atmosphere classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

The primary GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Examples of fluorinated gases include chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3); however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of GHGs exceeding natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the Earth's climate, known as global climate change or global warming.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants (TACs), which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of a GHG molecule is dependent on multiple variables and cannot be pinpointed, more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms of carbon sequestration. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere[1]. Table 1: Description of Greenhouse Gases describes the primary GHGs attributed to global climate change, including their physical properties.

[1] Intergovernmental Panel on Climate Change, *Carbon and Other Biogeochemical Cycles. In: Climate Change 2013: The Physical Science Basis*, *Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2013. http://www.climatechange2013.org/ images/report/WG1AR5_ALL_FINAL.pdf.

Table 1: Description of Greenhouse Gases

Greenhouse Gas	Description
Carbon Dioxide (CO_2)	CO_2 is a colorless, odorless gas that is emitted naturally and through human activities. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, and industrial facilities. The atmospheric lifetime of CO_2 is variable because it is readily exchanged in the atmosphere. CO_2 is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other GHGs.
Nitrous Oxide (N_2O)	N_2O is largely attributable to agricultural practices and soil management. Primary human-related sources of N_2O include agricultural soil management, sewage treatment, combustion of fossil fuels, and adipic and nitric acid production. N_2O is produced from biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years. The Global Warming Potential of N_2O is 298.
Methane (CH_4)	CH_4, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Methane is the major component of natural gas, about 87 percent by volume. Human-related sources include fossil fuel production, animal husbandry, rice cultivation, biomass burning, and waste management. Natural sources of CH_4 include wetlands, gas hydrates, termites, oceans, freshwater bodies, non-wetland soils, and wildfires. The atmospheric lifetime of CH_4 is about 12 years and the Global Warming Potential is 25.
Hydrofluorocarbons (HFCs)	HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is increasing, as the continued phase out of CFCs and HCFCs gains momentum. The 100-year Global Warming Potential of HFCs range from 124 for HFC-152 to 14,800 for HFC-23.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Global Warming Potentials range from 6,500 to 9,200.
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987. Global Warming Potentials for CFCs range from 3,800 to 14,400.
Sulfur Hexafluoride (SF_6)	SF_6 is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas. The Global Warming Potential of SF_6 is 23,900.
Hydrochlorofluorocarbons (HCFCs)	HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, HCFCs are subject to a consumption cap and gradual phase out. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The 100-year Global Warming Potentials of HCFCs range from 90 for HCFC-123 to 1,800 for HCFC-142b.
Nitrogen Trifluoride (NF_3)	NF_3 was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. This gas is used in electronics manufacture for semiconductors and liquid crystal displays. It has a high global warming potential of 17,200.

Source: Compiled from U.S. EPA, *Overview of Greenhouse Gases*, April 11, 2018 (https://www.epa.gov/ghgemissions/overview-greenhouse-gases); U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, 2018; Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis*, 2007; National Research Council, Advancing the Science of Climate Change, 2010; U.S. EPA, *Methane and Nitrous Oxide Emission from Natural Sources*, April 2010.

3 REGULATORY SETTING

3.1 FEDERAL

To date, national standards have not been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Energy Independence and Security Act of 2007. The Energy Independence and Security Act of 2007 (December 2007), among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

U.S. Environmental Protection Agency Endangerment Finding. The U.S. Environmental Protection Agency (EPA) authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Federal Clean Air Act (FCAA) and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing FCAA and the EPA's assessment of the scientific evidence that form the basis for the EPA's regulatory actions.

Federal Vehicle Standards. In response to the U.S. Supreme Court ruling discussed above, the George W. Bush Administration issued Executive Order 13432 in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Barack Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–

2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking. On January 12, 2017, the EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.

Clean Power Plan and New Source Performance Standards for Electric Generating Units. On October 23, 2015, the EPA published a final rule (effective December 22, 2015) establishing the carbon pollution emission guidelines for existing stationary sources: electric utility generating units (80 Federal Register [FR] 64510–64660), also known as the Clean Power Plan (CPP). These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish CO_2 emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: one fossil-fuel-fired electric utility steam-generating unit and two stationary combustion turbines. Concurrently, the EPA published a final rule (effective October 23, 2015) establishing standards of performance for GHG emissions from new, modified, and reconstructed stationary sources: electric utility generating units (80 FR 64661–65120). The rule prescribes CO_2 emission standards for newly constructed, modified, and reconstructed affected fossil-fuel-fired electric utility generating units. The U.S. Supreme Court stayed implementation of the CPP pending resolution of several lawsuits. Additionally, in March 2017, President Trump directed the EPA Administrator to review the CPP to determine whether it is consistent with current executive policies concerning GHG emissions, climate change, and energy.

Presidential Executive Order 13693. Presidential Executive Order 13693, *Planning for Federal Sustainability in the Next Decade*, signed in 2015, seeks to maintain federal leadership in sustainability and GHG emission reductions. Its goal is to reduce agency Scope 1 and 2 GHG emissions by at least 40 percent by 2025, foster innovation, reduce spending, and strengthen communities through increased efficiency and improved environmental performance. Sustainability goals are set for building efficiency and management, energy portfolio, water use efficiency, fleet efficiency, sustainable acquisition and supply chain GHG management, pollution prevention, and electronic stewardship.

Presidential Executive Order 13783. Presidential Executive Order 13783, *Promoting Energy Independence and Economic Growth* issued on March 28, 2017, orders all federal agencies to apply cost-benefit analyses to regulations of GHG emissions and evaluations of the social cost of CO_2, N_2O, and CH_4.

3.2 STATE OF CALIFORNIA

California Air Resources Board

The California Air Resources Board (CARB) is responsible for the coordination and oversight of State and local air pollution control programs in California. Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness about climate change and its potential for severe long-term adverse environmental, social, and economic effects. California is a significant emitter of CO_2 equivalents (CO_2e) in the world and produced 459 million gross metric tons of CO_2e in 2013. In the State, the transportation sector is the largest emitter of GHGs, followed by industrial operations such as manufacturing and oil and gas extraction.

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation, such as the landmark Assembly Bill (AB) 32, *California Global Warming Solutions Act of 2006*, was specifically enacted to address GHG emissions. Other legislation, such as Title 24 building efficiency standards and Title 20 appliance energy standards, were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

Assembly Bill 32 (California Global Warming Solutions Act of 2006). AB 32 instructs the CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. AB 32 also directed CARB to set a GHG emissions limit based on 1990 levels, to be achieved by 2020. It set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

CARB Scoping Plan. CARB adopted the Scoping Plan to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that would be adopted to reduce California's GHG emissions. CARB determined that achieving the 1990 emissions level would require a reduction of GHG emissions of approximately 29 percent below what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business-as-usual")[2]. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates early actions and additional GHG reduction measures by both CARB and the State's Climate Action Team, identifies additional measures to be pursued as regulations, and outlines the adopted role of a cap-and-trade program[3]. Additional development of these measures and adoption of the appropriate regulations occurred through the end of 2013. Key elements of the Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs, as well as building and appliance standards.
- Achieving a statewide renewables energy mix of 33 percent by 2020.

[2] CARB defines business-as-usual (BAU) in its Scoping Plan as emissions levels that would occur if California continued to grow and add new GHG emissions but did not adopt any measures to reduce emissions. Projections for each emission-generating sector were compiled and used to estimate emissions for 2020 based on 2002–2004 emissions intensities. Under CARB's definition of BAU, new growth is assumed to have the same carbon intensities as was typical from 2002 through 2004.

[3] The Climate Action Team, led by the secretary of the California Environmental Protection Agency, is a group of State agency secretaries and heads of agencies, boards, and departments. Team members work to coordinate statewide efforts to implement global warming emissions reduction programs and the State's Climate Adaptation Strategy.

- Developing a California cap-and-trade program that links with other programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions (adopted in 2011).
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets (several sustainable community strategies have been adopted).
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, heavy-duty truck measures, the Low Carbon Fuel Standard (amendments to the Pavley Standard adopted 2009; Advanced Clean Car standard adopted 2012), goods movement measures, and the Low Carbon Fuel Standard (adopted 2009).
- Creating targeted fees, including a public goods charge on water use, fees on gasses with high global warming potential, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

In 2012, CARB released revised estimates of the expected 2020 emissions reductions. The revised analysis relied on emissions projections updated in light of current economic forecasts that accounted for the economic downturn since 2008, reduction measures already approved and put in place relating to future fuel and energy demand, and other factors. This update reduced the projected 2020 emissions from 596 million metric tons of CO_2e ($MMTCO_2e$) to 545 $MMTCO_2e$. The reduction in forecasted 2020 emissions means that the revised business-as-usual reduction necessary to achieve AB 32's goal of reaching 1990 levels by 2020 is now 21.7 percent, down from 29 percent. CARB also provided a lower 2020 inventory forecast that incorporated State-led GHG emissions reduction measures already in place. When this lower forecast is considered, the necessary reduction from business-as-usual needed to achieve the goals of AB 32 is approximately 16 percent.

CARB adopted the first major update to the Scoping Plan on May 22, 2014. The updated Scoping Plan summarizes the most recent science related to climate change, including anticipated impacts to California and the levels of GHG emissions reductions necessary to likely avoid risking irreparable damage. It identifies the actions California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32.

In 2016, the Legislature passed Senate Bill (SB) 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the Legislature passed companion legislation, AB 197, which provides additional direction for developing the Scoping Plan. On December 14, 2017 CARB adopted a second update to the Scoping Plan[4]. The 2017 Scoping Plan details how the State will reduce GHG emissions to meet the 2030 target set by Executive Order B-30-15 and codified by SB 32. Other objectives listed in the 2017 Scoping plan are to provide direct GHG emissions reductions; support climate investment in disadvantaged communities; and, support the Clean Power Plan and other Federal actions.

Senate Bill 32 (California Global Warming Solutions Act of 2006: Emissions Limit). Signed into law in September 2016, SB 32 codifies the 2030 GHG reduction target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

[4] California Air Resources Board, *California's 2017 Climate Change Scoping Plan,* https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed May 9, 2018.

SB 375 (The Sustainable Communities and Climate Protection Act of 2008). Signed into law on September 30, 2008, SB 375 provides a process to coordinate land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction goals established by AB 32. SB 375 requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, aligns planning for transportation and housing, and creates specified incentives for the implementation of the strategies.

AB 1493 (Pavley Regulations and Fuel Efficiency Standards). AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011. The regulations establish one set of emission standards for model years 2009–2016 and a second set of emissions standards for model years 2017 to 2025. By 2025, when all rules will be fully implemented, new automobiles will emit 34 percent fewer CO_2e emissions and 75 percent fewer smog-forming emissions.

SB 1368 (Emission Performance Standards). SB 1368 is the companion bill of AB 32, which directs the California Public Utilities Commission (CPUC) to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 limits carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. The new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. The CPUC adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, for 1,100 pounds of CO_2 per megawatt-hour.

SB 1078 and SBX1-2 (Renewable Electricity Standards). SB 1078 requires California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Executive Order S-21-09 also directed CARB to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. CARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23. SBX1-2, which codified the 33 percent by 2020 goal.

SB 350 (Clean Energy and Pollution Reduction Act of 2015). Signed into law on October 7, 2015, SB 350 implements the goals of Executive Order B-30-15. The objectives of SB 350 are to increase the procurement of electricity from renewable sources from 33 percent to 50 percent (with interim targets of 40 percent by 2024, and 25 percent by 2027) and to double the energy efficiency savings in electricity and natural gas end uses of retail customers through energy efficiency and conservation. SB 350 also reorganizes the Independent System Operator to develop more regional electricity transmission markets and improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs using executive orders. Although not regulatory, they set the tone for the State and guide the actions of state agencies.

Executive Order S-3-05. Executive Order S-3-05 was issued on June 1, 2005, which established the following GHG emissions reduction targets:

- By 2010, reduce greenhouse gas emissions to 2000 levels.
- By 2020, reduce greenhouse gas emissions to 1990 levels.
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07. Issued on January 18, 2007, Executive Order S 01-07 mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. The executive order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. CARB adopted the LCFS on April 23, 2009.

Executive Order S-13-08. Issued on November 14, 2008, Executive Order S-13-08 facilitated the California Natural Resources Agency development of the 2009 California Climate Adaptation Strategy. Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order S-14-08. Issued on November 17, 2008, Executive Order S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. CARB adopted the Renewable Electricity Standard on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

Executive Order S-21-09. Issued on July 17, 2009, Executive Order S-21-09 directs CARB to adopt regulations to increase California's RPS to 33 percent by 2020. This builds upon SB 1078 (2002), which established the California RPS program, requiring 20 percent renewable energy by 2017, and SB 107 (2006), which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Executive Order B-30-15. Issued on April 29, 2015, Executive Order B-30-15 established a California GHG reduction target of 40 percent below 1990 levels by 2030 and directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of CO_2e (MMTCO2e). The 2030 target acts as an interim goal on the way to achieving reductions of 80 percent below 1990 levels by 2050, a goal set by Executive Order S-3-05. The executive order also requires the State's climate adaptation plan to be updated every three years and for the State to continue its climate change research program, among

other provisions. With the enactment of SB 32 in 2016, the Legislature codified the goal of reducing GHG emissions by 2030 to 40 percent below 1990 levels.

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 Appliance Efficiency Regulations. The appliance efficiency regulations (California Code of Regulations [CCR] Title 20, Sections 1601-1608) include standards for new appliances. Twenty-three categories of appliances are included in the scope of these regulations. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

Title 24 Building Energy Efficiency Standards. California's Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR Title 24, Part 6), was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2016 Building Energy Efficiency Standards approved on January 19, 2016 went into effect on January 1, 2017. The 2019 Building Energy Efficiency Standards were adopted on May 9, 2018 and take effect on January 1, 2020. Under the 2019 standards, homes will use about 53 percent less energy and nonresidential buildings will use about 30 percent less energy than buildings under the 2016 standards.

Title 24 California Green Building Standards Code. The California Green Building Standards Code (CCR Title 24, Part 11 code) commonly referred to as the CALGreen Code, is a statewide mandatory construction code developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency/conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code went into effect January 1, 2017.

3.3 REGIONAL

South Coast Air Quality Management District Thresholds

The South Coast Air Quality Management District (SCAQMD) formed a GHG California Environmental Quality Act (CEQA) Significance Threshold Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. As of the last Working Group meeting (Meeting 15) held in September 2010, the SCAQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency.

With the tiered approach, the Project is compared with the requirements of each tier sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from SB 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold. For all industrial projects, the SCAQMD is proposing a screening threshold of 10,000 million tons of CO_2e ($MTCO_2e$) per year. SCAQMD concluded that projects with emissions less than the screening threshold would not result in a significant cumulative impact.

Tier 4 consists of three decision tree options. Under the Tier 4 first option, SCAQMD initially outlined that a project would be excluded if design features and/or mitigation measures resulted in emissions 30 percent lower than business as usual emissions. However, the Working Group did not provide a recommendation for this approach. The Working Group folded the Tier 4 second option into the third option. Under the Tier 4 third option, the project would be excluded if it was below an efficiency-based threshold of 4.8 $MTCO_2e$ per service population per year. Tier 5 would exclude projects that implement offsite mitigation (GHG reduction projects) or purchase offsets to reduce GHG emission impacts to less than the proposed screening level.

GHG efficiency metrics are utilized as thresholds to assess the GHG efficiency of a project on a per capita basis or on a service population basis (the sum of the number of jobs and the number of residents provided by a project) such that the project would allow for consistency with the goals of AB 32 (i.e., 1990 GHG emissions levels by 2020 and 2035). GHG efficiency thresholds can be determined by dividing the GHG emissions inventory goal of the State, by the estimated 2035 population and employment. This method allows highly efficient projects with higher mass emissions to meet the overall reduction goals of AB 32, and is appropriate, because the threshold can be applied evenly to all project types (residential or commercial/retail only and mixed use).

Southern California Association of Governments

On April 7, 2016, the Southern California Association of Governments (SCAG) Regional Council adopted the *2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy* (RTP/SCS). The RTP/SCS seeks to closely integrate land use and transportation so that the region can grow sustainably. The strategy was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The RTP/SCS is a long-range vision plan that balances future mobility and housing needs with economic, environmental, and public health goals. The SCAG region strives toward sustainability through integrated land use and transportation planning. The SCAG region must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions.

Western Riverside Council of Governments Subregional Climate Action Plan

The Western Riverside Council of Governments (WRCOG) worked with its twelve cities, including the City of Wildomar, to develop a Subregional Climate Action Plan (CAP), which sets forth a subregional emissions reduction target, emissions reduction measures, and actions to assist each community in demonstrating consistency with AB 32 and SB 32. WRCOG's CAP was adopted in June 2014. Each participating municipality is responsible for its own CEQA documentation, local adoption, and employing a CEQA-appropriate GHG threshold.

The subregional CAP establishes emission targets for compliance with the goals of AB 32, but does not establish targets for individual cities within the WRCOG. The CAP identifies objectives and actions in four categories to set the subregion on a path to meet the 2020 GHG emission target, including energy, transportation, solid waste, and water reduction measures.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 THRESHOLDS AND SIGNIFICANT CRITERIA

The GHG 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:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance; or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Addressing GHG emissions generation impacts requires an agency to determine what constitutes a significant impact. The amendments to the CEQA Guidelines specifically allow lead agencies to determine thresholds of significance that illustrate the extent of an impact and are a basis from which to apply mitigation measures. This means that each agency is left to determine whether a project's GHG emissions would have a "significant" impact on the environment. The guidelines direct that agencies are to use "careful judgment" and "make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" a project's GHG emissions (14 California Code of Regulations Section 15064.4(a)).

The City of Wildomar has not adopted project-specific significance thresholds. For the proposed Project, the SCAQMD's proposed 3,000 $MTCO_2e$ annual non-industrial screening threshold is used as the significance threshold, in addition to the qualitative thresholds of significance set forth below from CEQA Guidelines Appendix G Section VII.

4.2 METHODOLOGY

The Project's construction and operational emissions were calculated using the California Emissions Estimator Model version 2016.3.2 (CalEEMod). Details of the modeling assumptions and emission factors are provided in Appendix A: Greenhouse Gas Emissions Data. For construction, CalEEMod calculates emissions from off-road equipment usage and on-road vehicle travel associated with haul, delivery, and construction worker trips. GHG emissions during construction were forecasted based on the proposed construction schedule and applying the mobile-source and fugitive dust emissions factors derived from CalEEMod. The Project's construction-related GHG emissions would be generated from off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. The Project's operations-related GHG emissions would be generated by vehicular traffic, area sources (e.g., landscaping maintenance, consumer products), electrical generation, natural gas consumption, water supply and wastewater treatment, and solid waste.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 GREENHOUSE GAS EMISSIONS

Threshold 5.1 Would the Project generate greenhouse gas emissions, either directly or indirectly, that could have a significant impact on the environment?

Short-Term Construction Greenhouse Gas Emissions

The proposed Project would result in direct emissions of GHGs from construction. The approximate quantity of daily GHG emissions generated by construction equipment utilized to build the proposed Project is depicted in Table 2: Construction-Related Greenhouse Gas Emissions.

Table 2: Construction-Related Greenhouse Gas Emissions

Category	$MTCO_2e$
Total Construction Emissions	1,873
30- Year Amortized Construction	62

Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.

As shown in Table 2, the Project would result in the generation of approximately 1,873 $MTCO_2e$ over the course of construction. Construction GHG emissions are typically summed and amortized over the lifetime of the Project (assumed to be 30 years), then added to the operational emissions[5]. The amortized Project emissions would be 62 $MTCO_2e$ per year. Once construction is complete, the generation of these GHG emissions would cease.

Long-Term Operational Greenhouse Gas Emissions

Operational or long-term emissions occur over the life of the proposed Project. GHG emissions would result from direct emissions such as Project generated vehicular traffic, on-site combustion of natural gas, operation of any landscaping equipment. Operational GHG emissions would also result from indirect sources, such as off-site generation of electrical power, the energy required to convey water to, and wastewater from the Project site, the emissions associated with solid waste generated from the Project site, and any fugitive refrigerants from air conditioning or refrigerators. Total GHG emissions associated with proposed Project are summarized in Table 3: Project Greenhouse Gas Emissions. As shown in Table 3, the Project would generate approximately 1,520 $MTCO_2e$ annually GHG emissions from both construction and operations and the proposed Project would not exceed the SCAQMD GHG threshold of 3,000 $MTCO_2e$ per year. Therefore, Project-related GHG emissions would be less than significant and no mitigation measures are required.

[5] The project lifetime is based on the standard 30-year assumption of the South Coast Air Quality Management District (South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13,* August 26, 2009).

Table 3: Project Greenhouse Gas Emissions	
Emissions Source	**$MTCO_2e$ per Year**
Construction Amortized Over 30 Years	62
Area Source	0
Energy	339
Mobile	983
Waste	85
Water and Wastewater	51
Total	**1,520**
SCAQMD Project Threshold	*3,000*
Exceeds SCAQMD Threshold?	**No**
Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.	

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

5.2 GREENHOUSE GAS REDUCTION PLAN COMPLIANCE

Threshold 5.2 Would the Project conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing greenhouse gas emissions?

There are currently no adopted local or regional GHG reduction plans applicable to the proposed Project. The proposed Project would be subject to compliance with all building codes in effect at the time of construction, which include energy conservation measures mandated by California Building Standards Code Title 24 – Energy Efficiency Standards. Because Title 24 standards require energy conservation features in new construction (e.g., high- efficiency lighting, high-efficiency heating, ventilating, and air-conditioning (HVAC) systems, thermal insulation, double-glazed windows, water conserving plumbing fixtures), they indirectly regulate and reduce GHG emissions. California's Building Energy Efficiency Standards are updated on an approximately three-year cycle. The 2016 standards improved upon the 2013 standards for new construction of, and additions and alterations to, residential, commercial, and industrial buildings. The 2016 standards went into effect on January 1, 2017. Additionally, the 2019 building standards further improve upon the 2016 standards and go into effect on January 1, 2020.

Consistency with the SCAG RTP/SCS

Adopted on April 7, 2016, the RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The RTP/SCS embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions, tribal governments, nonprofit organizations, businesses, and local stakeholders in the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. SCAG's RTP/SCS establishes GHG emissions goals for automobiles and light-duty trucks for 2020 and 2035 as well as an

overall GHG target for the Project region consistent with both the target date of AB 32 and the post-2020 GHG reduction goals of Executive Orders 5-03-05 and B-30-15.

The RTP/SCS contains over 4,000 transportation projects, ranging from highway improvements, railroad grade separations, bicycle lanes, new transit hubs and replacement bridges. These future investments were included in county plans developed by the six county transportation commissions and seek to reduce traffic bottlenecks, improve the efficiency of the region's network, and expand mobility choices for everyone. The RTP/SCS is an important planning document for the region, allowing project sponsors to qualify for federal funding.

The plan accounts for operations and maintenance costs to ensure reliability, longevity, and cost effectiveness. The RTP/SCS is also supported by a combination of transportation and land use strategies that help the region achieve state GHG emissions reduction goals and FCAA requirements, preserve open space areas, improve public health and roadway safety, support our vital goods movement industry, and utilize resources more efficiently. GHG emissions resulting from development-related mobile sources are the most potent source of emissions, and therefore project comparison to the RTP/SCS is an appropriate indicator of whether the proposed Project would inhibit the post-2020 GHG reduction goals promulgated by the state. The proposed Project's consistency with the RTP/SCS goals is analyzed in detail in Table 4: Regional Transportation Plan/Sustainable Communities Strategy Consistency.

Table 4: Regional Transportation Plan/Sustainable Communities Strategy Consistency

SCAG Goals		**Compliance**	
GOAL 1:	Align the plan investments and policies with improving regional economic development and competitiveness.	N/A:	This is not a project-specific policy and is therefore not applicable.
GOAL 2:	Maximize mobility and accessibility for all people and goods in the region.	N/A:	This is not a transportation improvement project and is therefore not applicable.
GOAL 3:	Ensure travel safety and reliability for all people and goods in the region.	N/A:	This is not a transportation improvement project and is therefore not applicable.
GOAL 4:	Preserve and ensure a sustainable regional transportation system.	N/A:	This is not a transportation improvement project and is therefore not applicable.
GOAL 5:	Maximize the productivity of our transportation system.	N/A:	This is not a transportation improvement project and is therefore not applicable.
GOAL 6:	Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking).	Consistent:	The reduction of energy use, improvement of air quality, and promotion of more environmentally sustainable development are encouraged through the development of alternative transportation methods, green design techniques for buildings, and other energy-reducing techniques. This development project is required to comply with the provisions of the California Building Energy Efficiency Standards and the Green Building Standards Code (CALGreen).
GOAL 7:	Actively encourage and create incentives for energy efficiency, where possible.	N/A:	This is not a project-specific policy and is therefore not applicable.

GOAL 8:	Encourage land use and growth patterns that facilitate transit as well as non-motorized transportation.	Consistent:	See response to RTP/SCS Goal 6.
GOAL 9:	Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	N/A:	This is not a transportation improvement project and is therefore not applicable.
Source: Southern California Association of Governments, *Regional Transportation Plan/Sustainable Communities Strategy*, 2016.			

Compliance with applicable State standards would ensure consistency with State and regional GHG reduction planning efforts. The goals stated in the RTP/SCS were used to determine consistency with the planning efforts previously stated. As shown in Table 4, the proposed Project would be consistent with the stated goals of the RTP/SCS. Therefore, the proposed Project would not result in any significant impacts or interfere with SCAG's ability to achieve the region's post-2020 mobile source GHG reduction targets.

Consistency with the CARB Scoping Plan

The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) to 1990 levels by the year 2020. Pursuant to the requirements in AB 32, CARB adopted the *Climate Change Scoping Plan* (CCSP) in 2008, which outlines actions recommended to obtain that goal. The CCSP provides a range of GHG reduction actions that include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as the cap-and-trade program, and an AB 32 implementation fee to fund the program. As shown in Table 5: Project Consistency with Applicable CARB Scoping Plan Measures, the proposed Project is consistent with most of the strategies, while others are not applicable to the proposed Project.

The 2017 CCSP Update identifies additional GHG reduction measures necessary to achieve the 2030 target. These measures build upon those identified in the first update to the CCSP in 2013. Although a number of these measures are currently established as policies and measures, some measures have not yet been formally proposed or adopted. It is expected that these actions to reduce GHG emissions will be adopted as required to achieve statewide GHG emissions targets. As such, impacts related to consistency with the Scoping Plan would be less than significant.

Table 5: Project Consistency with Applicable CARB Scoping Plan Measures

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
Transportation	California Cap-and-Trade Program Linked to Western Climate Initiative	Regulation for the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanism October 20, 2015 (CCR 95800)	**Consistent.** The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers. However, the regulation indirectly affects people who use the products and services produced by these industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-

Table 5: Project Consistency with Applicable CARB Scoping Plan Measures

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
Transportation			Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period.
	California Light-Duty Vehicle Greenhouse Gas Standards	Pavley I 2005 Regulations to Control GHG Emissions from Motor Vehicles	**Consistent**. This measure applies to all new vehicles starting with model year 2012. The proposed Project would not conflict with its implementation as it would apply to all new passenger vehicles purchased in California. Passenger vehicles, model year 2012 and later, associated with construction and operation of the proposed Project would be required to comply with the Pavley emissions standards.
	California Light-Duty Vehicle Greenhouse Gas Standards	2012 LEV III California GHG and Criteria Pollutant Exhaust and Evaporative Emission Standards	**Consistent.** The LEV III amendments provide reductions from new vehicles sold in California between 2017 and 2025. Passenger vehicles associated with the site would comply with LEV III standards.
	Low Carbon Fuel Standard	2009 readopted in 2015. Regulations to Achieve Greenhouse Gas Emission Reductions Subarticle 7. Low Carbon Fuel Standard CCR 95480	**Consistent.** This measure applies to transportation fuels utilized by vehicles in California. The proposed Project would not conflict with implementation of this measure. Motor vehicles associated with construction and operation of the proposed Project would utilize low carbon transportation fuels as required under this measure.
	Regional Transportation-Related Greenhouse Gas Targets.	SB 375. Cal. Public Resources Code §§ 21155, 21155.1, 21155.2, 21159.28	**Consistent**. The proposed Project would provide development in the region that is consistent with the growth projections in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).
	Goods Movement	Goods Movement Action Plan January 2007	**Not applicable**. The proposed Project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
	Medium/Heavy-Duty Vehicle	2010 Amendments to the Truck and Bus Regulation, the Drayage Truck Regulation and the Tractor-Trailer Greenhouse Gas Regulation	**Consistent**. This measure applies to medium and heavy-duty vehicles that operate in the state. The proposed Project would not conflict with implementation of this measure. Medium and heavy-duty vehicles associated with construction and operation of the proposed Project would be required to comply with the requirements of this regulation.
	High Speed Rail	Funded under SB 862	**Not applicable**. This is a statewide measure that cannot be implemented by a project applicant or Lead Agency.
Electricity and Natural Gas	Energy Efficiency	Title 20 Appliance Efficiency Regulation	**Consistent.** The proposed Project would not conflict with implementation of this measure. The proposed Project would comply with the latest energy efficiency standards.
		Title 24 Part 6 Energy Efficiency Standards for Residential and Non-Residential Building	
		Title 24 Part 11 California Green Building Code Standards	

Table 5: Project Consistency with Applicable CARB Scoping Plan Measures

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
	Renewable Portfolio Standard/Renewable Electricity Standard.	2010 Regulation to Implement the Renewable Electricity Standard (33% 2020)	**Consistent**. The Project would obtain electricity from the electric utility, Southern California Edison (SCE). SCE obtained 28 percent of its power supply from renewable sources in 2016. Therefore, the utility would provide power when needed on site that is composed of a greater percentage of renewable sources.
	Million Solar Roofs Program	SB 350 Clean Energy and Pollution Reduction Act of 2015 (50% 2030)	
	Million Solar Roofs Program	Tax Incentive Program	**Consistent.** This measure is to increase solar throughout California, which is being done by various electricity providers and existing solar programs. The program provides incentives that are in place at the time of construction.
Water	Water	Title 24 Part 11 California Green Building Code Standards	**Consistent.** The proposed Project would comply with the California Green Building Standards Code, which requires a 20 percent reduction in indoor water use. The proposed Project would also comply with the City's Water-Efficient Landscapes Regulations (Chapter 17.276 of the Wildomar Municipal Code).
Water	Water	SBX 7-7—The Water Conservation Act of 2009	
		Model Water Efficient Landscape Ordinance	
Green Buildings	Green Building Strategy	Title 24 Part 11 California Green Building Code Standards	**Consistent.** The State is to increase the use of green building practices. The proposed Project would implement required green building strategies through existing regulation that requires the proposed Project to comply with various CalGreen requirements. The proposed Project includes sustainability design features that support the Green Building Strategy.
Industry	Industrial Emissions	2010 CARB Mandatory Reporting Regulation	**Not applicable.** The Mandatory Reporting Regulation requires facilities and entities with more than 10,000 $MTCO_2e$ of combustion and process emissions, all facilities belonging to certain industries, and all electric power entities to submit an annual GHG emissions data report directly to CARB. As shown above, total Project GHG emissions would not exceed 10,000 $MTCO_2e$. Therefore, this regulation would not apply.
Recycling and Waste Management	Recycling and Waste	Title 24 Part 11 California Green Building Code Standards	**Consistent.** The proposed Project would not conflict with implementation of these measures. The proposed Project is required to achieve the recycling mandates via compliance with the CALGreen code. The City has consistently achieved its state recycling mandates.
		AB 341 Statewide 75 Percent Diversion Goal	
Forests	Sustainable Forests	Cap and Trade Offset Projects	**Not applicable.** The proposed Project site is in an area designated for urban uses. No forested lands exist on-site.
High Global Warming Potential	High Global Warming Potential Gases	CARB Refrigerant Management Program CCR 95380	**Not applicable**. The regulations are applicable to refrigerants used by large air conditioning systems and large commercial and industrial refrigerators and cold storage system. The proposed Project would not conflict with the refrigerant management regulations adopted by CARB.

Table 5: Project Consistency with Applicable CARB Scoping Plan Measures			
Scoping Plan Sector	**Scoping Plan Measure**	**Implementing Regulations**	**Project Consistency**
Agriculture	Agriculture	Cap and Trade Offset Projects for Livestock and Rice Cultivation	**Not applicable**. The Project site is designated for urban development. No grazing, feedlot, or other agricultural activities that generate manure occur currently exist on-site or are proposed by the Project.
Source: California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, 2017 and CARB, *Climate Change Scoping Plan*, 2008.			

The Project is estimated to emit approximately 1,520 $MTCO_2e$ annually from on-site activities and indirectly from off-site motor vehicles, see Table 3. The GHG emissions caused by long-term operation of the proposed would be less than significant.

Regarding goals for 2050 under Executive Order S-3-05, at this time it is not possible to quantify the emissions savings from future regulatory measures, as they have not yet been developed. Nevertheless, it is anticipated that operation of the proposed Project would comply with all applicable measures are enacted that state lawmakers decide would lead to an 80 percent reduction below 1990 levels by 2050.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

5.3 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

Cumulative Setting

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about 1 day), GHGs have much longer atmospheric lifetimes of 1 year to several thousand years, allowing them to disperse around the globe.

Cumulative Impacts and Mitigation Measures

It is generally the case that an individual project of this size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory. GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. The additive effect of project-related GHGs would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change. In addition, the proposed Project as well as other cumulative related projects would also be subject to all applicable regulatory requirements, which would further reduce GHG emissions. As shown in Table 4 and Table 5, the proposed Project would not conflict with the RTP/SCS. As a result, the Project would not conflict with any GHG reduction plans including the CARB Scoping Plan. Therefore, the Project's cumulative contribution of GHG emissions would be less than significant and the Project's cumulative GHG impacts would also be less than cumulatively considerable.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

6 REFERENCES

1. California Air Resources Board, *California's 2017 Climate Change Scoping Plan,* 2017.
2. FM Civil Engineers, *Site Plan*, 2018.
3. Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis*, 2007.
4. Intergovernmental Panel on Climate Change, *Climate Change 2013: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2013.
5. National Research Council, *Advancing the Science of Climate Change*, 2010.
6. State of California, *Code of Regulations Section 15065.5a*, 2018.
7. Southern California Association of Governments, *Regional Transportation Plan/Sustainable Communities Strategy*, 2016.
8. South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13*, 2009.
9. U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, 2018.
10. U.S. EPA, *Methane and Nitrous Oxide Emission from Natural Sources*, 2010.
11. U.S. EPA, *Overview of Greenhouse Gases*, 2018.
12. Western Riverside Council of Governments, *Subregional Climate Action Plan*, 2014.

Appendix A

Greenhouse Gas Emissions Data

Faith Bible Church Wildomar

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	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/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - city park - ball field (1.28 acres) and open space other asphalt surfaces - roads

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

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2331	2.7660	1.5853	3.3200e-003	0.4598	0.1133	0.5731	0.1673	0.1043	0.2716	0.0000	300.6070	300.6070	0.0862	0.0000	302.7613
2020	0.9909	6.8290	5.3026	0.0151	0.9961	0.2475	1.2436	0.3060	0.2304	0.5364	0.0000	1,370.1830	1,370.1830	0.2058	0.0000	1,375.3269
2021	0.1986	0.6951	0.7225	2.1400e-003	0.1029	0.0240	0.1269	0.0277	0.0224	0.0502	0.0000	194.4712	194.4712	0.0222	0.0000	195.0261
Maximum	**0.9909**	**6.8290**	**5.3026**	**0.0151**	**0.9961**	**0.2475**	**1.2436**	**0.3060**	**0.2304**	**0.5364**	**0.0000**	**1,370.1830**	**1,370.1830**	**0.2058**	**0.0000**	**1,375.3269**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2331	2.7660	1.5853	3.3200e-003	0.2075	0.1133	0.3208	0.0744	0.1043	0.1787	0.0000	300.6066	300.6066	0.0862	0.0000	302.7610
2020	0.9909	6.8290	5.3026	0.0151	0.7278	0.2475	0.9753	0.2129	0.2304	0.4432	0.0000	1,370.1823	1,370.1823	0.2058	0.0000	1,375.3262
2021	0.1986	0.6951	0.7225	2.1400e-003	0.0977	0.0240	0.1217	0.0265	0.0224	0.0489	0.0000	194.4711	194.4711	0.0222	0.0000	195.0260
Maximum	**0.9909**	**6.8290**	**5.3026**	**0.0151**	**0.7278**	**0.2475**	**0.9753**	**0.2129**	**0.2304**	**0.4432**	**0.0000**	**1,370.1823**	**1,370.1823**	**0.2058**	**0.0000**	**1,375.3262**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**33.73**	**0.00**	**27.06**	**37.39**	**0.00**	**21.83**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**10-1-2019**	**12-31-2019**	2.9839	2.9839
2	**1-1-2020**	**3-31-2020**	2.9410	2.9410
3	**4-1-2020**	**6-30-2020**	1.7251	1.7251
4	**7-1-2020**	**9-30-2020**	1.3981	1.3981
5	**10-1-2020**	**12-31-2020**	1.7363	1.7363
6	**1-1-2021**	**3-31-2021**	0.9121	0.9121
		Highest	2.9839	2.9839

2.2 Overall Operational

Unmitigated Operational

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

Category	tons/yr										MT/yr					
Area	0.3118	9.9000e-004	0.0422	1.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	0.6840	0.6840	1.2000e-004	1.0000e-005	0.6903
Energy	0.0107	0.0969	0.0797	5.8000e-004		7.3900e-003	7.3900e-003		7.3900e-003	7.3900e-003	0.0000	337.1046	337.1046	0.0116	3.9200e-003	338.5609
Mobile	0.2479	2.0424	2.5379	0.0106	0.7494	7.7000e-003	0.7571	0.2008	7.2200e-003	0.2080	0.0000	981.4381	981.4381	0.0611	0.0000	982.9661
Waste						0.0000	0.0000		0.0000	0.0000	68.2314	0.0000	68.2314	4.0324	0.0000	169.0403
Water						0.0000	0.0000		0.0000	0.0000	0.6397	53.2167	53.8565	0.0679	2.0100e-003	56.1519
Total	**0.5704**	**2.1403**	**2.6597**	**0.0112**	**0.7494**	**0.0153**	**0.7648**	**0.2008**	**0.0149**	**0.2157**	**68.8711**	**1,372.4434**	**1,441.3145**	**4.1731**	**5.9400e-003**	**1,547.4094**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3117	4.6000e-004	0.0419	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	0.0717	0.0717	1.1000e-004	0.0000	0.0743
Energy	0.0107	0.0969	0.0797	5.8000e-004		7.3900e-003	7.3900e-003		7.3900e-003	7.3900e-003	0.0000	337.1046	337.1046	0.0116	3.9200e-003	338.5609
Mobile	0.2479	2.0424	2.5379	0.0106	0.7494	7.7000e-003	0.7571	0.2008	7.2200e-003	0.2080	0.0000	981.4381	981.4381	0.0611	0.0000	982.9661
Waste						0.0000	0.0000		0.0000	0.0000	34.1157	0.0000	34.1157	2.0162	0.0000	84.5201
Water						0.0000	0.0000		0.0000	0.0000	0.5118	48.8076	49.3194	0.0546	1.6600e-003	51.1781
Total	**0.5703**	**2.1398**	**2.6595**	**0.0112**	**0.7494**	**0.0153**	**0.7647**	**0.2008**	**0.0148**	**0.2156**	**34.6275**	**1,367.4220**	**1,402.0495**	**2.1436**	**5.5800e-003**	**1,457.2994**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.01**	**0.02**	**0.01**	**0.09**	**0.00**	**0.26**	**0.01**	**0.00**	**0.27**	**0.02**	**49.72**	**0.37**	**2.72**	**48.63**	**6.06**	**5.82**

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	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195

Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0903**	**0.0120**	**0.1023**	**0.0497**	**0.0110**	**0.0607**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.3000e-004	3.4100e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8547	0.8547	2.0000e-005	0.0000	0.8552
Total	**4.5000e-004**	**3.3000e-004**	**3.4100e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8547**	**0.8547**	**2.0000e-005**	**0.0000**	**0.8552**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0386	0.0000	0.0386	0.0212	0.0000	0.0212	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0386**	**0.0120**	**0.0506**	**0.0212**	**0.0110**	**0.0322**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.3000e-004	3.4100e-003	1.0000e-005	9.4000e-004	1.0000e-005	9.4000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.8547	0.8547	2.0000e-005	0.0000	0.8552
Total	**4.5000e-004**	**3.3000e-004**	**3.4100e-003**	**1.0000e-005**	**9.4000e-004**	**1.0000e-005**	**9.4000e-004**	**2.5000e-004**	**1.0000e-005**	**2.6000e-004**	**0.0000**	**0.8547**	**0.8547**	**2.0000e-005**	**0.0000**	**0.8552**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3485	0.0000	0.3485	0.1122	0.0000	0.1122	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2060	2.4340	1.4375	2.7700e-003		0.1010	0.1010		0.0929	0.0929	0.0000	248.8623	248.8623	0.0787	0.0000	250.8307
Total	**0.2060**	**2.4340**	**1.4375**	**2.7700e-003**	**0.3485**	**0.1010**	**0.4495**	**0.1122**	**0.0929**	**0.2050**	**0.0000**	**248.8623**	**248.8623**	**0.0787**	**0.0000**	**250.8307**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	2.2300e-003	0.1019	0.0129	3.0000e-004	0.0138	3.6000e-004	0.0142	3.5900e-003	3.5000e-004	3.9300e-003	0.0000	28.4879	28.4879	1.8600e-003	0.0000	28.5344
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7800e-003	2.0300e-003	0.0213	6.0000e-005	6.1600e-003	4.0000e-005	6.1900e-003	1.6300e-003	4.0000e-005	1.6700e-003	0.0000	5.3178	5.3178	1.5000e-004	0.0000	5.3214
Total	**5.0100e-003**	**0.1039**	**0.0341**	**3.6000e-004**	**0.0200**	**4.0000e-004**	**0.0204**	**5.2200e-003**	**3.9000e-004**	**5.6000e-003**	**0.0000**	**33.8057**	**33.8057**	**2.0100e-003**	**0.0000**	**33.8559**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1490	0.0000	0.1490	0.0480	0.0000	0.0480	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2060	2.4340	1.4375	2.7700e-003		0.1010	0.1010		0.0929	0.0929	0.0000	248.8620	248.8620	0.0787	0.0000	250.8304
Total	**0.2060**	**2.4340**	**1.4375**	**2.7700e-003**	**0.1490**	**0.1010**	**0.2500**	**0.0480**	**0.0929**	**0.1408**	**0.0000**	**248.8620**	**248.8620**	**0.0787**	**0.0000**	**250.8304**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.2300e-003	0.1019	0.0129	3.0000e-004	0.0131	3.6000e-004	0.0135	3.4100e-003	3.5000e-004	3.7500e-003	0.0000	28.4879	28.4879	1.8600e-003	0.0000	28.5344
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7800e-003	2.0300e-003	0.0213	6.0000e-005	5.8300e-003	4.0000e-005	5.8700e-003	1.5600e-003	4.0000e-005	1.5900e-003	0.0000	5.3178	5.3178	1.5000e-004	0.0000	5.3214

Total	**5.0100e-003**	**0.1039**	**0.0341**	**3.6000e-004**	**0.0189**	**4.0000e-004**	**0.0193**	**4.9700e-003**	**3.9000e-004**	**5.3400e-003**	**0.0000**	**33.8057**	**33.8057**	**2.0100e-003**	**0.0000**	**33.8559**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4178	0.0000	0.4178	0.1502	0.0000	0.1502	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2730	3.1611	1.9233	3.9100e-003		0.1301	0.1301		0.1197	0.1197	0.0000	343.3815	343.3815	0.1111	0.0000	346.1579
Total	**0.2730**	**3.1611**	**1.9233**	**3.9100e-003**	**0.4178**	**0.1301**	**0.5479**	**0.1502**	**0.1197**	**0.2699**	**0.0000**	**343.3815**	**343.3815**	**0.1111**	**0.0000**	**346.1579**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.8800e-003	0.1330	0.0172	4.1000e-004	0.0145	4.2000e-004	0.0149	3.8300e-003	4.0000e-004	4.2300e-003	0.0000	39.7795	39.7795	2.4900e-003	0.0000	39.8418
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6300e-003	2.5400e-003	0.0272	8.0000e-005	8.6800e-003	5.0000e-005	8.7400e-003	2.3100e-003	5.0000e-005	2.3500e-003	0.0000	7.2648	7.2648	1.8000e-004	0.0000	7.2693
Total	**6.5100e-003**	**0.1356**	**0.0444**	**4.9000e-004**	**0.0232**	**4.7000e-004**	**0.0237**	**6.1400e-003**	**4.5000e-004**	**6.5800e-003**	**0.0000**	**47.0442**	**47.0442**	**2.6700e-003**	**0.0000**	**47.1111**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1786	0.0000	0.1786	0.0642	0.0000	0.0642	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2730	3.1611	1.9233	3.9100e-003		0.1301	0.1301		0.1197	0.1197	0.0000	343.3810	343.3810	0.1111	0.0000	346.1575
Total	**0.2730**	**3.1611**	**1.9233**	**3.9100e-003**	**0.1786**	**0.1301**	**0.3087**	**0.0642**	**0.1197**	**0.1839**	**0.0000**	**343.3810**	**343.3810**	**0.1111**	**0.0000**	**346.1575**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.8800e-003	0.1330	0.0172	4.1000e-004	0.0138	4.2000e-004	0.0142	3.6600e-003	4.0000e-004	4.0500e-003	0.0000	39.7795	39.7795	2.4900e-003	0.0000	39.8418
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6300e-003	2.5400e-003	0.0272	8.0000e-005	8.2300e-003	5.0000e-005	8.2800e-003	2.1900e-003	5.0000e-005	2.2400e-003	0.0000	7.2648	7.2648	1.8000e-004	0.0000	7.2693
Total	**6.5100e-003**	**0.1356**	**0.0444**	**4.9000e-004**	**0.0220**	**4.7000e-004**	**0.0225**	**5.8500e-003**	**4.5000e-004**	**6.2900e-003**	**0.0000**	**47.0442**	**47.0442**	**2.6700e-003**	**0.0000**	**47.1111**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	0.1940	1.7555	1.5416	2.4600e-003		0.1022	0.1022		0.0961	0.0961	0.0000	211.9231	211.9231	0.0517	0.0000	213.2157
Total	**0.1940**	**1.7555**	**1.5416**	**2.4600e-003**		**0.1022**	**0.1022**		**0.0961**	**0.0961**	**0.0000**	**211.9231**	**211.9231**	**0.0517**	**0.0000**	**213.2157**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0437	1.5989	0.3128	3.9500e-003	0.0971	9.0400e-003	0.1061	0.0280	8.6500e-003	0.0367	0.0000	377.9785	377.9785	0.0302	0.0000	378.7339
Worker	0.1813	0.1270	1.3560	4.0100e-003	0.4335	2.6700e-003	0.4361	0.1151	2.4600e-003	0.1176	0.0000	362.6551	362.6551	9.0800e-003	0.0000	362.8821
Total	**0.2249**	**1.7259**	**1.6688**	**7.9600e-003**	**0.5306**	**0.0117**	**0.5423**	**0.1431**	**0.0111**	**0.1542**	**0.0000**	**740.6336**	**740.6336**	**0.0393**	**0.0000**	**741.6160**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1940	1.7555	1.5416	2.4600e-003		0.1022	0.1022		0.0961	0.0961	0.0000	211.9229	211.9229	0.0517	0.0000	213.2154
Total	**0.1940**	**1.7555**	**1.5416**	**2.4600e-003**		**0.1022**	**0.1022**		**0.0961**	**0.0961**	**0.0000**	**211.9229**	**211.9229**	**0.0517**	**0.0000**	**213.2154**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0437	1.5989	0.3128	3.9500e-003	0.0930	9.0400e-003	0.1020	0.0270	8.6500e-003	0.0357	0.0000	377.9785	377.9785	0.0302	0.0000	378.7339
Worker	0.1813	0.1270	1.3560	4.0100e-003	0.4109	2.6700e-003	0.4136	0.1096	2.4600e-003	0.1120	0.0000	362.6551	362.6551	9.0800e-003	0.0000	362.8821
Total	**0.2249**	**1.7259**	**1.6688**	**7.9600e-003**	**0.5039**	**0.0117**	**0.5156**	**0.1366**	**0.0111**	**0.1477**	**0.0000**	**740.6336**	**740.6336**	**0.0393**	**0.0000**	**741.6160**

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	tons/yr										MT/yr					
Off-Road	0.0304	0.2789	0.2652	4.3000e-004		0.0153	0.0153		0.0144	0.0144	0.0000	37.0620	37.0620	8.9400e-003	0.0000	37.2855
Total	**0.0304**	**0.2789**	**0.2652**	**4.3000e-004**		**0.0153**	**0.0153**		**0.0144**	**0.0144**	**0.0000**	**37.0620**	**37.0620**	**8.9400e-003**	**0.0000**	**37.2855**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.4100e-003	0.2506	0.0482	6.9000e-004	0.0170	4.8000e-004	0.0175	4.9000e-003	4.6000e-004	5.3600e-003	0.0000	65.5800	65.5800	5.0000e-003	0.0000	65.7051
Worker	0.0296	0.0199	0.2171	6.8000e-004	0.0758	4.5000e-004	0.0763	0.0201	4.2000e-004	0.0206	0.0000	61.2949	61.2949	1.4300e-003	0.0000	61.3305
Total	**0.0360**	**0.2706**	**0.2653**	**1.3700e-003**	**0.0928**	**9.3000e-004**	**0.0937**	**0.0250**	**8.8000e-004**	**0.0259**	**0.0000**	**126.8748**	**126.8748**	**6.4300e-003**	**0.0000**	**127.0356**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0304	0.2789	0.2652	4.3000e-004		0.0153	0.0153		0.0144	0.0144	0.0000	37.0619	37.0619	8.9400e-003	0.0000	37.2855
Total	**0.0304**	**0.2789**	**0.2652**	**4.3000e-004**		**0.0153**	**0.0153**		**0.0144**	**0.0144**	**0.0000**	**37.0619**	**37.0619**	**8.9400e-003**	**0.0000**	**37.2855**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Vendor	6.4100e-003	0.2506	0.0482	6.9000e-004	0.0163	4.8000e-004	0.0167	4.7200e-003	4.6000e-004	5.1800e-003	0.0000	65.5800	65.5800	5.0000e-003	0.0000	65.7051
Worker	0.0296	0.0199	0.2171	6.8000e-004	0.0719	4.5000e-004	0.0723	0.0192	4.2000e-004	0.0196	0.0000	61.2949	61.2949	1.4300e-003	0.0000	61.3305
Total	**0.0360**	**0.2706**	**0.2653**	**1.3700e-003**	**0.0881**	**9.3000e-004**	**0.0890**	**0.0239**	**8.8000e-004**	**0.0248**	**0.0000**	**126.8748**	**126.8748**	**6.4300e-003**	**0.0000**	**127.0356**

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	tons/yr										MT/yr					
Off-Road	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0182					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0307**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	4.3000e-004	4.7200e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3333	1.3333	3.0000e-005	0.0000	1.3341
Total	**6.4000e-004**	**4.3000e-004**	**4.7200e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3333**	**1.3333**	**3.0000e-005**	**0.0000**	**1.3341**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0182					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0307**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	4.3000e-004	4.7200e-003	1.0000e-005	1.5600e-003	1.0000e-005	1.5700e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3333	1.3333	3.0000e-005	0.0000	1.3341
Total	**6.4000e-004**	**4.3000e-004**	**4.7200e-003**	**1.0000e-005**	**1.5600e-003**	**1.0000e-005**	**1.5700e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**	**0.0000**	**1.3333**	**1.3333**	**3.0000e-005**	**0.0000**	**1.3341**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2760					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3000e-003	0.0438	0.0476	8.0000e-005		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003	0.0000	6.6385	6.6385	5.1000e-004	0.0000	6.6513
Total	**0.2823**	**0.0438**	**0.0476**	**8.0000e-005**		**2.8800e-003**	**2.8800e-003**		**2.8800e-003**	**2.8800e-003**	**0.0000**	**6.6385**	**6.6385**	**5.1000e-004**	**0.0000**	**6.6513**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0103	7.2000e-003	0.0769	2.3000e-004	0.0246	1.5000e-004	0.0247	6.5300e-003	1.4000e-004	6.6700e-003	0.0000	20.5621	20.5621	5.1000e-004	0.0000	20.5750
Total	**0.0103**	**7.2000e-003**	**0.0769**	**2.3000e-004**	**0.0246**	**1.5000e-004**	**0.0247**	**6.5300e-003**	**1.4000e-004**	**6.6700e-003**	**0.0000**	**20.5621**	**20.5621**	**5.1000e-004**	**0.0000**	**20.5750**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2760					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	6.3000e-003	0.0438	0.0476	8.0000e-005		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003	0.0000	6.6385	6.6385	5.1000e-004	0.0000	6.6513
Total	**0.2823**	**0.0438**	**0.0476**	**8.0000e-005**		**2.8800e-003**	**2.8800e-003**		**2.8800e-003**	**2.8800e-003**	**0.0000**	**6.6385**	**6.6385**	**5.1000e-004**	**0.0000**	**6.6513**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0103	7.2000e-003	0.0769	2.3000e-004	0.0233	1.5000e-004	0.0235	6.2100e-003	1.4000e-004	6.3500e-003	0.0000	20.5621	20.5621	5.1000e-004	0.0000	20.5750
Total	**0.0103**	**7.2000e-003**	**0.0769**	**2.3000e-004**	**0.0233**	**1.5000e-004**	**0.0235**	**6.2100e-003**	**1.4000e-004**	**6.3500e-003**	**0.0000**	**20.5621**	**20.5621**	**5.1000e-004**	**0.0000**	**20.5750**

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	tons/yr										MT/yr					
Archit. Coating	0.0955					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9700e-003	0.0137	0.0164	3.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	2.2979	2.2979	1.6000e-004	0.0000	2.3019
Total	**0.0975**	**0.0137**	**0.0164**	**3.0000e-005**		**8.5000e-004**	**8.5000e-004**		**8.5000e-004**	**8.5000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.6000e-004**	**0.0000**	**2.3019**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3200e-003	2.2400e-003	0.0244	8.0000e-005	8.5100e-003	5.0000e-005	8.5600e-003	2.2600e-003	5.0000e-005	2.3100e-003	0.0000	6.8797	6.8797	1.6000e-004	0.0000	6.8837
Total	**3.3200e-003**	**2.2400e-003**	**0.0244**	**8.0000e-005**	**8.5100e-003**	**5.0000e-005**	**8.5600e-003**	**2.2600e-003**	**5.0000e-005**	**2.3100e-003**	**0.0000**	**6.8797**	**6.8797**	**1.6000e-004**	**0.0000**	**6.8837**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0955					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9700e-003	0.0137	0.0164	3.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	2.2979	2.2979	1.6000e-004	0.0000	2.3019
Total	**0.0975**	**0.0137**	**0.0164**	**3.0000e-005**		**8.5000e-004**	**8.5000e-004**		**8.5000e-004**	**8.5000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.6000e-004**	**0.0000**	**2.3019**

Mitigated Construction Off-Site

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3200e-003	2.2400e-003	0.0244	8.0000e-005	8.0600e-003	5.0000e-005	8.1200e-003	2.1500e-003	5.0000e-005	2.2000e-003	0.0000	6.8797	6.8797	1.6000e-004	0.0000	6.8837
Total	**3.3200e-003**	**2.2400e-003**	**0.0244**	**8.0000e-005**	**8.0600e-003**	**5.0000e-005**	**8.1200e-003**	**2.1500e-003**	**5.0000e-005**	**2.2000e-003**	**0.0000**	**6.8797**	**6.8797**	**1.6000e-004**	**0.0000**	**6.8837**

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	tons/yr										MT/yr					
Mitigated	0.2479	2.0424	2.5379	0.0106	0.7494	7.7000e-003	0.7571	0.2008	7.2200e-003	0.2080	0.0000	981.4381	981.4381	0.0611	0.0000	982.9661
Unmitigated	0.2479	2.0424	2.5379	0.0106	0.7494	7.7000e-003	0.7571	0.2008	7.2200e-003	0.2080	0.0000	981.4381	981.4381	0.0611	0.0000	982.9661

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	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

	Miles			Trip %			Trip Purpose %		
Land Use	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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	231.2999	231.2999	9.5500e-003	1.9800e-003	232.1273

Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	231.2999	231.2999	9.5500e-003	1.9800e-003	232.1273
NaturalGas Mitigated	0.0107	0.0969	0.0797	5.8000e-004		7.3900e-003	7.3900e-003		7.3900e-003	7.3900e-003	0.0000	105.8048	105.8048	2.0300e-003	1.9400e-003	106.4335
NaturalGas Unmitigated	0.0107	0.0969	0.0797	5.8000e-004		7.3900e-003	7.3900e-003		7.3900e-003	7.3900e-003	0.0000	105.8048	105.8048	2.0300e-003	1.9400e-003	106.4335

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
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	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	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	0.0000
Place of Worship	1.89092e+006	0.0102	0.0927	0.0779	5.6000e-004		7.0400e-003	7.0400e-003		7.0400e-003	7.0400e-003	0.0000	100.9066	100.9066	1.9300e-003	1.8500e-003	101.5062
Single Family Housing	91788.5	4.9000e-004	4.2300e-003	1.8000e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.8982	4.8982	9.0000e-005	9.0000e-005	4.9273
Total		**0.0107**	**0.0969**	**0.0797**	**5.9000e-004**		**7.3800e-003**	**7.3800e-003**		**7.3800e-003**	**7.3800e-003**	**0.0000**	**105.8048**	**105.8048**	**2.0200e-003**	**1.9400e-003**	**106.4335**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
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	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	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	0.0000
Place of Worship	1.89092e+006	0.0102	0.0927	0.0779	5.6000e-004		7.0400e-003	7.0400e-003		7.0400e-003	7.0400e-003	0.0000	100.9066	100.9066	1.9300e-003	1.8500e-003	101.5062
Single Family Housing	91788.5	4.9000e-004	4.2300e-003	1.8000e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.8982	4.8982	9.0000e-005	9.0000e-005	4.9273
Total		**0.0107**	**0.0969**	**0.0797**	**5.9000e-004**		**7.3800e-003**	**7.3800e-003**		**7.3800e-003**	**7.3800e-003**	**0.0000**	**105.8048**	**105.8048**	**2.0200e-003**	**1.9400e-003**	**106.4335**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	109060	34.7489	1.4300e-003	3.0000e-004	34.8732
Place of Worship	590730	188.2192	7.7700e-003	1.6100e-003	188.8926
Single Family Housing	26149.4	8.3318	3.4000e-004	7.0000e-005	8.3616
Total		**231.2999**	**9.5400e-003**	**1.9800e-003**	**232.1273**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000

Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	109060	34.7489	1.4300e-003	3.0000e-004	34.8732
Place of Worship	590730	188.2192	7.7700e-003	1.6100e-003	188.8926
Single Family Housing	26149.4	8.3318	3.4000e-004	7.0000e-005	8.3616
Total		**231.2999**	**9.5400e-003**	**1.9800e-003**	**232.1273**

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	tons/yr										MT/yr					
Mitigated	0.3117	4.6000e-004	0.0419	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	0.0717	0.0717	1.1000e-004	0.0000	0.0743
Unmitigated	0.3118	9.9000e-004	0.0422	1.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	0.6840	0.6840	1.2000e-004	1.0000e-005	0.6903

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2726					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.0000e-005	5.3000e-004	2.3000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.6124	0.6124	1.0000e-005	1.0000e-005	0.6160
Landscaping	1.9600e-003	4.6000e-004	0.0419	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	0.0717	0.0717	1.1000e-004	0.0000	0.0743
Total	**0.3118**	**9.9000e-004**	**0.0422**	**0.0000**		**2.5000e-004**	**2.5000e-004**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**0.6840**	**0.6840**	**1.2000e-004**	**1.0000e-005**	**0.6903**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2726					0.0000	0.0000		0.0000	0.0000	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	1.9600e-003	4.6000e-004	0.0419	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	0.0717	0.0717	1.1000e-004	0.0000	0.0743
Total	**0.3117**	**4.6000e-004**	**0.0419**	**0.0000**		**2.1000e-004**	**2.1000e-004**		**2.1000e-004**	**2.1000e-004**	**0.0000**	**0.0717**	**0.0717**	**1.1000e-004**	**0.0000**	**0.0743**

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	49.3194	0.0546	1.6600e-003	51.1781
Unmitigated	53.8565	0.0679	2.0100e-003	56.1519

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 9.69866	34.3321	1.4200e-003	2.9000e-004	34.4550
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	1.82101 / 2.84825	18.2152	0.0601	1.5500e-003	20.1793
Single Family Housing	0.195462 / 0.123226	1.3091	6.4200e-003	1.6000e-004	1.5177

Total		**53.8565**	**0.0679**	**2.0000e-003**	**56.1519**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 9.10704	32.2379	1.3300e-003	2.8000e-004	32.3532
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	1.45681 / 2.67451	15.9736	0.0481	1.2500e-003	17.5499
Single Family Housing	0.15637 / 0.115709	1.1080	5.1400e-003	1.3000e-004	1.2750
Total		**49.3194**	**0.0546**	**1.6600e-003**	**51.1781**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			

Mitigated	34.1157	2.0162	0.0000	84.5201
Unmitigated	68.2314	4.0324	0.0000	169.0403

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.7	0.1421	8.4000e-003	0.0000	0.3520
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	331.74	67.3402	3.9797	0.0000	166.8326
Single Family Housing	3.69	0.7490	0.0443	0.0000	1.8557
Total		**68.2314**	**4.0324**	**0.0000**	**169.0403**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.35	0.0711	4.2000e-003	0.0000	0.1760
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000

Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	165.87	33.6701	1.9899	0.0000	83.4163
Single Family Housing	1.845	0.3745	0.0221	0.0000	0.9279
Total		**34.1157**	**2.0162**	**0.0000**	**84.5201**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation