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# MEMORANDUM

**DATE:** November 21, 2024

**TO:** Brian T. Diebolt, Design Concepts

**FROM:** Ronald Brugger, Senior Air Quality Specialist

**SUBJECT:** Air Quality and Greenhouse Gas Impact Analysis for the Lighthouse Church and Coffee Shop in Yucca Valley, San Bernardino County, California (LSA Project Number 20241938)

## INTRODUCTION

LSA has prepared this Air Quality and Greenhouse Gas Technical Memorandum to evaluate the impacts associated with construction and operation of the proposed Lighthouse Church and Coffee Shop Project (project) in Yucca Valley, San Bernardino County, California. This analysis was prepared using methods and assumptions recommended in the Mojave Desert Air Quality Management District's (MDAQMD) *California Environmental Quality Act (CEQA) And Federal Conformity Guidelines*.[1] This analysis includes a description of existing regulatory framework and an assessment of project air pollutant emissions, greenhouse gas (GHG) emissions, and energy use. Measures to reduce or eliminate significant impacts are identified, where appropriate.

## PROJECT LOCATION AND DESCRIPTION

The proposed project is located on Assessor's Parcel Number 0595-371-15 at 57155 Twentynine Palms Highway. The project site is on the southeast corner of State Route (SR) 62 (Twentynine Palms Highway) and Dumosa Avenue near SR-247 (Old Women Springs Road), in Yucca Valley. Figure 1 (all figures provided in Attachment A) shows the regional and project location. The project site currently includes a 12,259-square-foot (sf) Bank of America building, which has two drive-through lanes with automatic teller machines (ATMs).

The proposed project would convert the Bank of America structure into a 10,773 sf church and 1,486 sf coffee shop with a drive-through window, while keeping the ATM operational. The proposed tenant improvements consist of the following:

[1] Mojave Desert Air Quality Management District (MDAQMD). 2020. *California Environmental Quality Act (CEQA) And Federal Conformity Guidelines*. February. Website: www.mdaqmd.ca.gov/home/showpublisheddocument/8510/638591628485540147 (accessed November 2024).

- Conversion of 2,617 sf of existing space to a main assembly area with non-fixed seating areas
- Conversion of 1,470 sf of existing space to a coffee house with seating areas and drive-through
- Conversion of other existing spaces to ancillary uses to the main assembly area, including nursery, nursing mother's room, entry foyers, restrooms, children's ministries, Sunday school classrooms, administration, janitorial, and youth activities room
- Replacement of existing windows with high-efficiency dual-pane windows

On-site improvements would include restriping of existing parking areas to accommodate additional required standard parking spaces and Americans with Disabilities Act (ADA) accessible parking spaces. Figure 2 shows the site plan.

The hours of operation for the Church would be from 9:00 a.m. to 5:00 p.m., Monday through Saturday, with expanded hours on Wednesday for Bible study from 6:00 p.m. to 9:00 p.m., and from 7:00 a.m. to 9:00 p.m. on Sunday for the main service. The hours of operation for the coffee shop would be from 6:00 a.m. to 9:00 p.m., Monday through Saturday. The Church would have two staff members, and the coffee shop would have four staff members.

Construction would consist primarily of remodeling the interior of the existing building and refurbishment of the parking lot. A patio cover will be added for the coffee shop outdoor dining area. Construction would begin in late 2024 and last approximately 5 months.

## EXISTING LAND USES IN THE PROJECT AREA

For this analysis, sensitive receptors are considered areas of the population that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include residences, schools, daycare centers, hospitals, parks, and similar uses that are sensitive to air quality. Impacts on sensitive receptors are of particular concern because those receptors are the population most vulnerable to the effects of air pollution.

The project site is surrounded primarily by commercial and retail uses. The areas adjacent to the project site include commercial uses to the north, east, and west. The nearest sensitive receptors are the existing residential uses northwest of the site at the corner of Dumosa Avenue and 29 Palms Highway, approximately 240 feet from the project boundary. There are additional residences to the south across Yucca Trail that are more than 475 feet away. Table A summarizes the distance of sensitive receptors to the proposed project by impact categories.

## Table A: Summary of Analysis Distances by Impact Category

| Activity | Nearest Sensitive Receptor | Points of Analysis | Distance (feet) |
|---|---|---|---|
| Construction[1] | Multi-family homes along Dumosa Avenue | Perimeter of construction activities to centroid of nearest residence. | 240 |
| Operations | Multi-family homes along Dumosa Avenue | Emissions sources on-site generalized at the centroid of the project site to centroid of nearest residence. | 400 |

Source: Compiled by LSA (2024).

[1] Distance for construction air quality impact potential includes the assumption that heavy construction equipment would operate adjacent to the proposed project boundary, which is approximately 240 feet from the center of the nearest off-site structures where a person would live.

# ENVIRONMENTAL SETTING

## Air Quality Background

Air quality is primarily a function of local climate, local sources of air pollution, and regional pollution transport. The amount of a given pollutant in the atmosphere is determined by the amount of the pollutant released and the atmosphere's ability to transport and dilute the pollutant. The major determinants of transport and dilution are wind, atmospheric stability, terrain and, for photochemical pollutants, sunshine.

A region's topographic features have a direct correlation with air pollution flow and therefore are used to determine the boundary of air basins. The project site is in Yucca Valley in San Bernardino County, and is within the jurisdiction of MDAQMD, which regulates air quality in the Mojave Desert Air Basin (Basin).

The Basin is an assemblage of mountain ranges interspersed with long, broad valleys that often contain dry lakes. Many of the lower mountains that dot the vast terrain rise from 1,000 to 4,000 feet above the valley floor. The Basin encompasses desert portions of Kern, Los Angeles, Riverside, and San Bernardino counties. The Basin is surrounded by national forests to the south and west and desert to the north and east.

Yucca Valley is located in the desert region east of the San Bernardino Mountains and north of Joshua Tree National Park in southern San Bernardino County. This area, known as the Morongo Basin, is part of the Mojave Desert. Yucca Valley is 20 miles west of Twentynine Palms and 35 miles north of Palm Springs. At an altitude of 3,300 feet, Yucca Valley's climate is more moderate than other desert jurisdictions. Yucca Valley serves as a commercial and residential center for the Morongo Valley, supporting the major economic drivers in the region, Joshua Tree National Park, and the United States Marine Corps Facility.

Both State and federal governments have established health-based ambient air quality standards for six criteria air pollutants: carbon monoxide (CO), ozone ($O_3$), nitrogen dioxide ($NO_2$), sulfur dioxide ($SO_2$), lead (Pb), and suspended particulate matter. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Two

criteria pollutants, $O_3$ and $NO_2$, are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. Pollutants such as CO, $SO_2$, and Pb are considered local pollutants that tend to accumulate in the air locally.

Air quality monitoring stations are located throughout the nation and are maintained by the local air districts and State air quality regulating agencies. Data collected at permanent monitoring stations are used by the United States Environmental Protection Agency (USEPA) to identify regions as "attainment" or "nonattainment" depending on whether the regions meet the requirements stated in the applicable National Ambient Air Quality Standards (NAAQS). Nonattainment areas are imposed with additional restrictions as required by the USEPA. In addition, different classifications of attainment (e.g., marginal, moderate, serious, severe, and extreme) are used to classify each air basin in the State on a pollutant-by-pollutant basis. The classifications are used as a foundation to create air quality management strategies to improve air quality and to comply with the NAAQS. As shown in Table B, the Basin is designated as nonattainment by the federal standards for $O_3$ and particulate matter less than 10 microns in diameter ($PM_{10}$) and nonattainment by the State standards for $O_3$, $PM_{10}$, and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$).

## Table B: Attainment Status of Criteria Pollutants in the Mojave Desert Air Basin

| Pollutant | State | Federal |
|---|---|---|
| $O_3$ | Nonattainment | Nonattainment[1] |
| $PM_{10}$ | Nonattainment | Nonattainment[2] |
| $PM_{2.5}$ | Nonattainment[1] | Unclassified/Attainment |
| CO | Attainment | Unclassified/Attainment |
| $NO_2$ | Attainment | Unclassified/Attainment |
| $SO_2$ | Attainment | Unclassified/Attainment |
| Lead[1] | Attainment | Unclassified/Attainment |
| All Others | Unclassified/Attainment | N/A |

Source: *MDAQMD Attainment Status* (Mojave Desert Air Quality Management District 2024). Website: www.mdaqmd.ca.gov/home/showpublisheddocument/1267/636337468837000000 (accessed November 2024).

[1] Only the southwest corner of the desert portion of San Bernardino County is Nonattainment

[2] Only the San Bernardino County portion is Nonattainment

CO = carbon monoxide
N/A = not applicable
$NO_2$ = nitrogen dioxide
$O_3$ = ozone
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
$PM_{10}$ = particulate matter less than 10 microns in size
$SO_2$ = sulfur dioxide

$O_3$ levels, as measured by peak concentrations and the number of days over the State 1-hour standard, have declined substantially as a result of aggressive programs by MDAQMD and other regional, State, and federal agencies. The reduction of peak concentrations represents progress in improving public health; however, the Basin still exceeds the State standard for 1-hour and 8-hour $O_3$ levels. The USEPA lowered the 1997 0.80 part per million (ppm) federal 8-hour $O_3$ standard to 0.75 ppm in 2008 and then to 0.70 ppm on October 1, 2015. The Basin is classified as nonattainment for the 1-hour and 8-hour $O_3$ standards at the State level and as extreme nonattainment for the 8-hour $O_3$ standard at the federal level.

From 2021 to 2023, the Joshua Tree National Monument station (the closest monitoring station to the project site) recorded the following exceedances of the State and federal 1-hour and 8-hour $O_3$ standards[2]:

- The State and federal 8-hour $O_3$ standard had 37 exceedances in 2021, 37 in 2022, and 24 in 2023.

- The State 1-hour $O_3$ standard had three exceedances in 2021, two in 2022, and one exceedance in 2023.

Federal and State standards have also been established for $PM_{2.5}$ over 24-hour and yearly averaging periods. $PM_{2.5}$, because of the small size of individual particles, can be especially harmful to human health. $PM_{2.5}$ is emitted by common combustion sources such as cars, trucks, buses, and power plants, in addition to ground-disturbing activities. On December 17, 2006, the USEPA strengthened the 24-hour $PM_{2.5}$ NAAQS from 65 micrograms per cubic meter ($\mu g/m^3$) to 35 $\mu g/m^3$, and the Basin was subsequently designated "moderate" nonattainment for the 2006 24-hour $PM_{2.5}$ NAAQS on December 14, 2009. On February 7, 2024, the USEPA strengthened the NAAQS for $PM_{2.5}$ by revising the primary (health-based) annual standard from 12.0 $\mu g/m^3$ to 9.0 $\mu g/m^3$; however, a new attainment designation has not been issued. The Basin is also considered a nonattainment area for the $PM_{2.5}$ standard at the State level. From 2021 to 2023, the Big Bear City-501 West Valley Boulevard station (the closest station to the project site monitoring $PM_{2.5}$) recorded the following exceedances of the federal 24-hour $PM_{2.5}$:

- The federal 24-hour $PM_{2.5}$ standard had no exceedances in 2021, 2022, or 2023.

The Basin is classified as a $PM_{10}$ nonattainment area at the State level and was redesignated from serious nonattainment to attainment of the federal $PM_{10}$ standard on July 26, 2013. Because the Basin was redesignated from nonattainment to attainment, a $PM_{10}$ maintenance plan was adopted in 2013 and is required to be updated every 10 years. From 2021 to 2023, the Redlands-Dearborn station in Redlands (the closest monitoring station to the project site monitoring $PM_{10}$) recorded no exceedances of the federal $PM_{10}$ standard.

- The State 24-hour $PM_{10}$ standard had no exceedances in 2021, 2022, or 2023.

All areas of the Basin have continued to remain below the federal CO standards (35 ppm 1-hour and 9 ppm 8-hour) since 2003. The USEPA redesignated the Basin to attainment of the federal CO standards, effective June 11, 2017. The Basin is also well below the State CO standards (20 ppm 1-hour CO and 9 ppm 8-hour CO).

## Greenhouse Gas Background

GHGs are present in the atmosphere naturally, are released by natural sources, or form from secondary reactions taking place in the atmosphere. Over the last 200 years, humans have caused

[2] California Air Resources Board (CARB). 2023. *iADAM: Air Quality Data Statistics.* Website: www.arb.ca.gov/adam/index.html (accessed November 2024).

substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which is believed to be causing global warming. Although manmade GHGs include naturally occurring GHGs such as carbon dioxide ($CO_2$), methane ($CH_4$), and nitrous oxide ($N_2O$), some gases like hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride ($NF_3$), and sulfur hexafluoride ($SF_6$) are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

These gases vary considerably in terms of global warming potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas in absorbing infrared radiation and the length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to $CO_2$, the most abundant GHG; the definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of $CO_2$ over a specified time period. GHG emissions are typically measured in terms of pounds or tons of $CO_2$ equivalents ($CO_2e$).

### Toxic Air Contaminants

The public's exposure to toxic air contaminants (TACs) is a significant environmental health issue in the State of California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the Federal Act (42 United States Code Section 7412) is a TAC. Under State law, the California Environmental Protection Agency, acting through the California Air Resources Board (CARB), is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act), AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987), and Senate Bill (SB) 25, the Children's Environmental Health Protection Act. The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions.

Air toxics from stationary sources are also regulated in California under AB 2588. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the designated air quality management district or air pollution control district. High-priority facilities are required to perform a Health Risk Assessment and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

To date, the CARB has designated over 200 compounds as TACs.[3] Additionally, the CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines (diesel particulate matter [DPM]).

## REGULATORY SETTING

### Air Quality

This section provides regulatory background information for air quality at the federal, State, and local levels.

#### *Federal Regulations*

The 1970 Federal Clean Air Act (CAA) authorized the establishment of national health-based air quality standards and set deadlines for their attainment. The CAA Amendments of 1990 changed deadlines for attaining national standards as well as the remedial actions required for areas of the nation that exceed the standards. Under the CAA, State and local agencies in areas that exceed the national standards are required to develop State Implementation Plans to demonstrate how they will achieve the national standards by specified dates.

#### *State Regulations*

In 1988, the California Clean Air Act (CCAA) required that all air districts in the State endeavor to achieve and maintain California Ambient Air Quality Standards (CAAQS) for CO, $O_3$, $SO_2$, and $NO_2$ by the earliest practical date. The CCAA provides districts with the authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each nonattainment district is required to adopt a plan to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. A Clean Air Plan shows how a district would reduce emissions to achieve air quality standards. Generally, the State standards for these pollutants are more stringent than the national standards.

CARB is the State's "clean air agency." CARB's goals are to attain and maintain healthy air quality, protect the public from exposure to toxic air contaminants, and oversee compliance with air pollution rules and regulations.

[3] CARB. n.d. CARB Identified Toxic Air Contaminants. Website: www.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants (accessed November 2024).

### *Regional Regulations*

**Southern California Association of Governments.** The Southern California Association of Governments (SCAG) is a regional council consisting of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. In total, the SCAG region encompasses 191 cities and more than 38,000 square miles within Southern California. SCAG is the Metropolitan Planning Organization (MPO) serving the region under federal law and serves as the Joint Powers Authority, the Regional Transportation Planning Agency, and the Council of Governments under State law. As the Regional Transportation Planning Agency, SCAG prepares long-range transportation plans for the Southern California region, including the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and the Regional Comprehensive Plan.

On April 4, 2024, SCAG adopted *Connect SoCal: The 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy* (2024–2050 RTP/SCS).[4] The 2024–2050 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The 2024–2050 RTP/SCS embodies a collective vision for the region's future and is developed 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.

**Mojave Desert Air Quality Management District.** MDAQMD is the agency principally responsible for comprehensive air pollution control in the Basin. To that end, MDAQMD, a regional agency, works directly with SCAG, county transportation commissions, and local governments, and cooperates actively with State and federal government agencies. MDAQMD develops air quality-related rules and regulations, establishes permitting requirements, inspects emissions sources, and provides regulatory enforcement through such measures as educational programs or fines, when necessary.

San Bernardino County, including Yucca Valley, is in non-attainment for $O_3$ and particulate matter. To meet the requirements for basins that are in nonattainment, the MDAQMD has established attainment plans for $O_3$, $PM_{10}$, and $PM_{2.5}$.

> ***Regional Air Quality Management Plan.*** The MDAQMD is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain CAAQS and NAAQS in the Mojave Desert Air Basin. All areas designated as non-attainment under the CCAA are required to prepare plans showing how they will meet the air quality standards. The MDAQMD prepared Air Quality Attainment Plans (AQAP) to address CAA and CCAA requirements by identifying policies and control measures. The SCAG assists by preparing

[4] Southern California Association of Governments (SCAG). 2024. *Connect SoCal: The 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments*. Website: scag.ca.gov/sites/main/files/file-attachments/23-2987-connect-socal-2024-final-complete-040424.pdf (accessed November 2024).

the transportation portion of an AQAP. The applicable AQAP is the 2023 MDAQMD Federal 70 PPB Ozone Attainment Plan (Western Mojave Desert Nonattainment Area).[5]

The MDAQMD Rules & Regulations website[6] lists the current attainment plans for the region. Consistency with the applicable AQAP would be achieved if the project complies with all applicable MDAQMD rules and regulations and is consistent with the growth forecasts in the applicable plan. Consistency with growth forecasts can be established by demonstrating that the project is consistent with the land use plan that was used to generate the growth forecast.

***MDAQMD California Environmental Quality Act (CEQA) And Federal Conformity Guidelines.*** The MDAQMD provides the *California Environmental Quality Act (CEQA) And Federal Conformity Guidelines*[7] to facilitate project compliance with CEQA. MDAQMD also recommends using approved models to calculate emissions from land use projects, such as the California Emissions Estimator Model (CalEEMod). These recommendations were followed in the preparation of this analysis.

The following MDAQMD rules and regulations[8] would apply to the proposed project:

- **Mojave Desert Air Quality Management District Rule 402 Measures:**
    - Nuisance control
- **Mojave Desert Air Quality Management District Rule 403 Measures:**
    - Water active sites periodically for short-term stabilization (locations where grading is to occur will take every reasonable precaution to minimize Fugitive Dust emissions).
    - All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least 2 feet of freeboard in accordance with the requirements of California Vehicle Code Section 23114 (freeboard means vertical space between the top of the load and top of the trailer).
    - Traffic speeds on all unpaved roads shall be reduced to 15 miles per hour or less.

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5 MDAQMD. 2023. Federal 70 PPB Ozone Attainment Plan (Western Mojave Desert Nonattainment Area). January 23. Website: www.mdaqmd.ca.gov/home/showpublisheddocument/9693/638131029372000000 (accessed November 2024).

6 MDAQMD. n.d. Rules & Regulations. Website: www.mdaqmd.ca.gov/rules/overview (accessed November 2024).

7 MDAQMD. 2020. *California Environmental Quality Act (CEQA) And Federal Conformity Guidelines*. February. Website: www.mdaqmd.ca.gov/home/showpublisheddocument/8510/638591628485530000 (accessed November 2024).

8 MDAQMD. n.d. Rules & Regulations. Website: www.mdaqmd.ca.gov/rules/overview (accessed November 2024).

- **Mojave Desert Air Quality Management District Rule 1113 Measures:** MDAQMD Rule 1113 governs the sale, use, and manufacture of architectural coating and limits the volatile organic compound (VOC) content in paints and paint solvents. This rule regulates the VOC content of paints available during construction and operation of the proposed project. Therefore, all paints and solvents used during construction and operation of the proposed project must comply with MDAQMD Rule 1113.

### *Local Regulations*

**Town of Yucca Valley General Plan.** The Town of Yucca Valley (Town) addresses air quality in the Open Space and Conservation Element of its Policy Plan.[9] The Open Space and Conservation Element includes goals and policies that work to improve and maintain air quality for the benefit of the health and vitality of the residents and the local economy. The following policies from the Open Space and Conservation Element are applicable to the proposed project:

- **Policy OSC 10-1:** Participate in the monitoring of all air pollutants of regional concern on a continuous basis.
- **Policy OSC 10-2:** Coordinate air quality planning efforts with other local, regional, and federal agencies.
- **Policy OSC 10-4:** Coordinate land use planning efforts to assure that sensitive receptors are reasonably separated from polluting point sources.
- **Policy OSC 10-5:** Provide consistent and effective code enforcement for construction and grading activities to assure ground disturbances do not contribute to blowing sand and fugitive dust emissions.

## Greenhouse Gas Emissions

This section describes regulations related to global climate change at the federal, State, and local levels.

### *Federal Regulations*

The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled that the USEPA has the authority to regulate $CO_2$ emissions under the CAA.

Although there currently are no adopted federal regulations for the control or reduction of GHG emissions, the USEPA commenced several actions in 2009 to implement a regulatory approach to global climate change, including the 2009 USEPA final rule for mandatory reporting of GHGs from large GHG emission sources in the United States. Additionally, the USEPA Administrator signed an

[9] Town of Yucca Valley. 2014. *General Plan, Open Space and Conservation Element*. Website: www.yucca-valley.org/our-town/departments/community-development/planning/general-plan-update (accessed November 2024).

endangerment finding action in 2009 under the CAA, finding that seven GHGs ($CO_2$, $CH_4$, $N_2O$, HFCs, $NF_3$, PFCs, and $SF_6$) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to global climate change, leading to national GHG emission standards.

### *State Regulations*

CARB is the lead agency for implementing climate change regulations in the State. Since its formation, CARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problems. Key efforts by the State are described below.

**Assembly Bill 32 (2006), California Global Warming Solutions Act.** California's major initiative for reducing GHG emissions is AB 32, passed by the State Legislature on August 31, 2006. This effort set a target to reduce GHG emissions to 1990 levels by 2020. CARB has established the level of GHG emissions in 1990 at 427 million metric tons (MMT) of $CO_2e$. The emissions target of 427 MMT $CO_2e$ requires the reduction of 169 MMT $CO_2e$ from the State's projected business-as-usual 2020 emissions of 596 MMT $CO_2e$. AB 32 requires CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. CARB approved the Scoping Plan on December 11, 2008, which contains the main strategies California will implement to achieve the reduction goals and includes CARB-recommended GHG reductions for each emissions sector of the State's GHG inventory.

The CARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines CARB climate change priorities until 2020 and sets the groundwork to reach long-term goals set forth in Executive Orders (EOs) S-3-05 and B-16-2012. The First Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals as defined in the initial Scoping Plan. It also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan,[10] to reflect the 2030 target that was set by EO B-30-15 and codified by SB 32.

The 2022 Scoping Plan[11] was approved in December 2022 and assesses progress toward the statutory 2030 target while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan Update focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

The 2022 Scoping Plan focuses on building clean energy production and distribution infrastructure for a carbon-neutral future, including transitioning existing energy production and transmission

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10 CARB. 2017. *California's 2017 Climate Change Scoping Plan*. November.

11 CARB. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality*. May 10. Website: www.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf (accessed November 2024).

infrastructure to produce zero-carbon electricity and hydrogen and utilizing biogas resulting from wildfire management or landfill and dairy operations, among other substitutes. The 2022 Scoping Plan states that in almost all sectors, electrification will play an important role. The 2022 Scoping Plan evaluates clean energy and technology options and the transition away from fossil fuels, including adding four times the solar and wind capacity by 2045 and about 1,700 times the amount of current hydrogen supply. As discussed in the 2022 Scoping Plan, EO N-79-20 requires that all new passenger vehicles sold in California be zero-emission by 2035 and that all other fleets transition to zero-emission as fully as possible by 2045, which will reduce the percentage of fossil fuel combustion vehicles.

**Senate Bill 375 (2008).** Signed into law on October 1, 2008, SB 375 supplements GHG reductions from new vehicle technology and fuel standards with reductions from more efficient land use patterns and improved transportation. Under the law, CARB-approved GHG reduction targets in February 2011 for California's 18 federally designated regional planning bodies, known as MPOs. CARB may update the targets every 4 years and must update them every 8 years. MPOs, in turn, must demonstrate how their plans, policies, and transportation investments meet the targets set by CARB through Sustainable Community Strategies (SCSs). The SCSs are included with the Regional Transportation Plan (RTP), a report required by State law. However, if an MPO finds that its SCS will not meet the GHG reduction targets, it may prepare an Alternative Planning Strategy. The Alternative Planning Strategy identifies the impediments to achieving the targets.

**Executive Order B-30-15 (2015).** Governor Jerry Brown signed EO B-30-15 on April 29, 2015, which added the immediate target of:

- GHG emissions reduced to 40 percent below 1990 levels by 2030

All State agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. CARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target and, therefore, is moving forward with the update process. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue reducing emissions.

**Senate Bill 350 (2015) Clean Energy and Pollution Reduction Act.** SB 350, signed by Governor Jerry Brown on October 7, 2015, updates and enhances AB 32 by introducing the following set of objectives in clean energy, clean air, and pollution reduction for 2030:

- Raise California's renewable portfolio standard from 33 percent to 50 percent
- Increase energy efficiency in buildings by 50 percent by the year 2030

The 50 percent renewable energy standard will be implemented by the California Public Utilities Commission for private utilities and by the California Energy Commission for municipal utilities. Each utility must submit a procurement plan showing it will purchase clean energy to displace other nonrenewable resources. The 50 percent increase in energy efficiency in buildings must be achieved through the use of existing energy efficiency retrofit funding and regulatory tools already available to State energy agencies under existing law. The addition made by this legislation requires State

energy agencies to plan for and implement those programs in a manner that achieves the energy efficiency target.

**Senate Bill 32, California Global Warming Solutions Act of 2016, and Assembly Bill 197.** In summer 2016, the Legislature passed, and the Governor signed, SB 32 and AB 197. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emission reduction target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown's April 2015 EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an Intergovernmental Panel on Climate Change analysis of the emission trajectory that would stabilize atmospheric GHG concentrations at 450 ppm $CO_2e$ and reduce the likelihood of catastrophic impacts from climate change.

AB 197, the companion bill to SB 32, provides additional direction to CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 meant to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

**Senate Bill 100.**On September 10, 2018, Governor Brown signed SB 100, which raises California's renewable portfolio standard requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

**Executive Order B-55-18.**EO B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." EO B-55-18 directs CARB to work with relevant State agencies to ensure that future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning that not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions should be offset by equivalent net removals of $CO_2e$ from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

**Assembly Bill 1279.** AB 1279 was signed in September 2022 and codifies the State goals of achieving net carbon neutrality by 2045 and maintaining net negative GHG emissions thereafter. This bill also requires California to reduce statewide GHG emissions by 85 percent compared to 1990 levels by 2045 and directs CARB to work with relevant State agencies to achieve these goals.

**Title 24, Building Efficiencies Standards, and the California Green Building Standards Code.** In November 2008, the California Building Standards Commission established the California Green Building Standards Code (CALGreen) (California Code of Regulations Title 24, Part 11), which sets performance standards for residential and nonresidential development to reduce environmental impacts and to encourage sustainable construction practices. CALGreen addresses energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. CALGreen is updated every 3 years and was most recently updated in 2022 to include new

mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2023.

### *Regional Regulations*

**Southern California Association of Governments.** On April 4, 2024, SCAG adopted *Connect SoCal: The 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy* (2024–2050 RTP/SCS).[12] In general, the SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce vehicle miles traveled from automobiles and light-duty trucks and thereby reduce GHG emissions from these sources. For the SCAG region, CARB has set GHG reduction targets at 8 percent below 2005 per-capita emission levels by 2020 and 19 percent below 2005 per capita emission levels by 2035. The 2024–2050 RTP/SCS lays out a strategy for the region to meet these targets. Overall, the SCS is meant to provide growth strategies that will achieve the regional GHG emission reduction targets. Land use strategies to achieve the region's targets include planning for new growth around high-quality transit areas and livable corridors and creating neighborhood mobility areas to integrate land use and transportation and to plan for more active lifestyles.[13] However, the SCS does not require that local General Plans, Specific Plans, or zoning be consistent with the SCS; instead, it provides incentives to governments and developers for consistency.

### *Local Regulations*

**San Bernardino County Greenhouse Gas Reduction Plan.** As a response to the 2006 AB 32 law, a project partnership led by the San Bernardino Associated Governments, the predecessor agency to the San Bernardino County Transportation Authority (SBCTA), has compiled an inventory of GHG emissions and developed reduction measures that was adopted by the 21 Partnership Cities of San Bernardino County. The regional GHG reduction plan[14] was adopted in 2021 and will serve as the basis for cities in San Bernardino County to develop more detailed community level climate action plans.

The Town of Yucca Valley was a participant in the San Bernardino County Regional Greenhouse Gas Reduction Plan (GHGRP), which identifies the County's vision and goals on reducing GHG emissions in different cities, local government facilities, and communities. In response to these initiatives, an informal project partnership, led by the San Bernardino Council of Governments (SBCOG), compiled a GHG emissions inventory and an evaluation of reduction measures that could be adopted by the 25 partnership cities of San Bernardino County. This partnership has committed to undertake the following actions that will reduce GHG emissions associated with its regional (or countywide) activities:

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12 SCAG. 2024. *Connect SoCal: The 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments*. Website: scag.ca.gov/sites/main/files/file-attachments/23-2987-connect-socal-2024-final-complete-040424.pdf (accessed November 2024).

13 Ibid.

14 San Bernardino Council of Governments (SBCOG). 2021. San Bernardino County Regional Greenhouse Gas Reduction Plan. Website: www.gosbcta.com/plan/regional-greenhouse-gas-reduction-plan/ (accessed November 2024).

- Prepare a baseline (2016) GHG emissions inventory for each of the 25 Partnership Jurisdictions in the County

- Prepare a future year (2020, 2030, and 2045) GHG emissions forecast for each of the jurisdictions

- Develop general GHG reduction measures and jurisdiction-specific measures appropriate for each jurisdiction

- Develop consistent baseline information for jurisdictions to use for their development of community climate action plans (CAPs) meeting jurisdiction-identified reduction goals

Yucca Valley selected a goal to reduce its community GHG emissions to a level that is 40 percent below its 2020 GHG emissions level by 2030. The Town plans to meet and exceed this goal through a combination of State (approximately 80 percent) and local (approximately 20 percent) efforts. The Pavley vehicle standards, the State's low carbon fuel standard, the Renewables Portfolio Standard, and other state measures will reduce GHG emissions in Yucca Valley's on-road, solid waste and building energy sectors by 2030. Additional GHG emissions reductions of 22,158 metric tons (MT) of $CO_2e$ will be achieved primarily through waste diversion and reduction and solar installations.

**Town of Yucca Valley General Plan.** The Town of Yucca Valley addresses climate change in the Open Space and Conservation Element of its General Plan.[15] The Open Space and Conservation Element includes goals and policies that work to improve and maintain air quality for the benefit of the health and vitality of residents and the local economy. The following policies from the Open Space and Conservation Element are applicable to the proposed project:

- **Policy OCS 11-1:** Continue to participate in and support the provisions of the San Bernardino Regional Greenhouse Gas Reduction Plan.

- **Policy OCS 11-2:** Encourage new development to be designed to take advantage of the desert climate through solar orientation, shading patterns, and other green building practices and technologies.

- **Policy OCS 11-3:** Maintain General Plan Land Use, Housing, and Transportation goals and policies to be aligned with, support, and enhance SCAG's Regional Transportation Plan and Sustainable Communities Strategy to achieve reductions in GHG emissions.

[15] Town of Yucca Valley. n.d. *2022 General Plan, Open Space and Conservation Element*. Website: www.yucca-valley.org/our-town/departments/community-development/planning/general-plan-update (accessed November 2024).

## METHODOLOGY

### Construction Emissions

Construction activities can generate a substantial amount of air pollution. Construction activities are considered temporary; however, short-term impacts can contribute to exceedances of air quality standards. Construction activities include site preparation, earthmoving, and general construction. The emissions generated from these common construction activities include fugitive dust from soil disturbance and fuel combustion by mobile heavy-duty, diesel- and gasoline-powered equipment, portable auxiliary equipment, and worker commute trips.

LSA used the CalEEMod version 2022.1 computer program to calculate emissions from on-site construction equipment and emissions from worker and vehicle trips to the site. As mentioned in the Project Location and Description section, construction of the proposed project would consist primarily of remodeling the interior of the existing building and some refurbishment of the parking lot. A patio cover will be added for the coffee shop outdoor dining area. This was modeled in CalEEMod with three construction phases: building construction, paving, and architectural coating beginning in late 2024 and lasting approximately 5 months. This analysis also assumes that the proposed project would comply with MDAQMD Rule 403 measures.[16] All other construction details are not yet known; therefore, default assumptions (e.g., construction equipment, construction worker and truck trips, and fleet activities) from CalEEMod were used.

### Operational Emissions

This air quality analysis includes estimating the change to regional emissions converting from the existing operations to the proposed project operations. In addition, localized air quality impacts (i.e., higher CO concentrations or "hot-spots") near intersections or roadway segments in the project vicinity from project-generated vehicle trips have also been assessed.

Consistent with MDAQMD guidance for estimating emissions associated with land use development projects, the CalEEMod computer program was used to calculate the long-term operational emissions associated with the project. As the existing operational emissions have not been quantified, these emissions were estimated using CalEEMod as well. As previously discussed in the Project Location and Description section, the proposed project would replace an existing Bank of America with drive-through with a church and coffee shop with a drive-through. The existing operations were analyzed using the land codes for *Bank (with Drive-Through)* and *Parking Lot*. The proposed project operations were analyzed using the land use codes *User Defined Recreational* and *Parking Lot.* The *User Defined Recreational* land use code was used to represent the church and coffee shop combination because this use does not match any built-in land use code in CalEEMod. Trip generation rates from the project's trip generation analysis were used in CalEEMod for both the existing operation and the proposed project, which identifies that the existing operation generates approximately 836 average daily trips, and the proposed project would generate approximately 581

[16] MDAQMD. n.d. Rules & Regulations. Website: www.mdaqmd.ca.gov/rules/overview (accessed November 2024).

average daily trips.[17] Thus, the proposed project operations would have 255 fewer daily trips than the existing operations. Other than this traffic data, when project-specific data were not available, default assumptions from CalEEMod were used to estimate the existing and proposed project emissions. As the *User Defined Recreational* land use code does not include any default parameters, and as the proposed project would be remodeling an existing bank, the CalEEMod parameters for energy use, water use, and waste production were set to the existing values.

### Greenhouse Gas Emissions

GHG emissions associated with the project would occur over the short term from construction activities, consisting primarily of emissions from equipment exhaust. There are also GHG emissions associated with vehicular trips from existing operations and would be long-term GHG emissions associated with project-related vehicular trips. Recognizing that the field of global climate change analysis is rapidly evolving, the approaches advocated most recently indicate that, for determining a project's contribution to GHG emissions, lead agencies should calculate, or estimate, emissions from vehicular traffic, energy consumption, water conveyance and treatment, waste generation, construction activities, and any other significant source of emissions within the project area. The CalEEMod results were used to quantify GHG emissions generated by the existing and proposed project emissions.

## THRESHOLDS OF SIGNIFICANCE

### Air Quality

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse air quality impact if project-generated pollutant emissions would do any of the following:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project is in nonattainment under applicable federal or State ambient air quality standards;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) affecting a substantial number of people.

Certain air districts (e.g., MDAQMD) have created guidelines and requirements to conduct air quality analysis. The MDAQMD's current guidelines, the *California Environmental Quality Act (CEQA) And*

[17] LSA Associates, Inc. (LSA). 2024. *Lighthouse Church and Coffee Project Trip Generation Comparison Analysis Memorandum*. October 21.

*Federal Conformity Guidelines,*[18] were followed in this assessment of air quality impacts for the proposed project.

### *Regional Emissions Thresholds*

MDAQMD has established daily emission thresholds for construction and operation of proposed projects. The emission thresholds were established based on the attainment status of the Mojave Desert Air Basin with regard to air quality standards for specific criteria pollutants. Because the air quality standards were set at a level that protects public health with an adequate margin of safety, these emission thresholds are regarded as conservative and would overstate an individual project's contribution to health risks. Table C lists the CEQA significance thresholds established by the MDAQMD.

**Table C: MDAQMD Criteria Pollutant Significance Thresholds**

| Air Pollutant | Annual (tons/year) | Daily (lbs/day) |
|---|---|---|
| Volatile Organic Compounds (VOCs) | 25 | 137 |
| Oxides of Nitrogen ($NO_X$) | 25 | 137 |
| Carbon Monoxide (CO) | 100 | 548 |
| Oxides of Sulfur ($SO_X$) | 25 | 137 |
| Particulate Matter ($PM_{10}$) | 15 | 82 |
| Fine Particulate Matter ($PM_{2.5}$) | 12 | 65 |

Source: *California Environmental Quality Act (CEQA) And Federal Conformity Guidelines* (MDAQMD 2020).
lbs/day = pounds per day MDAQMD = Mojave Desert Air Quality Management District

Note that the emission thresholds are given as a daily value and an annual value, so that multi-phased project (such as project with a construction phase and a separate operational phase) with phases shorter than one year can be compared to the daily value.

Projects in the MDAQMD with construction- or operations-related emissions that exceed any of their respective emission thresholds would be considered significant under MDAQMD guidelines. These thresholds, which the MDAQMD developed, and which apply throughout the MDAQMD, apply as both project and cumulative thresholds. If a project exceeds these standards, it is considered to have a project-specific and cumulative impact.

### *Health Risk Assessment Thresholds of Significance*

Both the State and federal governments have established health-based ambient air quality standards for seven air pollutants. For other air pollutants without defined significance standards, the definition of substantial pollutant concentrations varies. For TACs, "substantial" is taken to mean that the individual health risk exceeds a threshold considered to be a prudent risk management level.

[18] MDAQMD. 2020. *California Environmental Quality Act (CEQA) And Federal Conformity Guidelines.* February. Website: www.mdaqmd.ca.gov/home/showpublisheddocument/8510/637406182097070000 (accessed November 2024).

The following limits for maximum individual cancer risk (MICR) and noncancer acute and chronic Hazard Index (HI) from project emissions of TACs are considered appropriate for use in determining the health risk for projects in the Basin:

- **MICR:** MICR is the estimated probability of a maximum exposed individual (MEI) contracting cancer as a result of exposure to TACs over a period of 30 years for adults and 9 years for children in residential locations and over a period of 25 years for workers. The MICR calculations include multipathway consideration, when applicable.

  The cumulative increase in MICR that is the sum of the calculated MICR values for all TACs would be considered significant if it would result in an increased MICR greater than 10 in 1 million ($1 \times 10^{-5}$) at any receptor location.

- **Chronic HI:** Chronic HI is the ratio of the estimated long-term level of exposure to a TAC for a potential MEI to its chronic reference exposure level. The chronic HI calculations include multipathway consideration, when applicable.

  The project would be considered significant if the cumulative increase in total chronic HI for any target organ system would exceed 1.0 at any receptor location.

- **Acute HI:** Acute HI is the ratio of the estimated maximum 1-hour concentration of a TAC for a potential MEI to its acute reference exposure level.

  The project would be considered significant if the cumulative increase in total acute HI for any target organ system would exceed 1.0 at any receptor location.

### *Local Microscale Concentration Standards*

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the project vicinity are above or below State and federal CO standards. Because ambient CO levels are below the standards throughout the MDAQMD, a project would be considered to have a significant CO impact if project emissions would result in an exceedance of one or more of the 1-hour or 8-hour standards. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20 ppm
- California State 8-hour CO standard of 9 ppm

## Greenhouse Gas Thresholds

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse greenhouse gas emissions impact if the project would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Section 15064.4 of the *State CEQA Guidelines* states that: "A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a project." In performing that analysis, the lead agency has discretion to determine whether to use a model or methodology to quantify GHG emissions or to rely on a qualitative analysis or performance-based standards. In making a determination as to the significance of potential impacts, the lead agency then considers the extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting, whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project, and the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

Currently, there is no statewide GHG emissions threshold that has been used to determine the potential GHG emissions impacts of a project. The MDAQMD recommends the GHG emissions thresholds shown in Table D be utilized to evaluate a proposed project's potential GHG emissions impact.

### Table D: MDAQMD Greenhouse Gas Significance Threshold

| Annual (tons/year) | Daily (lbs/day) |
|---|---|
| 100,000 (97,718 metric tons) | 548,000 |

Source: *California Environmental Quality Act (CEQA) And Federal Conformity Guidelines* (MDAQMD 2020).
Note: Project with phases shorter than one year, including construction activities, can be compared to the daily value.
lbs/day = pounds per day MDAQMD = Mojave Desert Air Quality Management District

For the purpose of this analysis, the proposed project will be compared to the MDAQMD threshold of 100,000 tons (97,718 metric tons) per year. The project is also evaluated for compliance with the San Bernardino County GHGRP, the CARB 2022 Scoping Plan, and the 2024–2050 RTP/SCS.

## IMPACT ANALYSIS

This section identifies potential air quality and GHG impacts associated with implementation of the proposed project.

### Air Quality Impacts

Air pollutant emissions associated with the project would occur over the short term from construction activities and over the long term from project-related vehicular trips and energy consumption.

#### *Consistency with Applicable Air Quality Plans*

A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the air quality plans. A consistency determination fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are addressed. Only new or amended General Plan elements, Specific Plans, and significantly unique

projects need to undergo a consistency review due to the air quality plan strategy being based on projections from local General Plans.

The proposed project would include remodeling an existing building to house the 10,945 sf Lighthouse Church and Coffee Shop. The proposed project is not considered a project of statewide, regional, or area-wide significance (e.g., large-scale projects such as airports, electrical generating facilities, petroleum and gas refineries, residential development of more than 500 dwelling units, or shopping centers or business establishments employing more than 1,000 persons or encompassing more than 500,000 sf of floor space) as defined in the California Code of Regulations (Title 14, Division 6, Chapter 3, Article 13, Section 15206(b)). Because the proposed project would not be defined as a regionally significant project under CEQA, it does not meet the SCAG Intergovernmental Review criteria.

The Town's General Plan is consistent with the SCAG Regional Comprehensive Plan Guidelines and the MDAQMD air quality attainment plans. Pursuant to the methodology provided in the MDAQMD *California Environmental Quality Act (CEQA) And Federal Conformity Guidelines*,[19] consistency with the MDAQMD air quality attainment plans is affirmed when a project (1) would not increase the frequency or severity of an air quality standard violation or cause a new violation, and (2) is consistent with the growth assumptions in the plans. Consistency review is presented as follows:

1. The project would result in short-term construction and long-term operational pollutant emissions that are all less than the CEQA significance emissions thresholds established by MDAQMD, as demonstrated below; therefore, the project would not result in an increase in the frequency or severity of an air quality standards violation or cause a new air quality standards violation.

2. The *California Environmental Quality Act (CEQA) And Federal Conformity Guidelines* indicates that consistency with air quality attainment plan growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities; therefore, the proposed project is not defined as significant. In addition, the proposed project would not require a change to the General Plan land use designation or the current zoning and would be consistent with the Town's General Plan and Zoning Ordinance.

   According to SCAG's 2024–2050 RTP/SCS,[20] the Town of Yucca Valley households and jobs are forecast to increase by approximately 2,000 households and 3,100 jobs between 2019 and 2050. Based on information provided by the Project Applicant, the proposed project would have approximately six employees. The number of new employees generated by the proposed

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19 MDAQMD. 2020. *California Environmental Quality Act (CEQA) And Federal Conformity Guidelines.* February. Website: www.mdaqmd.ca.gov/home/showpublisheddocument/8510/637406182097070000 (accessed November 2024).

20 SCAG. 2024. *Connect SoCal: The 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments*. Website: scag.ca.gov/sites/main/files/file-attachments/23-2987-connect-socal-2024-final-complete-040424.pdf (accessed November 2024).

project would fall within the 3,100 projected jobs for the Town of Yucca Valley. Accordingly, the proposed project's labor demand would not be expected to substantially increase population, households, or employment in Upland since the number of employees associated with the proposed project would be a small fraction (approximately 0.2 percent) of the projected job growth for the Town. Therefore, implementation of the proposed project would not interfere with SCAG's ability to implement the regional strategies outlined in the 2024–2050 RTP/SCS.

Based on the consistency analysis presented above, the proposed project would be consistent with the regional air quality attainment plans.

### *Criteria Pollutant Analysis*

The Basin is currently designated nonattainment for $O_3$, $PM_{10}$, and $PM_{2.5}$. The Basin's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of an ambient air quality standard. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, MDAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is not necessary. The following analysis assesses the potential project-level air quality impacts associated with construction and operation of the proposed project.

**Construction Emissions.** During construction, short-term degradation of air quality may occur due to the release of particulate matter emissions (i.e., fugitive dust) generated by building construction, paving, and other activities. Emissions from construction equipment are also anticipated and would include CO, nitrogen oxides ($NO_X$), VOCs, directly emitted $PM_{2.5}$ or $PM_{10}$, and TACs (e.g., DPM).

Project construction activities would include building remodeling, architectural coating, and paving activities. Construction-related effects on air quality from the proposed project would be greatest during the paving phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. $PM_{10}$ emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. $PM_{10}$ emissions would depend on soil moisture, silt content of soil, wind speed, and amount of operating equipment. Larger dust particles would settle near the source, whereas fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. MDAQMD has established Rule 403: Fugitive Dust,[21] which would require the applicant to implement measures that would reduce the amount of particulate matter generated during the construction period. Rule 403 measures that were incorporated in this analysis include:

- Water active sites at least twice daily (locations where earth disturbance is to occur shall be thoroughly watered prior to earthmoving).
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 2 feet (0.6 meter) of freeboard (vertical space between the top of the load and the top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114.
- Reduce traffic speeds on all unpaved roads to 15 miles per hour or less.

In addition to dust-related $PM_{10}$ emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, sulfur oxides ($SO_X$), $NO_X$, VOCs, and some soot particulate ($PM_{2.5}$ and $PM_{10}$) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the project using CalEEMod and are summarized in Table E (CalEEMod output sheets are provided in Attachment B).

The results shown in Table E indicate the proposed project would not exceed the significance criteria for daily VOCs, $NO_X$, CO, $SO_X$, $PM_{10}$, or $PM_{2.5}$ emissions. Therefore, construction of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable NAAQS or CAAQS.

## Table E: Short-Term Regional Construction Emissions

| Construction Phase | Maximum Daily Regional Pollutant Emissions (lbs/day) | | | | | |
|---|---|---|---|---|---|---|
| | VOCs | $NO_X$ | CO | $SO_X$ | Total $PM_{10}$ | Total $PM_{2.5}$ |
| Building Remodeling | 1 | 9 | 10 | <1 | <1 | <1 |
| Architectural Coating | 2 | <1 | 2 | <1 | <1 | <1 |
| Paving | <1 | 5 | 7 | <1 | <1 | <1 |
| **Peak Daily Emissions** | **4** | **15** | **19** | **<1** | **<1** | **<1** |
| **MDAQMD Threshold** | **137** | **137** | **548** | **137** | **82** | **65** |
| **Significant?** | **No** | **No** | **No** | **No** | **No** | **No** |

Source: Compiled by LSA (November 2024).
Note: Maximum emissions of VOCs occurred during the overlapping building remodeling, paving, and architectural coating phases. Values may not appear to add up correctly due to rounding.
CO = carbon monoxide
lbs/day = pounds per day
MDAQMD = Mojave Desert Air Quality Management District
$NO_X$ = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
$PM_{10}$ = particulate matter less than 10 microns in size
$SO_X$ = sulfur oxides
VOCs = volatile organic compounds

[21] MDAQMD. n.d. Rules & Regulations. Website: www.mdaqmd.ca.gov/rules/overview (accessed November 2024).

**Operational Air Quality Impacts.** Long-term air pollutant emissions associated with operation of the proposed project include emissions from area, energy, and mobile sources. Area-source emissions include architectural coatings, consumer products, and landscaping. Energy-source emissions result from utility plants generating electricity used by the project and from activities in buildings that use natural gas. Mobile-source emissions are from vehicle trips associated with operation of the project.

Mobile source emissions include VOC and $NO_X$ emissions that contribute to the formation of $O_3$. Additionally, $PM_{10}$ emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways.

Long-term operational emissions associated with both the existing operations and the proposed project were calculated using CalEEMod. Table F provides the estimated existing emission estimates and the proposed project's estimated operational emissions.

The results shown in Table F indicate the proposed project would not exceed the significance criteria for daily VOC, $NO_X$, CO, $SO_X$, $PM_{10}$, or $PM_{2.5}$ emissions, in fact the proposed project's emissions would be less than the existing operations. Therefore, operation of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under applicable NAAQS or CAAQS.

## Table F: Existing and Proposed Project Operational Emissions

| Emission Type | Pollutant Emissions (lbs/day) | | | | | |
|---|---|---|---|---|---|---|
| | VOCs | $NO_X$ | CO | $SO_X$ | $PM_{10}$ | $PM_{2.5}$ |
| **Existing Operational Emissions** | | | | | | |
| Mobile Sources | 5 | 6 | 58 | <1 | 11 | 3 |
| Area Sources | <1 | <1 | <1 | <1 | <1 | <1 |
| Energy Sources | <1 | <1 | <1 | <1 | <1 | <1 |
| **Total Existing Emissions** | **6** | **7** | **59** | <1 | **12** | **4** |
| **Proposed Project Operational Emissions** | | | | | | |
| Mobile Sources | 3 | 4 | 38 | <1 | 7 | 2 |
| Area Sources | <1 | <1 | <1 | <1 | <1 | <1 |
| Energy Sources | <1 | <1 | <1 | <1 | <1 | <1 |
| **Total Project Emissions** | **4** | **5** | **39** | **<1** | **8** | **3** |
| **Net Emissions Change** | **-2** | **-2** | **-20** | **0** | **-4** | **-1** |
| MDAQMD Threshold | 137 | 137 | 548 | 137 | 82 | 65 |
| **Exceeds Threshold?** | **No** | **No** | **No** | **No** | **No** | **No** |

Source: Compiled by LSA (November 2024).
Note: Some values may not appear to add correctly due to rounding.
CO = carbon monoxide
lbs/day = pounds per day
MDAQMD = Mojave Desert Air Quality Management District
$NO_X$ = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
$PM_{10}$ = particulate matter less than 10 microns in size
$SO_X$ = sulfur oxides
VOCs = volatile organic compounds

**Long-Term Microscale (CO Hot-Spot) Analysis.** Vehicular trips associated with the proposed project would contribute to congestion at intersections and along roadway segments in the vicinity of the proposed project site. Localized air quality impacts would occur when emissions from vehicular traffic increase as a result of the proposed project. The primary mobile-source pollutant of local

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

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

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate project vicinity are not available. Ambient CO levels monitored at the FS-590 Racquet Club Avenue, Palm Springs station (the closest station to the project site monitoring CO), showed a highest recorded 1-hour concentration of 1.1 ppm (the State standard is 20 ppm) and a highest 8-hour concentration of 0.8 ppm (the State standard is 9 ppm) from 2021 to 2023 (see Attachment C for full monitoring data). The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis. Reduced speeds and vehicular congestion at intersections result in increased CO emissions.

The proposed project is expected to generate 581 peak daily trips, with 78 net new trips occurring in the a.m. peak hour and 51 net new trips occurring in the p.m. peak hour.[22] However, compared to the existing operations the proposed project would have 8 fewer a.m. peak hour trips and 117 fewer trips in the p.m. peak hour. The coffee shop drive-through would replace one of the bank drive-through lanes, with the other drive-through lane continuing to operate as a bank ATM. It is not expected that the amount of time vehicles spend idling in the drive-through lanes will change substantially with implantation of the proposed project. As described above, the nearest sensitive receptors are the existing residential uses northwest of the site at the corner of Dumosa Avenue and 29 Palms Highway, approximately 240 feet from the project boundary and approximately 430 feet from the drive-through lanes. There are additional residences to the south across Yucca Trail that are more than 620 feet from the drive-through lanes. Therefore, given the extremely low level of CO concentrations in the project area and the lack of existing or predicted traffic impacts at any intersections, and the large distance from the drive-through lanes to any sensitive receptors, project-related vehicles are not expected to result in CO concentrations exceeding the State or federal CO standards. No CO hot spots would occur, and the project would not result in any project-related impacts on CO concentrations.

### *Health Risk on Nearby Sensitive Receptors*

Sensitive receptors are defined as people who have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include schools, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential dwelling units. The nearest sensitive

[22] LSA. 2024. *Lighthouse Church and Coffee Project Trip Generation Comparison Analysis Memorandum*. October 21.

receptors are the existing residential uses northwest of the site at the corner of Dumosa Avenue and 29 Palms Highway, approximately 240 feet from the project boundary.

The MDAQMD does not currently have a methodology that would correlate the expected air quality emissions of the project to the likely health consequences of those emissions. As detailed in Tables E and F, the emission levels indicate that the project would not exceed MDAQMD thresholds during project construction or operation. Due to the small size of the proposed project in relation to the overall Basin, the level of emissions is not sufficiently high enough to use a regional modeling program to correlate health effects on a Basin-wide level. On a regional scale, the quantity of emissions from the project is incrementally minor. As shown in Table E and F, construction and operational emissions would all be well below MDAQMD thresholds of significance, in fact long-term operational emissions would be reduced from the existing emissions. Construction emissions would be minor, as there would not be any large diesel equipment, such as graders, excavators, or dozers, used. Project operations would not include any heavy-duty truck or other substantial sources of DPM or other TACs. Because the MDAQMD has not identified any other methods to quantify health impacts from small projects, and due to the size of the project, it is speculative to assign any specific health effects to small project-related emissions. However, based on this emissions analysis as shown in Table F, the proposed project would result in minimal emissions and would not expose sensitive receptors to substantial pollutant concentrations.

The MDAQMD *California Environmental Quality Act (CEQA) And Federal Conformity Guidelines*[23] states that the following project types proposed for sites within the specified distance to an existing or planned (zoned) sensitive receptor land use must be evaluated using the Health Risk Assessment Thresholds of Significance described in the Thresholds Section:

- Any industrial project within 1,000 feet;
- A distribution center (40 or more trucks per day) within 1,000 feet;
- A major transportation project (50,000 or more vehicles per day) within 1,000 feet;
- A dry cleaner using perchloroethylene within 500 feet;
- A gasoline dispensing facility within 300 feet.

The proposed Church and Coffee Shop project would not include any of these land use types, following MDAQMD guidance, a project specific health risk assessment is not required.

### *Odors*

Heavy-duty equipment on the project site during construction would emit odors, primarily from equipment exhaust. However, the construction activity would cease after construction is completed. No other sources of objectionable odors have been identified for the proposed project.

MDAQMD Rule 402 regarding nuisances states, “A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment,

[23] Mojave Desert Air Quality Management District (MDAQMD). 2020. *California Environmental Quality Act (CEQA) And Federal Conformity Guidelines*. February. Website: www.mdaqmd.ca.gov/home/showpublisheddocument/8510/638591628485540147 (accessed November 2024).

nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."[24] The proposed uses are not anticipated to emit any objectionable odors. Therefore, the proposed project would not result in other emissions (e.g., those leading to odors) adversely affecting a substantial number of people.

## Greenhouse Gas Emission Impacts

The following sections describe the proposed project's construction- and operation-related GHG impacts and consistency with applicable GHG reduction plans.

### *Generation of Greenhouse Gas Emissions*

This section describes the proposed project's construction- and operation-related GHG emissions and contribution to global climate change.

**Construction Greenhouse Gas Emissions.** Construction activities associated with the proposed project would produce combustion emissions from various sources. Construction would emit GHGs through the operation of construction equipment and from worker and builder supply vendor vehicles for the duration of the approximately 5-month construction period. The combustion of fossil-based fuels creates GHGs such as $CO_2$, $CH_4$, and $N_2O$. Furthermore, the fueling of heavy equipment emits $CH_4$. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

As indicated above, lead agencies are required to quantify and disclose GHG emissions that would occur during construction. Based on the CalEEMod analysis, it is estimated that the project would generate 71 MT $CO_2e$ during the 5 months of construction of the project. This is less than the MDAQMD threshold of 97,718 MT $CO_2e$ per year.

**Operational Greenhouse Gas Emissions.** Long-term operation of the proposed project would generate GHG emissions from area, mobile, waste, and water sources, as well as indirect emissions from sources associated with energy consumption. Mobile-source GHG emissions would include project-generated vehicle trips associated with trips to the proposed project. Area-source emissions would be associated with activities such as landscaping and maintenance on the project site and other sources. Waste-source emissions generated by the proposed project include energy generated by landfilling and other methods of disposal related to transporting and managing project-generated waste. In addition, water-source emissions associated with the proposed project are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment. Lastly, air conditioning and refrigeration equipment use common refrigerant GHGs, some of which are HFCs.

GHG emissions were estimated using CalEEMod. Table G provides the estimated existing GHG emission estimates and the proposed project's estimated GHG emissions. Motor vehicle emissions are the largest source of GHG emissions for the project, at approximately 95.9 percent of the project

[24] MDAQMD. n.d. Rules & Regulations. Website: www.mdaqmd.ca.gov/rules/overview (accessed November 2024).

total. Energy sources are the next largest category, at approximately 3.7 percent. Waste sources are about 0.2 percent of the total emissions. Area, water, waste, and refrigerant sources make up less than 1 percent of the total emissions, respectively. As shown in Table G, the proposed project's GHG emissions would be less that the MDAQMD threshold of 97,718 MT $CO_2e$ per year.

### Table G: Existing and Proposed Project Greenhouse Gas Emissions

| Emission Type | Operational Emissions (MT/yr) | | | | | Percentage of Total |
|---|---|---|---|---|---|---|
| | $CO_2$ | $CH_4$ | $N_2O$ | Refrigerant | $CO_2e$ | |
| Mobile Source | 1,367 | <1 | <1 | 2 | 1,389 | 95.9% |
| Area Source | <1 | <1 | <1 | — | <1 | 0.1% |
| Energy Source | 53 | <1 | <1 | — | 54 | 3.7% |
| Water Source | 1 | <1 | <1 | — | 2 | 0.1% |
| Waste Source | 1 | <1 | <1 | — | 3 | 0.2% |
| Refrigerant Source | — | — | — | <1 | <1 | 0% |
| **Total Proposed Project Emissions** | | | | | **1,449** | |
| **Total Existing Emissions** | | | | | 2,115 | |
| Net Emissions Change | | | | | -666 | |
| **MDAQMD Threshold** | | | | | **97,718** | |
| **Exceedance?** | | | | | **No** | |

Source: Compiled by LSA (November 2024).
Figures may not appear to add correctly due to rounding.
$CH_4$ = methane
$CO_2$ = carbon dioxide
$CO_2e$ = carbon dioxide equivalent
GHG = greenhouse gas
MDAQMD = Mojave Desert Air Quality Management District
MT/yr = metric tons per year
$N_2O$ = nitrous oxide

As discussed above, a project would have less than significant GHG emissions if it would result in operational-related GHG emissions of less than 100,000 tons per year (or 97,718 MT $CO_2e$ per year). Based on the analysis results, the proposed project would result in approximately 1,449 MT $CO_2e$ per year, which is 666 MT $CO_2e$ per year less than existing operations. This level of GHG emissions would be less than significant. Therefore, operation of the proposed project would not generate significant GHG emissions that would have a significant effect on the environment.

#### *Consistency with Greenhouse Gas Reduction Plans*

The following discussion evaluates the proposed project according to the goals of the San Bernardino County GHGRP, CARB's 2022 Scoping Plan and SCAG's 2024–2050 RTP/SCS.

**San Bernardino County Greenhouse Gas Reduction Plan.** Yucca Valley selected a goal to reduce its community GHG emissions to a level that is 40 percent below its 2020 GHG emissions level by 2030. The Town will meet and exceed this goal through a combination of State (approximately 80 percent) and local (approximately 20 percent) efforts. The following emission reduction policies would apply to the project:

- **Energy-1. Building Energy Efficiency.** The project would renovate an existing building with a more efficient HVAC system, better insulating windows, and enhanced roof insulation, all intended to maximize building energy-efficiency.

- **Energy-2. Lighting Efficiency.** The project would replace existing inefficient lighting with LED lighting throughout the building.

- **Waste-2. Waste Diversion and Reduction.** The project would ensure that any construction, demolition, addition, alteration, repair, remodel, or landscaping waste would be properly recycled to divert all reusable, salvageable, and recyclable debris from landfill disposal.

As outlined above, the proposed project would comply with applicable policies included in the San Bernadino County GHGRP. As shown in Table G the proposed project would reduce the existing GHG emissions on the project site by 666 MT $CO_2$e every year. Thus, the proposed project is consistent with the San Bernardino County GHGRP GHG reduction goals.

**2022 Scoping Plan.** EO B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reduction target of at least 40 percent below 1990 levels by 2030 contained in EO B-30-15. CARB released the 2017 Scoping Plan to reflect the 2030 target set by EO B-30-15 and codified by SB 32.[25] SB 32 builds on AB 32 and keeps California on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels. AB 197, the companion bill to SB 32, provides additional direction to CARB that is related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 that is intended to provide easier public access to air emission data collected by CARB was posted in December 2016. AB 1279 codifies the State goals of achieving net carbon neutrality by 2045 and maintaining net negative GHG emissions thereafter.

In addition, the 2022 Scoping Plan[26] assesses progress toward the statutory 2030 target while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

The 2022 Scoping Plan focuses on building clean energy production and distribution infrastructure for a carbon-neutral future, including transitioning existing energy production and transmission infrastructure to produce zero-carbon electricity and hydrogen, and utilizing biogas resulting from wildfire management or landfill and dairy operations, among other substitutes. The 2022 Scoping Plan states that in almost all sectors, electrification will play an important role. The 2022 Scoping

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25 CARB. 2017. *California's 2017 Climate Change Scoping Plan*. November. Website: www.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2017-scoping-plan-documents. (accessed November 2024).

26 CARB. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* December. Website: www.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf (accessed November 2024).

Plan evaluates clean energy and technology options and the transition away from fossil fuels, including adding four times the solar and wind capacity by 2045 and about 1,700 times the amount of current hydrogen supply. As discussed in the 2022 Scoping Plan, EO N-79-20 requires that all new passenger vehicles sold in California be zero-emission by 2035 and that all other fleets transition to zero-emission as fully as possible by 2045, which will reduce the percentage of fossil fuel combustion vehicles.

- **Energy-efficient measures** are intended to maximize energy-efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. As mentioned above, the proposed project would remodel an existing building and increase the energy efficiency by upgrading existing windows to high-efficiency dual-pane windows. The proposed project would comply with the latest Title 24 standards regarding energy conservation and green building standards by replacing all lighting with light-emitting diodes (LEDs); installing new insulated heating, ventilation, and air conditioning ductwork; and adding new insulation in the roof. Therefore, the proposed project would comply with applicable energy measures.

- **Water conservation and efficiency measures** are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, the project would be required to comply with the latest Title 24 standards, which include a variety of different measures, including reduction of wastewater and water use. In addition, the proposed project would be required to comply with the California Model Water Efficient Landscape Ordinance. Therefore, the proposed project would not conflict with any of the water conservation and efficiency measures.

- **Transportation and motor vehicle measures** are intended to develop regional GHG emission reduction targets for passenger vehicles. Specific regional emission targets for transportation emissions would not directly apply to the proposed project. However, vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all vehicles by 2020. Therefore, the proposed project would not conflict with the identified transportation and motor vehicle measures.

The proposed project would comply with existing State regulations adopted to achieve the overall GHG emission reduction goals identified in the 2022 Scoping Plan, EO B-30-15, SB 32, AB 197, and AB 1279.

**SCAG's Regional Transportation Plan/Sustainable Communities Strategy.** SCAG's 2024–2050 RTP/SCS[27] identifies land use strategies that focus on new housing and job growth in areas served by high-quality transit and other opportunity areas would be consistent with a land use development pattern that supports and complements the proposed transportation network. The core vision in the 2024–2050 RTP/SCS is to better manage the existing transportation system through design management strategies, integrate land use decisions and technological advancements, create complete streets that are safe for all roadway users, preserve the transportation system, and expand transit and foster development in transit-oriented communities. The 2024–2050 RTP/SCS contains transportation projects to help more efficiently distribute population, housing, and employment growth, as well as providing a forecast development pattern that is generally consistent with regional-level General Plan data. The forecast development pattern, when integrated with the financially constrained transportation investments identified in the 2024–2050 RTP/SCS, would reach the regional target of reducing GHG emissions from automobiles and light-duty trucks by 8 percent by 2020 and 19 percent by 2035 (compared to 2005 levels per capita emission levels). The 2024–2050 RTP/SCS does not require that local General Plans, Specific Plans, or zoning be consistent with the 2024–2050 RTP/SCS, but it provides incentives for consistency for governments and developers.

Implementing SCAG's RTP/SCS will greatly reduce the regional GHG emissions from transportation, helping to achieve statewide emissions reduction targets. As demonstrated in the Consistency with Applicable Air Quality Plans section, above, the proposed project does not meet the criteria identified in *State CEQA Guidelines* Section 15205.b.2 (Projects of Statewide, Regional, or Areawide Significance) for projects of statewide, regional, or area-wide significance. In addition, the proposed project would not require a change to the General Plan land use designation or the current zoning, and would be consistent with the Town's General Plan and Zoning Ordinance. As such, the proposed project would not interfere with SCAG's ability to achieve the region's GHG reduction target of 19 percent below 2005 per capita emissions levels by 2035. Furthermore, the proposed project is not regionally significant per *State CEQA Guidelines* Section 15206 and, as such, it would not conflict with the SCAG RTP/SCS targets because those targets were established and are applicable on a regional level.

The proposed project would renovate an existing building to a 10,773 sf church and a 1,486 sf coffee shop with a drive-through window, along with associated improvements. The project is consistent with existing local and regional planning assumptions for the project site. Therefore, it is anticipated that implementation of the proposed project would not interfere with SCAG's ability to implement the regional strategies outlined in the RTP/SCS.

## CONCLUSION

Based on the analysis presented above, construction and operation of the proposed project would not result in the generation of criteria air pollutants that would exceed MDAQMD thresholds of significance. Compliance with MDAQMD Rule 403: Fugitive Dust would further reduce construction

[27] SCAG. 2024. *Connect SoCal: The 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments*. Website: scag.ca.gov/sites/main/files/file-attachments/23-2987-connect-socal-2024-final-complete-040424.pdf (accessed November 2024).

dust impacts. The proposed project is not expected to produce significant emissions that would affect nearby sensitive receptors. The project would also be consistent with the MDAQMD air quality attainment plans. The project would also not result in objectionable odors affecting a substantial number of people. GHG emissions released during construction and operation of the project are estimated to be minimal and would not be cumulatively considerable. The proposed project would generally be consistent with both the 2022 Scoping Plan and the SCAG RTP/SCS.

Attachments: A: Figures
B: CalEEMod Output Files
C: Pollutant Monitoring Data

# ATTACHMENT A

# FIGURES


LSA

LEGEND

Project Location

FIGURE 1

N

0 290 580

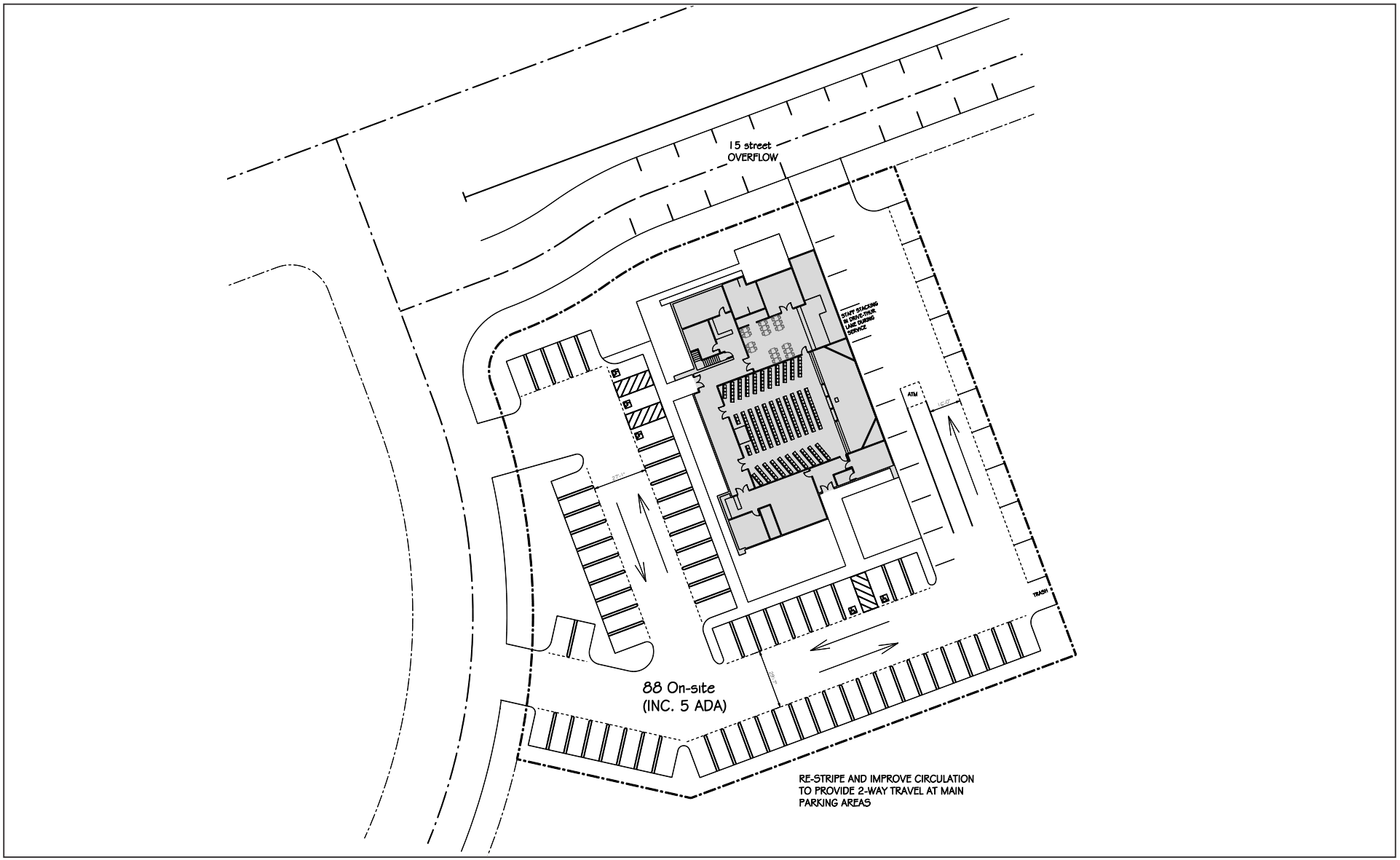
FEET

SOURCE: ESRI Streets, 2021; Google Earth, 2023.

I:\2024\20241938\GIS\Pro\Yucca Valley Lighthouse\Yucca Valley Lighthouse.aprx (9/13/2024)

*Lighthouse Church and Coffee Project*

Regional and Project Location




LSA

FIGURE 2

N

0 40 80

FEET

SOURCE: Design Concepts

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*Lighthouse Church and Coffee Project*

Site Plan

# ATTACHMENT B

# CALEEMOD OUTPUT FILES

# Lighthouse Church & Coffee (20241938) Existing Custom Report

## Table of Contents

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Lighthouse Church & Coffee (20241938) Existing |
| Operational Year | 2024 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.60 |
| Precipitation (days) | 14.4 |
| Location | 34.12191034872521, -116.4169447078605 |
| County | San Bernardino-Mojave Desert |
| City | Yucca Valley |
| Air District | Mojave Desert AQMD |
| Air Basin | Mojave Desert |
| TAZ | 5142 |
| EDFZ | 10 |
| Electric Utility | Southern California Edison |
| Gas Utility | Southern California Gas |
| App Version | 2022.1.1.28 |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|
| Bank (with Drive-Through) | 12.3 | 1000sqft | 0.59 | 12,259 | 11,580 | 0.00 | — | — |
| Parking Lot | 36.1 | 1000sqft | 0.83 | 0.00 | 0.00 | 0.00 | — | — |

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

### 2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Un/Mit. | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 5.60 | 6.42 | 58.8 | 0.13 | 0.12 | 10.4 | 10.5 | 0.11 | 2.64 | 2.75 | 7.09 | 13,444 | 13,451 | 1.16 | 0.54 | 52.2 | 13,693 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 4.89 | 6.93 | 43.7 | 0.12 | 0.11 | 10.4 | 10.5 | 0.11 | 2.64 | 2.75 | 7.09 | 12,278 | 12,286 | 1.17 | 0.56 | 1.38 | 12,483 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 4.99 | 7.13 | 47.9 | 0.12 | 0.11 | 10.3 | 10.4 | 0.11 | 2.62 | 2.73 | 7.09 | 12,545 | 12,552 | 1.17 | 0.57 | 22.5 | 12,773 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.91 | 1.30 | 8.75 | 0.02 | 0.02 | 1.88 | 1.91 | 0.02 | 0.48 | 0.50 | 1.17 | 2,077 | 2,078 | 0.19 | 0.09 | 3.73 | 2,115 |

### 2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Sector | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 5.23 | 6.28 | 58.1 | 0.13 | 0.10 | 10.4 | 10.5 | 0.10 | 2.64 | 2.74 | — | 13,051 | 13,051 | 0.42 | 0.53 | 52.1 | 13,273 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | 0.37 | < 0.005 | 0.53 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 2.19 | 2.19 | < 0.005 | < 0.005 | — | 2.20 |
| Energy | 0.01 | 0.14 | 0.12 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 385 | 385 | 0.03 | < 0.005 | — | 386 |
| Water | — | — | — | — | — | — | — | — | — | — | 0.93 | 5.66 | 6.59 | 0.10 | < 0.005 | — | 9.67 |
| Waste | — | — | — | — | — | — | — | — | — | — | 6.16 | 0.00 | 6.16 | 0.62 | 0.00 | — | 21.6 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.03 | 0.03 |
| Total | 5.60 | 6.42 | 58.8 | 0.13 | 0.12 | 10.4 | 10.5 | 0.11 | 2.64 | 2.75 | 7.09 | 13,444 | 13,451 | 1.16 | 0.54 | 52.2 | 13,693 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 4.60 | 6.79 | 43.6 | 0.12 | 0.10 | 10.4 | 10.5 | 0.10 | 2.64 | 2.74 | — | 11,888 | 11,888 | 0.43 | 0.56 | 1.35 | 12,065 |
| Area | 0.28 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | 0.01 | 0.14 | 0.12 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 385 | 385 | 0.03 | < 0.005 | — | 386 |
| Water | — | — | — | — | — | — | — | — | — | — | 0.93 | 5.66 | 6.59 | 0.10 | < 0.005 | — | 9.67 |
| Waste | — | — | — | — | — | — | — | — | — | — | 6.16 | 0.00 | 6.16 | 0.62 | 0.00 | — | 21.6 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.03 | 0.03 |
| Total | 4.89 | 6.93 | 43.7 | 0.12 | 0.11 | 10.4 | 10.5 | 0.11 | 2.64 | 2.75 | 7.09 | 12,278 | 12,286 | 1.17 | 0.56 | 1.38 | 12,483 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 4.65 | 6.99 | 47.5 | 0.12 | 0.10 | 10.3 | 10.4 | 0.10 | 2.62 | 2.71 | — | 12,153 | 12,153 | 0.43 | 0.57 | 22.5 | 12,355 |
| Area | 0.32 | < 0.005 | 0.26 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 1.08 | 1.08 | < 0.005 | < 0.005 | — | 1.09 |
| Energy | 0.01 | 0.14 | 0.12 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 385 | 385 | 0.03 | < 0.005 | — | 386 |
| Water | — | — | — | — | — | — | — | — | — | — | 0.93 | 5.66 | 6.59 | 0.10 | < 0.005 | — | 9.67 |
| Waste | — | — | — | — | — | — | — | — | — | — | 6.16 | 0.00 | 6.16 | 0.62 | 0.00 | — | 21.6 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.03 | 0.03 |
| Total | 4.99 | 7.13 | 47.9 | 0.12 | 0.11 | 10.3 | 10.4 | 0.11 | 2.62 | 2.73 | 7.09 | 12,545 | 12,552 | 1.17 | 0.57 | 22.5 | 12,773 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.85 | 1.27 | 8.68 | 0.02 | 0.02 | 1.88 | 1.90 | 0.02 | 0.48 | 0.50 | — | 2,012 | 2,012 | 0.07 | 0.09 | 3.73 | 2,045 |
| Area | 0.06 | < 0.005 | 0.05 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.18 | 0.18 | < 0.005 | < 0.005 | — | 0.18 |
| Energy | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 63.7 | 63.7 | < 0.005 | < 0.005 | — | 64.0 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Water | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.94 | 1.09 | 0.02 | < 0.005 | — | 1.60 |
| Waste | — | — | — | — | — | — | — | — | — | — | 1.02 | 0.00 | 1.02 | 0.10 | 0.00 | — | 3.57 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | 0.91 | 1.30 | 8.75 | 0.02 | 0.02 | 1.88 | 1.91 | 0.02 | 0.48 | 0.50 | 1.17 | 2,077 | 2,078 | 0.19 | 0.09 | 3.73 | 2,115 |

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Bank (with Drive-Through) | 5.23 | 6.28 | 58.1 | 0.13 | 0.10 | 10.4 | 10.5 | 0.10 | 2.64 | 2.74 | — | 13,051 | 13,051 | 0.42 | 0.53 | 52.1 | 13,273 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 5.23 | 6.28 | 58.1 | 0.13 | 0.10 | 10.4 | 10.5 | 0.10 | 2.64 | 2.74 | — | 13,051 | 13,051 | 0.42 | 0.53 | 52.1 | 13,273 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Bank (with Drive-Through) | 4.60 | 6.79 | 43.6 | 0.12 | 0.10 | 10.4 | 10.5 | 0.10 | 2.64 | 2.74 | — | 11,888 | 11,888 | 0.43 | 0.56 | 1.35 | 12,065 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 4.60 | 6.79 | 43.6 | 0.12 | 0.10 | 10.4 | 10.5 | 0.10 | 2.64 | 2.74 | — | 11,888 | 11,888 | 0.43 | 0.56 | 1.35 | 12,065 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bank (with Drive-Through) | 0.85 | 1.27 | 8.68 | 0.02 | 0.02 | 1.88 | 1.90 | 0.02 | 0.48 | 0.50 | — | 2,012 | 2,012 | 0.07 | 0.09 | 3.73 | 2,045 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.85 | 1.27 | 8.68 | 0.02 | 0.02 | 1.88 | 1.90 | 0.02 | 0.48 | 0.50 | — | 2,012 | 2,012 | 0.07 | 0.09 | 3.73 | 2,045 |

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Bank (with Drive-Through) | — | — | — | — | — | — | — | — | — | — | — | 170 | 170 | 0.01 | < 0.005 | — | 171 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 46.1 | 46.1 | < 0.005 | < 0.005 | — | 46.3 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 217 | 217 | 0.01 | < 0.005 | — | 217 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Bank (with Drive-Through) | — | — | — | — | — | — | — | — | — | — | — | 170 | 170 | 0.01 | < 0.005 | — | 171 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 46.1 | 46.1 | < 0.005 | < 0.005 | — | 46.3 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 217 | 217 | 0.01 | < 0.005 | — | 217 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bank (with Drive-Through) | — | — | — | — | — | — | — | — | — | — | — | 28.2 | 28.2 | < 0.005 | < 0.005 | — | 28.3 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 7.63 | 7.63 | < 0.005 | < 0.005 | — | 7.66 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 35.8 | 35.8 | < 0.005 | < 0.005 | — | 36.0 |

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Bank (with Drive-Through) | 0.01 | 0.14 | 0.12 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 168 | 168 | 0.01 | < 0.005 | — | 169 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.01 | 0.14 | 0.12 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 168 | 168 | 0.01 | < 0.005 | — | 169 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Bank (with Drive-Through) | 0.01 | 0.14 | 0.12 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 168 | 168 | 0.01 | < 0.005 | — | 169 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.01 | 0.14 | 0.12 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 168 | 168 | 0.01 | < 0.005 | — | 169 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Bank (with Drive-Through) | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.9 | 27.9 | < 0.005 | < 0.005 | — | 28.0 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.9 | 27.9 | < 0.005 | < 0.005 | — | 28.0 |

## 4.3. Area Emissions by Source

### 4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Source | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 0.27 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.02 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.09 | < 0.005 | 0.53 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 2.19 | 2.19 | < 0.005 | < 0.005 | — | 2.20 |
| Total | 0.37 | < 0.005 | 0.53 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 2.19 | 2.19 | < 0.005 | < 0.005 | — | 2.20 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 0.27 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.02 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | 0.28 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Consum Products | 0.05 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.01 | < 0.005 | 0.05 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.18 | 0.18 | < 0.005 | < 0.005 | — | 0.18 |
| Total | 0.06 | < 0.005 | 0.05 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.18 | 0.18 | < 0.005 | < 0.005 | — | 0.18 |

## 4.4. Water Emissions by Land Use

### 4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Bank (with Drive-Through) | — | — | — | — | — | — | — | — | — | — | 0.93 | 5.66 | 6.59 | 0.10 | < 0.005 | — | 9.67 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | 0.93 | 5.66 | 6.59 | 0.10 | < 0.005 | — | 9.67 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Bank (with Drive-Through) | — | — | — | — | — | — | — | — | — | — | 0.93 | 5.66 | 6.59 | 0.10 | < 0.005 | — | 9.67 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | 0.93 | 5.66 | 6.59 | 0.10 | < 0.005 | — | 9.67 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Bank (with Drive-Through) | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.94 | 1.09 | 0.02 | < 0.005 | — | 1.60 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.94 | 1.09 | 0.02 | < 0.005 | — | 1.60 |

## 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Bank (with Drive-Through) | — | — | — | — | — | — | — | — | — | — | 6.16 | 0.00 | 6.16 | 0.62 | 0.00 | — | 21.6 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | 6.16 | 0.00 | 6.16 | 0.62 | 0.00 | — | 21.6 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Bank (with Drive-Through) | — | — | — | — | — | — | — | — | — | — | 6.16 | 0.00 | 6.16 | 0.62 | 0.00 | — | 21.6 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | 6.16 | 0.00 | 6.16 | 0.62 | 0.00 | — | 21.6 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bank (with Drive-Through) | — | — | — | — | — | — | — | — | — | — | 1.02 | 0.00 | 1.02 | 0.10 | 0.00 | — | 3.57 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | 1.02 | 0.00 | 1.02 | 0.10 | 0.00 | — | 3.57 |

## 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Bank (with Drive-Through) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.03 | 0.03 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.03 | 0.03 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Bank (with Drive-Through) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.03 | 0.03 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.03 | 0.03 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Bank (with Drive-Through) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |

# 5. Activity Data

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|
| Bank (with Drive-Through) | 836 | 836 | 836 | 305,119 | 14,761 | 14,761 | 14,761 | 5,387,712 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 5.10. Operational Area Sources

### 5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|
| 0 | 0.00 | 24,518 | 0.00 | 300 |

### 5.10.3. Landscape Equipment

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0.00 |
| Summer Days | day/yr | 180 |

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

| Land Use | Electricity (kWh/yr) | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| Bank (with Drive-Through) | 116,923 | 532 | 0.0330 | 0.0040 | 525,741 |

| | | | | | |
|---|---|---|---|---|---|
| Parking Lot | 31,631 | 532 | 0.0330 | 0.0040 | 0.00 |

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| Bank (with Drive-Through) | 485,737 | 256,364 |
| Parking Lot | 0.00 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| Bank (with Drive-Through) | 11.4 | — |
| Parking Lot | 0.00 | — |

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---|---|---|---|---|---|---|---|
| Bank (with Drive-Through) | Household refrigerators and/or freezers | R-134a | 1,430 | 0.02 | 0.60 | 0.00 | 1.00 |
| Bank (with Drive-Through) | Other commercial A/C and heat pumps | R-410A | 2,088 | < 0.005 | 4.00 | 4.00 | 18.0 |

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|

| | |
|---|---|
| Construction: Construction Phases | Only a outdoor dining canopy would be constructed, some parking area would be repaved. |
| Construction: Trips and VMT | Using the "User-Defined Recreational" land use provides zero worker and vendor trips. Changed to match trips for a similar sized project. |
| Construction: Architectural Coatings | Interior remodeling - set interior area to twice the building size to estimate interior wall area. |
| Operations: Vehicle Data | Set to match the project's traffic study for existing bank w/drivethru. |
| Operations: Architectural Coatings | Set interior area to twice the building size to estimate interior wall area. |
| Operations: Energy Use | — |
| Operations: Water and Waste Water | — |
| Operations: Solid Waste | — |
| Operations: Refrigerants | Set the Church & Coffee Shop refrigerant uses to match a same-sized Bank w/drive thru. |
| Land Use | Lot size is 1.42 acres, adjusted Bank lot acreage. |

# Lighthouse Church & Coffee (20241938) Custom Report

## Table of Contents

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Lighthouse Church & Coffee (20241938) |
| Construction Start Date | 1/1/2025 |
| Operational Year | 2025 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.60 |
| Precipitation (days) | 14.4 |
| Location | 34.12191034872521, -116.4169447078605 |
| County | San Bernardino-Mojave Desert |
| City | Yucca Valley |
| Air District | Mojave Desert AQMD |
| Air Basin | Mojave Desert |
| TAZ | 5142 |
| EDFZ | 10 |
| Electric Utility | Southern California Edison |
| Gas Utility | Southern California Gas |
| App Version | 2022.1.1.28 |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|
| User Defined Recreational | 1.00 | User Defined Unit | 0.59 | 9,857 | 11,580 | 0.00 | — | — |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Parking Lot | 36.1 | 1000sqft | 0.83 | 0.00 | 0.00 | 0.00 | — | — |

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

### 2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Un/Mit. | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 3.09 | 10.1 | 12.4 | 0.02 | 0.36 | 0.23 | 0.59 | 0.33 | 0.06 | 0.39 | — | 2,330 | 2,330 | 0.09 | 0.05 | 1.27 | 2,348 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 3.08 | 10.1 | 12.0 | 0.02 | 0.36 | 0.23 | 0.59 | 0.33 | 0.06 | 0.39 | — | 2,307 | 2,307 | 0.09 | 0.05 | 0.03 | 2,323 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.40 | 1.87 | 2.25 | < 0.005 | 0.07 | 0.04 | 0.11 | 0.06 | 0.01 | 0.07 | — | 425 | 425 | 0.02 | 0.01 | 0.09 | 428 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.07 | 0.34 | 0.41 | < 0.005 | 0.01 | 0.01 | 0.02 | 0.01 | < 0.005 | 0.01 | — | 70.3 | 70.3 | < 0.005 | < 0.005 | 0.01 | 70.8 |

### 2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Year | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2025 | 3.09 | 10.1 | 12.4 | 0.02 | 0.36 | 0.23 | 0.59 | 0.33 | 0.06 | 0.39 | — | 2,330 | 2,330 | 0.09 | 0.05 | 1.27 | 2,348 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 3.08 | 10.1 | 12.0 | 0.02 | 0.36 | 0.23 | 0.59 | 0.33 | 0.06 | 0.39 | — | 2,307 | 2,307 | 0.09 | 0.05 | 0.03 | 2,323 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.40 | 1.87 | 2.25 | < 0.005 | 0.07 | 0.04 | 0.11 | 0.06 | 0.01 | 0.07 | — | 425 | 425 | 0.02 | 0.01 | 0.09 | 428 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.07 | 0.34 | 0.41 | < 0.005 | 0.01 | 0.01 | 0.02 | 0.01 | < 0.005 | 0.01 | — | 70.3 | 70.3 | < 0.005 | < 0.005 | 0.01 | 70.8 |

## 2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Un/Mit. | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 3.73 | 4.15 | 38.2 | 0.09 | 0.08 | 7.24 | 7.32 | 0.07 | 1.84 | 1.91 | 5.94 | 9,194 | 9,200 | 0.89 | 0.36 | 33.3 | 9,363 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 3.27 | 4.47 | 28.5 | 0.08 | 0.08 | 7.24 | 7.32 | 0.07 | 1.84 | 1.91 | 5.94 | 8,405 | 8,411 | 0.90 | 0.38 | 0.89 | 8,547 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 3.33 | 4.60 | 31.2 | 0.08 | 0.08 | 7.17 | 7.25 | 0.07 | 1.82 | 1.89 | 5.94 | 8,585 | 8,591 | 0.90 | 0.38 | 14.4 | 8,742 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.61 | 0.84 | 5.69 | 0.01 | 0.01 | 1.31 | 1.32 | 0.01 | 0.33 | 0.35 | 0.98 | 1,421 | 1,422 | 0.15 | 0.06 | 2.38 | 1,447 |

## 2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Sector | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 3.42 | 4.03 | 37.7 | 0.09 | 0.07 | 7.24 | 7.31 | 0.07 | 1.84 | 1.90 | — | 8,864 | 8,864 | 0.27 | 0.36 | 33.2 | 9,010 |
| Area | 0.30 | < 0.005 | 0.43 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 1.76 | 1.76 | < 0.005 | < 0.005 | — | 1.77 |
| Energy | 0.01 | 0.12 | 0.10 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 323 | 323 | 0.02 | < 0.005 | — | 324 |
| Water | — | — | — | — | — | — | — | — | — | — | 0.93 | 5.66 | 6.59 | 0.10 | < 0.005 | — | 9.67 |
| Waste | — | — | — | — | — | — | — | — | — | — | 5.01 | 0.00 | 5.01 | 0.50 | 0.00 | — | 17.5 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.02 | 0.02 |
| Total | 3.73 | 4.15 | 38.2 | 0.09 | 0.08 | 7.24 | 7.32 | 0.07 | 1.84 | 1.91 | 5.94 | 9,194 | 9,200 | 0.89 | 0.36 | 33.3 | 9,363 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 3.03 | 4.36 | 28.4 | 0.08 | 0.07 | 7.24 | 7.31 | 0.07 | 1.84 | 1.90 | — | 8,077 | 8,077 | 0.28 | 0.37 | 0.86 | 8,196 |
| Area | 0.23 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | 0.01 | 0.12 | 0.10 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 323 | 323 | 0.02 | < 0.005 | — | 324 |
| Water | — | — | — | — | — | — | — | — | — | — | 0.93 | 5.66 | 6.59 | 0.10 | < 0.005 | — | 9.67 |
| Waste | — | — | — | — | — | — | — | — | — | — | 5.01 | 0.00 | 5.01 | 0.50 | 0.00 | — | 17.5 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.02 | 0.02 |
| Total | 3.27 | 4.47 | 28.5 | 0.08 | 0.08 | 7.24 | 7.32 | 0.07 | 1.84 | 1.91 | 5.94 | 8,405 | 8,411 | 0.90 | 0.38 | 0.89 | 8,547 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 3.06 | 4.48 | 30.9 | 0.08 | 0.07 | 7.17 | 7.24 | 0.07 | 1.82 | 1.88 | — | 8,256 | 8,256 | 0.28 | 0.38 | 14.3 | 8,390 |
| Area | 0.27 | < 0.005 | 0.21 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.87 | 0.87 | < 0.005 | < 0.005 | — | 0.87 |
| Energy | 0.01 | 0.12 | 0.10 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 323 | 323 | 0.02 | < 0.005 | — | 324 |
| Water | — | — | — | — | — | — | — | — | — | — | 0.93 | 5.66 | 6.59 | 0.10 | < 0.005 | — | 9.67 |
| Waste | — | — | — | — | — | — | — | — | — | — | 5.01 | 0.00 | 5.01 | 0.50 | 0.00 | — | 17.5 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.02 | 0.02 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 3.33 | 4.60 | 31.2 | 0.08 | 0.08 | 7.17 | 7.25 | 0.07 | 1.82 | 1.89 | 5.94 | 8,585 | 8,591 | 0.90 | 0.38 | 14.4 | 8,742 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.56 | 0.82 | 5.64 | 0.01 | 0.01 | 1.31 | 1.32 | 0.01 | 0.33 | 0.34 | — | 1,367 | 1,367 | 0.05 | 0.06 | 2.38 | 1,389 |
| Area | 0.05 | < 0.005 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.14 | 0.14 | < 0.005 | < 0.005 | — | 0.14 |
| Energy | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 53.4 | 53.4 | < 0.005 | < 0.005 | — | 53.6 |
| Water | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.94 | 1.09 | 0.02 | < 0.005 | — | 1.60 |
| Waste | — | — | — | — | — | — | — | — | — | — | 0.83 | 0.00 | 0.83 | 0.08 | 0.00 | — | 2.90 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | 0.61 | 0.84 | 5.69 | 0.01 | 0.01 | 1.31 | 1.32 | 0.01 | 0.33 | 0.35 | 0.98 | 1,421 | 1,422 | 0.15 | 0.06 | 2.38 | 1,447 |

# 3. Construction Emissions Details

## 3.1. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.07 | 8.95 | 10.0 | 0.02 | 0.33 | — | 0.33 | 0.30 | — | 0.30 | — | 1,801 | 1,801 | 0.07 | 0.01 | — | 1,807 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.07 | 8.95 | 10.0 | 0.02 | 0.33 | — | 0.33 | 0.30 | — | 0.30 | — | 1,801 | 1,801 | 0.07 | 0.01 | — | 1,807 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.19 | 1.62 | 1.81 | < 0.005 | 0.06 | — | 0.06 | 0.05 | — | 0.05 | — | 326 | 326 | 0.01 | < 0.005 | — | 327 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.30 | 0.33 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 53.9 | 53.9 | < 0.005 | < 0.005 | — | 54.1 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.83 | 0.00 | 0.00 | 0.13 | 0.13 | 0.00 | 0.03 | 0.03 | — | 146 | 146 | 0.01 | < 0.005 | 0.53 | 148 |
| Vendor | < 0.005 | 0.13 | 0.06 | < 0.005 | < 0.005 | 0.03 | 0.04 | < 0.005 | 0.01 | 0.01 | — | 127 | 127 | < 0.005 | 0.02 | 0.35 | 133 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.05 | 0.56 | 0.00 | 0.00 | 0.13 | 0.13 | 0.00 | 0.03 | 0.03 | — | 129 | 129 | 0.01 | < 0.005 | 0.01 | 131 |
| Vendor | < 0.005 | 0.14 | 0.06 | < 0.005 | < 0.005 | 0.03 | 0.04 | < 0.005 | 0.01 | 0.01 | — | 128 | 128 | < 0.005 | 0.02 | 0.01 | 133 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.11 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | 0.01 | 0.01 | — | 24.0 | 24.0 | < 0.005 | < 0.005 | 0.04 | 24.4 |
| Vendor | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 23.1 | 23.1 | < 0.005 | < 0.005 | 0.03 | 24.0 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 3.98 | 3.98 | < 0.005 | < 0.005 | 0.01 | 4.04 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 3.82 | 3.82 | < 0.005 | < 0.005 | < 0.005 | 3.97 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.3. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.49 | 4.63 | 6.50 | 0.01 | 0.20 | — | 0.20 | 0.19 | — | 0.19 | — | 992 | 992 | 0.04 | 0.01 | — | 995 |
| Paving | 0.22 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.13 | 0.18 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 27.2 | 27.2 | < 0.005 | < 0.005 | — | 27.3 |
| Paving | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | 0.02 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 4.50 | 4.50 | < 0.005 | < 0.005 | — | 4.51 |
| Paving | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.50 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 87.5 | 87.5 | < 0.005 | < 0.005 | 0.32 | 88.8 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.19 | 2.19 | < 0.005 | < 0.005 | < 0.005 | 2.22 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.36 | 0.36 | < 0.005 | < 0.005 | < 0.005 | 0.37 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.5. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.13 | 0.88 | 1.14 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 134 | 134 | 0.01 | < 0.005 | — | 134 |
| Architectural Coatings | 1.81 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.13 | 0.88 | 1.14 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 134 | 134 | 0.01 | < 0.005 | — | 134 |
| Architectural Coatings | 1.81 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.08 | 0.10 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 12.1 | 12.1 | < 0.005 | < 0.005 | — | 12.1 |
| Architectural Coatings | 0.16 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | 0.01 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 2.00 | 2.00 | < 0.005 | < 0.005 | — | 2.01 |
| Architectural Coatings | 0.03 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.02 | 0.33 | 0.00 | 0.00 | 0.05 | 0.05 | 0.00 | 0.01 | 0.01 | — | 58.3 | 58.3 | < 0.005 | < 0.005 | 0.21 | 59.2 |
| Vendor | < 0.005 | 0.06 | 0.03 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | 0.01 | — | 63.7 | 63.7 | < 0.005 | 0.01 | 0.17 | 66.4 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.02 | 0.22 | 0.00 | 0.00 | 0.05 | 0.05 | 0.00 | 0.01 | 0.01 | — | 51.6 | 51.6 | < 0.005 | < 0.005 | 0.01 | 52.3 |
| Vendor | < 0.005 | 0.07 | 0.03 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | 0.01 | — | 63.8 | 63.8 | < 0.005 | 0.01 | < 0.005 | 66.3 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 4.81 | 4.81 | < 0.005 | < 0.005 | 0.01 | 4.87 |
| Vendor | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.76 | 5.76 | < 0.005 | < 0.005 | 0.01 | 6.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.80 | 0.80 | < 0.005 | < 0.005 | < 0.005 | 0.81 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.95 | 0.95 | < 0.005 | < 0.005 | < 0.005 | 0.99 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Recreational | 3.42 | 4.03 | 37.7 | 0.09 | 0.07 | 7.24 | 7.31 | 0.07 | 1.84 | 1.90 | — | 8,864 | 8,864 | 0.27 | 0.36 | 33.2 | 9,010 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 3.42 | 4.03 | 37.7 | 0.09 | 0.07 | 7.24 | 7.31 | 0.07 | 1.84 | 1.90 | — | 8,864 | 8,864 | 0.27 | 0.36 | 33.2 | 9,010 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Recreational | 3.03 | 4.36 | 28.4 | 0.08 | 0.07 | 7.24 | 7.31 | 0.07 | 1.84 | 1.90 | — | 8,077 | 8,077 | 0.28 | 0.37 | 0.86 | 8,196 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 3.03 | 4.36 | 28.4 | 0.08 | 0.07 | 7.24 | 7.31 | 0.07 | 1.84 | 1.90 | — | 8,077 | 8,077 | 0.28 | 0.37 | 0.86 | 8,196 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Recreational | 0.56 | 0.82 | 5.64 | 0.01 | 0.01 | 1.31 | 1.32 | 0.01 | 0.33 | 0.34 | — | 1,367 | 1,367 | 0.05 | 0.06 | 2.38 | 1,389 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.56 | 0.82 | 5.64 | 0.01 | 0.01 | 1.31 | 1.32 | 0.01 | 0.33 | 0.34 | — | 1,367 | 1,367 | 0.05 | 0.06 | 2.38 | 1,389 |

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Recreational | — | — | — | — | — | — | — | — | — | — | — | 139 | 139 | 0.01 | < 0.005 | — | 140 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 46.1 | 46.1 | < 0.005 | < 0.005 | — | 46.3 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | — | — | — | — | — | — | — | — | — | — | — | 185 | 185 | 0.01 | < 0.005 | — | 186 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Recreational | — | — | — | — | — | — | — | — | — | — | — | 139 | 139 | 0.01 | < 0.005 | — | 140 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 46.1 | 46.1 | < 0.005 | < 0.005 | — | 46.3 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 185 | 185 | 0.01 | < 0.005 | — | 186 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Recreational | — | — | — | — | — | — | — | — | — | — | — | 23.0 | 23.0 | < 0.005 | < 0.005 | — | 23.1 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 7.63 | 7.63 | < 0.005 | < 0.005 | — | 7.66 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 30.6 | 30.6 | < 0.005 | < 0.005 | — | 30.8 |

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Recreational | 0.01 | 0.12 | 0.10 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 137 | 137 | 0.01 | < 0.005 | — | 138 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.01 | 0.12 | 0.10 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 137 | 137 | 0.01 | < 0.005 | — | 138 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| User Defined Recreational | 0.01 | 0.12 | 0.10 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 137 | 137 | 0.01 | < 0.005 | — | 138 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.01 | 0.12 | 0.10 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 137 | 137 | 0.01 | < 0.005 | — | 138 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Recreational | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 22.8 | 22.8 | < 0.005 | < 0.005 | — | 22.8 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 22.8 | 22.8 | < 0.005 | < 0.005 | — | 22.8 |

## 4.3. Area Emissions by Source

### 4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Source | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 0.21 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.02 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.07 | < 0.005 | 0.43 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 1.76 | 1.76 | < 0.005 | < 0.005 | — | 1.77 |
| Total | 0.30 | < 0.005 | 0.43 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 1.76 | 1.76 | < 0.005 | < 0.005 | — | 1.77 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 0.21 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.02 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | 0.23 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 0.04 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.01 | < 0.005 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.14 | 0.14 | < 0.005 | < 0.005 | — | 0.14 |
| Total | 0.05 | < 0.005 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.14 | 0.14 | < 0.005 | < 0.005 | — | 0.14 |

## 4.4. Water Emissions by Land Use

### 4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Recreational | — | — | — | — | — | — | — | — | — | — | 0.93 | 5.66 | 6.59 | 0.10 | < 0.005 | — | 9.67 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Parking Lot | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | 0.93 | 5.66 | 6.59 | 0.10 | < 0.005 | — | 9.67 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Recreational | — | — | — | — | — | — | — | — | — | — | 0.93 | 5.66 | 6.59 | 0.10 | < 0.005 | — | 9.67 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | 0.93 | 5.66 | 6.59 | 0.10 | < 0.005 | — | 9.67 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Recreational | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.94 | 1.09 | 0.02 | < 0.005 | — | 1.60 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.94 | 1.09 | 0.02 | < 0.005 | — | 1.60 |

## 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Recreational | — | — | — | — | — | — | — | — | — | — | 5.01 | 0.00 | 5.01 | 0.50 | 0.00 | — | 17.5 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | — | — | — | — | — | — | — | — | — | — | 5.01 | 0.00 | 5.01 | 0.50 | 0.00 | — | 17.5 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Recreational | — | — | — | — | — | — | — | — | — | — | 5.01 | 0.00 | 5.01 | 0.50 | 0.00 | — | 17.5 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | 5.01 | 0.00 | 5.01 | 0.50 | 0.00 | — | 17.5 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Recreational | — | — | — | — | — | — | — | — | — | — | 0.83 | 0.00 | 0.83 | 0.08 | 0.00 | — | 2.90 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | 0.83 | 0.00 | 0.83 | 0.08 | 0.00 | — | 2.90 |

## 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Recreational | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.02 | 0.02 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.02 | 0.02 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| User Defined Recreational | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.02 | 0.02 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.02 | 0.02 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Recreational | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Building Construction | Building Construction | 1/1/2025 | 4/2/2025 | 5.00 | 66.0 | — |
| Paving | Paving | 4/3/2025 | 4/16/2025 | 5.00 | 10.0 | — |
| Architectural Coating | Architectural Coating | 3/3/2025 | 4/16/2025 | 5.00 | 33.0 | — |

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Building Construction | Cranes | Diesel | Average | 1.00 | 6.00 | 367 | 0.29 |
| Building Construction | Forklifts | Diesel | Average | 1.00 | 6.00 | 82.0 | 0.20 |
| Building Construction | Tractors/Loaders/Backhoes | Diesel | Average | 1.00 | 6.00 | 84.0 | 0.37 |
| Building Construction | Generator Sets | Diesel | Average | 1.00 | 8.00 | 14.0 | 0.74 |
| Building Construction | Welders | Diesel | Average | 3.00 | 8.00 | 46.0 | 0.45 |
| Paving | Pavers | Diesel | Average | 1.00 | 6.00 | 81.0 | 0.42 |
| Paving | Rollers | Diesel | Average | 1.00 | 7.00 | 36.0 | 0.38 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Paving | Cement and Mortar Mixers | Diesel | Average | 1.00 | 6.00 | 10.0 | 0.56 |
| Paving | Tractors/Loaders/Backhoes | Diesel | Average | 1.00 | 8.00 | 84.0 | 0.37 |
| Paving | Paving Equipment | Diesel | Average | 1.00 | 8.00 | 89.0 | 0.36 |
| Architectural Coating | Air Compressors | Diesel | Average | 1.00 | 6.00 | 37.0 | 0.48 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Building Construction | — | — | — | — |
| Building Construction | Worker | 10.0 | 18.5 | LDA,LDT1,LDT2 |
| Building Construction | Vendor | 4.00 | 10.2 | HHDT,MHDT |
| Building Construction | Hauling | 0.00 | 20.0 | HHDT |
| Building Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 6.00 | 18.5 | LDA,LDT1,LDT2 |
| Paving | Vendor | 0.00 | 10.2 | HHDT,MHDT |
| Paving | Hauling | 0.00 | 20.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Architectural Coating | — | — | — | — |
| Architectural Coating | Worker | 4.00 | 18.5 | LDA,LDT1,LDT2 |
| Architectural Coating | Vendor | 2.00 | 10.2 | HHDT,MHDT |
| Architectural Coating | Hauling | 0.00 | 20.0 | HHDT |
| Architectural Coating | Onsite truck | — | — | HHDT |

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

| Control Strategies Applied | PM10 Reduction | PM2.5 Reduction |
|---|---|---|
| Water unpaved roads twice daily | 55% | 55% |
| Limit vehicle speeds on unpaved roads to 25 mph | 44% | 44% |
| Sweep paved roads once per month | 9% | 9% |

## 5.5. Architectural Coatings

| Phase Name | Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|---|
| Architectural Coating | 0.00 | 0.00 | 19,714 | 5,473 | 300 |

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (cy) | Material Exported (cy) | Acres Graded (acres) | Material Demolished (sq. ft.) | Acres Paved (acres) |
|---|---|---|---|---|---|
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 0.84 |

### 5.6.2. Construction Earthmoving Control Strategies

| Control Strategies Applied | Frequency (per day) | PM10 Reduction | PM2.5 Reduction |
|---|---|---|---|
| Water Exposed Area | 2 | 61% | 61% |

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| User Defined Recreational | 0.01 | 0% |
| Parking Lot | 0.83 | 100% |

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2025 | 0.00 | 532 | 0.03 | < 0.005 |

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|
| User Defined Recreational | 581 | 581 | 581 | 212,065 | 10,259 | 10,259 | 10,259 | 3,744,594 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 5.10. Operational Area Sources

### 5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|
| 0 | 0.00 | 19,714 | 5,473 | 2,166 |

### 5.10.3. Landscape Equipment

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0.00 |
| Summer Days | day/yr | 180 |

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

| Land Use | Electricity (kWh/yr) | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| User Defined Recreational | 95,377 | 532 | 0.0330 | 0.0040 | 428,861 |
| Parking Lot | 31,631 | 532 | 0.0330 | 0.0040 | 0.00 |

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| User Defined Recreational | 485,737 | 256,364 |
| Parking Lot | 0.00 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| User Defined Recreational | 9.30 | — |
| Parking Lot | 0.00 | — |

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---|---|---|---|---|---|---|---|
| User Defined Recreational | Household refrigerators and/or freezers | R-134a | 1,430 | 0.02 | 0.60 | 0.00 | 1.00 |
| User Defined Recreational | Other commercial A/C and heat pumps | R-410A | 2,088 | < 0.005 | 4.00 | 4.00 | 18.0 |

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Construction: Construction Phases | Only a outdoor dining canopy would be constructed, some parking area would be repaved and restriped. |
| Construction: Off-Road Equipment | — |
| Construction: Trips and VMT | Using the "User-Defined Recreational" land use provides zero worker and vendor trips. Changed to match trips for a similar sized project. |
| Construction: Architectural Coatings | Interior remodeling - set interior area to twice the building size to estimate interior wall area. |
| Operations: Vehicle Data | Set to match the project's traffic study. |
| Operations: Architectural Coatings | Set interior area to twice the building size to estimate interior wall area. |
| Operations: Energy Use | Set the Church & Coffee Shop energy uses to match a same-sized Bank w/drive thru. |
| Operations: Water and Waste Water | Set the Church & Coffee Shop water use to match a same-sized Bank w/drive thru. |
| Operations: Solid Waste | Set the Church & Coffee Shop waste generation rate to match a same-sized Bank w/drive thru. |
| Operations: Refrigerants | Set the Church & Coffee Shop refrigerant uses to match a same-sized Bank w/drive thru. |
| Land Use | Set "User Defined Recreational" to match proposed Church & Coffee parameters. |
| Construction: Paving | The only added concrete is the additional 630 sf area for the outdoor dining at the coffee shop (North side of building). |

# ATTACHMENT C

# POLLUTANT MONITORING DATA

# Air Pollutant Monitoring Data from the Palm Springs Monitoring Station

## 2021 Monitoring Data

| Parameter Name | Duration Description | Pollutant Standard | Units of Measure | Arithmetic Mean | First Maximum Value | Second Maximum Value | Third Maximum Value | Fourth Maximum Value | 50th Perecentile | 75th Perecentile | 90th Perecentile | 95th Perecentile | 98th Perecentile | 99th Perecentile | Address |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Carbon monoxide | 1 HOUR | CO 1-hour 1971 | Parts per million | 0.157001 | 0.8 | 0.6 | 0.6 | 0.6 | 0.1 | 0.2 | 0.2 | 0.3 | 0.4 | 0.4 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| Carbon monoxide | 8-HR RUN AV( | CO 8-hour 1971 | Parts per million | 0.158002 | 0.4 | 0.4 | 0.4 | 0.4 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| Nitrogen dioxide (NO2) | 1 HOUR | NO2 1-hour 2010 | Parts per billion | 16.771944 | 35.6 | 34 | 33.9 | 33.7 | 16.5 | 22.7 | 28 | 30.6 | 32.9 | 33.7 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| Nitrogen dioxide (NO2) | 1 HOUR | NO2 Annual 1971 | Parts per billion | 6.757322 | 35.6 | 34 | 33.9 | 33.7 | 4.3 | 9.8 | 16.2 | 19.9 | 23.7 | 26.7 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| Ozone | 1 HOUR | Ozone 1-hour 1979 | Parts per million | 0.059329 | 0.11 | 0.106 | 0.106 | 0.106 | 0.057 | 0.07 | 0.08 | 0.089 | 0.096 | 0.106 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| Ozone | 8-HR RUN AV( | Ozone 8-hour 2015 | Parts per million | 0.052681 | 0.092 | 0.091 | 0.09 | 0.088 | 0.051 | 0.062 | 0.07 | 0.074 | 0.084 | 0.088 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| PM10 Total 0-10um STP | 24 HOUR | PM10 24-hour 2006 | Micrograms/cubic met | 17.836066 | 35 | 30 | 29 | 28 | 18 | 23 | 26 | 28 | 30 | 35 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| PM2.5 - Local Conditions | 24 HOUR | PM25 24-hour 2012 | Micrograms/cubic met | 6.198361 | 13.5 | 13 | 12.6 | 12.5 | 5.9 | 8.5 | 10.2 | 11.7 | 12.6 | 13 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| PM2.5 - Local Conditions | 24 HOUR | PM25 Annual 2012 | Micrograms/cubic met | 6.198361 | 13.5 | 13 | 12.6 | 12.5 | 5.9 | 8.5 | 10.2 | 11.7 | 12.6 | 13 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |

## 2022 Monitoring Data

| Parameter Name | Duration Description | Pollutant Standard | Units of Measure | Arithmetic Mean | First Maximum Value | Second Maximum Value | Third Maximum Value | Fourth Maximum Value | 50th Perecentile | 75th Perecentile | 90th Perecentile | 95th Perecentile | 98th Perecentile | 99th Perecentile | Address |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Carbon monoxide | 1 HOUR | CO 1-hour 1971 | Parts per million | 0.176141 | 1.1 | 0.8 | 0.7 | 0.7 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.5 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| Carbon monoxide | 8-HR RUN AV( | CO 8-hour 1971 | Parts per million | 0.177154 | 0.5 | 0.5 | 0.5 | 0.5 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.4 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| Nitrogen dioxide (NO2) | 1 HOUR | NO2 1-hour 2010 | Parts per billion | 16.163562 | 37.5 | 35 | 34.4 | 33.1 | 15.3 | 22.6 | 27.7 | 30.9 | 32.5 | 33.1 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| Nitrogen dioxide (NO2) | 1 HOUR | NO2 Annual 1971 | Parts per billion | 6.273718 | 37.5 | 36.3 | 35 | 34.4 | 3.8 | 8.8 | 15.7 | 20 | 24.3 | 27.2 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| Ozone | 1 HOUR | Ozone 1-hour 1979 | Parts per million | 0.059226 | 0.106 | 0.105 | 0.1 | 0.1 | 0.057 | 0.069 | 0.081 | 0.088 | 0.094 | 0.1 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| Ozone | 8-HR RUN AV( | Ozone 8-hour 2015 | Parts per million | 0.053257 | 0.089 | 0.088 | 0.087 | 0.084 | 0.053 | 0.061 | 0.071 | 0.077 | 0.082 | 0.084 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| PM10 Total 0-10um STP | 24 HOUR | PM10 24-hour 2006 | Micrograms/cubic met | 23.169811 | 159 | 57 | 54 | 51 | 19 | 27 | 41 | 54 | 57 | 159 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| PM2.5 - Local Conditions | 24 HOUR | PM25 24-hour 2012 | Micrograms/cubic met | 6.336667 | 31.2 | 16.7 | 16.1 | 13.7 | 5.7 | 8.3 | 11.2 | 11.9 | 16.1 | 16.7 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| PM2.5 - Local Conditions | 24 HOUR | PM25 Annual 2012 | Micrograms/cubic met | 6.336667 | 31.2 | 16.7 | 16.1 | 13.7 | 5.7 | 8.3 | 11.2 | 11.9 | 16.1 | 16.7 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |

## 2023 Monitoring Data

| Parameter Name | Duration Description | Pollutant Standard | Units of Measure | Arithmetic Mean | First Maximum Value | Second Maximum Value | Third Maximum Value | Fourth Maximum Value | 50th Perecentile | 75th Perecentile | 90th Perecentile | 95th Perecentile | 98th Perecentile | 99th Perecentile | Address |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Carbon monoxide | 1 HOUR | CO 1-hour 1971 | Parts per million | 0.193237 | 0.9 | 0.9 | 0.9 | 0.8 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.4 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| Carbon monoxide | 8-HR RUN AV( | CO 8-hour 1971 | Parts per million | 0.1953 | 0.8 | 0.8 | 0.8 | 0.7 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.4 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| Nitrogen dioxide (NO2) | 1 HOUR | NO2 1-hour 2010 | Parts per billion | 13.246685 | 35.4 | 32.2 | 31.2 | 31.2 | 12.2 | 17.9 | 23.4 | 27.2 | 29.3 | 31.2 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| Nitrogen dioxide (NO2) | 1 HOUR | NO2 Annual 1971 | Parts per billion | 5.478632 | 35.4 | 32.2 | 31.2 | 31.2 | 3.5 | 7.6 | 13.3 | 16.4 | 20.1 | 22.6 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| Ozone | 1 HOUR | Ozone 1-hour 1979 | Parts per million | 0.057667 | 0.116 | 0.104 | 0.103 | 0.103 | 0.055 | 0.069 | 0.078 | 0.085 | 0.092 | 0.103 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| Ozone | 8-HR RUN AV( | Ozone 8-hour 2015 | Parts per million | 0.051887 | 0.093 | 0.086 | 0.086 | 0.085 | 0.051 | 0.062 | 0.071 | 0.075 | 0.082 | 0.085 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| PM10 Total 0-10um STP | 24 HOUR | PM10 24-hour 2006 | Micrograms/cubic met | 22.27907 | 173 | 47 | 41 | 37 | 20 | 24 | 33 | 41 | 173 | 173 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| PM2.5 - Local Conditions | 24 HOUR | PM25 24-hour 2012 | Micrograms/cubic met | 5.922321 | 26.2 | 24.1 | 13.6 | 12.1 | 5.5 | 7.8 | 9.7 | 11 | 13.6 | 24.1 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |
| PM2.5 - Local Conditions | 24 HOUR | PM25 Annual 2012 | Micrograms/cubic met | 5.922321 | 26.2 | 24.1 | 13.6 | 12.1 | 5.5 | 7.8 | 9.7 | 11 | 13.6 | 24.1 | FS-590 RACQUET CLUB AVE, PALM SPRINGS |