APPENDIX A

Air Quality Technical Report

Landers Hotel Project

Air Quality Technical Report

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1.0 INTRODUCTION

This Air Quality Technical Report evaluates air quality impacts associated with the proposed hotel project located in the Community of Landers (Project) in San Bernardino County (County). This report has been prepared by Impact Sciences, Inc., to support the Project's environmental documentation being prepared pursuant to the California Environmental Quality Act (CEQA). This analysis considers both the temporary air quality impacts from Project construction and long-term impacts associated with operation of the Project.

1.1 PROJECT LOCATION

The Project is located off Belfield Boulevard (APN# 0630-031-05 and 0630-031-06, "Project Site") within the unincorporated community of Landers, in the County of San Bernardino. The Project Site is approximately 5.8 acres, on the east side of Belfield Boulevard, west of Pipes Wash, north of Chuckawalla Road/Amargon Road, and south of Mirasol Road (**Figure 1, Aerial Photograph of the Project Site**). The Project Site and the parcels directly north and south of the Project Site is zoned Homestead Valley/Rural Commercial (HV/CR). The parcels west of the Project Site is zoned Homestead Valley/Rural Living (HV/RL) and to the east is zoned Government Land.[1] The proposed use is allowed with a Minor Use Permit.

See **Figure 1, Aerial Photograph of Project Site,** which illustrates the location of the Project Site.

1.2 PROJECT DESCRIPTION

The Project includes the construction of approximately 30,000 square feet of new development as shown in **Figure 2, Project Site Plan** and **Table 1, Project Features**. The Project would include a goods market, restaurant, lodge, health club, a pool and hot tub, and 35 hotel rooms.

[1] San Bernardino County, *Land Use Plan*, General Plan, Land Use Zoning Districts: F13A, Landers. Available: https://www.sbcounty.gov/uploads/LUS/GeneralPlan/DesertRegion/FI13A_20100422.pdf, accessed January 29, 2024.

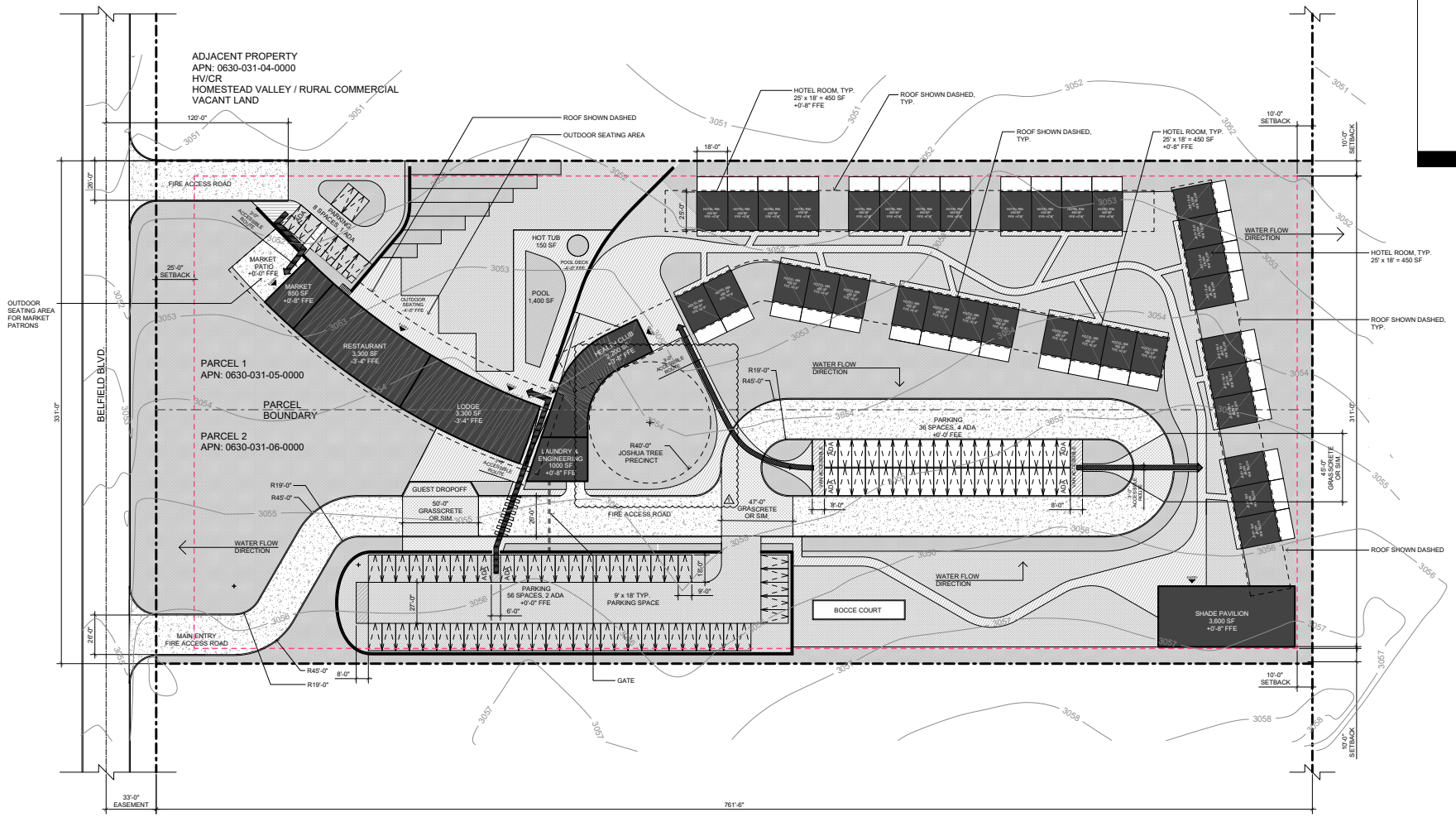
SOURCE: Esri, 2024

FIGURE **1**

IMPACT SCIENCES

Aerial Photograph of the Project Site

1537.007•01/24



SOURCE: West of West, 2024

FIGURE **2**

IMPACT SCIENCES

Project Site Plan

1537.007•08/24

Table 1
Project Features

Project Features	Square Footage (sq. ft.)
Restaurant	3,300 sq. ft.
Lodge (Hotel Lobby)	3,300 sq. ft.
Community Market	850 sq. ft.
Health Club	2,200 sq. ft.
Laundry and Engineering	1,000 sq. ft.
Shade Structure	3,600 sq. ft.
Guest Rooms	17,750 sq. ft.
Total Square Footage	**30,000 sq. ft.**

Source: West of the West, Sheet A-100, 2/19/24.

The Project would include a total of 100 parking spaces (93 standard and 7 ADA) located primarily along the southern perimeter of the Project Site. Low voltage lighting will be used throughout the Project.

The Project would operate 24 hours a day. According to the applicant, the Project is anticipated to accommodate 35-75 guests per night and 5-25 employees throughout the day. The high season would be from October to May, and low season from June to September.

Access/Parking

Regional access to the Project Site is provided by State Route 247 (SR-247)/Old Woman Springs Road (approximately 2.5 miles west of the Project Site) via Reche Road to the south and Belfield Boulevard. The Project will provide 100 parking spaces (93 standard and 7 ADA). Two driveway entrances will be provided by Belfield Boulevard and the proposed driveway in the southwestern corner of the Project Site would serve as the main driveway for regular access. Both driveways will include a fire apparatus access roads for the Project Site. The primary parking area is located along the southern perimeter of the Project Site, south of the lodge and health club. The Project would also include the installation of new sidewalks adjacent to the Project Site along Belfield Boulevard.

1.3 PROJECT CONSTRUCTION SEQUENCING

For the purpose of analyzing impacts associated with construction activities, this analysis assumes a construction schedule of approximately 12 months with site preparation/grading beginning in 2024. This analysis assumes the Project will be fully operational in 2025. This assumption is conservative and yields

the maximum daily impacts.[2] Construction activities associated with the Project would be undertaken in two main steps: (1) grading/foundation preparation and (2) building construction (including paving and architectural coatings). The Project Site is undeveloped and would not require any demolition.

Grading and foundation preparation would occur for approximately one month and this analysis assumes cut/fill operations would balance soil on-site and no soil import or export would be required.

Building construction would occur for approximately 11 months and would include the construction of the proposed structure, connection of utilities, architectural coatings, and paving the Project Site. Architectural coating and paving are assumed to occur over the final month of the building construction phase.

Conventional construction equipment would be used, such as excavators, backhoes, and both light- and heavy-duty trucks Consistent with the assumptions included within the California Emissions Estimator Model (CalEEMod), the following maximum daily equipment by phase will be assumed for a project site between 5 and 10 acres:

- Grading: 1 excavator, 1 grader, 1 rubber tired dozer, 3 tractors/loaders/backhoes
- Building Construction: 1 crane, 3 forklifts, 1 generator set, 3 tractors/loaders/backhoes, 1 welder
- Paving: 2 pavers, 2 paving equipment, 2 rollers
- Architectural Coatings: 1 air compressor

Truck trips are expected to reach the Project Site via SR-247/Old Woman Springs Road and Reche Road. Due to the existing topography of the Project Site, it is assumed that soil would balance on-site and no soil import or export would be required.

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2 It is noted that construction will likely not begin in 2024. However, the construction schedule/phasing is conceptual and is primarily intended to identify worst case construction impacts. If construction begins later than 2024, construction impacts associated with air quality and greenhouse gas emissions would be reduced compared to what is analyzed herein. Emission factors improve each calendar year into the future and associated air quality and greenhouse gas emissions would be reduced accordingly.

2.0 ENVIRONMENTAL SETTING

2.1 AIR QUALITY SETTING

Mojave Desert Air Basin

The Project Site is located within the San Bernardino County portion of the Mojave Desert Air Basin ("MDAB" or "Basin). The Basin is composed of a 21,000-square-mile area that includes the eastern portion of Kern County, the eastern portion of Riverside County, the northeastern side of Los Angeles County, and almost all of San Bernardino County. The regional climate within the Basin is characterized by hot, dry summers, mild winters, very infrequent rainfalls, moderate wind, and low humidity. The MDAB is home to many mountain ranges containing long, broad valleys. The Sierra Nevada Mountains provide a natural barrier to the north, inhibiting cold air masses originating from Canada and Alaska from passing through the MDAB. Prevailing winds in the MDAB come from the west and the south, caused by air masses pushed onshore in Southern California by differential heating and channeled inland through mountain passes. The San Gabriel and San Bernardino mountain ranges block the majority of cool, moist air from the south; this results in infrequent rainfalls and air pollutants settling in over the region. Local air quality in the Basin is affected by transport of pollutants from other air basins. The Basin is downwind of the South Coast Air Basin and, though to a lesser extent, is downwind from the San Joaquin Valley Air Basin. Prevailing winds transport ozone and ozone precursors from both regions into and through the MDAB during the summer ozone season.

Air Pollutants of Concern

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards for outdoor concentrations. The federal and state standards have been set at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons such as children, pregnant women, and the elderly, from illness or discomfort. Criteria air pollutants include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter 2.5 microns or less in diameter (PM2.5), particulate matter ten microns or less in diameter (PM10), and lead (Pb). Note that reactive organic gases (ROGs), which are also known as reactive organic compounds (ROCs) or volatile organic compounds (VOCs), and nitrogen oxides (NOx) are not classified as criteria pollutants. However, ROGs and NOx are widely emitted from land development projects and participate in photochemical reactions in the atmosphere to form O_3; therefore, NOx and ROGs are relevant to the Proposed Project and are of concern in the Basin. As such, they are listed below along with the criteria pollutants. Sources and health effects

commonly associated with criteria pollutants are summarized in **Table 2, Criteria Pollutants Summary of Common Sources and Effects.**

Table 2
Criteria Pollutants Summary of Common Sources and Effects

Pollutant	Major Man-Made Sources	Human Health & Welfare Effects
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuels is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include moto vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Ozone (O_3)	Formed by a chemical reaction between volatile organic compounds (VOC) and nitrous oxides (NOx) in the presence of sunlight. VOCs are also commonly referred to as reactive organic gases (ROGs). Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles, and dyes.
Particulate Matter (PM10 & PM2.5)	Produced by power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and others.	Increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
Sulfur Dioxide (SO_2)	A colorless, nonflammable gas formed when fuel containing sulfur is burned; when gasoline is extracted from ore. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant; aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron, and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.

Source: CAPCOA, Health Effects. Available: http://www.capcoa.org/health-effects/.

2.2 AMBIENT AIR QUALITY

Criteria Air Pollutant Monitoring Data

Ambient air quality in Landers can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. Existing levels of ambient air quality and historical trends and projections are documented by measurements made by the Mojave Desert Air Quality Management District

(MDAQMD), the air pollution regulatory agency in the Basin. The MDAQMD maintains air quality monitoring stations which process ambient air quality measurements throughout the Basin.

The purpose of the monitoring station is to measure ambient concentrations of pollutants and determine whether ambient air quality meets the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS). Ozone and particulate matter (PM10 and PM2.5) are pollutants of particular concern in the Basin. The monitoring station located closest to the Project Site and most representative of air quality at CARB Station No. 36306 located in Victorville. Ambient emission concentrations vary due to localized variations in emissions sources and climate and should be considered "generally" representative of ambient concentrations near the Project Site. See **Table 3, Air Monitoring Station Ambient Pollutant Concentrations**.

Table 3
Air Monitoring Station Ambient Pollutant Concentrations

Pollutant	Standards[1]	Year		
		2020	2021	2022
Ozone (O_3)				
Maximum 1-hour concentration monitored (ppm)		0.112	0.112	0.100
Maximum 8-hour concentration monitored (ppm)		0.095	0.098	0.090
Number of days exceeding state 1-hour standard	0.09 ppm	4	8	3
Number of days exceeding federal/state 8-hour standard	0.070 ppm	35 / 38	34 / 35	44 / 49
Particulate Matter (PM2.5)				
Maximum 24-hour concentration monitored ($\mu g/m^3$)		48.7	87.1	24.6
Annual average concentration monitored ($\mu g/m^3$)		10.3	10.2	9.0
Number of days exceeding federal standards		4	1	0
Particulate Matter (PM10)				
Maximum 24-hour concentration monitored ($\mu g/m^3$)		NA	NA	NA
Annual average concentration monitored ($\mu g/m^3$)		NA	NA	NA
Number of days exceeding federal/state standards		1.9 / NA	1.0 / NA	2.1 / NA

Source: CARB. Select-8 Summary. Available at: https://www.arb.ca.gov/adam/select8/sc8start.php, accessed January 26, 2024.
NA = not available
[1] *Parts by volume per million of air (ppm), micrograms per cubic meter of air ($\mu g/m^3$), or annual arithmetic mean (aam).*
[2] *The 8-hour federal O_3 standard was revised from 0.075 ppm to 0.070 ppm in 2015. The statistics shown are based on the 2015 standard of 0.070 ppm.*

The attainment status for the Basin region is included in **Table 4, Attainment Status of Criteria Pollutants in the Mojave Desert Air Basin**. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The Basin region

is designated as a partial nonattainment area for federal ozone and PM2.5 standards and is designated as nonattainment for state ozone, PM10, and PM2.5 standards.

Table 4
Attainment Status of Criteria Pollutants in the Mojave Desert Air Basin

Pollutant	State	Federal
Ozone (O_3)	Non-Attainment	Non-Attainment*
Particulate Matter (PM10)	Non-Attainment	Non-Attainment**
Particulate Matter (PM2.5)	Non-Attainment	Unclassified/Attainment
Carbon Monoxide (CO)	Attainment	Unclassified/Attainment
Nitrogen Dioxide (NO_2)	Attainment	Unclassified/Attainment
Sulfur Dioxide (SO_2)	Attainment	Unclassified/Attainment
Lead	Attainment	Unclassified/Attainment

** Southwest corner of desert portion of San Berardino County only*
*** San Berardino County portion only*
Source: MDAQMD. MDAQMD Attainment Status, available online at https://www.mdaqmd.ca.gov/home/showpublisheddocument/1267/636337468837000000, accessed April 12, 2024.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes, such as petroleum refining and chrome-plating operations; commercial operations, such as gasoline stations and dry cleaners; and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute affects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

To date, CARB has designated 244 compounds as TACs. Additionally, 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 a relatively few compounds.[3]

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

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiovascular diseases.[4] According to the MDAQMD, residences, schools, daycare centers, playgrounds, and medical facilities are considered to be sensitive receptor land uses; 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 significance threshold criteria number four:[5]

- 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;

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3 California Air Resources Board, *CARB Identified Toxic Air Contaminants*. Available online at: https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants.

4 California Air Resources Board, *Sensitive Receptor Assessment*. Available online at: https://ww2.arb.ca.gov/capp-resource-center/community-assessment/sensitive-receptor-assessment.

5 MDAQMD, *CEQA and Federal Conformity Guidelines*, 2020.Available online at: https://www.mdaqmd.ca.gov/home/showpublisheddocument/8510/638126583450270000, accessed January 26, 2024.

- A gasoline dispensing facility within 300 feet.

The closest air quality sensitive receptors would be the residence 281 feet to the west of the Project Site and the residence 286 feet to the north of the Project Site.

3.0 REGULATORY FRAMEWORK

3.1 FEDERAL

Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the U.S. Environmental Protection Agency (U.S. EPA) to establish NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants. On April 2, 2007, the Supreme Court found that carbon dioxide is an air pollutant covered by the CAA; however, no NAAQS have been established for carbon dioxide.

These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The U.S. EPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for nonattainment or attainment designations. **Table 3** lists the federal attainment status of the Basin for the criteria pollutants.

National Emissions Standards for Hazardous Air Pollutants Program

Under federal law, 187 substances are currently listed as hazardous air pollutants (HAPs). Major sources of specific HAPs are subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAPS) program. The U.S. EPA is establishing regulatory schemes for specific source categories and requires implementation of the Maximum Achievable Control Technologies (MACT) for major sources of HAPs in each source category. State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program and is aimed at HAPs that are a problem is California. The state has formally identified 244 substances as TACs and is adopting appropriate control measures for each. Once adopted at the state level, each air district will be required to adopt a measure that is equally or more stringent.

National Ambient Air Quality Standards

The federal CAA required the U.S. EPA to establish NAAQS. The NAAQS set primary standards and secondary standards for specific air pollutants**.** Primary standards define limits for the intention of protecting public health, which include sensitive populations such as asthmatics, children, and the elderly. Secondary Standards define limits to protect public welfare to include protection against decreased visibility, damage to animals, crops, vegetation, and buildings. A summary of the federal ambient air quality standards is shown in **Table 5, National Ambient Air Quality Standards**.

Table 5
National Ambient Air Quality Standards

Pollutant		Primary/Secondary	Averaging Time	Level
Carbon monoxide		Primary	8 hours	9 ppm
			1 hour	35 ppm
Lead		Primary and secondary	Rolling 3-month average	0.15 μg/m^3
Nitrogen dioxide		Primary	1 hour	100 ppb
		Primary and secondary	Annual	0.053 ppm
Ozone		Primary and secondary	8 hours	0.070 ppm
Particulate Matter	PM2.5	Primary	Annual	12 μg/m^3
		Secondary	Annual	15 μg/m^3
		Primary and secondary	24 hours	35 μg/m^3
	PM10	Primary and secondary	24 hours	150 μg/m^3
Sulfur dioxide		Primary	1 hour	75 ppb
		Secondary	3 hours	0.5 ppm

Source: California Air Resources Board. 2016. Ambient Air Quality Standards. Available online at: https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf, accessed January 29, 2024.

3.2 STATE

California Clean Air Act of 1988

The California CAA of 1988 (CCAA) allows the state to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. The California Air Resources Board (CARB), a part of the California Environmental Protection Agency (Cal EPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. The CCAA, amended in 1992, requires all air quality management districts (AQMDs) in the state to achieve and maintain the CAAQS. The CAAQS are generally stricter than national standards for the same pollutants and has also established state standards for sulfates, hydrogen sulfide,

vinyl chloride, and visibility-reducing particles, for which there are no national standards. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB also has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

California Ambient Air Quality Standards

The federal CAA permits states to adopt additional or more protective air quality standards if needed. California has set standards for certain pollutants, such as particulate matter and ozone, which are more protective of public health than respective federal standards. California has also set standards for some pollutants that are not addressed by federal standards. The state standards for ambient air quality are summarized in **Table 6, California Ambient Air Quality Standards**.

Table 6
California Ambient Air Quality Standards

Pollutant		Averaging Time	Level
Carbon monoxide		8 hours	9 ppm
		1 hour	20 ppm
Lead		30-day average	1.5 μg/m^3
Nitrogen dioxide		1 hour	0.180 ppm
		Annual	0.030 ppm
Ozone		8 hours	0.070 ppm
		1 hour	0.09 ppm
Particulate matter	PM2.5	Annual	12 μg/m^3
	PM10	24 hours	50 μg/m^3
		Annual	20 μg/m^3
Sulfur dioxide		1 hour	0.25 ppm
		24 hours	0.04 ppm
Sulfates		24 hours	25 μg/m^3
Hydrogen sulfide		1 hour	0.03 ppm
Vinyl chloride		24 hours	0.01 ppm

Source: California Air Resources Board. 2016. Ambient Air Quality Standards. Available online at: https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf, accessed January 29, 2024.

California State Implementation Plan

The federal CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The SIP is a living document that is periodically

modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The EPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the EPA for approval and publication in the Federal Register. The MDAQMD is responsible for developing, updating, and implementing the Air Quality Management Plan for the area, in coordination with the Southern California Association of Governments. The MDAB has adopted several plans to attain state and federal standards for ozone and particulate matter. The plans for the MDAB are listed below:

Ozone Plans

The MDAQMD adopted a Federal 8-Hour Ozone Attainment Plan (Ozone Plan) for the Western Mojave Desert non-attainment area on June 9, 2008. This area includes part of the San Bernardino County portion of the MDAQMD as well as the Antelope Valley portion of Los Angeles County. The Ozone Plan demonstrates that the MDAQMD will meet the primary required Federal planning milestones: reach attainment of the 8-hour ozone national ambient air quality standard by June 2021, presents the progress the MDAQMD will make towards meeting all required ozone planning milestones, and discusses the newest 0.075 part per million 8-hour ozone national ambient air quality standard.

Particulate Matter Plans

The MDAQMD adopted a Federal PM10 Attainment Plan (PM10 Plan) for the Mojave Desert Planning Area on July 31, 1995. The PM10 plan indicates that local sources of wind-blown fugitive dust be controlled with strategies that focus on unpaved road travel, construction, and local disturbed areas in populated areas as well as stationary dust sources operating in the rural Lucerne Valley.

California Air Toxics "Hot Spots" Information and Assessment Act (AB 2588)

The California Air Toxics Program is supplemented by the Air Toxics "Hot Spots" program, which became law (AB 2588, Statutes of 1987) in 1987. In 1992, the AB 2588 program was amended by Senate Bill 1731 to require facilities that pose a significant health risk to the community to perform a risk reduction audit and reduce their emissions through implementation of a risk management plan. Under this program, which is required under the Air Toxics "Hot Spots" Information and Assessment Act (Section 44363 of the California

Health and Safety Code), facilities are required to report their air toxics emissions, assess health risks, and notify nearby residents and workers of significant risks when present.

Typically, land development projects generate diesel emissions from construction vehicles during the construction phase, as well as some diesel emissions from small trucks during the operational phase. Diesel exhaust is mainly composed of particulate matter and gases, which contain potential cancer-causing substances. Emissions from diesel engines currently include over 40 substances that are listed by EPA as hazardous air pollutants and by CARB as TACs. On August 27, 1998, CARB identified particulate matter in diesel exhaust as a TAC, based on data linking diesel particulate emissions to increased risks of lung cancer and respiratory disease.[6]

In March 2015, the OEHHA adopted "The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments" in accordance with the Health and Safety Code, Section 44300. The Final Guidance Manual incorporates the scientific basis from three earlier developed Technical Support Documents to assess risk from exposure to facility emissions. The 2015 OEHHA Final Guidance has key changes including greater age sensitivity in particular for children, decreased exposure durations, and higher breathing rate profiles. Because cancer risk could be up to three times greater using this new guidance, it may result in greater mitigation requirements, more agency backlog, and increased difficulty in getting air permits. Regardless of the change in calculation methodology, actual emissions and cancer risk within South Coast Air Basin has declined by more than 50% since 2005.

The CARB provides a computer program, the Hot Spots Analysis and Reporting Program (HARP), to assist in a coherent and consistent preparation of a Health Risk Assessment (HRA). HARP2, an update to HARP, was released in March 2015. HARP2 has a more refined risk characterization in HRA and CEQA documents and incorporates the 2015 OEHHA Final Guidance.

3.3 REGIONAL

Mojave Desert Air Quality Management District

The MDAQMD is the air pollution control district for San Bernardino County's High Desert and Riverside County's Palo Verde Valley. The MDAQMD has primary responsibility for regulating stationary sources of air pollution located within its jurisdictional boundaries. The MDAQMD implements air quality programs required by state and federal mandates, enforces rules and regulations based on air pollutions laws and educates businesses and residents about their role in protecting air quality and the risks of air

6 Diesel exhaust is included within pollutants subject to the hotspot program. Please refer to OEHHA's Air Toxics Hot Spot Program Risk Assessment Guidelines. Available online at: https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0.

pollution. Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties.[7]

MDAQMD Rules and Regulations

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

- Rule 401 – *Visible Emissions.* A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

    1. As dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or

    2. (b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection (a) of this rule.

- Rule 402 – *Nuisance.* A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property

- Rule 403 – *Fugitive Dust.*

    (C) Requirements

    1. Any person shall not cause or allow the emissions of fugitive dust from any transport, handling, construction or storage activity so that the visible fugitive dust remains visible in the atmosphere beyond the property line of the emission source, except during high winds.

    2. A person shall take every reasonable precaution to minimize fugitive dust emissions from wrecking, excavation, grading, clearing of land and solid waste disposal operations.

    3. A person shall not cause or allow PM10 to exceed 100 micrograms per cubic meter when determined as the difference between upwind and downwind samples collected on federal

7 MDAQMD. *What is MDAQMD?* Available online at: https://www.mdaqmd.ca.gov/about-us, accessed January 26, 2024.

reference method samplers at the property line for a minimum of five hours, except during high winds. Installation of samplers or monitors to determine compliance with this subsection shall be required at the Air Pollution Control Officer's (APCO) discretion.

4. Cities, Towns, and the County of San Bernardino shall collectively:

    a) Stabilize sufficient publicly maintained heavily traveled unpaved roads to reduce fugitive dust entrainment and wind erosion by at least 1,541 tons per year of PM10 emissions relative to 1990.

5. The Owner/Operator of a site undergoing weed abatement activity shall not:

    a) Disrupt the soil crust to the extent that visible fugitive dust is created due to wind erosion.

6. The Owner/Operator of any construction/demolition activities subject to this rule in accordance with subsection (A)(2) of this rule shall:

    a) Obtain and maintain a District-approved Dust Control Plan as set forth by Section (D) of this Rule; and

    b) Use periodic watering for short-term stabilization of disturbed surface area to minimize visible fugitive dust emissions. for the purposes of this rule, use of a water truck to maintain moist disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient to maintain compliance; and

    c) Take actions sufficient to prevent project-related trackout onto paved surfaces; and;

    d) Cover loaded haul vehicles while operating on publicly maintained paved surfaces; and

    e) Stabilize graded site surfaces upon completion of grading when subsequent development is delayed or expected to be delayed more than thirty days, except when such delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate visible fugitive dust emissions; and

    f) Cleanup project-related trackout or spills on publicly maintained paved surfaces within twenty-four hours; and

    g) Reduce non-essential earth-moving activity under high wind conditions. For purposes of this rule, a reduction in earth-moving activity when visible dusting occurs from moist and

dry surfaces due to wind erosion shall be considered sufficient to maintain compliance; and

h) Maintain the natural topography to the extent possible during grading and other earth movement; and

i) Provide a construction schedule that specifies construction of parking lots and paved roads first, where feasible, and upwind structures prior to downwind structures; and

j) Cover or otherwise contain bulk material carried on haul trucks operating on paved roads; and

k) Remove bulk material tracked onto paved road surfaces.

- Rule 404: *Particulate Matter Concentration.* A person shall not discharge into the atmosphere from any source, particulate matter except liquid sulfur compounds, in excess of the concentration at standard conditions, shown in Table 404(a). Where the volume discharged is between figures listed in the table, the exact concentration permitted to be discharged shall be determined by linear interpolation.

  1. The provisions of this rule shall not apply to emissions resulting from the combustion of liquid or gaseous fuels in steam generators or gas turbines.

  2. For the purposes of this rule, emissions shall be averaged over one complete cycle of operation or one hour, whichever is the lesser time period. Refer to the official text of the Rule at the MDAQMD website to see Table 404(a).

- Rule 405: *Solid Particulate Matter Weight*

  1. A person shall not discharge into the atmosphere from any source, solid particulate matter including lead and lead compounds, in excess of the rate shown in Table 405 (a). Where the process weight per hour is between figures listed in the table, the exact weight of permitted discharge shall be determined by linear interpolation.

  2. For the purposes of this rule, emissions shall be averaged over one complete cycle of operation or one hour, whichever is the lesser time period. Refer to the official text of the Rule at the MDAQMD website to see Table 405(a).

- Rule 409: *Combustion Contaminants.* A person shall not discharge into the atmosphere from the burning of fuel, combustion contaminants exceeding 0.23 gram per cubic meter (0.1 grain per cubic foot) of gas

calculated to 12 percent of carbon dioxide (CO_2) at standard conditions averaged over a minimum of 25 consecutive minutes.

3.4 LOCAL

County of San Bernardino General Plan

The County's Natural Resources Element of the General Plan provides goals and policies to assist the County in planning a future that is conscientious of natural resources, such as air quality. Goals and policies that are relevant to the Project are listed below:[8]

Goal NR-1: Air quality that promotes health and wellness of residents in San Bernardino County through improvements in locally-generated emissions.

- **Policy NR-1.1. Land use:** We promote compact and transit-oriented development countywide and regulate the types and locations of development in unincorporated areas to minimize vehicle miles traveled and greenhouse gas emissions.
- **Policy NR-1.2. Indoor air quality.** We promote the improvement of indoor air quality through the California Building and Energy Codes and through the provision of public health programs and services.
- **Policy NR-1.3: Coordination on air pollution.** We collaborate with air quality management districts and other local agencies to monitor and reduce major pollutants affecting the county at the emission source.
- **Policy NR-1.6: Fugitive fust emissions.** We coordinate with air quality management districts on requirements for dust control plans, revegetation, and soil compaction to prevent fugitive dust emissions.
- **Policy NR-1.8: Construction and operations.** We invest in County facilities and fleet vehicles to improve energy efficiency and reduce emissions. We encourage County contractors and other builders and developers to use low-emission construction vehicles and equipment to improve air quality and reduce emissions.

8 County of San Bernardino, *Countywide Policy Plan*, 2020. Available online at: https://www.sbcounty.gov/Uploads/LUS/GeneralPlan/Policy%20Plan%20and%20Policy%20Maps.pdf, accessed January 26, 2024.

- **Policy NR 1.9: Building design and upgrades.** We use the CALGreen Code to meet energy efficiency standards for new buildings and encourage the upgrading of existing buildings to incorporate design elements, building materials, and fixtures that improve environmental sustainability and reduce emissions.

County of San Bernardino Municipal Code

Section 83.01.040 – Air Quality[9]

c) Diesel Exhaust Emissions Control Measures. The following emissions control measures shall apply to all discretionary land use projects approved by the County on or after January 15, 2009:

1. On-Road Diesel Vehicles. On-road diesel vehicles are regulated by the State of California Air Resources Board.

2. Off-Road Diesel Vehicle/Equipment Operations. All business establishments and contractors that use off-road diesel vehicle/equipment as part of their normal business operations shall adhere to the following measures during their operations in order to reduce diesel particulate matter emissions from diesel-fueled engines:

   A. Off-road vehicles/equipment shall not be left idling on site for periods in excess of five minutes. The idling limit does not apply to:

      i. Idling while queueing;

      ii. Idling to verify that the vehicle is in safe operating condition;

      iii. Idling for testing, servicing, repairing or diagnostic purposes;

      iv. Idling necessary to accomplish work for which the vehicle was designed (such as operating a crane)

      v. Idling required to bring the machine system to operating temperature; and

      vi. Idling necessary to ensure safe operation of the vehicle.

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9 San Bernardino County Municipal Code. *Section 83.01.040 – Air Quality*. Available online at: https://codelibrary.amlegal.com/codes/sanbernardino/latest/sanberncty_ca/0-0-0-169099, accessed January 29, 2024.

B. Use reformulated ultra-low-sulfur diesel fuel in equipment and use equipment certified by the U.S. EPA or that pre-dates U.S. EPA regulations.

C. Maintain engines in good working order to reduce emissions.

D. Signs shall be posted requiring vehicle drivers to turn off engines when parked.

E. Any requirements or standards subsequently adopted by the South Coast Air Quality Management District, the Mojave Desert Air Quality Management District or the California Air Resources Board.

F. Provide temporary traffic control during all phases of construction.

G. On-site electrical power connections shall be provided for electric construction tools to eliminate the need for diesel-powered electric generators, where feasible.

H. Maintain construction equipment engines in good working order to reduce emissions. The developer shall have each contractor certify that all construction equipment is properly serviced and maintained in good operating condition.

I. Contractors shall use ultra-low sulfur diesel fuel for stationary construction equipment as required by Air Quality Management District (AQMD) Rules 431.1 and 431.2 to reduce the release of undesirable emissions.

J. Substitute electric and gasoline-powered equipment for diesel-powered equipment, where feasible.

4.0 AIR QUALITY ANALYSIS

4.1 THRESHOLDS AND METHODOLOGY

Thresholds of Significance

The impact analysis provided below is based on the application of the following *California Environmental Quality Act (CEQA) Guidelines* Appendix G, which indicates that a Project would have a significant impact on air quality if it would:

1. Conflict with or obstruct implementation of any applicable air quality plan.

    - Consistency with these attainment plans is determined through the following criterion:

        - **Consistency Criterion No. 1**: Determining project consistency with local land use and/or population projections;

        - **Consistency Criterion No. 2**: Demonstrating project compliance with relevant MDAQMD rules and regulations; and

        - **Consistency Criterion No**. **3**: Demonstrating project implementation will not increase the frequency or severity of a violation in the federal or state ambient air quality standards.

2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.

3. Expose sensitive receptors to substantial pollutant concentrations.

4. Result in other emissions (such as those leading to odors), adversely affecting a substantial number of people.

MDAQMD Thresholds

The MDAQMD CEQA and Federal Conformity Guidelines (MDAQMD Guidelines) set forth methodologies and quantitative significance thresholds that a lead agency may use to estimate and evaluate the significance of a project's air emissions. According to the MDAQMD, any project is significant if it triggers or exceeds the most appropriate evaluation criteria. The District will clarify upon request which threshold is most appropriate for a given project; in general, the emissions comparison (criteria number 1) is sufficient:

1. Generates total emissions (direct and indirect) in excess of the thresholds given in **Table 7**;

2. Generates a violation of any ambient air quality standard when added to the local background;

3. Does not conform with the applicable attainment or maintenance plan(s);

4. Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to 1.

A project with significant impacts must incorporate mitigation sufficient to reduce its impact to a level that is not significant. A project that cannot be mitigated to a level that is not significant must incorporate all feasible mitigation. 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.[10] See **Table 7, Mojave Desert AQMD Air Quality Significance Thresholds,** below.

Table 7
Mojave Desert AQMD Air Quality Significance Thresholds

Mass Daily Thresholds[a]		
Pollutant	**Annual Threshold (short tons)**	**Daily Threshold (pounds)**
NOx	25	137
VOC	25	137
PM10	15	82
PM2.5	12	65
SOx	25	137
CO	100	548
Lead	0.6	3
Greenhouse Gas (GHG) Thresholds		
GHG	100,000 MT/yr or 548,000 pounds/day CO_2e	

[a] *Source: MDAQMD.*

10 MDAQMD, *MDAQMD CEQA and Federal Conformity Guidelines*, 2020. Available online at: https://www.mdaqmd.ca.gov/home/showpublisheddocument/8510/638126583450270000, accessed January 26, 2024.

Methodology

This analysis focuses on the nature and magnitude of the change in the air quality environment due to implementation of the Project. Air pollutant emissions associated with the Project would result from Project operations and from Project-related traffic volumes. Construction activities would also generate air pollutant emissions at the Project Site and on roadways resulting from construction-related equipment and traffic. The net increase in Project Site emissions generated by these activities and other secondary sources have been quantitatively estimated and compared to thresholds of significance recommended by the MDAQMD (see **Project Impacts** subsection, below).

Construction Emissions

The regional construction emissions associated with the Project were calculated using the California Emissions Estimator Model (CalEEMod). CalEEMod was developed in collaboration with the air districts of California as a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects.

Construction activities associated with site preparation, grading, and building construction would generate pollutant emissions. Specifically, these construction activities would temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants. These construction emissions were compared to the thresholds established by the MDAQMD.

Operational Emissions

Operational emissions associated with the Project were also calculated using CalEEMod. Operational emissions associated with the Project would comprise mobile source emissions, energy demand, and other area source emissions. Mobile source emissions are generated by the increase in motor vehicle trips to and from the Project Site associated with operation of the Project. Area source emissions are generated by landscape maintenance equipment, application of architectural coatings, and consumer products. To determine if a regional air quality impact would occur, the increase in emissions is compared with the MDAQMD's recommended regional thresholds for operational emissions.

4.2 PROJECT IMPACTS

AQ Impact 1 **Would implementation of the Proposed Project conflict with or obstruct implementation of any applicable air quality plan? *(Less than Significant).***

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

The Project is located within the MDAB and is regulated by the MDAQMD. As previously discussed, the MDAQMD PM10 Attainment Plan and Ozone Attainment Plan are the AQMPs for the Basin and serve to guide the Basin into compliance with all federal and state air quality standards. The PM10 Attainment Plan and Ozone Attainment Plan contain control measures and related emission reduction measures based upon emissions projections for future development projects from land use, employment characteristics, and population. Consistency with these attainment plans is determined through the following criterion:

- **Consistency Criterion No. 1**: Determining project consistency with local land use and/or population projections;
- **Consistency Criterion No. 2**: Demonstrating project compliance with relevant MDAQMD rules and regulations; and
- **Consistency Criterion No**. 3: Demonstrating project implementation will not increase the frequency or severity of a violation in the federal or state ambient air quality standards.

Criterion 1: Consistency with local land use plans and/or population projections.

Area air quality planning, including the AQMPs, assumes that there will be emissions from new growth, but that such emissions may not impede the attainment and may actually contribute to the attainment of applicable air quality standards within the Basin. Growth projections included in the AQMPs form the basis for projected emissions for the Basin; these projections are based on general plan land use designations as well as the Southern California Association of Government's (SCAG) Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) demographics. SCAG assembles

population, housing, and employment forecasts based on local general plans as well as input from local governments, such as the County. Although the SCAG has adopted the Connect SoCal 2024, the MDAQMD has not released an updated AQMP that utilizes data from the most previous RTP/SCS. The MDAQMD has incorporated demographic growth forecasts for various socioeconomic categories from the 2016-2040 RTP/SCS into the AQMPs.

The County's land use and zoning designations serve to regulate various aspects of how land can be used. The Project Site is designated as Commercial and is zoned for Homestead Valley/Rural Commercial. The Rural Commercial land use zoning district provides sites for retail trade and personal services, repair services, lodging services, recreation and entertainment services, transportation services, and similar and compatible uses. Per the County's Code, the Rural Commercial zone permits hotel and motel uses with more than 20 guest rooms through a Minor Use Permit.[11]

According to City/County Population and Housing Estimates from the Department of Finance, as of January 2023, the County's unincorporated area population estimate was 297,482 persons and the County's total area population estimate was 2,182,056 persons.[12] The 2016-2040 RTP/SCS estimated that the County's forecasted population to reach 2,731,000 persons by the year 2040.[13] Growth forecasts for employment in the County were expected to reach 1,028,000 jobs by 2040.[14]

The Project proposes to develop a hotel that would include a community market, restaurant, lodge, health club, pools, and 35 guest rooms. As previously mentioned, the Project is permitted through a Minor Use Permit. Given the commercial nature of the Project, employment would be generated from the Project. Although the Project would increase employment in the area, it is anticipated that employees of the Project would primarily consist of existing residents in the San Bernardino County area and the Project would not result in a high number of employees permanently relocating to the region. Estimating the number of future employees who may choose to relocate to the County would be highly speculative, since many factors influence personal housing location decisions (e.g., family income levels and the cost and availability of suitable housing in the local area). Nevertheless, in an effort to present a worst-case population growth

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11 County of San Bernardino Code, Chapter 82.05 Commercial Land Use Zoning Districts. Available online at: https://codelibrary.amlegal.com/codes/sanbernardino/latest/sanberncty_ca/0-0-0-167997#JD_Chapter82.05, accessed March 26, 2024.

12 California Department of Finance, Demographic Research Unit, "E-5 Population and Housing Estimates, 1/1/2023." Available online at: https://dof.ca.gov/Forecasting/Demographics/Estimates/estimates-e5-2010-2021/ , accessed March 26, 2024.

13 Southern California Association of Governments, *2016-2045 RTP/SCS*, Challenges in a Changing Region, Table 3.1. 2016. Available online at: https://scag.ca.gov/sites/main/files/file-attachments/f2016rtpscs.pdf?1606005557, accessed March 26, 2024.

14 *Ibid.*

scenario, this analysis assumes the Project would employ up to 25 full-time employees, all of whom would permanently relocate to the County. Based on the employment forecast from the 2016-2040 RTP/SCS, the employment generated from the project would represent less than one percent of the County's projected employment.

Based on the San Bernardino County average household size of 3.15 persons, the Project could result in a maximum population increase of approximately 79 persons.[15] The 2016-2040 RTP/SCS growth forecasts estimated the County's population to reach 2,731,000 persons by the year 2040, representing a total increase of 548,944 persons.[16] The Project's potential maximum increase of 79 persons would represent less than one percent of the County's projected increase in population between the years 2023 and 2040. The Project would not generate population or employment growth beyond what was forecasted by the SCAG. As the MDAQMD has incorporated these forecasts on population, housing, and employment into the AQMPs, the Project would be consistent with the AQMPs, making impacts less than significant.

Criterion 2: Compliance with applicable MDAQMD Rules and Regulations

Construction-related emissions would be temporary in nature, lasting only for the duration of the construction period, and would not have a long-term impact on the region's ability to meet state and federal air quality standards. Furthermore, the Project will be required to comply with all applicable MDAQMD rules and regulations. For example, the Project must comply with MDAQMD Rules 401, 402, and 403 for the control of fugitive dust during construction. The Project would comply with any and all applicable rules established by the MDAQMD. By meeting MDAQMD rules and regulations, Project construction activities will be consistent with the goals and objectives of the AQMPs to improve air quality in the Basin.

Criterion 3: Demonstrating project implementation will not increase the frequency or severity of a violation in the federal or state ambient air quality standards.

Also discussed herein (see **AQ Impact 2** and **AQ Impact 3**), the Project would not result in operational air quality emissions that exceed the MDAQMD thresholds of significance. And, as discussed in more detail below, projects, land uses, and activities that are consistent with the applicable assumptions used in the

15 California Department of Finance, Demographic Research Unit, "E-5 Population and Housing Estimates, 1/1/2023." Available online at: https://dof.ca.gov/Forecasting/Demographics/Estimates/estimates-e5-2010-2021/ , accessed March 26, 2024.

16 Southern California Association of Governments, *2016-2045 RTP/SCS*, Challenges in a Changing Region, Table 3.1. 2016. Available online at: https://scag.ca.gov/sites/main/files/file-attachments/f2016rtpscs.pdf?1606005557, accessed March 26, 2024.

development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP.

The Project's consistency with all three criterion demonstrates that it would not conflict with or obstruct the implementation of any AQMPs. Therefore, impacts are less than significant.

AQ Impact 2 **Would implementation of the Proposed Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard? *(Less than Significant).***

A project may have a significant impact if project-related emissions would result in a cumulatively considerable net increase for an criteria pollutant for which the region in nonattainment under applicable federal or state ambient air quality standards. The cumulative analysis of air quality impacts follows the MDAQMD's guidance such that construction or operational project emissions will be considered cumulatively considerable if project-specific emissions exceed an applicable MDAQMD recommended daily threshold.

Construction Significance Analysis

For purposes of this analysis, it is estimated that the Project would be constructed in approximately 12 months with construction beginning mid-2024 and project operations commencing in 2025. While construction may begin at a later date and/or take place over a longer period, these assumptions represent the earliest and fastest build-out potential resulting in a worst-case daily impact scenario for purposes of this analysis. This analysis assumes construction would be undertaken with the following primary construction phases: (1) grading/foundation preparation and (2) building construction. The Project would also require paving and architectural coatings, which have conservatively been assumed to occur concurrently during the final month of the building construction phase.

The analysis of regional daily construction emissions has been prepared utilizing the CalEEMod computer model. Predicted maximum daily construction-generated emissions for the Project are summarized in **Table 8, Construction-Related Criteria Pollutant and Precursor Emissions – Maximum Pounds per Day.** These calculations assume that appropriate dust control measures would be implemented as part of the Project during each phase of development, as specified by MDAQMD Rule 403 (Fugitive Dust). As shown in **Table 8**, the peak daily emissions generated during the construction of the Project would not exceed any of the emission thresholds recommended by the MDAQMD. Therefore, Project construction would not

result in a cumulatively considerable net increase of any criteria air pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard.

Table 8
Construction-Related Criteria Pollutant and Precursor Emissions – Maximum Pounds per Day

Maximum Pounds Per Day						
Construction Year	**ROG**	**NOx**	**CO**	**SO_2**	**PM10**	**PM2.5**
2024	1.98	18.30	20.20	0.03	3.80	2.15
2025	10.10	19.10	26.90	0.04	1.27	0.86
Threshold	**137**	**137**	**548**	**137**	**82**	**65**
Exceed?	*No*	*No*	*No*	*No*	*No*	*No*
Maximum Annual Emissions (short tons)						
Construction Year	**ROG**	**NOx**	**CO**	**SO_2**	**PM10**	**PM2.5**
2024	0.09	0.80	0.96	< 0.01	0.08	0.05
2025	0.17	0.82	1.08	< 0.01	0.05	0.04
Threshold	**25**	**25**	***100***	**25**	**15**	**12**
Exceed?	*No*	*No*	*No*	*No*	*No*	*No*

*Source: Impact Sciences January 2024. See **Appendix A** to this report. Emissions shown are the highest daily maximum from either summer or winter season.*
Note: Project emissions account for the reductions from MDAQMD Rule 403 (Fugitive Dust).

Operational Significance Analysis

Project-generated emissions would be associated with motor vehicle use, energy use, and area sources, such as the use of natural-gas-fired appliances, landscape maintenance equipment, consumer cleaning products, and architectural coatings associated with the operation of the Project. The operational emissions from the Project were calculated with CalEEMod and the operational emissions were compared against MDAQMD thresholds to determine Project significance. Long-term operational emissions attributable to the Project are summarized in **Table 9, Long-Term Operational Emissions – Maximum Pounds per Day**. As shown, the operational emissions generated by the Project would not exceed the regional thresholds of significance set by the MDAQMD.

Table 9
Long-Term Operational Emissions – Maximum Pounds per Day

Maximum Pounds Per Day						
Source	**ROG**	**NOx**	**CO**	**SO_2**	**PM10**	**PM2.5**
Mobile Source	2.04	2.95	25.70	0.06	5.09	1.32
Area Source	0.98	0.01	1.42	< 0.01	< 0.01	< 0.01
Energy Use	0.02	0.34	0.29	< 0.01	0.03	0.03
Total	*3.04*	*3.30*	*27.41*	*0.08*	*5.13*	*1.36*
Threshold	**137**	**137**	**548**	**137**	**82**	**65**
Exceed?	*No*	*No*	*No*	*No*	*No*	*No*
Maximum Annual Emissions (short tons)						
Source	**ROG**	**NOx**	**CO**	**SO_2**	**PM10**	**PM2.5**
Mobile	0.33	0.53	3.61	0.01	0.87	0.23
Area Source	0.16	< 0.01	0.13	< 0.01	< 0.01	< 0.01
Energy Use	< 0.01	0.05	0.05	< 0.01	< 0.01	< 0.01
Total	*0.49*	*0.59*	*3.79*	*0.01*	*0.87*	*0.23*
Threshold	**25**	**25**	**100**	**25**	**15**	**12**
Exceed?	*No*	*No*	*No*	*No*	*No*	*No*

*Source: Impact Sciences, January 2024. See **Appendix A** to this report. Emissions shown are the highest daily maximum from either summer or winter season.*

As shown in **Table 8** and **Table 9**, the Project's construction and operational emissions would not exceed the MDAQMD's thresholds for any criteria air pollutants. Thus, the Project would also not result in a cumulatively considerable net increase of any criteria air pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard. These impacts are less than significant.

Air Quality Health Impacts

On December 24, 2018, the California Supreme Court published its opinion on the *Sierra Club et al. v. County of Fresno et. Al.* (Case No. S219783) which determined that an environmental review must adequately analyze a project's potential impacts and inform the public how its bare numbers translate to a potential adverse health impact or explain how existing scientific constraints cannot translate the emissions numbers to the potential health impacts.

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health. The national and state ambient air quality standards have been set at levels to protect human health with a

determined margin of safety. As discussed previously, the Basin is in state non-attainment for PM2.5, PM10, and Ozone (O_3) and federal non-attainment for PM10, and O_3. Therefore, an increase in emissions of particulate matter or ozone precursors (ROG and NOx) has the potential to push the region further from reaching attainment status and, as a result, are the pollutants of greatest concern in the region. As noted in **Table 8** and **Table 9** above, the Project will emit criteria air pollutants during construction and operation**.** However, the Project will not exceed MDAQMD thresholds for ozone precursors (ROG and NOx), PM2.5, PM10, or any other criteria air pollutants, and will not result in a cumulatively significant impact for which the region is in non-attainment. With respect to the Project's increase in criteria pollutant emissions, the Project would not have the potential cause significant air quality health impacts. Therefore, impacts are less than significant.

AQ Impact 3 **Would implementation of the Proposed Project expose sensitive receptors to substantial air pollutant concentrations? (*Less than Significant).***

Based on the MDAQMD Guidelines, a significant impact may occur if a project were to generate pollutant concentrations to a degree that would significantly affect sensitive receptors.

Construction

Project impacts related to increased community risk could occur by introducing a new source of localized pollutants during construction and operation with the potential to adversely affect existing sensitive receptors in the Project vicinity. According to the MDAQMD, residences, schools, daycare centers, playgrounds, and medical facilities are considered to be sensitive receptor land uses. 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 significance threshold criteria number four:[17]

- 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;

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17 MDAQMD. CEQA and Federal Conformity Guidelines. Available online at: https://www.mdaqmd.ca.gov/home/showpublisheddocument/8510/638126583450270000, accessed January 26, 2024.

- A gasoline dispensing facility within 300 feet.

The Project is not proposing to develop any of the project types listed above and will not be required to be evaluated against MDAQMD significance threshold criteria number four. The closest air quality sensitive receptors would be the residence 281 feet to the west of the Project Site and the residence 286 feet to the north of the Project Site.

The primary sources of potential TACs under the Project would be construction activity and the associated generation of diesel particulate matter (DPM) emissions from the use of off-road diesel equipment required for grading, paving, and other construction activities. The amount to which nearby sensitive receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk. Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. Construction of the Project would not have the potential to generate large amounts of DPM since a minimal amount of daily heavy construction equipment will be utilized and the overall construction duration would be short (approximately 12 months). Furthermore, the low levels of diesel exhaust would primarily be emitted during the grading/foundational preparation phase, which is anticipated to last only one month total. Average daily diesel exhaust emissions generated on-site during the 11 months of building construction would be negligible. Emissions generated from the development of the Project are temporary and localized and would cease upon completion of construction. This impact would be less than significant.

Operation

Project-operation impacts related to increased health risk can occur either by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors, or by introducing a new sensitive receptor, such as a residential use, in proximity to an existing source of TACs.

The Project does not include any stationary sources of TAC emissions and most vehicles associated with the operation of the Project would run on gasoline and not diesel, which is the primary source of TACs and DPM. Therefore, operation of the Project would not generate TAC or PM2.5 emissions that could affect the health of sensitive receptors. As such, the Project would not contribute to human health risk to nearby receptors during operation, and the Project would not contribute to any cumulative human health risk impact.

AQ Impact 4 **Would the Proposed Project include sources that could create other emissions (such as those leading to odors) adversely affecting a substantial number of people? (*Less than Significant).***

According to CARB's CEQA Air Quality Handbook land uses often associated with odors include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Project would not include any of the land uses that have been identified by CARB as odor sources.

Construction activities associated with the Project may generate detectable odors from heavy-duty equipment exhaust and architectural coatings. However, construction-related odors would be short-term in nature and cease upon Project completion. In addition, the Project would be required to comply with the California Code of Regulations, Title 13, sections 2449(d)(3) and 2485, which minimizes the idling time of construction equipment either by shutting it off when not in use or by reducing the time of idling to no more than five minutes. This would reduce the detectable odors from heavy-duty equipment exhaust. Any odor impacts to existing adjacent land uses would be short-term and not substantial. As such, the Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. Impacts would be less than significant.

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APPENDIX A

Air Quality Data

Landers Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Landers
Construction Start Date	6/3/2024
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	34.269229, -116.403828
County	San Bernardino-Mojave Desert
City	Unincorporated
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5143
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.21

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

Hotel	35.0	Room	4.05	25,900	135,700	—	—	—
High Turnover (Sit Down Restaurant)	3.30	1000sqft	0.76	3,300	0.00	—	—	—
Convenience Market (24 hour)	1.00	1000sqft	0.02	1,000	0.00	—	—	—
Health Club	2.40	1000sqft	0.06	2,400	0.00	—	—	—
Parking Lot	98.0	Space	0.88	0.00	0.00	—	—	—
Recreational Swimming Pool	1.15	1000sqft	0.03	1,150	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.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.65	10.1	19.1	26.9	0.04	0.84	2.96	3.80	0.77	1.38	2.15	—	4,684	4,684	0.18	0.07	2.18	4,712
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.52	1.28	11.5	14.1	0.02	0.50	0.23	0.73	0.46	0.06	0.52	—	2,763	2,763	0.11	0.05	0.03	2,781
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.60	0.95	4.47	5.91	0.01	0.19	0.24	0.43	0.18	0.10	0.27	—	1,135	1,135	0.04	0.02	0.22	1,142

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.11	0.17	0.82	1.08	< 0.005	0.04	0.04	0.08	0.03	0.02	0.05	—	188	188	0.01	< 0.005	0.04	189

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.35	1.98	18.3	20.2	0.03	0.84	2.96	3.80	0.77	1.38	2.15	—	3,182	3,182	0.13	0.05	1.30	3,195
2025	2.65	10.1	19.1	26.9	0.04	0.81	0.46	1.27	0.75	0.11	0.86	—	4,684	4,684	0.18	0.07	2.18	4,712
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.52	1.28	11.5	14.1	0.02	0.50	0.23	0.73	0.46	0.06	0.52	—	2,763	2,763	0.11	0.05	0.03	2,781
2025	1.42	1.20	10.7	13.9	0.02	0.43	0.23	0.67	0.40	0.06	0.46	—	2,756	2,756	0.11	0.05	0.03	2,773
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.58	0.49	4.41	5.27	0.01	0.19	0.24	0.43	0.18	0.10	0.27	—	989	989	0.04	0.02	0.19	995
2025	0.60	0.95	4.47	5.91	0.01	0.18	0.10	0.28	0.17	0.02	0.19	—	1,135	1,135	0.04	0.02	0.22	1,142
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.11	0.09	0.80	0.96	< 0.005	0.04	0.04	0.08	0.03	0.02	0.05	—	164	164	0.01	< 0.005	0.03	165
2025	0.11	0.17	0.82	1.08	< 0.005	0.03	0.02	0.05	0.03	< 0.005	0.04	—	188	188	0.01	< 0.005	0.04	189

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.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.55	3.03	3.08	27.4	0.06	0.08	5.04	5.12	0.07	1.28	1.35	48.2	7,508	7,556	5.10	0.26	276	8,037
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.07	2.58	3.29	19.4	0.06	0.07	5.04	5.12	0.07	1.28	1.35	48.2	6,954	7,002	5.10	0.27	254	7,463
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.16	2.67	3.22	20.8	0.06	0.07	4.71	4.78	0.07	1.19	1.26	48.2	6,756	6,804	5.10	0.26	262	7,272
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.39	0.49	0.59	3.79	0.01	0.01	0.86	0.87	0.01	0.22	0.23	7.98	1,118	1,126	0.84	0.04	43.4	1,204

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.26	2.04	2.73	25.7	0.06	0.05	5.04	5.09	0.04	1.28	1.32	—	6,157	6,157	0.18	0.24	23.1	6,258
Area	0.25	0.98	0.01	1.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.83	5.83	< 0.005	< 0.005	—	5.85
Energy	0.04	0.02	0.34	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,308	1,308	0.09	0.01	—	1,312
Water	—	—	—	—	—	—	—	—	—	—	—	4.16	36.8	41.0	0.43	0.01	—	54.8
Waste	—	—	—	—	—	—	—	—	—	—	—	44.0	0.00	44.0	4.40	0.00	—	154
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	253	253
Total	2.55	3.03	3.08	27.4	0.06	0.08	5.04	5.12	0.07	1.28	1.35	48.2	7,508	7,556	5.10	0.26	276	8,037

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.03	1.82	2.95	19.1	0.06	0.05	5.04	5.09	0.04	1.28	1.32	—	5,609	5,609	0.18	0.25	0.60	5,690
Area	—	0.74	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.02	0.34	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,308	1,308	0.09	0.01	—	1,312
Water	—	—	—	—	—	—	—	—	—	—	—	4.16	36.8	41.0	0.43	0.01	—	54.8
Waste	—	—	—	—	—	—	—	—	—	—	—	44.0	0.00	44.0	4.40	0.00	—	154
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	253	253
Total	2.07	2.58	3.29	19.4	0.06	0.07	5.04	5.12	0.07	1.28	1.35	48.2	6,954	7,002	5.10	0.27	254	7,463
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.00	1.79	2.88	19.8	0.05	0.05	4.71	4.76	0.04	1.19	1.24	—	5,408	5,408	0.17	0.24	9.42	5,495
Area	0.12	0.86	0.01	0.70	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.88	2.88	< 0.005	< 0.005	—	2.89
Energy	0.04	0.02	0.34	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,308	1,308	0.09	0.01	—	1,312
Water	—	—	—	—	—	—	—	—	—	—	—	4.16	36.8	41.0	0.43	0.01	—	54.8
Waste	—	—	—	—	—	—	—	—	—	—	—	44.0	0.00	44.0	4.40	0.00	—	154
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	253	253
Total	2.16	2.67	3.22	20.8	0.06	0.07	4.71	4.78	0.07	1.19	1.26	48.2	6,756	6,804	5.10	0.26	262	7,272
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.36	0.33	0.53	3.61	0.01	0.01	0.86	0.87	0.01	0.22	0.23	—	895	895	0.03	0.04	1.56	910
Area	0.02	0.16	< 0.005	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.48	0.48	< 0.005	< 0.005	—	0.48
Energy	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	216	216	0.02	< 0.005	—	217
Water	—	—	—	—	—	—	—	—	—	—	—	0.69	6.09	6.78	0.07	< 0.005	—	9.07
Waste	—	—	—	—	—	—	—	—	—	—	—	7.29	0.00	7.29	0.73	0.00	—	25.5
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	41.9	41.9
Total	0.39	0.49	0.59	3.79	0.01	0.01	0.86	0.87	0.01	0.22	0.23	7.98	1,118	1,126	0.84	0.04	43.4	1,204

3. Construction Emissions Details

3.1. Grading (2024) - Unmitigated

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

Location	TOG	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	2.26	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.05	1.08	< 0.005	0.05	—	0.05	0.04	—	0.04	—	170	170	0.01	< 0.005	—	171
Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.08	0.08	—	—	—	—	—	—	—
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.19	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.2	28.2	< 0.005	< 0.005	—	28.3

Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.08	1.35	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	224	224	0.01	0.01	0.87	227
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	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.7	11.7	< 0.005	< 0.005	0.02	11.9
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	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.94	1.94	< 0.005	< 0.005	< 0.005	1.97
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	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	0.00

3.3. Building Construction (2024) - Unmitigated

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

Location	TOG	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	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.35	3.27	3.82	0.01	0.15	—	0.15	0.13	—	0.13	—	699	699	0.03	0.01	—	702
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.60	0.70	< 0.005	0.03	—	0.03	0.02	—	0.02	—	116	116	< 0.005	< 0.005	—	116
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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.07	1.27	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	210	210	0.01	0.01	0.82	213
Vendor	0.01	0.01	0.19	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	180	180	< 0.005	0.02	0.48	187
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	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	0.85	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	186	186	0.01	0.01	0.02	188
Vendor	0.01	0.01	0.20	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	180	180	< 0.005	0.02	0.01	187
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.03	0.28	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	55.7	55.7	< 0.005	< 0.005	0.10	56.5
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	52.4	52.4	< 0.005	0.01	0.06	54.5
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.22	9.22	< 0.005	< 0.005	0.02	9.35
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.67	8.67	< 0.005	< 0.005	0.01	9.02
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	0.00

3.5. 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	TOG	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	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.42	3.88	4.85	0.01	0.16	—	0.16	0.15	—	0.15	—	892	892	0.04	0.01	—	895
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.71	0.88	< 0.005	0.03	—	0.03	0.03	—	0.03	—	148	148	0.01	< 0.005	—	148
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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.17	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	205	205	0.01	0.01	0.75	208
Vendor	0.01	0.01	0.18	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	176	176	< 0.005	0.02	0.48	184
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.78	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	182	182	0.01	0.01	0.02	184
Vendor	0.01	0.01	0.19	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	176	176	< 0.005	0.02	0.01	183
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.33	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	69.6	69.6	< 0.005	< 0.005	0.12	70.5
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	65.5	65.5	< 0.005	0.01	0.08	68.2

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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.02	11.7
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	0.01	11.3
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	0.00

3.7. Paving (2025) - Unmitigated

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

Location	TOG	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	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.43	0.57	< 0.005	0.02	—	0.02	0.02	—	0.02	—	87.0	87.0	< 0.005	< 0.005	—	87.3
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.4	14.4	< 0.005	< 0.005	—	14.4

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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.07	1.25	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	219	219	0.01	0.01	0.80	222
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	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.02	11.6
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	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.90	1.90	< 0.005	< 0.005	< 0.005	1.93
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	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	0.00

3.9. 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	TOG	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	0.15	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	—	7.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.68	7.68	< 0.005	< 0.005	—	7.71
Architectural Coatings	—	0.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.27	1.27	< 0.005	< 0.005	—	1.28
Architectural Coatings	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.23	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	41.1	41.1	< 0.005	< 0.005	0.15	41.7
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	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	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.15	2.15	< 0.005	< 0.005	< 0.005	2.18
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	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 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	0.36
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	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	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	1.97	1.78	2.38	22.5	0.05	0.04	4.41	4.46	0.04	1.12	1.16	—	5,388	5,388	0.15	0.21	20.3	5,475
High Turnover (Sit Down Restaurant)	0.28	0.25	0.34	3.22	0.01	0.01	0.63	0.64	0.01	0.16	0.17	—	770	770	0.02	0.03	2.89	782

Convenience Market (24 hour)	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	0.00
Health Club	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	0.00
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	0.00
Recreational Swimming Pool	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	0.00
Total	2.26	2.04	2.73	25.7	0.06	0.05	5.04	5.09	0.04	1.28	1.32	—	6,157	6,157	0.18	0.24	23.1	6,258
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	1.78	1.59	2.58	16.7	0.05	0.04	4.41	4.46	0.04	1.12	1.16	—	4,908	4,908	0.16	0.22	0.53	4,978
High Turnover (Sit Down Restaurant)	0.25	0.23	0.37	2.39	0.01	0.01	0.63	0.64	0.01	0.16	0.17	—	701	701	0.02	0.03	0.08	711
Convenience Market (24 hour)	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	0.00
Health Club	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	0.00
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	0.00
Recreational Swimming Pool	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	0.00
Total	2.03	1.82	2.95	19.1	0.06	0.05	5.04	5.09	0.04	1.28	1.32	—	5,609	5,609	0.18	0.25	0.60	5,690

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.33	0.29	0.48	3.33	0.01	0.01	0.80	0.81	0.01	0.20	0.21	—	831	831	0.03	0.04	1.45	844
High Turnover (Sit Down Restaurant)	0.04	0.03	0.04	0.28	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	64.8	64.8	< 0.005	< 0.005	0.11	65.9
Convenience Market (24 hour)	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	0.00
Health Club	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	0.00
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	0.00
Recreational Swimming Pool	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	0.00
Total	0.36	0.33	0.53	3.61	0.01	0.01	0.86	0.87	0.01	0.22	0.23	—	895	895	0.03	0.04	1.56	910

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	602	602	0.04	< 0.005	—	605

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	169	169	0.01	< 0.005	—	169
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	47.0	47.0	< 0.005	< 0.005	—	47.2
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	33.4	33.4	< 0.005	< 0.005	—	33.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	48.9	48.9	< 0.005	< 0.005	—	49.1
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	900	900	0.06	0.01	—	904
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	602	602	0.04	< 0.005	—	605
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	169	169	0.01	< 0.005	—	169
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	47.0	47.0	< 0.005	< 0.005	—	47.2
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	33.4	33.4	< 0.005	< 0.005	—	33.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	48.9	48.9	< 0.005	< 0.005	—	49.1

Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	900	900	0.06	0.01	—	904
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	99.7	99.7	0.01	< 0.005	—	100
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	27.9	27.9	< 0.005	< 0.005	—	28.0
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	7.79	7.79	< 0.005	< 0.005	—	7.82
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52	< 0.005	< 0.005	—	5.54
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	8.10	8.10	< 0.005	< 0.005	—	8.13
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	149	149	0.01	< 0.005	—	150

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.02	0.01	0.21	0.17	< 0.005	0.02	—	0.02	0.02	—	0.02	—	248	248	0.02	< 0.005	—	249

High Turnover (Sit Down Restaurant)	0.01	0.01	0.10	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	121	121	0.01	< 0.005	—	121
Convenience Market (24 hour)	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.41	5.41	< 0.005	< 0.005	—	5.42
Health Club	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	33.0	33.0	< 0.005	< 0.005	—	33.1
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
Recreational Swimming Pool	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	0.04	0.02	0.34	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	407	407	0.04	< 0.005	—	408
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.02	0.01	0.21	0.17	< 0.005	0.02	—	0.02	0.02	—	0.02	—	248	248	0.02	< 0.005	—	249
High Turnover (Sit Down Restaurant)	0.01	0.01	0.10	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	121	121	0.01	< 0.005	—	121
Convenience Market (24 hour)	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.41	5.41	< 0.005	< 0.005	—	5.42
Health Club	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	33.0	33.0	< 0.005	< 0.005	—	33.1
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

Recreational Swimming Pool	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	0.04	0.02	0.34	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	407	407	0.04	< 0.005	—	408
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	41.0	41.0	< 0.005	< 0.005	—	41.2
High Turnover (Sit Down Restaurant)	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.0	20.0	< 0.005	< 0.005	—	20.1
Convenience Market (24 hour)	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.90	0.90	< 0.005	< 0.005	—	0.90
Health Club	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.46	5.46	< 0.005	< 0.005	—	5.48
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
Recreational Swimming Pool	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	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	67.4	67.4	0.01	< 0.005	—	67.6

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

Consum Products	—	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.25	0.23	0.01	1.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.83	5.83	< 0.005	< 0.005	—	5.85
Total	0.25	0.98	0.01	1.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.83	5.83	< 0.005	< 0.005	—	5.85
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.74	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.02	0.02	< 0.005	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.48	0.48	< 0.005	< 0.005	—	0.48
Total	0.02	0.16	< 0.005	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.48	0.48	< 0.005	< 0.005	—	0.48

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	1.70	26.0	27.7	0.18	< 0.005	—	33.4
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.92	8.41	10.3	0.20	< 0.005	—	16.7
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	0.14	0.62	0.76	0.01	< 0.005	—	1.23
Health Club	—	—	—	—	—	—	—	—	—	—	—	0.27	1.19	1.46	0.03	< 0.005	—	2.36
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	0.13	0.57	0.70	0.01	< 0.005	—	1.13
Total	—	—	—	—	—	—	—	—	—	—	—	4.16	36.8	41.0	0.43	0.01	—	54.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	1.70	26.0	27.7	0.18	< 0.005	—	33.4
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.92	8.41	10.3	0.20	< 0.005	—	16.7

Convenie Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	0.14	0.62	0.76	0.01	< 0.005	—	1.23
Health Club	—	—	—	—	—	—	—	—	—	—	—	0.27	1.19	1.46	0.03	< 0.005	—	2.36
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Recreati onal Swimmin g Pool	—	—	—	—	—	—	—	—	—	—	—	0.13	0.57	0.70	0.01	< 0.005	—	1.13
Total	—	—	—	—	—	—	—	—	—	—	—	4.16	36.8	41.0	0.43	0.01	—	54.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	0.28	4.31	4.59	0.03	< 0.005	—	5.53
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	0.32	1.39	1.71	0.03	< 0.005	—	2.76
Convenie nce Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	0.02	0.10	0.13	< 0.005	< 0.005	—	0.20
Health Club	—	—	—	—	—	—	—	—	—	—	—	0.05	0.20	0.24	< 0.005	< 0.005	—	0.39
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Recreati onal Swimmin g Pool	—	—	—	—	—	—	—	—	—	—	—	0.02	0.09	0.12	< 0.005	< 0.005	—	0.19
Total	—	—	—	—	—	—	—	—	—	—	—	0.69	6.09	6.78	0.07	< 0.005	—	9.07

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	10.3	0.00	10.3	1.03	0.00	—	36.1
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	21.2	0.00	21.2	2.12	0.00	—	74.0
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	1.62	0.00	1.62	0.16	0.00	—	5.67
Health Club	—	—	—	—	—	—	—	—	—	—	—	7.37	0.00	7.37	0.74	0.00	—	25.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	3.53	0.00	3.53	0.35	0.00	—	12.4
Total	—	—	—	—	—	—	—	—	—	—	—	44.0	0.00	44.0	4.40	0.00	—	154
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	10.3	0.00	10.3	1.03	0.00	—	36.1

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	21.2	0.00	21.2	2.12	0.00	—	74.0
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	1.62	0.00	1.62	0.16	0.00	—	5.67
Health Club	—	—	—	—	—	—	—	—	—	—	—	7.37	0.00	7.37	0.74	0.00	—	25.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	3.53	0.00	3.53	0.35	0.00	—	12.4
Total	—	—	—	—	—	—	—	—	—	—	—	44.0	0.00	44.0	4.40	0.00	—	154
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	1.71	0.00	1.71	0.17	0.00	—	5.98
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	3.50	0.00	3.50	0.35	0.00	—	12.3
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	0.27	0.00	0.27	0.03	0.00	—	0.94
Health Club	—	—	—	—	—	—	—	—	—	—	—	1.22	0.00	1.22	0.12	0.00	—	4.27
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	0.58	0.00	0.58	0.06	0.00	—	2.05
Total	—	—	—	—	—	—	—	—	—	—	—	7.29	0.00	7.29	0.73	0.00	—	25.5

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	40.5	40.5
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.16	5.16
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	207	207
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	253	253

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	40.5	40.5
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.16	5.16
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	207	207
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	253	253
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.70	6.70
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.85	0.85
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	34.3	34.3
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005

Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	41.9	41.9

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Grading	Grading	7/5/2024	8/2/2024	5.00	21.0	—
Building Construction	Building Construction	8/5/2024	7/9/2025	5.00	243	—
Paving	Paving	6/11/2025	7/9/2025	5.00	21.0	—
Architectural Coating	Architectural Coating	6/11/2025	7/9/2025	5.00	21.0	—

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
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20

Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
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
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	14.1	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	5.53	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT

Architectural Coating	—	—	—	—
Architectural Coating	Worker	2.81	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	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%

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	48,900	16,300	2,300

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)
Grading	—	—	21.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.88

5.6.2. Construction Earthmoving Control Strategies

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

Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Hotel	0.00	0%
High Turnover (Sit Down Restaurant)	0.00	0%
Convenience Market (24 hour)	0.00	0%
Health Club	0.00	0%
Parking Lot	0.88	100%
Recreational Swimming Pool	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
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
Hotel	280	280	280	102,200	6,254	6,254	6,254	2,282,603
High Turnover (Sit Down Restaurant)	40.0	40.0	40.0	14,599	319	893	893	176,209
Convenience Market (24 hour)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Recreational Swimming Pool	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

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	48,900	16,300	2,300

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)
Hotel	413,298	532	0.0330	0.0040	773,646
High Turnover (Sit Down Restaurant)	115,720	532	0.0330	0.0040	377,094
Convenience Market (24 hour)	32,277	532	0.0330	0.0040	16,880

Health Club	22,891	532	0.0330	0.0040	102,927
Parking Lot	33,580	532	0.0330	0.0040	0.00
Recreational Swimming Pool	0.00	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)
Hotel	887,837	3,004,199
High Turnover (Sit Down Restaurant)	1,001,661	0.00
Convenience Market (24 hour)	74,073	0.00
Health Club	141,944	0.00
Parking Lot	0.00	0.00
Recreational Swimming Pool	68,015	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Hotel	19.2	—
High Turnover (Sit Down Restaurant)	39.3	—
Convenience Market (24 hour)	3.01	—
Health Club	13.7	—
Parking Lot	0.00	—
Recreational Swimming Pool	6.55	—

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
Hotel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Hotel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Hotel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Convenience Market (24 hour)	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Convenience Market (24 hour)	Supermarket refrigeration and condensing units	R-404A	3,922	26.5	16.5	16.5	18.0
Health Club	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Health Club	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Recreational Swimming Pool	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Recreational Swimming Pool	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

8. User Changes to Default Data

Screen	Justification
Land Use	The Project includes the construction of a new hotel that would include 35 guest rooms (17,500 sq ft), a restaurant (3,300 sq ft), a convenience market (1,000 sq ft), pools (approx 1,150 sq ft), and 2,400 sq ft wellness center/health club. The hotel would provide a total of 98 parking spaces (90 standard and 8 handicapped). The hotel land use also includes the square footage for other features of the Project, such as: a shade structure (4,000 sq ft), lodge (3,300 sq ft), and a laundry/engineering room (1,100 sq ft).
Construction: Construction Phases	No demolition required. Architectural coatings and paving assumed to take place over the final month of construction.
Operations: Vehicle Data	A previous version of the Project identified 320 average daily trips. However the current project model identifies 97 average daily trips. Therefore, this analysis is conservative