Toll Brothers Laguna Hills Townhome Project Air Quality, Greenhouse Gas, and Energy Impact Study

City of Laguna Hills, California
January 28, 2026

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RK ENGINEERING GROUP INC.

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City of Laguna Hills, California

Prepared for:
CITY OF LAGUNA HILLS, CA
24035 El Toro Road
Laguna Hills, CA 92653

Prepared by:
RK Engineering Group, Inc.
1401 Dove Street, Ste. 540
Newport Beach, CA 92660

Bryan Estrada, T.E.
Becca Morrison
Claire Stokes

Table of Contents

Table of Contents

Section **Page**

Table of Contents

Section **Page**

List of Exhibits

List of Tables

Table No. **Page**

List of Appendices

1.0 Introduction

1.1 Purpose of Report & Study Objectives

The purpose of this air quality, greenhouse gas, (GHG) and energy impact study is to determine whether the construction and operation of the Toll Brothers Laguna Hills Townhome Project (hereinafter referred to as "project") would cause significant air quality, GHG, or energy impacts.

This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The methodology follows the California Air Resources Board (CARB), the SCAQMD, and City of Laguna Hills recommendations for quantification of emissions and evaluation of potential impacts.

This study also evaluates the project's potential impact on energy conservation pursuant to CEQA Guidelines, Appendix F, Energy Conservation Analysis, and the use of renewable energy sources.

1.2 Site Location & Project Description

The proposed project site will be constructed on the 2.43-acre parcel at 23161 Mill Creek Drive (APN 588-142-07) in the City of Laguna Hills, Orange County, California (Project Site). The project site is located on the west side of Mill Creek Drive, approximately 0.27 miles south of Lake Forest Drive, Mill Creek Drive, and Scientific Intersection. The project site is currently developed with a two-story office building, surface parking lot, and associated landscaping and pavement. **Exhibit A** shows the location map of the proposed project.

The proposed project consists of the demolition of the existing office building and associated surface parking lot and landscaping to construct 36 single-family-attached condominium residential units, parking, roadways, and associated infrastructure at a density of 14.8 dwelling units per acre (du/ac). Two units will be deed-restricted for very low-income households, while the remaining 34 units are designated as above-moderate income.

Construction activities are expected to consist of demolition, site preparation, grading, building construction, paving, and architectural coating. During construction, the project would demolish approximately 34,200 square feet of building area, 29,461 square feet of asphalt, and 5,000 square feet of hardscape. The project would require the import/export of up to approximately 35,000 cubic yards of earthwork material for grading purposes. All mobile off-road diesel construction equipment including generators will be equipped with Tier 4 low emission "clean diesel" engines.

Exhibit B shows the proposed site plan used for this analysis. **Table 1-1** summarizes the land use assumptions used for this analysis.

Table 1-1 | Project Land Use Summary

Project Land Use	CalEEMod Land Use Category	Quantity	Metric[1]
Townhomes	Condo/Townhouse	36	DU
Onsite Paved Surfaces	Parking Lot	0.92	AC

[1] DU = Dwelling unit.
AC = Acres.

1.3 Sensitive Receptors

Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution exposure. Sensitive population groups include children, the elderly, the acutely and chronically ill, and those with cardio-respiratory diseases.

For CEQA purposes, the SCAQMD considers a sensitive receptor to be a location where a sensitive individual could remain for 24 hours or longer, such as residences, hospitals, and schools (etc.), as described in the Localized Significance Threshold Methodology (SCAQMD 2008a, page 3-2). There are several sensitive land uses adjacent to the project site, including the following.

A project site location map, including sensitive receptor locations, is provided in **Exhibit A**.

Receptor-1 Existing residential land uses located to the west of the proposed project site. The nearest residential home located at Receptor-1 (marked as circle "1" on **Exhibit A**) is located approximately 80 feet (~24 meters) west of the project site's western boundary.

For conservative localized analysis purposes, sensitive receptors are considered to be less than 25 meters from the project site.

1.4 Summary of Analysis Results

Table 1-2 provides a summary of the CEQA air quality impact analysis results.

Table 1-2 | CEQA Air Quality Impact Criteria

Air Quality Impact Criteria	Potentially Significant	Potentially Significant Unless Mitigated	Less Than Significant	No Impact
Would the project:				
a) Conflict with, or obstruct the implementation of, the applicable air quality plan?			X	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

Table 1-3 provides a summary of the CEQA GHG impact criteria analysis results.

Table 1-3 | CEQA GHG Impact Criteria

Greenhouse Gas Impact Criteria	Potentially Significant	Potentially Significant Unless Mitigated	Less Than Significant	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases?			X	

Table 1-4 provides a summary of the CEQA energy impact criteria analysis results.

Table 1-4 | CEQA Energy Impact Criteria

Energy Impact Criteria	Potentially Significant	Potentially Significant Unless Mitigated	Less Than Significant	No Impact
Would the project:				
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy?			X	
b) Conflict with or obstruct a State and/or local plan for renewable energy or energy efficiency?			X	

Legend

1 = Sensitive Receptor Location

= Project Site Boundary

Exhibit A

Location Map

N

Exhibit B

Site Plan

2.0 Air Quality Setting

The Federal Clean Air Act (§ 7602) defines air pollution as any agent or combination of such agents, including any physical, chemical, biological, or radioactive substance which is emitted into or otherwise enters the ambient air. Household combustion devices, motor vehicles, industrial facilities and forest fires are common sources of air pollution. Air pollution can cause disease, allergies and death. It affects soil, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate. It can also cause damage to and deterioration of property, present hazards to transportation, and negatively impact the economy.

This section provides background information on criteria air pollutants, the applicable federal, state and local regulations concerning air pollution, and the existing physical setting of the project within the context of local air quality.

2.1 Description of Air Pollutants

The following section describes the air pollutants of concern related to the project. 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 following descriptions of criteria air pollutants have been provided by the SCAQMD.

- **Carbon Monoxide (CO)** is a colorless, odorless, toxic gas produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, and competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs in the body. The ambient air quality standard for carbon monoxide is intended to protect persons whose medical condition already compromises their circulatory system's ability to deliver oxygen. These medical conditions include certain heart ailments, chronic lung diseases, and anemia. Persons with these conditions have reduced exercise capacity even when exposed to relatively low levels of CO. Fetuses are at risk because their blood has an even greater affinity to bind with CO. Smokers are also at risk from ambient CO levels because smoking increases the background level of CO in their blood. The South Coast Basin has achieved attainment status for carbon monoxide by both USEPA and CARB.

- **Nitrogen Dioxide (NO_2)** is a byproduct of fuel combustion. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts quickly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_x. NO_2 acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO_2 is only potentially irritating. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase in bronchitis in young

children has also been observed at concentrations below 0.3 parts per million (ppm). NO_2 absorbs blue light which results in a brownish red cast to the atmosphere and reduced visibility. Although NO_2 concentrations have not exceeded national standards since 1991 and the state hourly standard since 1993, NO_x emissions remain of concern because of their contribution to the formation of O_3 and particulate matter.

- **Ozone (O_3)** is one of a number of substances called photochemical oxidants that are formed when volatile organic compounds (VOC) and NO_x react in the presence of ultraviolet sunlight. O_3 concentrations in the South Coast basin are typically among the highest in the nation, and the damaging effects of photochemical smog, which is a popular name for a number of oxidants in combination, are generally related to the concentrations of O_3. Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the subgroups most susceptible to O_3 effects. Short-term exposures (lasting for a few hours) to O_3 at levels typically observed in southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. In recent years, a correlation between elevated ambient O_3 levels and increases in daily hospital admission rates, as well as mortality, has also been reported. The South Coast Air Basin is designated by the USEPA as an extreme non-attainment area for ozone. Although O_3 concentrations have declined substantially since the early 1990s, the South Coast basin continues to have peak O_3 levels that exceed both state and federal standards.

- **Fine Particulate Matter (PM_{10})** consists of extremely small suspended particles or droplets 10 microns or smaller in diameter that can lodge in the lungs, contributing to respiratory problems. PM_{10} arises from such sources as re-entrained road dust, diesel soot, combustion products, tire and brake abrasion, construction operations, and fires. It is also formed in the atmosphere from NO_x and SO_2 reactions with ammonia. PM_{10} scatters light and significantly reduces visibility. Inhalable particulates pose a serious health hazard, alone or in combination with other pollutants. More than half of the smallest particles inhaled will be deposited in the lungs and can cause permanent lung damage. Inhalable particulates can also have a damaging effect on health by interfering with the body's mechanism for clearing the respiratory tract or by acting as a carrier of an absorbed toxic substance. The South Coast basin has recently achieved federal attainment status for PM_{10}, but is non-attainment based on state requirements.

- **Ultra-Fine Particulate Matter ($PM_{2.5}$)** is defined as particulate matter with a diameter less than 2.5 microns and is a subset of PM_{10}. $PM_{2.5}$ consists mostly of products from the reaction of NO_x and SO_2 with ammonia, secondary organics, finer dust particles, and the combustion of fuels, including diesel soot. $PM_{2.5}$ can cause exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease, declines in pulmonary function growth in children, and increased risk of premature death from heart or lung diseases in the elderly. Daily fluctuations in $PM_{2.5}$ levels have been related to hospital admissions for acute

respiratory conditions, school absences, and increased medication use in children and adults with asthma. The South Coast basin is designated as non-attainment for $PM_{2.5}$ by both federal and state standards.

- **Sulfur Dioxide (SO_2)** is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Health effects include acute respiratory symptoms and difficulty in breathing for children. Individuals with asthma may experience constriction of airways with exposure to SO_2. Though SO_2 concentrations have been reduced to levels well below state and federal standards, further reductions in SO_2 emissions are needed because SO_2 is a precursor to sulfate and PM_{10}. The South Coast basin is considered a SO_2 attainment area by USEPA and CARB.

- **Lead (Pb)** is a toxic heavy metal that can be emitted into the air through some industrial processes, burning of leaded gasoline and past use of lead-based consumer products. Lead is a neurotoxin that accumulates in soft tissues and bones, damages the nervous system, and causes blood disorders. It is particularly problematic in children, in that permanent brain damage may result, even if blood levels are promptly normalized with treatment. Concentrations of lead once exceeded the state and federal air quality standards by a wide margin, but as a result of the removal of lead from motor vehicle gasoline, ambient air quality standards for lead have not been exceeded since 1982. Though special monitoring sites immediately downwind of lead sources recorded localized violations of the state standard in 1994, no violations have been recorded since. Consequently, the South Coast basin is designated as an attainment area for lead by both the USEPA and CARB. This report does not analyze lead emissions from the project, as it is not expected to emit lead in any significant measurable quantity.

- **Volatile Organic Compounds (VOCs)**, although not actually a criteria air pollutant, VOCs are regulated by the SCAQMD because they cause chemical reactions which contribute to the formation of ozone. VOCs are also transformed into organic aerosols in the atmosphere, contributing to higher PM_{10} and lower visibility levels. Sources of VOCs include combustion engines, and evaporative emissions associated with fuel, paints and solvents, asphalt paving, and the use of household consumer products such as aerosols. Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations of VOC. Some hydrocarbon components classified as VOC emissions are hazardous air pollutants. Benzene, for example, is a hydrocarbon component of VOC emissions that are known to be a human carcinogen. The term reactive organic gases (ROG) are often used interchangeably with VOC.

- **Toxic Air Contaminants (TACs)** are defined as air pollutants that may cause or contribute to an increase in mortality or serious illness, or that may pose a present or potential hazard to human health (Health & Safety Code §39655). Unlike criteria pollutants, which have concentration-based standards, TACs generally do not have identified safe exposure levels. Per Cal. Code Regs., tit. 17, §93000, the California Air Resources Board (CARB) lists

substances designated as TACs and specifies "None identified" for threshold levels when there is insufficient scientific evidence to establish a concentration below which adverse health effects are not expected to occur. The majority of the estimated health risk from TACs can be attributed to a relatively few compounds, the most common being diesel particulate matter (DPM) from diesel engine exhaust. In addition to DPM, benzene and 1,3-butadiene are also significant contributors to overall ambient public health risk in California.

2.2 Federal and State Ambient Air Quality Standards

The Federal Clean Air Act, which was last amended in 1990, requires the EPA to set National Ambient Air Quality Standards (NAAQS) for criteria pollutants considered harmful to public health and the environment. The State of California has also established additional and more stringent California Ambient Air Quality Standards (CAAQS) in addition to the seven criteria pollutants designated by the federal government.

AAQS are designed to protect the health and welfare of the populace with a reasonable margin of safety. The standards are divided into two categories, primary standards and secondary standards. Primary standards are implemented to provide protection for the "sensitive" populations such as those with asthma, or the children and elderly. Secondary standards are to provide protection against visible pollution as well as damage to the surrounding environment, including animals, crops, and buildings.

Table 2-1 shows the Federal and State Ambient Air Quality Standards.

Table 2-1 | Federal and State Ambient Air Quality Standards (AAQS)[1]

Air Pollutant	Averaging Time[2]	Federal Standard (NAAQS)[2]	California Standard (CAAQS)[2]
Ozone	1 Hour	--	0.09 ppm
	8 Hour	0.07 ppm	0.07 ppm
Carbon Monoxide (CO)	1 Hour	35 ppm	20 ppm
	8 Hour	9 ppm	9 ppm
Nitrogen Dioxide (NO_2)	1 Hour	0.100 ppm	0.18 ppm
	Annual	0.053 ppm	0.030 ppm
Sulfur Dioxide (SO_2)	1 Hour	0.075 ppm	0.25 ppm
	3 Hour	0.5 ppm[3]	--
	24 Hour	0.14 ppm	0.04 ppm
Fine Particulate Matter (PM_{10})	24 Hour	150 µg/m^3	50 µg/m^3
	Annual Mean	--	20 µg/m^3
Ultra-Fine Particulate Matter ($PM_{2.5}$)	24 Hour	35 µg/m^3	--
	Annual Mean	12.0 µg/m^3	12.0 µg/m^3
Lead (Pb)	30 Day Average	--	1.5 µg/m^3
	Calendar Quarter	1.5 µg/m^3	--
	Rolling 3 Month Average	0.15 µg/m^3	--
Visibility Reducing Particles	8 Hour	--	0.23/km extinction coefficient (10-mile visibility standard)
Sulfates	24 Hour	--	25 µg/m^3
Hydrogen Sulfide	1 Hour	--	0.03 µg/m^3
Vinyl Chloride	24 Hour	--	0.01 ppm

[1] Source: CARB. https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf.
[2] ppm = parts per million of air by volume.
µg/m^3 = micrograms per cubic meter.
[3] Secondary standards.

Several pollutants listed in **Table 2-1** are not addressed in this analysis. Lead is not included because the project is not anticipated to emit lead. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed. The project is not expected to generate or be

exposed to vinyl chloride because proposed project uses do not utilize the chemical processes that create this pollutant and there are no such uses in the project vicinity. The proposed project is not expected to cause exposure to hydrogen sulfide because there are no project activities or processes that produce this compound. Hydrogen sulfide emissions are typically associated with petroleum refining, geothermal operations, or wastewater treatment, none of which are included in the proposed residential project.

2.3 Attainment Status

The Clean Air Act requires states to prepare a State Implementation Plan (SIP), a comprehensive regulatory framework that demonstrates how states will achieve and maintain the NAAQS. The California Air Resources Board (CARB) provides designations of attainment for air basins where AAQS are either met or exceeded. If the AAQS are met, the area is designated as being in "attainment", if the air pollutant concentrations exceed the AAQS, then the area is designated as being "nonattainment". If there is inadequate or inconclusive data to make a definitive attainment designation, the area is considered "unclassified."

National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or 'form' of what constitutes attainment, based on specific air quality statistics. For example, the Federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the three-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

When a state submits a request to the EPA to re-designate a nonattainment area to attainment, the Clean Air Act (CAA) section 175A(a) requires that the state (or states, if the area is a multi-state area) submit a maintenance plan ensuring the area can maintain the air quality standard for which the area is to be re-designated for at least 10 years following the effective date of re-designation. **Table 2-2** lists the attainment status for the criteria pollutants in the South Coast Air Basin (SCAB).

Table 2-2 | South Coast Air Basin Attainment Status[1]

Pollutant	State Status	National Status
Ozone	Nonattainment	Nonattainment (Extreme)[2]
Carbon Monoxide	Attainment	Attainment (Maintenance)
Nitrogen Dioxide	Attainment	Attainment (Maintenance)
PM_{10}	Nonattainment	Attainment (Maintenance)
$PM_{2.5}$	Nonattainment	Nonattainment
Lead	Attainment	Nonattainment (Partial)[3]

[1] Source: CARB. https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations.
[2] 8-Hour Ozone.
[3] Partial Nonattainment designation for Los Angeles County portion of Basin only.

2.4 South Coast Air Quality Management District (SCAQMD)

The agency responsible for air pollution control for the South Coast Air Basin (SCAB) is the South Coast Air Quality Management District (SCAQMD). SCAQMD is responsible for controlling emissions from stationary sources. SCAQMD maintains air quality monitoring stations throughout the SCAB. SCAQMD, in coordination with the Southern California Association of Governments, is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the SCAB. An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as nonattainment of the federal and/or California ambient air quality standards. The term nonattainment area is used to refer to an air basin where one or more ambient air quality standards are exceeded. The AQMP is incorporated into the SIP.

The latest version is the 2022 AQMP, adopted in December 2022. The 2022 AQMP is a regional blueprint for achieving the federal air quality standards and healthful air. While air quality has dramatically improved over the years, the SCAB still exceeds federal public health standards for both ozone and particulate matter (PM) and experiences some of the worst air pollution in the nation. The 2022 AQMP includes both stationary and mobile source strategies to ensure that rapidly approaching attainment deadlines are met, that public health is protected to the maximum extent feasible, and that the region is not faced with burdensome sanctions if the Plan is not approved or if the NAAQS are not met on time.

According to the 2022 AQMP, the most significant air quality challenge in the SCAB is to reduce nitrogen oxide (NO_x) emissions sufficiently to meet the upcoming ozone standard deadlines. Based

on the inventory and modeling results, the 2022 AQMP projects that 184 tons per day (tpd) of NO_x will be emitted in the year 2037 as a result of continued implementation of already adopted regulatory actions ("baseline emissions"). The analysis suggests that in order to meet the ozone standard of 60 tpd, NO_x emissions need to be reduced about 67 percent beyond the projected 2037 baseline emissions and about 83 percent below current levels[1].

2.4.1 SCAQMD Rules and Regulations

The SCAQMD establishes a program of rules and regulations to obtain attainment of the state and federal standards in conjunction with the AQMP. Several of the rules and regulations that may be applicable to this project include, but are not limited to, the following:

- **SCAQMD Rule 402** prohibits a person from discharging 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.

- **SCAQMD Rule 403** governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

- **SCAQMD Rule 445** restricts wood burning devices from being installed into any new development and is intended to reduce the emissions of particulate matter for wood burning devices.

- **SCAQMD Rule 1113** governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents. This rule regulates the VOC content of paints available during construction. Therefore, all paints and solvents used during construction and operation of project must comply with Rule 1113.

- **SCAQMD Rule 1143** governs the manufacture, sale, and use of paint thinners and solvents used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations by limiting their VOC content. This rule regulates the VOC content of solvents used during construction. Solvents used during the construction phase must comply with this rule.

[1] Source: South Coast Air Quality Management District. *2022 Air Quality Management Plan*. Adopted December 2, 2022.

- **SCAQMD Rule 1186** limits the presence of fugitive dust on paved and unpaved roads and sets certification protocols and requirements for street sweepers that are under contract to provide sweeping services to any federal, state, county, agency, or special district such as water, air, sanitation, transit, or school district.

The proposed project would be required to comply with the above South Coast Air Quality Management District rules and regulations, as well as all applicable federal, state, regional, and local regulations related to air quality. In addition to SCAQMD rules and regulations, these requirements include state energy efficiency standards and local solid waste management regulations. The following list summarizes applicable regulatory compliance requirements for the project. The project actions listed below represent standard regulatory compliance obligations and are not considered mitigation measures.

1. During construction, the project will follow the SCAQMD rules and requirements for fugitive dust control, including the following:
    - Pre-water active grading or trenching areas.
    - Water all active construction areas as frequently as needed (at least twice daily) to prevent visible dust plumes from extending more than 100 feet.
    - Maintain a stabilized surface or apply dust suppressants to inactive areas, disturbed surfaces, staging areas, haul routes, and unpaved roads.
    - Limit on-site vehicle speeds to 15 mph on unpaved areas.
    - Maintain all haul trucks with covered loads and ≥6 inches of freeboard (CVC §23114).
    - Stabilize stockpiles with water or covers and restrict height if near occupied structures.
    - Use a gravel pad at egress points (minimum 30' x 50', 1" washed gravel, 6" depth), or alternatively a wheel shaker or wheel washing station.
    - Remove track-out extending ≥25 feet onto public roadways immediately and clean daily.
    - Suspend dust-generating activities and implement contingency measures during high wind events (wind gusts >25 mph).
    - Re-vegetate or stabilize disturbed areas within 21 days of inactivity.
    - Limit construction vehicle traffic to designated haul routes only.
2. The project will utilize low-VOC or zero-VOC paints, coatings, and solvents consistent with the requirements of SCAQMD Rules 1113 and 1143.

3. The project will comply with the mandatory requirements of the California Building Standards Code, Title 24, Part 6 (Energy Code) and Part 11 (CALGreen), including, but not limited to:
    - Install low flow fixtures and toilets, water efficient irrigation systems, drought tolerant/native landscaping, and reduce the amount of turf.
    - Provide the necessary infrastructure to support electric vehicle charging.
    - Provide solar installations/solar readiness zones per the prescribed Energy Design Ratings.
4. The project will participate in local waste management recycling and composting programs.

2.5 Local Climate and Meteorology

The weather station closest to the project site is the National Weather Service Cooperative – Laguna Beach, CA (044647) station. Climatological data from the National Weather Service at this station is summarized in **Table 2-3**.

Table 2-3 | Meteorological Summary[1]

Month	Temperature (°F)			Mean Precipitation (inches)
	Max.	Min.	Mean	
January	65.1	43.0	54.1	2.43
February	66.1	44.1	55.1	2.77
March	67.1	45.8	56.5	2.01
April	69.0	48.4	58.7	0.98
May	70.9	53.0	62.0	0.25
June	73.1	56.1	64.6	0.10
July	76.5	59.3	67.9	0.03
August	78.1	59.6	68.9	0.07
September	77.5	58.2	67.9	0.26
October	74.5	53.7	64.1	0.47
November	70.4	47.5	59.0	1.24
December	66.1	43.4	54.8	1.92
Annual	**71.2**	**51.0**	**61.1**	**12.52**

[1] Source: Western Regional Climate Center. Averages derived from measurements recorded between 1928 and 2016 at Laguna Beach, CA (044647).

2.6 Local Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the air basin.

The SCAQMD has divided the SCAB into fourteen general forecasting areas and thirty-eight Source Receptor Areas (SRAs) for monitoring and reporting local air quality. The SCAQMD provides daily reports of the current air quality conditions in each general forecast area and SRA. The monitoring areas provide a general representation of the local meteorological, terrain, and air quality conditions within the SCAB.

The project is located within the Coastal general forecasting area and Central Orange County Coastal air monitoring area (SRA-20). The SCAQMD has not published air quality monitoring data for SRA-20. Therefore, pollutant data for the most recent three-year period is derived from the nearest adjacent stations available (i.e., Saddleback Valley/SRA-19 and Central Orange County/SRA-17). These pollutant levels were used to comprise a "background" for the project location and existing local air quality.

Table 2-4 | Local Air Quality[1]

Air Pollutant Location	Averaging Time	Item[2]	2021	2022	2023
Carbon Monoxide -- Saddleback Valley	1 Hour	Max 1-Hour (ppm)	1.0	1.2	--
		Exceeded State Standard (20 ppm)	No	No	--
		Exceeded National Standard (35 ppm)	No	No	--
	8 Hour	Max 8 Hour (ppm)	0.8	1.0	--
		Days > State Standard (9 ppm)	No	No	--
		Days >National Standard (9 ppm)	No	No	--
Ozone -- Saddleback Valley	1 Hour	Max 1-Hour (ppm)	0.105	0.110	--
		Days > State Standard (0.09 ppm)	2.0	1.0	--
	8 Hour	Max 8 Hour (ppm)	0.081	0.088	--
		Days > State Standard (0.070 ppm)	8	6	--
		Days >National Standard (0.070 ppm)	8	5	--
Nitrogen Dioxide -- Central Orange County	1 Hour	Max 1-Hour (ppm)	0.067	0.053	0.051
		Exceeded State Standard (0.18 ppm)	No	No	No
	Annual	Annual Average (ppm)	0.012	0.012	0.011
		Exceeded State Standard (0.030 ppm)	No	No	No
		Exceeded National Standard (0.053 ppm)	No	No	No
Sulfur Dioxide -- Saddleback Valley	1 Hour	Max 1 Hour (ppm)	--	0.0000	--
		Exceeded State Standard (0.25 ppm)	--	No	--
		Exceeded National Standard (0.075 ppm)	--	No	--
PM10 -- Saddleback Valley	24 Hour	Max 24-Hour (µg/m³)	35	--	--
		Days > State Standard (50 µg/m³)	0	--	--
		Days >National Standard (150 µg/m³)	0	--	--
	Annual	Annual Average (µg/m³)	15.60	--	--
		Exceeded State Standard (20 µg/m³)	No	--	--
PM2.5 -- Saddleback Valley	24 Hour	Max 24-Hour (µg/m³)	28.70	--	--
		Days >National Standard (35 µg/m³)	0	--	--
	Annual	Annual Average (µg/m³)	8.27	--	--
		Exceeded State Standard (12 µg/m³)	No	--	--
		Exceeded National Standard (15 µg/m³)	No	--	--

[1] Source: https://www.aqmd.gov/home/air-quality/historical-air-quality-data/historical-data-by-year.

[2] ppm = parts per million.
µg/m³ = micrograms per cubic meter.

3.0 Global Climate Change Setting

Lead agencies must analyze direct and indirect GHG emissions from proposed projects. This includes emissions from construction, operations, transportation, energy use, waste, and water consumption. Lead agencies must make a good faith effort to describe, calculate, or estimate GHG emissions (CEQA Guidelines § 15064.4).

3.1 Greenhouse Gases (GHGs)

Greenhouse gases include naturally occurring compounds such as carbon dioxide (CO_2), methane (CH_4), water vapor (H_2O), and nitrous oxide (N_2O), while others are synthetic. Man-made GHGs include the chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs) and Perfluorocarbons (PFCs), as well as sulfur hexafluoride (SF_6). Different GHGs have different effects on the Earth's warming. GHGs differ from each other in their ability to absorb energy (their "radiative efficiency") and how long they stay in the atmosphere, also known as the "lifetime".

The Global Warming Potential (GWP) was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of CO_2. The larger the GWP, the more that a given gas warms the Earth compared to CO_2 over that time period. The time period usually used for GWPs is 100 years. GWPs provide a common unit of measure, which allows analysts to add up emissions estimates of different gases and allows policymakers to compare emissions reduction opportunities across sectors and gases.

Table 3-1 lists the 100-year GWP of GHGs from the Intergovernmental Panel on Climate Change (IPCC) fifth assessment report (AR5) and IPCC sixth (6th) assessment report (AR6).

Table 3-1 | Global Warming Potential of Greenhouse Gases[1, 2]

Gas Name	Formula	Lifetime (Years)	GWP
Carbon Dioxide	CO_2	--	1
Methane	CH_4 (Fossil Origin)	12	29.8
	CH_4 (Non-Fossil Origin)		27.2
Nitrous Oxide	N_2O	114	273
Sulphur Hexafluoride	SF_6	3200	23,500
Nitrogen Trifluoride	NF_3	740	16,100
Chlorofluorocarbon (CFC-11)	CFC-11	52	8,321
Hexafluoroethane (PFC-116)	C_2F_6	10,000	11,100
Octafluoropropane (PFC-218)	C_3F_8	2,600	8,900
Octafluorocyclobutane (PFC-318)	C_4F_8	3,200	9,540
Tetrafluoromethane (PFC-14)	CF_4	50,000	5,301
Hydrofluorocarbon 125	HFC-125	29	3,170
Hydrofluorocarbon 134a	HFC-134a	14	1,526
Hydrofluorocarbon 143a	HFC-143a	52	4,800
Hydrofluorocarbon 152a	HFC-152a	1	138
Hydrofluorocarbon 227ea	HFC-227ea	34	3,350
Hydrofluorocarbon 23	HFC-23	270	12,400
Hydrofluorocarbon 236fa	HFC-236fa	240	8,060
Hydrofluorocarbon 245fa	HFC-245fa	8	858
Hydrofluorocarbon 32	HFC-32	5	771
Hydrofluorocarbon 365mfc	HFC-365mfc	9	804
Hydrofluorocarbon 43-10mee	HFC-43-10mee	16	1,650

[1] Source: IPCC Sixth Assessment Report (AR6). https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf and https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter08_FINAL.pdf.

[2] GWPs are used to convert GHG emission values to "carbon dioxide equivalent" (CO_2e) units.

3.2 GHG Regulatory Setting – State of California

The State of California has been a leader in climate change legislation and has passed numerous bills to reduce greenhouse gas emissions across all sectors of the economy. Some of the key climate legislation and regulation in the State include the following:

- **Assembly Bill (AB) 32, California Global Warming Solutions Act of 2006.** AB 32 set the stage for the State's transition to a sustainable, low-carbon future. AB 32 was the first program in the country to take a comprehensive, long-term approach to addressing climate change.
- **Senate Bill (SB) 375, Sustainable Communities & Climate Protection Act of 2008.** SB 375 requires the Air Resources Board to develop regional greenhouse gas emission reduction targets for passenger vehicles GHG reduction targets for 2020 and 2035 for each region covered by the State's 18 metropolitan planning organizations.
- **Senate Bill (SB) 100, California Renewables Portfolio Standard Program.** SB 100 established a landmark policy requiring renewable energy and zero-carbon resources supply 100 percent of electric retail sales to end-use customers by 2045.
- **California Building Standards Code – Title 24.** The California Building Standards Code Title 24 Part 6 (Energy Code) and Title 24 Part 11 (CALGreen) requires multiple building provisions to reduce energy usage and GHG emissions and is updated on a triennial basis.

3.3 GHG Emissions Inventory

Table 3-2 shows the latest GHG emission inventories at the national, state, regional, and local levels.

Table 3-2 | GHG Emissions Inventory [1]

United States (2019)[2]	State of California (2019)[3]	SCAG (2020)[4]
6,558 $MMTCO_2e$	418 $MMTCO_2e$	216.4 $MMTCO_2e$

[1] MMTCO2e = million metric tons of carbon dioxide equivalents.

[2] https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks.

[3] SCAG – Regional GHG Inventory and Reference Case Projections, 1990 – 2035. May 30, 2012. http://www.scag.ca.gov/programs/Pages/GreenhouseGases.aspx.

4.0 Modeling Parameters and Assumptions

The California Emissions Estimator Model Version 2022.1.1 (CalEEMod) was used to calculate criteria air pollutants and GHG emissions from the construction and operation of the project. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify criteria air pollutant and GHG emissions.

The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from off-site energy generation, solid waste disposal, vegetation planting and/or removal, and water use. The model also identifies design standards to reduce criteria pollutant and GHG emissions. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts.

4.1 Construction Assumptions

Construction of the project is estimated to begin in the year 2026. Construction activities are expected to consist of demolition, site preparation, grading, building construction, paving, and architectural coating. The project will require the import and export of up to 35,000 total cubic yards of earthwork material for grading purposes. For the purposes of this analysis, construction phases are not expected to overlap.

The CalEEMod default construction equipment list is based on survey data and the size of the site. The parameters used to estimate construction emissions, such as the worker and vendor trips and trip lengths, utilize the CalEEMod defaults. The construction equipment list is shown in **Table 4-1**.

All mobile off-road diesel construction equipment including generators will be equipped with Tier 4 low emission "clean diesel" engines. Accordingly, the CalEEMod default construction equipment list was modified to reflect Tier 4 engines for applicable equipment.

The project will be required to comply with several standard fugitive dust control measures, per SCAQMD Rule 403. The following key inputs are utilized in CalEEMod and are based upon data provided from SCAQMD :

- Water exposed area – 61% PM10 and PM2.5 reduction.
- Water unpaved roads twice daily – 55% PM10 and PM2.5 reduction.
- Limit vehicle speeds on unpaved roads to 25 mph – 44% PM10 and PM2.5 reduction.
- Sweep paved roads once per month – 9% PM10 and PM2.5 reduction.

Table 4-1 | Construction Equipment Assumptions [1]

Phase	Equipment	Number	Hours Per Day	Soil Disturbance Rate (Acres/8-Hour Day)	Off-Road Equipment Daily Disturbance Footprint (Acres)	Total Daily Disturbance Footprint (Acres)
Demolition	Concrete/Industrial Saws	1	8	0.00	0.00	0.50
	Rubber Tired Dozers	1	8	0.50	0.50	
	Tractors/Loaders/Backhoes	3	8	0.00	0.00	
Site Preparation	Graders	1	8	0.50	0.50	1.50
	Scrapers	1	8	1.00	1.00	
	Tractors/Loaders/Backhoes	1	7	0.00	0.00	
Grading	Graders	1	8	0.50	0.50	1.00
	Rubber Tired Dozers	1	8	0.50	0.50	
	Tractors/Loaders/Backhoes	2	7	0.00	0.00	
Building Construction	Cranes	1	8	0.00	0.00	0.00
	Forklifts	2	7	0.00	0.00	
	Generator Sets	1	8	0.00	0.00	
	Tractors/Loaders/Backhoes	1	6	0.00	0.00	
	Welders	3	8	0.00	0.00	
Paving	Cement and Mortar Mixers	1	8	0.00	0.00	0.00
	Pavers	1	8	0.00	0.00	
	Paving Equipment	1	8	0.00	0.00	
	Rollers	2	8	0.00	0.00	
	Tractors/Loaders/Backhoes	1	8	0.00	0.00	
Architectural Coating	Air Compressors	1	6	0.00	0.00	0.00

[1] CalEEMod defaults.

4.2 Localized Construction Analysis Modeling Parameters

CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. This report identifies the

following parameters in the project design or applicable mitigation measures in order to compare CalEEMod reported emissions against the localized significance threshold lookup tables:

1. The off-road equipment list (including type of equipment, horsepower, and hours of operation) assumed for the day of construction activity with maximum emissions.
2. The maximum number of acres disturbed on the peak day.
3. Any emission control devices added onto off-road equipment.
4. Specific dust suppression techniques used on the day of construction activity with maximum emissions.

4.3 Operational Assumptions

Operational emissions occur over the life of the project and are considered "long-term" sources of emissions. Operational emissions include both direct and indirect sources. This section briefly describes the operational sources of emissions analyzed for the project.

4.3.1 Mobile Source Emissions

Mobile source emissions would be the largest source of long-term air pollutants from the proposed operation of the project. Mobile sources are direct sources of project emissions that are primarily attributed to tailpipe exhaust and road dust (tire, brake, clutch, and road surface wear) from motor vehicles traveling to and from the site.

Estimates of mobile source emissions require information on four parameters: trip generation, trip length, vehicle/fleet mix, and emission factors (quantity of emission for each mile traveled or time spent idling by each vehicle).

The trip generation rates used for this analysis are based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition. The proposed project consists of constructing 36 townhome dwelling units. As such, ITE Land Use 215: Single-Family Attached Housing accurately reflect the proposed project land use. For trip lengths, the CalEEMod defaults are used.

The Emission Factors (EMFAC2021) 2021 model and off-model adjustments factors to account for the SAFE Vehicle Rule is used to estimate the mobile source emissions are embedded in the CalEEMod emissions model. No adjustments have been made to default emission factors.

The project's total vehicle miles traveled is shown in **Table 4-2**.

Table 4-2 | Operational Vehicle Miles Traveled [1]

Land Use	Annual Home-Based Vehicle Miles Traveled (VMT)
Condo/Townhouse	905,531

[1] CalEEMod defaults.

To be conservative, this analysis has assumed that 2% of the total trips associated with the project will be heavy trucks with a gross vehicle weight rating (GVWR) of 10,000 pounds or greater. This includes LHD2, MHD, HHD, OBUS, UBUS, and SBUS vehicles. This is conservative, as in practice, residential land uses such as the one proposed by the project typically generate very few heavy truck trips, generally less than 1% of total traffic. Using 2% therefore overestimates the proportion of heavy trucks associated with the project. The adjusted vehicle mix is proportioned according to the default CalEEMod vehicle mix.

Table 4-3 summarizes the adjusted vehicle mix used for the project.

Table 4-3 | Operational Vehicle Mix [1]

Vehicle Type	Vehicle Mix
Light Duty Automobile (LDA)	50.42%
Light Duty Truck (LDTI)	4.13%
Light Duty Truck (LDT2)	23.72%
Medium Duty Truck (MDV)	14.70%
Light Heavy Truck (LHD1)	2.80%
Light Heavy Truck (LHD2)	0.42%
Medium Heavy Truck (MHD)	0.90%
Heavy Heavy Truck (HHD)	0.33%
Other Bus (OBUS)	0.04%
Urban Bus (UBUS)	0.04%
Motorcycle (MCY)	2.23%
School Bus (SBUS)	0.06%
Motor Home (MH)	0.22%
Total	**100.00%**

[1] Adjusted fleet mix to include 2% total trucks over 10,000 lbs. GVWR (LHD2, MHD, HHD, OBUS, UBUS, SBUS, MH).

4.3.2 Energy Source Emissions

Energy usage includes both direct and indirect sources of emissions. Direct sources of emissions include on-site energy usage, while indirect emissions include electricity generated by offsite power plants. The proposed project will be powered exclusively by electricity, with no use of natural gas. As a result, this analysis evaluates all project-related energy consumption solely in terms of electricity usage.

CalEEMod divides building electricity use into uses that are subject to Title 24 standards and those that are not. Lighting electricity usage is also calculated as a separate category in CalEEMod. For electricity, Title 24 uses include the major building envelope systems covered by Part 6 (California Energy Code) of Title 24, such as space heating, space cooling, water heating, and ventilation. Non-Title 24 uses include all other end uses, such as appliances, electronics, and other miscellaneous plug-in uses. Because some lighting is not considered as part of the building envelope energy budget, and since a separate mitigation measure is applicable to this end use, CalEEMod makes lighting a separate category.

The baseline values are based on the California Energy Commission (CEC) sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies.

The project will be required to provide on-site renewable energy photovoltaic installations (solar panels), as prescribed by the 2022 Building Energy Efficiency Standards for Residential and Nonresidential Buildings.

In order to assess the potential project's future energy usage, RK has performed a quantitative energy impact analysis using CEQA energy impact criteria. The energy impact analysis is provided in Section 8.0 of this report.

4.3.3 Area Source Emissions

Area source emissions are direct sources of emissions that fall under four categories: hearths, consumer products, architectural coatings, and landscaping equipment. Per SCAQMD Rule 445, no wood burning devices are allowed in new developments; therefore, no wood hearths are included in this project.

Consumer products are various solvents used in non-industrial applications which emit ROGs during their product use. These typically include cleaning supplies, kitchen aerosols, cosmetics, and toiletries.

4.3.4 Other Sources of Operational Emissions

- **Water.** Greenhouse gas emissions are generated from the upstream energy required to supply and treat the water used on the project site. Indirect emissions from water usage are counted as part of the project's overall impact.

- **Waste.** CalEEMod calculates the indirect GHG emissions associated with waste that is disposed of at a landfill. The program uses annual waste disposal rates from the California Department of Resources Recycling and Recovery (CalRecycle) data for individual land uses. The program quantifies the GHG emissions associated with the decomposition of the waste which generates methane based on the total amount of degradable organic carbon.

The project's estimated water usage and waste generation is reported in **Table 4-4**.

Table 4-4 | Operational Water Usage and Waste Generation [1]

Land Use	Water Usage (gallons/yr)			Waste Generation (tons/yr)
	Indoor	Outdoor	Total	
Condo/Townhouse	1,350,923.40	475,213.66	1,826,137.06	26.55
Parking Lot	--	--	--	--
Total	**1,350,923.40**	**475,213.66**	**1,826,137.06**	**26.55**

[1] CalEEMod defaults.

5.0 Significance Thresholds

5.1 Air Quality Regional Significance Thresholds

The SCAQMD has established air quality emissions thresholds for criteria air pollutants for the purposes of determining whether a project may have a significant effect on the environment per Section 15002(g) of the Guidelines for implementing CEQA. By complying with the thresholds of significance, the project would be in compliance with the SCAQMD Air Quality Management Plan (AQMP) and the federal and state air quality standards.

Table 5-1 lists the air quality significance thresholds for the six air pollutants analyzed in this report. Lead is not included as part of this analysis as the project is not expected to emit lead in any significant measurable quantity.

Table 5-1 | SCAQMD Regional Significance Thresholds[1]

Pollutant	Construction (lbs/day)	Operation (lbs/day)
NO_X	100	55
VOC	75	55
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_X	150	150
CO	550	550

[1] Source: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.

5.2 Air Quality Localized Significance Thresholds

Air quality emissions were analyzed using the SCAQMD's Mass Rate Localized Significance Threshold (LST) Look-up Tables.

Table 5-2 lists the Localized Significance Thresholds (LST) used to determine whether a project may generate significant adverse localized air quality impacts. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptors in the project vicinity. LSTs are developed based on the ambient concentrations of four applicable air pollutants for SRA-20 (Central Orange County Coastal).

The nearest existing sensitive receptors are located to the west of the project site, less than 25 meters from potential areas of on-site construction and operational activity. Although receptors are located

closer than 25 meters to the site, SCAQMD LST methodology states that projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters.

The disturbance area for applying SCAQMD LST thresholds is based on the maximum area of active ground disturbance that could occur at one time during construction, as this represents the largest potential source area for localized emissions. As shown in **Table 4-1**, the daily disturbance area is calculated to be 1.5 acres, however LST thresholds are only based on 1, 2, and 5-acre sites. To be conservative, a linear trend was used to estimate the construction thresholds for 1.5-acre sites based on the established LST thresholds.

Table 5-2 | SCAQMD Localized Significance Thresholds (LSTs)[1]

Pollutant	Construction (lbs/day)	Operation (lbs/day)
NO_X	110.5	110.5
CO	800.7	800.7
PM_{10}	5.5	1.5
$PM_{2.5}$	4.0	1.4

[1] Source: SCAQMD Mass Rate Localized Significance Thresholds for 1.5 acres/day in SRA-20 at 25 meters.

5.3 GHG Significance Thresholds

5.3.1 SCAQMD GHG Interim Significance Thresholds

The SCAQMD has published the Interim CEQA Greenhouse Gas (GHG) Significance Thresholds, December 2008, to assist local agencies with determining the impact of a project's GHG emissions. SCAQMD's objective in providing the GHG guidelines is to establish a performance standard that will ultimately contribute to reducing GHG emissions below 1990 levels, and thus achieve the requirements of the California Global Warming Solutions Act (AB 32). The SCAQMD's GHG thresholds were upheld in *Upland Community First v. City of Upland* (2024) 105 Cal. App. 5th 1, 20.

In the absence of a formal threshold established by the State, SCAQMD's interim GHG threshold has been established for use by lead agencies in determining significance of GHG emissions in CEQA. SCAQMD guidance describes a five-tiered approach for determining significance. Tier 3 is the primary method used for development projects of this size and is the approach used in this analysis. The Tier 3 approach limits the amount of GHG emissions from residential and commercial development projects to 3,000 metric tons of CO2 equivalents per year (MTCO2e/yr).

If the project exceeds 3,000 MTCO2e/yr, then the impact is considered significant, and mitigation measures would be required to reduce emissions below the threshold.

6.0 Air Quality Impact Analysis

6.1 Short-Term Air Quality Impacts – Construction

6.1.1 Regional Emissions – Construction

Regional air quality emissions include both on-site and off-site emissions associated with construction of the project. As shown in **Table 6-1**, the project's potential regional daily emissions of criteria pollutants are expected to be below the allowable thresholds of significance.

CalEEMod emissions outputs are provided in **Appendix A**.

Table 6-1 | Regional Construction Emissions

Activity	Maximum Daily Emissions (lbs./day)[1]					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Demolition	0.48	6.95	17.08	0.05	4.02	0.84
Site Preparation	0.28	1.36	15.39	0.03	0.77	0.14
Grading	0.97	63.00	41.32	0.36	16.90	5.77
Building Construction	0.33	3.96	14.19	0.02	0.41	0.13
Paving	0.47	2.23	9.28	0.01	0.23	0.08
Architectural Coating	46.58	0.85	1.35	0.00	0.09	0.03
Maximum[1]	**46.58**	**63.00**	**41.32**	**0.36**	**16.90**	**5.77**
SCAQMD Threshold	75	100	550	150	150	55
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

[1] Maximum daily emissions during summer or winter; includes both onsite and offsite project emissions.

The project must follow mandatory SCAQMD rules and requirements with regards to fugitive dust control, as described in **Section 6.1.3**.

Table 6-1 shows that the project's potential daily construction emissions would be below the applicable SCAQMD air quality standards and thresholds of significance. As a result, the project would not contribute substantially to an existing or projected air quality violation.

Furthermore, by complying with the SCAQMD standards, the project would not contribute to a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Therefore, the project's short-term construction impact on regional air resources will be less than significant.

6.1.2 Localized Emissions – Construction

Table 6-2 illustrates the construction-related localized emissions and compares the results to SCAQMD LST thresholds. As shown in **Table 6-2**, the emissions will be below the SCAQMD thresholds of significance for localized construction emissions. The project must follow all standard SCAQMD rules and requirements with regards to fugitive dust control, as described in Section 6.1.3.

Therefore, the project's short-term construction impact on localized air quality would be less than significant.

Table 6-2 | Localized Construction Emissions

Activity	Maximum Daily Emissions (lbs./day)[1]			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Onsite Emissions	3.74	15.05	2.93	1.40
SCAQMD Localized Threshold[2]	110.5	800.7	5.5	4.0
Exceeds Threshold?	**No**	**No**	**No**	**No**

[1] Maximum daily emissions during summer or winter; includes both onsite and offsite project emissions.
[2] Source: SCAQMD Mass Rate Localized Significance Thresholds for 1.5 acres/day in SRA-20 at 25 meters.

6.1.3 Fugitive Dust – Construction

The Project is required to comply with standard SCAQMD rules that assist in reducing short-term air pollutant emissions associated with suspended particulate matter, also known as fugitive dust. Fugitive dust emissions are commonly associated with land clearing activities, cut-and-fill grading operations, and exposure of soils to the air and wind. SCAQMD Rule 403 requires that fugitive dust is controlled with best-available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rules 402 and 403 require implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site.

6.1.4 Odors – Construction

Heavy-duty equipment in the project area during construction will emit odors; however, the construction activity would cease to occur after individual construction is completed. The project is required to comply with Rule 402 during construction, which states that 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. No other sources of objectionable odors have been identified for the proposed Project.

Therefore, the project impact from odor emissions would be less than significant.

6.1.5 Asbestos – Construction

Asbestos is a carcinogen and is categorized as a hazardous air pollutant by the Environmental Protection Agency (EPA) and regulated through the National Emissions Standards for Hazardous Air Pollutants (NESHAP). Asbestos fibers embedded within construction materials become a health hazard once they are disturbed and rendered airborne, such as through physical contact like building renovation and demolition activities.

SCAQMD is the local enforcement authority for asbestos. SCAQMD Rule 1403 establishes the survey requirements, notification, and work practices to prevent asbestos emissions from emanating during building renovation and demolition activities. The project proposes to demolish the existing building and hardscape on the project site during construction. Compliance with Rule 1403 will ensure that the project does not result in asbestos emissions that would adversely affect a substantial number of people.

Asbestos also occurs naturally in serpentine and ultramafic rock. Based on the California Division of Mines and Geology General Location Guide for Ultramafic Rocks in California - Areas More Likely to Contain Naturally Occurring Asbestos, naturally occurring asbestos has not been shown to occur within in the vicinity of the project site. Therefore, the potential risk for naturally occurring asbestos (NOA) during project construction is small. However, in the event NOA is found on the site, the project will be required to comply with SCAQMD and NESHAP standards.

By following the SCAQMD's required asbestos abatement protocols, the project impact would be less than significant.

6.1.6 Diesel Particulate Matter – Construction

The project will generate diesel particulate matter (DPM) during construction from off-road diesel equipment and trucks. The California Office of Environmental Health Hazard Assessment (OEHHA) adopted the Guidance Manual for Preparation of Health Risk Assessments (HRA Guidelines) to provide procedures for use in the Air Toxics Hot Spots Program or for the permitting of existing, new, or modified stationary sources[2].

[2] OEHHA. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance for Preparation of Health Risk Assessments. February 2015.

To evaluate potential cancer and non-cancer health risks associated with DPM emissions during project construction, RK prepared the *Toll Brothers Laguna Hills Townhome Project Construction Health Risk Assessment* (HRA). Construction-related PM_{10} exhaust emissions were quantified using the CalEEMod outputs provided in **Appendix A** and used as a surrogate for modeling DPM emissions. The HRA indicates that the project will not exceed the applicable cancer and non-cancer health risk thresholds established by the SCAQMD.

As a result, the project's short-term construction health risk impact would be less than significant.

6.2 Long-Term Air Quality Impacts – Operation

6.2.1 Regional Emissions – Operation

Long-term unmitigated operational air pollutant impacts from the project are shown in **Table 6-3**. CalEEMod emissions outputs are provided in **Appendix A**.

The project's daily unmitigated operational emissions will be below the applicable SCAQMD regional air quality standards and thresholds of significance, and the project would not contribute substantially to an existing or projected air quality violation. Furthermore, by complying with the SCAQMD standards, the project would not contribute to a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Therefore, the project's long-term regional air quality impacts would be less than significant.

Table 6-3 | Regional Operational Emissions

Activity	Maximum Daily Emissions (lbs./day)[1]					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Mobile Sources	0.97	0.71	8.49	0.02	2.08	0.54
Area Sources	1.86	0.02	2.04	0.00	0.00	0.00
Energy Sources	0.01	0.22	0.09	0.00	0.02	0.02
Total	**2.84**	**0.95**	**10.62**	**0.02**	**2.10**	**0.55**
SCAQMD Threshold	55	55	550	150	150	55
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

[1] Maximum daily emissions during summer or winter; includes both onsite and offsite project emissions.

6.2.2 Localized Emissions – Operations

Table 6-4 shows the localized operational emissions and compares the results to SCAQMD LST thresholds of significance. As shown in **Table 6-4**, the emissions will be below the SCAQMD thresholds of significance for localized operational emissions.

Therefore, the project's long-term localized air quality impacts would be less than significant.

Table 6-4 | Localized Operational Emissions

Activity	Maximum Daily Emissions (lbs./day)[1]			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Onsite Emissions	0.27	2.56	0.12	0.05
SCAQMD Localized Threshold[2]	110.5	800.7	1.5	1.4
Exceeds Threshold?	**No**	**No**	**No**	**No**

[1] Maximum daily emissions during summer or winter.
[2] Source: SCAQMD Mass Rate Localized Significance Thresholds for 1.5 acres/day in SRA-20 at 25 meters.

6.2.3 Odors – Operation

Land uses that commonly receive odor complaints include agricultural uses (farming and livestock), chemical plants, composting operations, dairies, fiberglass molding facilities, food processing plants, landfills, refineries, rail yards, and wastewater treatment plants. The proposed residential project does not contain land uses that would typically be associated with significant odor emissions.

The project will be required to comply with standard building code requirements related to exhaust ventilation, as well as comply with SCAQMD Rule 402. Rule 402 requires that a person may 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. Project related odors would not create a nuisance.

Therefore, the project's operation would result in less than significant odor impacts.

6.2.4 Toxic Air Contaminants – Operations

The proposed project consists of residential land use and does not include major sources of toxic air contaminants (TAC) emissions that would result in significant exposure of sensitive receptors to substantial pollutant concentrations. Examples of land uses that are major sources of TACs include distribution centers with heavy truck traffic, rail yards, ports, refineries, chrome plating facilities, dry

cleaners, and gasoline dispensing stations. The project does not include any of these uses, **hence the project's potential impact is considered less than significant.**

7.0 Greenhouse Gas Impact Analysis

7.1 Greenhouse Gas Emissions – Construction

Greenhouse gas emissions are estimated for on-site and off-site construction activity using CalEEMod. **Table 7-1** shows the construction greenhouse gas emissions, including equipment and worker vehicle emissions for all phases of construction.

CalEEMod GHG output calculations are provided in **Appendix A**.

Table 7-1 | Construction Greenhouse Gas Emissions

Activity	Emissions ($MTCO_2e$)[1]		
	Onsite	Offsite	Total
Demolition	22.70	34.67	57.37
Site Preparation	3.71	0.13	3.84
Grading	6.70	143.15	149.85
Building Construction	221.10	45.60	266.71
Paving	5.66	0.85	6.51
Architectural Coating	0.61	0.29	0.90
Total	**260.48**	**224.69**	**485.18**
Amortized Over 30 Years[2]	**8.68**	**7.49**	**16.17**

[1] $MTCO_2e$ = metric tons of carbon dioxide equivalents (includes carbon dioxide, methane, nitrous oxide, and/or hydrofluorocarbons).

[2] The emissions are amortized over 30 years and added to the operational emissions, pursuant to SCAQMD recommendations.

Because impacts from construction activities occur over a relatively short period of time, they contribute a relatively small portion of the overall lifetime project GHG emissions. Therefore, the SCAQMD recommends amortizing construction GHG emissions over a 30-year project lifetime and adding them to the overall project operational emissions. Pursuant to SCAQMD recommendations, this study assesses construction related GHG emissions along with the project's operational emissions, as further discussed in the section below.

7.2 Greenhouse Gas Emissions – Operations

Greenhouse gas emissions are estimated for on-site and off-site operational activity using CalEEMod. **Table 7-2** shows the project's operational greenhouse gas emissions, along with the project's amortized construction emissions.

Appendix A provides the CalEEMod emissions outputs for this study.

Table 7-2 | Operational Greenhouse Gas Emissions

Emission Source	Unmitigated GHG Emissions ($MTCO_2e/yr.$)[1]
Mobile Sources	297.27
Area Sources	2.98
Energy Sources	94.58
Water	4.68
Waste	8.29
Refrigerant	0.09
Construction (30-Year Amortization)	16.17
Total Annual Emissions	**424.06**
SCAQMD Tier 3 Significance Threshold	3,000.00
Exceeds Threshold?	**No**

[1] $MTCO_2e/yr.$ = metric tons of carbon dioxide equivalents per year.

As shown in **Table 7-2**, the proposed project's GHG emissions are not expected to exceed the SCAQMD GHG emissions threshold of 3,000 $MTCO_2e$.

Therefore, the proposed project's impact from GHG emissions would be less than significant.

8.0 Energy Impact Analysis

8.1 Study Objectives

The purpose of this energy conservation analysis is to review the energy implications of the proposed project and provide recommendations to reduce wasteful, inefficient, and unnecessary consumption of energy during the operation of the project. This analysis has been prepared within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.).

CEQA Guidelines, Appendix F, Energy Conservation, describes the framework within which energy conservation should be analyzed. Conserving energy implies the wise and efficient use of energy through decreasing overall per capita energy consumption, decreasing reliance on fossil fuels (such as coal, natural gas, and oil), and increasing reliance on renewable energy sources.

8.2 Utility Providers

The proposed project would be served by the utility providers shown in **Table 8-1** below.

Table 8-1 | Utility Providers

Utility	Provider
Electricity	Southern California Edison
Natural Gas	Southern California Gas Company

8.3 Project Energy Consumption

The three (3) main types of energy expected to be consumed by the project include electricity, natural gas, and petroleum products in the form of gasoline and diesel fuel. CalEEMod is used to calculate energy usage associated with the construction and operation of the project.

The CalEEMod calculation sheets for the project are provided in **Appendix A**. The EMFAC2021 vehicle fuel consumption data used for this analysis is provided in **Appendix B**.

8.3.1 Electricity Consumption

The project will use electricity for operational activities including, but not limited to, building heating and cooling, lighting, appliances, electronics, mechanical equipment, and parking lot lighting. Indirect electricity usage will also be required to supply, distribute, and treat water and wastewater. Electricity will be provided to the site by Southern California Edison.

Temporary electricity usage for construction activities may include lighting, electric equipment, and mobile office uses. However, CalEEMod does not calculate electricity usage during construction. Electricity usage during construction is expected to be short-term and relatively minor compared to the operational demand.

Table 8-2 shows the project's estimated operational electricity consumption in kilowatt-hours per year (kWh/yr) and millions of BTU per year (MMBTU/yr).

Table 8-2 | Project Electricity Consumption[1]

Land Use/Activity	Electricity Consumption	
	(KWh/yr.)[2]	(MMBTU/yr.)[2]
Condo/Townhouse	167,260.09	570.69
Parking Lot	35,105.88	119.78
Water Supply and Treatment	12,430.51	42.41
Total	**214,796.48**	**732.88**

[1] CalEEMod defaults.
[2] KWHr/yr. = kilowatt hours per year.
MMBTU/yr. = million British Thermal Units per year.

8.3.2 Natural Gas Consumption

The proposed project will be powered exclusively by electricity, with no use of natural gas. As a result, all project-related energy usage is accounted for in the projected electricity consumption shown in **Table 8-2**.

8.3.3 Petroleum Consumption

The project's energy consumption from petroleum products is primarily associated with transportation-related activities. This includes gasoline and diesel fuel usage for auto and truck trips during construction and operation and off-road equipment usage during construction.

8.3.3.1 Petroleum Consumption – Construction

Construction of the project is expected to consist of demolition, site preparation, grading, building construction, paving, and architectural coating phases. Construction activities will consume energy in the form of motor vehicle fuel (gasoline and diesel) for off-road construction equipment and on-road vehicle trips. Vehicle trips include workers and vendors traveling to and from the project site.

Table 8-3 and **Table 8-4** show the project's energy consumption for all off-road and on-road equipment during construction, respectively. For the purposes of this analysis, all off-road equipment is assumed to run on diesel fuel.

Table 8-3 | Construction Off-Road Equipment Energy Consumption

Phase[1]	Phase Duration (Days)[1]	Equipment[1]	Amount[1]	Hrs./Day[1]	Horsepower (HP)[1]	Load Factor[1]	HP-hrs.[2]	Fuel Consumption Rate (HP-hrs./gal.)[3]	Diesel Fuel Consumption (Gal.)	Diesel Fuel Consumption by Phase (Gal.)	MMBTU[4]
Demolition	20	Concrete/Industrial Saws	1	8	33	0.73	3,854.40	18.50	208.35	2,284.37	313.83
		Rubber Tired Dozers	1	8	367	0.40	23,488.00		1,269.62		
		Tractors/Loaders/Backhoes	3	8	84	0.37	14,918.40		806.40		
Site Preparation	3	Graders	1	8	148	0.41	1,456.32		78.72	377.40	51.85
		Scrapers	1	8	423	0.48	4,872.96		263.40		
		Tractors/Loaders/Backhoes	1	7	84	0.37	652.68		35.28		
Grading	6	Graders	1	8	148	0.41	2,912.64		157.44	679.45	93.34
		Rubber Tired Dozers	1	8	367	0.40	7,046.40		380.89		
		Tractors/Loaders/Backhoes	2	7	84	0.37	2,610.72		141.12		
Building Construction	220	Cranes	1	8	367	0.29	187,316.80		10,125.23	21,966.70	3,017.81
		Forklifts	2	7	82	0.20	50,512.00		2,730.38		
		Generator Sets	1	8	14	0.74	18,233.60		985.60		
		Tractors/Loaders/Backhoes	1	6	84	0.37	41,025.60		2,217.60		
		Welders	3	8	46	0.45	109,296.00		5,907.89		
Paving	10	Cement and Mortar Mixers	1	8	10	0.56	448.00		24.22	562.59	77.29
		Pavers	1	8	81	0.42	2,721.60		147.11		
		Paving Equipment	1	8	89	0.36	2,563.20		138.55		
		Rollers	2	8	36	0.38	2,188.80		118.31		
		Tractors/Loaders/Backhoes	1	8	84	0.37	2,486.40		134.40		
Architectural Coating	10	Air Compressors	1	6	37	0.48	1,065.60		57.60	57.60	7.91
								Total Energy Requirements		**25,928.11**	**3,562.03**

[1] CalEEMod defaults.
[2] HP-hrs. = Horsepower hours.
[3] Source: Carl Moyer Program Guidelines. 2017 Revisions. Table D-21. https://www.arb.ca.gov/msprog/moyer/guidelines/current.htm.
[4] MMBTU = Millions of BTU, assuming 1 gallon of diesel fuel = 137,381 BTU.

Table 8-4 | Construction On-Road Equipment Energy Consumption

Phase[1]	Phase Duration (Days)[1]	Trips per Day[1]	Trip Length	Phase VMT	Vehicle Class[1]	Vehicle Mix[1]	Average Fuel Economy (MPG)[2]	Gasoline			Diesel			Total MMBTU[3]
								Fuel Split[2]	Fuel Consumption by Vehicle Class (Gal.)	Fuel Consumption by Phase (Gal.)	Fuel Split[2]	Fuel Consumption by Vehicle Class (Gal.)	Fuel Consumption by Phase (Gal.)	
Worker Trips														
Demolition	20	13	18.5	4,810	LDA	0.50	29.94	0.9986	80.20	177.28	0.0014	0.11	0.25	21.38
					LDT1	0.25	24.89	0.9998	48.31		0.0002	0.01		
					LDT2	0.25	24.59	0.9974	48.76		0.0026	0.13		
Site Preparation	3	8	18.5	444	LDA	0.50	29.94	0.9986	7.40	16.36	0.0014	0.01	0.02	1.97
					LDT1	0.25	24.89	0.9998	4.46		0.0002	0.00		
					LDT2	0.25	24.59	0.9974	4.50		0.0026	0.01		
Grading	6	10	18.5	1,110	LDA	0.50	29.94	0.9986	18.51	40.91	0.0014	0.03	0.06	4.93
					LDT1	0.25	24.89	0.9998	11.15		0.0002	0.00		
					LDT2	0.25	24.59	0.9974	11.25		0.0026	0.03		
Building Construction	220	26	18.5	105,820	LDA	0.50	29.94	0.9986	1,764.46	3,900.15	0.0014	2.46	5.51	470.45
					LDT1	0.25	24.89	0.9998	1,062.88		0.0002	0.19		
					LDT2	0.25	24.59	0.9974	1,072.81		0.0026	2.85		
Paving	10	15	18.5	2,775	LDA	0.50	29.94	0.9986	46.27	102.28	0.0014	0.06	0.14	12.34
					LDT1	0.25	24.89	0.9998	27.87		0.0002	0.01		
					LDT2	0.25	24.59	0.9974	28.13		0.0026	0.07		
Architectural Coating	10	5	18.5	925	LDA	0.50	29.94	0.9986	15.42	34.09	0.0014	0.02	0.05	4.11
					LDT1	0.25	24.89	0.9998	9.29		0.0002	0.00		
					LDT2	0.25	24.59	0.9974	9.38		0.0026	0.02		
Subtotal Worker Trips Energy Consumption								*Gasoline (Gal.)*		*4,271.07*	*Diesel (Gal.)*		*6.03*	*515.19*
Vendor Trips														
Building Construction	220	4	10.2	8,976	MHDT	0.50	7.79	0.3129	180.24	180.57	0.6871	395.77	1,126.54	176.51
					HHDT	0.50	6.14	0.0005	0.33		0.9995	730.76		
Subtotal Vendor Trips Energy Consumption								*Gasoline (Gal.)*		*180.57*	*Diesel (Gal.)*		*1,126.54*	*176.51*
Hauling Trips														
Demolition	20	51	20.0	20,400	HHDT	1.00	6.14	0.0005	1.50	1.50	0.9995	3,321.65	3,321.65	456.51
Grading	6	729	20.0	87,480	HHDT	1.00	6.14	0.0005	6.44	6.44	0.9995	14,244.04	14,244.04	1,957.64
Subtotal Hauling Trips Energy Consumption								*Gasoline (Gal.)*		*7.94*	*Diesel (Gal.)*		*17,565.69*	*2,414.15*
Total On-Road Construction Trips Energy Consumption								**Gasoline (Gal.)**		**4,459.57**	**Diesel (Gal.)**		**18,698.26**	**3,105.85**

[1] CalEEMod defaults.
[2] HP-hrs. = Horsepower hours.
[3] Source: Carl Moyer Program Guidelines. 2017 Revisions. Table D-21. https://www.arb.ca.gov/msprog/moyer/guidelines/current.htm.
[4] MMBTU = Millions of BTU, assuming 1 gallon of diesel fuel = 137,381 BTU.

8.3.3.2 Petroleum Consumption – Operation

The project is expected to consume energy from auto and truck trips generated by the proposed land uses. Operational vehicle trips are associated with workers, customers, and vendors/non-workers (i.e., delivery, service, maintenance vehicles, etc.) traveling to and from the site. EMFAC2021 vehicle fuel consumption data is provided in **Appendix B**.

Table 8-5 shows the project's petroleum energy consumption for all operational trips generated by the project on an annual basis.

Table 8-5 | Operational Trips Energy Consumption - Annual

Vehicle Class	Vehicle Mix	Average Fuel Economy (MPG)	Annual VMT	Gasoline		Diesel		MMBTU/yr.
				Fuel Split	Fuel Consumption (Gal.)	Fuel Split	Fuel Consumption (Gal.)	
LDA	50.42%	29.94	905,531	0.9986	15,226.61	0.0014	21.27	1,836.65
LDT1	4.13%	24.89		0.9998	1,501.66	0.0002	0.27	180.88
LDT2	23.72%	24.59		0.9974	8,709.95	0.0026	23.11	1,052.11
MDV	14.70%	20.00		0.9896	6,584.21	0.0104	69.46	802.47
LHD1	2.80%	15.84		0.7199	1,152.41	0.2801	448.44	200.39
LHD2	0.42%	15.05		0.4505	113.76	0.5495	138.73	32.76
MHD	0.90%	7.79		0.3129	328.91	0.6871	722.23	138.83
HHD	0.33%	6.14		0.0005	0.22	0.9995	488.32	67.11
OBUS	0.04%	6.01		0.5471	29.15	0.4529	24.13	6.83
UBUS	0.04%	7.01		0.9852	46.79	0.0148	0.70	5.73
MCY	2.23%	41.68		1.0000	485.18	0.0000	0.00	58.43
SBUS	0.06%	8.34		0.6144	37.78	0.3856	23.71	7.81
MH	0.22%	5.77		0.8268	280.21	0.1732	58.69	41.81
Total Operational Trips Energy Usage				**Gasoline Consumption (Gal.)**	**34,496.84**	**Diesel Consumption (Gal.)**	**2,019.06**	**4,431.81**

8.4 Summary of Project Energy Consumption

Table 8-6 provides a summary of the project's annual operational energy consumption.

Table 8-6 | Total Annual Energy Consumption

Activity	Energy Consumption (MMBTU/yr.)[1]
Operational Electricity	732.88
Operational Natural Gas	--
Operational Petroleum	4,431.81
Total	**5,164.69**

[1] MBTU/yr. = Million British Thermal Units per year.

8.5 Energy Impacts

This analysis has been prepared within the context of the CEQA Guidelines, Appendix F, Energy Conservation, and Appendix G, Environmental Checklist Form. According to CEQA, the goal of conserving energy implies the wise and efficient use of energy through decreasing overall per capita energy consumption, decreasing reliance on fossil fuels (such as coal, natural gas, and oil), and increasing reliance on renewable energy sources (CEQA Guidelines, Appendix F).

A significant environmental impact would result if the project would:

a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

8.5.1 Energy Impact – A

Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The project will implement the mandatory requirements of California's Building Efficiency Standards (Title 24, Part 6) to reduce operational energy consumption. California's building standards are some of the strictest in the nation and the project's compliance with the Building Code will ensure that wasteful, inefficient or unnecessary consumption of energy is minimized. The California Building Code is designed to reduce the amount of energy needed to heat or cool a building, reduce energy usage for lighting and appliances and promote usage of energy from renewable sources.

In particular, the project is expected to comply with Section 110.10 of the building code regarding mandatory requirements for solar readiness and provide a rooftop solar zone.

Hence, the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources, and the impact is considered less than significant.

8.5.2 Energy Impact – B

Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The project is not expected to conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The project will purchase electricity through Southern California Edison which is subject to the requirements of California Senate Bill 100 (SB 100). SB 100 is the most stringent and current energy legislation in California; requiring that renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers and 100% of electricity procured to serve all state agencies by December 31, 2045.[3]

In addition, the project will include onsite solar photovoltaic energy generation in compliance with the California Title 24 Building Energy Efficiency Standards. Title 24 requires new multifamily developments to incorporate solar PV systems sized to serve onsite electricity demand, thereby directly supporting state renewable energy and energy efficiency policies.

The project will also comply with the mandatory requirements of California's Green Building and Building Energy Efficiency standards that promote renewable energy and energy efficiency.

Hence, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and the impact is considered less than significant.

[3] SB-100 California Renewables Portfolio Standard Program.
http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100

Appendices

Appendix A
CalEEMod Emissions Outputs

Toll Brothers Laguna Hills Townhomes Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Toll Brothers Laguna Hills Townhomes
Construction Start Date	2/1/2026
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.5
Precipitation (days)	6.0
Location	23161 Mill Creek Dr, Laguna Hills, CA 92653, USA
County	Orange
City	Laguna Hills
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5929
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.35

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
Condo/Townhouse	36	Dwelling Unit	1.5	72,432	30,000	0.00	107	—

Parking Lot	0.92	Acre	0.92	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Energy	E-15	Require All-Electric Development

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.	0.34	0.33	3.9	14	0.02	0.04	0.37	0.41	0.04	0.09	0.13	—	2,659	2,659	0.10	0.05	1.5	2,677
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	47	47	63	41	0.36	0.69	16	17	0.69	5.1	5.8	—	52,564	52,564	3.9	7.9	2.6	55,028
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.3	1.3	3.7	9.7	0.02	0.04	0.70	0.74	0.04	0.17	0.21	—	2,731	2,731	0.14	0.19	1.3	2,792
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.24	0.24	0.67	1.8	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	452	452	0.02	0.03	0.21	462

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.34	0.33	3.9	14	0.02	0.04	0.37	0.41	0.04	0.09	0.13	—	2,659	2,659	0.10	0.05	1.5	2,677
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	5.1	0.97	63	41	0.36	0.69	16	17	0.69	5.1	5.8	—	52,564	52,564	3.9	7.9	2.6	55,028
2027	47	47	3.9	14	0.02	0.04	0.37	0.41	0.04	0.09	0.13	—	2,635	2,635	0.10	0.05	0.03	2,652
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.32	0.23	3.7	9.7	0.02	0.04	0.70	0.74	0.04	0.17	0.21	—	2,731	2,731	0.14	0.19	1.3	2,792
2027	1.3	1.3	0.22	0.78	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	138	138	0.01	< 0.005	0.03	138
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.06	0.04	0.67	1.8	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	452	452	0.02	0.03	0.21	462
2027	0.24	0.24	0.04	0.14	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	23	23	< 0.005	< 0.005	< 0.005	23

2.3. Construction Emissions by Year, Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.34	0.33	3.9	14	0.02	0.04	0.37	0.41	0.04	0.09	0.13	—	2,659	2,659	0.10	0.05	1.5	2,677
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	5.1	0.97	63	41	0.36	0.69	16	17	0.69	5.1	5.8	—	52,564	52,564	3.9	7.9	2.6	55,028
2027	47	47	3.9	14	0.02	0.04	0.37	0.41	0.04	0.09	0.13	—	2,635	2,635	0.10	0.05	0.03	2,652
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.32	0.23	3.7	9.7	0.02	0.04	0.70	0.74	0.04	0.17	0.21	—	2,731	2,731	0.14	0.19	1.3	2,792

2027	1.3	1.3	0.22	0.78	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	138	138	0.01	< 0.005	0.03	138
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.06	0.04	0.67	1.8	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	452	452	0.02	0.03	0.21	462
2027	0.24	0.24	0.04	0.14	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	23	23	< 0.005	< 0.005	< 0.005	23

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.	3.0	2.8	0.89	11	0.02	0.03	2.1	2.1	0.03	0.52	0.55	17	2,954	2,971	1.8	0.08	8.1	3,050
Mit.	2.9	2.8	0.67	11	0.02	0.01	2.1	2.1	0.01	0.52	0.54	17	2,680	2,697	1.8	0.08	8.1	2,775
% Reduced	1%	< 0.5%	25%	1%	6%	57%	—	1%	59%	—	3%	—	9%	9%	1%	—	—	9%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.8	2.7	0.93	8.0	0.02	0.03	2.1	2.1	0.03	0.52	0.55	17	2,862	2,879	1.8	0.09	0.71	2,952
Mit.	2.7	2.6	0.71	7.9	0.02	0.01	2.1	2.1	0.01	0.52	0.54	17	2,587	2,604	1.8	0.09	0.71	2,677
% Reduced	1%	< 0.5%	24%	1%	6%	59%	—	1%	61%	—	3%	—	10%	10%	1%	—	—	9%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.7	2.6	0.84	8.3	0.02	0.03	1.7	1.8	0.03	0.44	0.47	17	2,376	2,392	1.8	0.07	3.3	2,464
Mit.	2.7	2.6	0.62	8.2	0.02	0.01	1.7	1.8	0.01	0.44	0.45	17	2,101	2,118	1.8	0.07	3.3	2,188
% Reduced	1%	< 0.5%	26%	1%	7%	62%	—	1%	64%	—	4%	—	12%	11%	1%	—	—	11%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.50	0.48	0.15	1.5	< 0.005	0.01	0.32	0.32	0.01	0.08	0.09	2.8	393	396	0.30	0.01	0.54	408

Mit.	0.49	0.48	0.11	1.5	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	2.8	348	351	0.30	0.01	0.54	362
% Reduced	1%	< 0.5%	26%	1%	7%	62%	—	1%	64%	—	4%	—	12%	11%	1%	1%	—	11%

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	1.1	0.97	0.65	8.5	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,155	2,155	0.09	0.07	7.5	2,187
Area	1.9	1.9	0.02	2.0	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	213	213	0.01	< 0.005	—	214
Energy	0.03	0.01	0.22	0.09	< 0.005	0.02	—	0.02	0.02	—	0.02	—	569	569	0.04	< 0.005	—	571
Water	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Waste	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	3.0	2.8	0.89	11	0.02	0.03	2.1	2.1	0.03	0.52	0.55	17	2,954	2,971	1.8	0.08	8.1	3,050
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.1	0.96	0.71	7.9	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,068	2,068	0.10	0.08	0.20	2,094
Area	1.7	1.7	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	207	207	0.01	< 0.005	—	208
Energy	0.03	0.01	0.22	0.09	< 0.005	0.02	—	0.02	0.02	—	0.02	—	569	569	0.04	< 0.005	—	571
Water	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Waste	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	2.8	2.7	0.93	8.0	0.02	0.03	2.1	2.1	0.03	0.52	0.55	17	2,862	2,879	1.8	0.09	0.71	2,952
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.88	0.81	0.61	6.8	0.02	0.01	1.7	1.8	0.01	0.44	0.45	—	1,771	1,771	0.08	0.07	2.8	1,796

Area	1.8	1.8	0.01	1.4	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	18	18	< 0.005	< 0.005	—	18
Energy	0.03	0.01	0.22	0.09	< 0.005	0.02	—	0.02	0.02	—	0.02	—	569	569	0.04	< 0.005	—	571
Water	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Waste	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	2.7	2.6	0.84	8.3	0.02	0.03	1.7	1.8	0.03	0.44	0.47	17	2,376	2,392	1.8	0.07	3.3	2,464
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.16	0.15	0.11	1.2	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	—	293	293	0.01	0.01	0.46	297
Area	0.33	0.33	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.0	3.0	< 0.005	< 0.005	—	3.0
Energy	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	94	94	0.01	< 0.005	—	95
Water	—	—	—	—	—	—	—	—	—	—	—	0.43	2.8	3.3	0.04	< 0.005	—	4.7
Waste	—	—	—	—	—	—	—	—	—	—	—	2.4	0.00	2.4	0.24	0.00	—	8.3
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	0.50	0.48	0.15	1.5	< 0.005	0.01	0.32	0.32	0.01	0.08	0.09	2.8	393	396	0.30	0.01	0.54	408

2.6. Operations Emissions by Sector, Mitigated

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	1.1	0.97	0.65	8.5	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,155	2,155	0.09	0.07	7.5	2,187
Area	1.9	1.9	0.02	2.0	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	213	213	0.01	< 0.005	—	214
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	295	295	0.02	< 0.005	—	296
Water	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Waste	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	2.9	2.8	0.67	11	0.02	0.01	2.1	2.1	0.01	0.52	0.54	17	2,680	2,697	1.8	0.08	8.1	2,775

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.1	0.96	0.71	7.9	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,068	2,068	0.10	0.08	0.20	2,094
Area	1.7	1.7	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	207	207	0.01	< 0.005	—	208
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	295	295	0.02	< 0.005	—	296
Water	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Waste	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	2.7	2.6	0.71	7.9	0.02	0.01	2.1	2.1	0.01	0.52	0.54	17	2,587	2,604	1.8	0.09	0.71	2,677
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.88	0.81	0.61	6.8	0.02	0.01	1.7	1.8	0.01	0.44	0.45	—	1,771	1,771	0.08	0.07	2.8	1,796
Area	1.8	1.8	0.01	1.4	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	18	18	< 0.005	< 0.005	—	18
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	295	295	0.02	< 0.005	—	296
Water	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Waste	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	2.7	2.6	0.62	8.2	0.02	0.01	1.7	1.8	0.01	0.44	0.45	17	2,101	2,118	1.8	0.07	3.3	2,188
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.16	0.15	0.11	1.2	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	—	293	293	0.01	0.01	0.46	297
Area	0.33	0.33	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.0	3.0	< 0.005	< 0.005	—	3.0
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	49	49	< 0.005	< 0.005	—	49
Water	—	—	—	—	—	—	—	—	—	—	—	0.43	2.8	3.3	0.04	< 0.005	—	4.7
Waste	—	—	—	—	—	—	—	—	—	—	—	2.4	0.00	2.4	0.24	0.00	—	8.3
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	0.49	0.48	0.11	1.5	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	2.8	348	351	0.30	0.01	0.54	362

3. Construction Emissions Details

3.1. Demolition (2026) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.39	2.6	15	0.02	0.08	—	0.08	0.08	—	0.08	—	2,494	2,494	0.10	0.02	—	2,503
Demolition	—	—	—	—	—	—	2.8	2.8	—	0.43	0.43	—	—	—	—	—	—	—
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	0.02	0.02	0.14	0.80	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	137	137	0.01	< 0.005	—	137
Demolition	—	—	—	—	—	—	0.15	0.15	—	0.02	0.02	—	—	—	—	—	—	—
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	0.03	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23	23	< 0.005	< 0.005	—	23
Demolition	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.57	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	155	155	< 0.005	0.01	0.01	157
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	0.34	0.05	4.3	1.9	0.02	0.04	0.92	0.97	0.04	0.26	0.30	—	3,489	3,489	0.26	0.55	0.18	3,661
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.6	8.6	< 0.005	< 0.005	0.01	8.7
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	0.02	< 0.005	0.24	0.10	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	191	191	0.01	0.03	0.17	201
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.4	1.4	< 0.005	< 0.005	< 0.005	1.4
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	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32	32	< 0.005	0.01	0.03	33

3.2. Demolition (2026) - Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.42	0.39	2.6	15	0.02	0.08	—	0.08	0.08	—	0.08	—	2,494	2,494	0.10	0.02	—	2,503
Demolition	—	—	—	—	—	—	2.8	2.8	—	0.43	0.43	—	—	—	—	—	—	—
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	0.02	0.02	0.14	0.80	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	137	137	0.01	< 0.005	—	137
Demolition	—	—	—	—	—	—	0.15	0.15	—	0.02	0.02	—	—	—	—	—	—	—
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	0.03	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23	23	< 0.005	< 0.005	—	23
Demolition	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.57	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	155	155	< 0.005	0.01	0.01	157
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	0.34	0.05	4.3	1.9	0.02	0.04	0.92	0.97	0.04	0.26	0.30	—	3,489	3,489	0.26	0.55	0.18	3,661

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.6	8.6	< 0.005	< 0.005	0.01	8.7
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	0.02	< 0.005	0.24	0.10	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	191	191	0.01	0.03	0.17	201
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.4	1.4	< 0.005	< 0.005	< 0.005	1.4
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	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32	32	< 0.005	0.01	0.03	33

3.3. Site Preparation (2026) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.26	1.3	15	0.03	0.05	—	0.05	0.05	—	0.05	—	2,716	2,716	0.11	0.02	—	2,725
Dust From Material Movement	—	—	—	—	—	—	0.62	0.62	—	0.07	0.07	—	—	—	—	—	—	—
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	< 0.005	< 0.005	0.01	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22	22	< 0.005	< 0.005	—	22
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.7	3.7	< 0.005	< 0.005	—	3.7
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.34	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	93	93	< 0.005	< 0.005	0.01	94
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.77	0.77	< 0.005	< 0.005	< 0.005	0.78
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	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13
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

3.4. Site Preparation (2026) - Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.26	1.3	15	0.03	0.05	—	0.05	0.05	—	0.05	—	2,716	2,716	0.11	0.02	—	2,725
Dust From Material Movement	—	—	—	—	—	—	0.62	0.62	—	0.07	0.07	—	—	—	—	—	—	—
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	< 0.005	< 0.005	0.01	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22	22	< 0.005	< 0.005	—	22
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.7	3.7	< 0.005	< 0.005	—	3.7
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.34	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	93	93	< 0.005	< 0.005	0.01	94
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.77	0.77	< 0.005	< 0.005	< 0.005	0.78
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	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13
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

3.5. Grading (2026) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.23	1.2	14	0.02	0.05	—	0.05	0.05	—	0.05	—	2,455	2,455	0.10	0.02	—	2,463
Dust From Material Movement	—	—	—	—	—	—	2.9	2.9	—	1.4	1.4	—	—	—	—	—	—	—
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	< 0.005	< 0.005	0.02	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	40	40	< 0.005	< 0.005	—	40
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—
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	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.7	6.7	< 0.005	< 0.005	—	6.7
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.45	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	124	124	< 0.005	< 0.005	0.01	125
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	4.8	0.71	62	27	0.34	0.64	13	14	0.64	3.7	4.3	—	49,985	49,985	3.8	7.9	2.6	52,439
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	—	2.1	2.1	< 0.005	< 0.005	< 0.005	2.1
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	0.08	0.01	1.0	0.44	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	822	822	0.06	0.13	0.72	863
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.34	0.34	< 0.005	< 0.005	< 0.005	0.35
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	0.01	< 0.005	0.19	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	136	136	0.01	0.02	0.12	143

3.6. Grading (2026) - Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.23	1.2	14	0.02	0.05	—	0.05	0.05	—	0.05	—	2,455	2,455	0.10	0.02	—	2,463
Dust From Material Movement	—	—	—	—	—	—	2.9	2.9	—	1.4	1.4	—	—	—	—	—	—	—
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	< 0.005	< 0.005	0.02	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	40	40	< 0.005	< 0.005	—	40
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—
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	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.7	6.7	< 0.005	< 0.005	—	6.7

Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.45	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	124	124	< 0.005	< 0.005	0.01	125
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	4.8	0.71	62	27	0.34	0.64	13	14	0.64	3.7	4.3	—	49,985	49,985	3.8	7.9	2.6	52,439
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	—	2.1	2.1	< 0.005	< 0.005	< 0.005	2.1
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	0.08	0.01	1.0	0.44	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	822	822	0.06	0.13	0.72	863
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.34	0.34	< 0.005	< 0.005	< 0.005	0.35
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	0.01	< 0.005	0.19	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	136	136	0.01	0.02	0.12	143

3.7. Building Construction (2026) - 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	0.24	0.24	3.7	13	0.02	0.04	—	0.04	0.04	—	0.04	—	2,201	2,201	0.09	0.02	—	2,208
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	0.24	0.24	3.7	13	0.02	0.04	—	0.04	0.04	—	0.04	—	2,201	2,201	0.09	0.02	—	2,208
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	0.14	0.14	2.1	7.3	0.01	0.02	—	0.02	0.02	—	0.02	—	1,253	1,253	0.05	0.01	—	1,258
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	0.39	1.3	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	208	208	0.01	< 0.005	—	208
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	1.4	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	338	338	< 0.005	0.01	1.2	342
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	121	121	0.01	0.02	0.31	126
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	0.09	0.09	0.09	1.2	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	321	321	< 0.005	0.01	0.03	325
Vendor	0.01	< 0.005	0.13	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	121	121	0.01	0.02	0.01	126
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	0.05	0.05	0.05	0.70	0.00	0.00	0.19	0.19	0.00	0.05	0.05	—	185	185	< 0.005	0.01	0.29	188
Vendor	0.01	< 0.005	0.07	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	69	69	< 0.005	0.01	0.08	72
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	0.01	0.01	0.01	0.13	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	31	31	< 0.005	< 0.005	0.05	31
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11	11	< 0.005	< 0.005	0.01	12
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

3.8. Building Construction (2026) - Mitigated

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	0.24	0.24	3.7	13	0.02	0.04	—	0.04	0.04	—	0.04	—	2,201	2,201	0.09	0.02	—	2,208

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	0.24	0.24	3.7	13	0.02	0.04	—	0.04	0.04	—	0.04	—	2,201	2,201	0.09	0.02	—	2,208
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	0.14	0.14	2.1	7.3	0.01	0.02	—	0.02	0.02	—	0.02	—	1,253	1,253	0.05	0.01	—	1,258
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	0.39	1.3	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	208	208	0.01	< 0.005	—	208
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	1.4	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	338	338	< 0.005	0.01	1.2	342
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	121	121	0.01	0.02	0.31	126
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	0.09	0.09	0.09	1.2	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	321	321	< 0.005	0.01	0.03	325
Vendor	0.01	< 0.005	0.13	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	121	121	0.01	0.02	0.01	126
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	0.05	0.05	0.05	0.70	0.00	0.00	0.19	0.19	0.00	0.05	0.05	—	185	185	< 0.005	0.01	0.29	188
Vendor	0.01	< 0.005	0.07	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	69	69	< 0.005	0.01	0.08	72
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	0.01	0.01	0.01	0.13	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	31	31	< 0.005	< 0.005	0.05	31
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11	11	< 0.005	< 0.005	0.01	12
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. Building Construction (2027) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.24	3.7	13	0.02	0.04	—	0.04	0.04	—	0.04	—	2,201	2,201	0.09	0.02	—	2,208
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	0.01	0.01	0.13	0.45	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	78	78	< 0.005	< 0.005	—	78
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	0.02	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13	13	< 0.005	< 0.005	—	13
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.07	0.08	1.1	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	316	316	< 0.005	0.01	0.03	320
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	119	119	0.01	0.02	0.01	124
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	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11	11	< 0.005	< 0.005	0.02	11
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.2	4.2	< 0.005	< 0.005	< 0.005	4.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	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	—	1.9	1.9	< 0.005	< 0.005	< 0.005	1.9
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.69	0.69	< 0.005	< 0.005	< 0.005	0.72
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

3.10. Building Construction (2027) - Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.24	3.7	13	0.02	0.04	—	0.04	0.04	—	0.04	—	2,201	2,201	0.09	0.02	—	2,208
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	0.01	0.01	0.13	0.45	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	78	78	< 0.005	< 0.005	—	78
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	0.02	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13	13	< 0.005	< 0.005	—	13
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.07	0.08	1.1	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	316	316	< 0.005	0.01	0.03	320
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	119	119	0.01	0.02	0.01	124
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	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11	11	< 0.005	< 0.005	0.02	11
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.2	4.2	< 0.005	< 0.005	< 0.005	4.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	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	—	1.9	1.9	< 0.005	< 0.005	< 0.005	1.9
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.69	0.69	< 0.005	< 0.005	< 0.005	0.72
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

3.11. Paving (2027) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.18	2.2	8.6	0.01	0.04	—	0.04	0.04	—	0.04	—	1,244	1,244	0.05	0.01	—	1,248
Paving	0.24	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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	0.01	0.01	0.06	0.24	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	34	34	< 0.005	< 0.005	—	34
Paving	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.6	5.6	< 0.005	< 0.005	—	5.7
Paving	< 0.005	< 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.64	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	183	183	< 0.005	0.01	0.02	185
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.1	5.1	< 0.005	< 0.005	0.01	5.1
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	—	0.84	0.84	< 0.005	< 0.005	< 0.005	0.85
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

3.12. Paving (2027) - Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.18	2.2	8.6	0.01	0.04	—	0.04	0.04	—	0.04	—	1,244	1,244	0.05	0.01	—	1,248
Paving	0.24	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.01	0.01	0.06	0.24	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	34	34	< 0.005	< 0.005	—	34
Paving	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	< 0.005	< 0.005	0.01	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.6	5.6	< 0.005	< 0.005	—	5.7
Paving	< 0.005	< 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.64	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	183	183	< 0.005	0.01	0.02	185
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.1	5.1	< 0.005	< 0.005	0.01	5.1
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	—	0.84	0.84	< 0.005	< 0.005	< 0.005	0.85
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

3.13. Architectural Coating (2027) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.1	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	46	46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.7	3.7	< 0.005	< 0.005	—	3.7
Architectural Coatings	1.3	1.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 0.005	< 0.005	—	0.61
Architectural Coatings	0.23	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.22	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	63	63	< 0.005	< 0.005	0.01	64
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
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	—	1.8	1.8	< 0.005	< 0.005	< 0.005	1.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	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	—	0.29	0.29	< 0.005	< 0.005	< 0.005	0.29
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

3.14. Architectural Coating (2027) - Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.14	0.11	0.83	1.1	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	46	46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.7	3.7	< 0.005	< 0.005	—	3.7
Architectural Coatings	1.3	1.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 0.005	< 0.005	—	0.61
Architectural Coatings	0.23	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.22	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	63	63	< 0.005	< 0.005	0.01	64
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
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	—	1.8	1.8	< 0.005	< 0.005	< 0.005	1.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	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	—	0.29	0.29	< 0.005	< 0.005	< 0.005	0.29
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	1.1	0.97	0.65	8.5	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,155	2,155	0.09	0.07	7.5	2,187
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

Total	1.1	0.97	0.65	8.5	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,155	2,155	0.09	0.07	7.5	2,187
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	1.1	0.96	0.71	7.9	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,068	2,068	0.10	0.08	0.20	2,094
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
Total	1.1	0.96	0.71	7.9	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,068	2,068	0.10	0.08	0.20	2,094
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.16	0.15	0.11	1.2	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	—	293	293	0.01	0.01	0.46	297
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
Total	0.16	0.15	0.11	1.2	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	—	293	293	0.01	0.01	0.46	297

4.1.2. Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	1.1	0.97	0.65	8.5	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,155	2,155	0.09	0.07	7.5	2,187
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
Total	1.1	0.97	0.65	8.5	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,155	2,155	0.09	0.07	7.5	2,187
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Condo/T	1.1	0.96	0.71	7.9	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,068	2,068	0.10	0.08	0.20	2,094
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
Total	1.1	0.96	0.71	7.9	0.02	0.01	2.1	2.1	0.01	0.52	0.54	—	2,068	2,068	0.10	0.08	0.20	2,094
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.16	0.15	0.11	1.2	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	—	293	293	0.01	0.01	0.46	297
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
Total	0.16	0.15	0.11	1.2	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	—	293	293	0.01	0.01	0.46	297

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	241	241	0.01	< 0.005	—	242
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	51	51	< 0.005	< 0.005	—	51
Total	—	—	—	—	—	—	—	—	—	—	—	—	292	292	0.02	< 0.005	—	293
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	241	241	0.01	< 0.005	—	242

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	51	51	< 0.005	< 0.005	—	51
Total	—	—	—	—	—	—	—	—	—	—	—	—	292	292	0.02	< 0.005	—	293
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	40	40	< 0.005	< 0.005	—	40
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	8.5	8.5	< 0.005	< 0.005	—	8.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	48	48	< 0.005	< 0.005	—	49

4.2.2. Electricity Emissions By Land Use - Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	244	244	0.02	< 0.005	—	245
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	51	51	< 0.005	< 0.005	—	51
Total	—	—	—	—	—	—	—	—	—	—	—	—	295	295	0.02	< 0.005	—	296
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	244	244	0.02	< 0.005	—	245
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	51	51	< 0.005	< 0.005	—	51
Total	—	—	—	—	—	—	—	—	—	—	—	—	295	295	0.02	< 0.005	—	296
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Condo/T	—	—	—	—	—	—	—	—	—	—	—	—	40	40	< 0.005	< 0.005	—	41
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	8.5	8.5	< 0.005	< 0.005	—	8.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	49	49	< 0.005	< 0.005	—	49

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.03	0.01	0.22	0.09	< 0.005	0.02	—	0.02	0.02	—	0.02	—	277	277	0.02	< 0.005	—	278
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
Total	0.03	0.01	0.22	0.09	< 0.005	0.02	—	0.02	0.02	—	0.02	—	277	277	0.02	< 0.005	—	278
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.03	0.01	0.22	0.09	< 0.005	0.02	—	0.02	0.02	—	0.02	—	277	277	0.02	< 0.005	—	278
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
Total	0.03	0.01	0.22	0.09	< 0.005	0.02	—	0.02	0.02	—	0.02	—	277	277	0.02	< 0.005	—	278
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	46	46	< 0.005	< 0.005	—	46
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
Total	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	46	46	< 0.005	< 0.005	—	46

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.00	0.00	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
Total	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.00	0.00	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
Total	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.00	0.00	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
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	207	207	0.01	< 0.005	—	208
Consumer Products	1.6	1.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.13	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.19	0.18	0.02	2.0	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.5	5.5	< 0.005	< 0.005	—	5.5
Total	1.9	1.9	0.02	2.0	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	213	213	0.01	< 0.005	—	214
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	207	207	0.01	< 0.005	—	208
Consumer Products	1.6	1.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.13	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.7	1.7	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	207	207	0.01	< 0.005	—	208
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	2.4	2.4	< 0.005	< 0.005	—	2.4

Consumer Product	0.28	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.02	0.02	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.62
Total	0.33	0.33	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.0	3.0	< 0.005	< 0.005	—	3.0

4.3.2. Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	207	207	0.01	< 0.005	—	208
Consumer Products	1.6	1.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.13	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.19	0.18	0.02	2.0	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.5	5.5	< 0.005	< 0.005	—	5.5
Total	1.9	1.9	0.02	2.0	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	213	213	0.01	< 0.005	—	214
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	207	207	0.01	< 0.005	—	208
Consumer Products	1.6	1.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.13	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.7	1.7	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	207	207	0.01	< 0.005	—	208
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	2.4	2.4	< 0.005	< 0.005	—	2.4
Consumer Products	0.28	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.02	0.02	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.62
Total	0.33	0.33	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.0	3.0	< 0.005	< 0.005	—	3.0

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Condo/T	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	0.43	2.8	3.3	0.04	< 0.005	—	4.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.43	2.8	3.3	0.04	< 0.005	—	4.7

4.4.2. Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.6	17	20	0.27	0.01	—	28
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	0.43	2.8	3.3	0.04	< 0.005	—	4.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.43	2.8	3.3	0.04	< 0.005	—	4.7

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	2.4	0.00	2.4	0.24	0.00	—	8.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.4	0.00	2.4	0.24	0.00	—	8.3

4.5.2. Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Condo/Townhou	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14	0.00	14	1.4	0.00	—	50
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	2.4	0.00	2.4	0.24	0.00	—	8.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.4	0.00	2.4	0.24	0.00	—	8.3

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Condo/T	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09

4.6.2. Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Demolition	Demolition	2/1/2026	3/1/2026	5.0	20	—
Site Preparation	Site Preparation	3/2/2026	3/6/2026	5.0	3.0	—
Grading	Grading	3/7/2026	3/15/2026	5.0	6.0	—
Building Construction	Building Construction	3/16/2026	1/18/2027	5.0	220	—
Paving	Paving	1/19/2027	2/2/2027	5.0	10.0	—
Architectural Coating	Architectural Coating	2/3/2027	2/17/2027	5.0	10.0	—

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

Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.0	33	0.73
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.0	367	0.40
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.0	8.0	84	0.37
Site Preparation	Graders	Diesel	Tier 4 Final	1.00	8.0	148	0.41
Site Preparation	Scrapers	Diesel	Tier 4 Final	1.00	8.0	423	0.48
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	7.0	84	0.37
Grading	Graders	Diesel	Tier 4 Final	1.00	8.0	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.0	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.0	7.0	84	0.37
Building Construction	Cranes	Diesel	Tier 4 Final	1.00	8.0	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Final	2.0	7.0	82	0.20
Building Construction	Generator Sets	Diesel	Tier 4 Final	1.00	8.0	14	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	6.0	84	0.37
Building Construction	Welders	Diesel	Tier 4 Final	3.0	8.0	46	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.0	10.0	0.56
Paving	Pavers	Diesel	Tier 4 Final	1.00	8.0	81	0.42
Paving	Paving Equipment	Diesel	Tier 4 Final	1.00	8.0	89	0.36
Paving	Rollers	Diesel	Tier 4 Final	2.0	8.0	36	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.0	84	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.0	37	0.48

5.2.2. Mitigated

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

Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.0	33	0.73
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.0	367	0.40
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.0	8.0	84	0.37
Site Preparation	Graders	Diesel	Tier 4 Final	1.00	8.0	148	0.41
Site Preparation	Scrapers	Diesel	Tier 4 Final	1.00	8.0	423	0.48
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	7.0	84	0.37
Grading	Graders	Diesel	Tier 4 Final	1.00	8.0	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.0	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.0	7.0	84	0.37
Building Construction	Cranes	Diesel	Tier 4 Final	1.00	8.0	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Final	2.0	7.0	82	0.20
Building Construction	Generator Sets	Diesel	Tier 4 Final	1.00	8.0	14	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	6.0	84	0.37
Building Construction	Welders	Diesel	Tier 4 Final	3.0	8.0	46	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.0	10.0	0.56
Paving	Pavers	Diesel	Tier 4 Final	1.00	8.0	81	0.42
Paving	Paving Equipment	Diesel	Tier 4 Final	1.00	8.0	89	0.36
Paving	Rollers	Diesel	Tier 4 Final	2.0	8.0	36	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.0	84	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.0	37	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	Worker	13	19	LDA,LDT1,LDT2
Demolition	Vendor	—	10	HHDT,MHDT
Demolition	Hauling	51	20	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	Worker	7.5	19	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10	HHDT,MHDT
Site Preparation	Hauling	0.00	20	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	10.0	19	LDA,LDT1,LDT2
Grading	Vendor	—	10	HHDT,MHDT
Grading	Hauling	729	20	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	26	19	LDA,LDT1,LDT2
Building Construction	Vendor	3.8	10	HHDT,MHDT
Building Construction	Hauling	0.00	20	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15	19	LDA,LDT1,LDT2
Paving	Vendor	—	10	HHDT,MHDT
Paving	Hauling	0.00	20	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	5.2	19	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10	HHDT,MHDT
Architectural Coating	Hauling	0.00	20	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix

Demolition	Worker	13	19	LDA,LDT1,LDT2
Demolition	Vendor	—	10	HHDT,MHDT
Demolition	Hauling	51	20	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	Worker	7.5	19	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10	HHDT,MHDT
Site Preparation	Hauling	0.00	20	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	10.0	19	LDA,LDT1,LDT2
Grading	Vendor	—	10	HHDT,MHDT
Grading	Hauling	729	20	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	26	19	LDA,LDT1,LDT2
Building Construction	Vendor	3.8	10	HHDT,MHDT
Building Construction	Hauling	0.00	20	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15	19	LDA,LDT1,LDT2
Paving	Vendor	—	10	HHDT,MHDT
Paving	Hauling	0.00	20	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	5.2	19	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10	HHDT,MHDT
Architectural Coating	Hauling	0.00	20	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

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

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	146,675	48,892	0.00	0.00	2,405

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	4,072	0.00
Site Preparation	0.00	0.00	4.5	0.00	0.00
Grading	0.00	35,000	6.0	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.92

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

Phase Name	Land Use	Area Paved (acres)	% Asphalt

Paving	Condo/Townhouse	—	0%
Paving	Parking Lot	0.92	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	532	0.03	< 0.005
2027	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
Condo/Townhouse	259	315	258	97,480	2,408	2,930	2,398	905,531
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Condo/Townhouse	259	315	258	97,480	2,408	2,930	2,398	905,531
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
Condo/Townhouse	Wood Fireplaces	0	0
Condo/Townhouse	Gas Fireplaces	0	0

Condo/Townhouse	Propane Fireplaces	0	0
Condo/Townhouse	Electric Fireplaces	36	36
Condo/Townhouse	No Fireplaces	0	0
Condo/Townhouse	Conventional Wood Stoves	0	0
Condo/Townhouse	Catalytic Wood Stoves	0	0
Condo/Townhouse	Non-Catalytic Wood Stoves	0	0
Condo/Townhouse	Pellet Wood Stoves	0	0
Parking Lot	Wood Fireplaces	0	0
Parking Lot	Gas Fireplaces	0	0
Parking Lot	Propane Fireplaces	0	0
Parking Lot	Electric Fireplaces	0	0
Parking Lot	No Fireplaces	0	0
Parking Lot	Conventional Wood Stoves	0	0
Parking Lot	Catalytic Wood Stoves	0	0
Parking Lot	Non-Catalytic Wood Stoves	0	0
Parking Lot	Pellet Wood Stoves	0	0

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)
undefined	146,675	48,892	0.00	0.00	2,405

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

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)
Condo/Townhouse	165,318	532	0.0330	0.0040	865,093
Parking Lot	35,106	532	0.0330	0.0040	0.00

5.11.2. Mitigated

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)
Condo/Townhouse	167,260	532	0.0330	0.0040	0.00
Parking Lot	35,106	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)
Condo/Townhouse	1,350,923	475,214
Parking Lot	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Condo/Townhouse	1,350,923	475,214

Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Condo/Townhouse	27	0.00
Parking Lot	0.00	0.00

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Condo/Townhouse	27	0.00
Parking Lot	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Condo/Townhouse	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.5	2.5	10.0
Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.14.2. Mitigated

Land Use	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

Condo/Townhouse	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.5	2.5	10.0
Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

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

5.18.1.2. Mitigated

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

5.18.1.2. Mitigated

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)

5.18.2.2. Mitigated

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

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	Project consists of 36 townhome dwelling units, approximately 40,000 SF of paved surfaces, and approximately 30,000 SF of landscaped area on a site totaling approximately 2.43 acres.
Construction: Off-Road Equipment	Diesel construction equipment will be equipped with Tier 4 low emission “clean diesel” engines (OEM or retrofit) that include diesel oxidation catalysts and diesel particulate filters that meet the latest CARB best available control technology, to the extent feasible.
Operations: Vehicle Data	Trip generation rates are adjusted based on the ITE Trip Generation Manual, 11th Edition.
Operations: Fleet Mix	Fleet mix is adjusted to reflect a total of 2% heavy trucks (GVWR > 10,000 lbs.).
Operations: Hearths	Per SCAQMD Rule 445, no woodburning devices shall be allowed. No gas hookups are proposed for the site.

Appendix B
EMFAC2021 Vehicle Fuel Consumption Data

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Air District
Region: South Coast AQMD
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Y	Vehicle Ca	Model Yea	Speed	Fuel	Population	Total VMT	Fuel Consu	Fuel Split	MPG,	MPG,
South Coas	2025	HHDT	Aggregate	Aggregate	Gasoline	56.72119	4109.856	1.00199	0.000452	4.101694	6.138742
South Coas	2025	HHDT	Aggregate	Aggregate	Diesel	104913.1	13605802	2216.05	0.999548	6.139663	
South Coas	2025	LDA	Aggregate	Aggregate	Gasoline	5388809	2.15E+08	7191.774	0.998605	29.92833	29.94472
South Coas	2025	LDA	Aggregate	Aggregate	Diesel	13906.68	418696.8	10.0457	0.001395	41.6792	
South Coas	2025	LDT1	Aggregate	Aggregate	Gasoline	497455.9	17999149	723.2745	0.999817	24.88564	24.88537
South Coas	2025	LDT1	Aggregate	Aggregate	Diesel	167.6467	3101.137	0.132443	0.000183	23.41482	
South Coas	2025	LDT2	Aggregate	Aggregate	Gasoline	2603678	1.07E+08	4374.284	0.997354	24.5731	24.59427
South Coas	2025	LDT2	Aggregate	Aggregate	Diesel	8796.37	378041	11.60574	0.002646	32.57362	
South Coas	2025	LHDT1	Aggregate	Aggregate	Gasoline	205266.9	8110009	580.7083	0.719875	13.96572	15.83978
South Coas	2025	LHDT1	Aggregate	Aggregate	Diesel	111060.2	4667620	225.9715	0.280125	20.65579	
South Coas	2025	LHDT2	Aggregate	Aggregate	Gasoline	31970.23	1183187	97.13095	0.450539	12.18135	15.05322
South Coas	2025	LHDT2	Aggregate	Aggregate	Diesel	49620.94	2062111	118.4572	0.549461	17.40806	
South Coas	2025	MCY	Aggregate	Aggregate	Gasoline	252661.4	1614784	38.74127	1	41.68124	41.68124
South Coas	2025	MDV	Aggregate	Aggregate	Gasoline	1634952	63253755	3169.302	0.989561	19.95826	20.00212
South Coas	2025	MDV	Aggregate	Aggregate	Diesel	20570.99	807748.5	33.43349	0.010439	24.15986	
South Coas	2025	MH	Aggregate	Aggregate	Gasoline	29165.48	280201.3	57.65573	0.82681	4.859904	5.768027
South Coas	2025	MH	Aggregate	Aggregate	Diesel	12429.91	122019.2	12.07704	0.17319	10.1034	
South Coas	2025	MHDT	Aggregate	Aggregate	Gasoline	24929.99	1334681	255.9905	0.312907	5.21379	7.791513
South Coas	2025	MHDT	Aggregate	Aggregate	Diesel	119577.2	5039597	562.1147	0.687093	8.965424	
South Coas	2025	OBUS	Aggregate	Aggregate	Gasoline	5258.137	208336.2	40.66862	0.54713	5.122775	6.007104
South Coas	2025	OBUS	Aggregate	Aggregate	Diesel	3132.978	238176.9	33.66222	0.45287	7.075494	
South Coas	2025	SBUS	Aggregate	Aggregate	Gasoline	2910.898	130742.1	14.58637	0.614391	8.963306	8.344243
South Coas	2025	SBUS	Aggregate	Aggregate	Diesel	3330.728	67359.96	9.154797	0.385609	7.357888	
South Coas	2025	UBUS	Aggregate	Aggregate	Gasoline	892.0637	96751.77	13.80115	0.985191	7.010415	7.00775
South Coas	2025	UBUS	Aggregate	Aggregate	Diesel	11.1976	1417.051	0.20746	0.014809	6.830476	