TTM 39105 Residential Project Air Quality and Greenhouse Gas Impact Study

City of Jurupa Valley, California
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1.0 Introduction

1.1 Purpose of Report & Study Objectives

The purpose of this air quality and greenhouse gas (GHG) impact study is to determine whether the estimated criteria air pollutants and greenhouse gas emissions generated from the construction and operation of the proposed TTM 39105 Residential Project (hereinafter referred to as "project") would cause significant impacts to air resources.

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 Jurupa Valley recommendations for quantification of emissions and evaluation of potential impacts.

1.2 Site Location & Project Description

The proposed project site is located near the southeast corner of Limonite Avenue and Baldwin Avenue, in the City of Jurupa Valley. **Exhibit A** shows the location map of the proposed project.

The project consists of developing 85 attached residential dwelling units on approximately 4.0 net acres (5.43 gross acres). The site is currently vacant and is located adjacent to the former Albertsons grocery store which is no longer in business.

Construction activities are expected to consist of demolition, site preparation, grading, building construction, paving, and architectural coating. Approximately 2 acres of existing hardscape will be demolished during construction. The project will require the export of approximately 2,000 cubic yards of earthwork material for grading purposes.

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]
Single Family Attached	Condo/Townhouse	85	DU
Onsite Street Improvements	Parking Lot	2	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 north of the project site. The nearest residential receptor located at Receptor-1 (marked as circle "1" on **Exhibit A**) is located approximately 300 feet (~91 meters) north-northwest of the project site's northern boundary.

Receptor-2 Existing residential land uses located to the west of the project site. The nearest residential receptor located at Receptor-2 (marked as circle "2" on **Exhibit A**) is located approximately 175 feet (~53 meters) west-southwest of the western boundary of the project site.

Receptor-3 Existing residential land uses located to the east of the project site. The nearest residential receptor located at Receptor-3 (marked as circle "3" on **Exhibit A**) is located approximately 900 feet (~274 meters) east of the southeastern corner of the project site.

For conservative localized analysis purposes, sensitive receptors are considered to be approximately 50 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	

1.5 Project Design Features (DF)

The following design features include several standard rules and requirements, best practices and building code requirements for reducing air quality and GHG emissions. Design features are assumed to be integrated into the project design and required as part of the conditions of approval of the project. Design features are not considered to be mitigation under CEQA.

Construction Design Features

DF-1 The project will follow the SCAQMD rules and requirements for fugitive dust control, which include, but are not limited to the following:

1. All active construction areas shall be watered two (2) times daily.
2. Any visible deposition on any public roadway shall be swept or washed at the site access points within 30 minutes.
3. Any on-site stockpiles of debris, dirt or other dusty material shall be covered or watered twice daily.
4. All operations on any unpaved surface shall be suspended if winds exceed 15 mph.
5. Access points shall be washed or swept daily.
6. Construction sites shall be sandbagged for erosion control.
7. Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
8. Cover all trucks hauling dirt, sand, soil, or other loose materials, and maintain at least 2 feet of freeboard space in accordance with the requirements of California Vehicle Code (CVC) section 23114.
9. Use gravel aprons at truck exits.
10. Replace the ground cover of disturbed areas as quickly possible.

DF-2 All diesel construction equipment should have 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.

DF-3 Construction equipment shall be maintained in proper tune.

DF-4 All construction vehicles shall be prohibited from excessive idling. Excessive idling is defined as five (5) minutes or longer.

DF-5 Minimize the simultaneous operation of multiple construction equipment units, to the maximum extent feasible.

DF-6 The use of heavy construction equipment and earthmoving activity shall be suspended during Air Alerts when the Air Quality Index reaches the "Unhealthy" level.

DF-7 Establish an electricity supply to the construction site and use electric-powered equipment instead of diesel-powered equipment or generators, where feasible.

DF-8 Establish staging areas for the construction equipment that are as distant as possible from adjacent residential homes.

DF-9 Utilize zero VOC and low VOC paints and solvents, where feasible.

Operational Design Features

DF-10 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:

1. Install low flow fixtures and toilets, water efficient irrigation systems, drought tolerant/native landscaping, and reduce the amount of turf.
2. Provide the necessary infrastructure to support electric vehicle charging.
3. Provide solar installations per the Energy Code Performance and Prescriptive Compliance Approaches for Multifamily Residential Buildings.

DF-11 Participate in the local waste management recycling and composting programs.



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 recently 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 which may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health, and for which there is no concentration that does not present some risk. This contrasts with the criteria pollutants, in that there is no threshold level for TAC exposure below which adverse health impacts 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 it would not generate hydrogen sulfide in any substantial quantity.

2.3 Attainment Status

The Clean Air Act requires states to prepare a State Implementation Plan (SIP) to ensure air quality meets 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 primarily 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 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 the 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.

2.5 Local Climate and Meteorology

The weather station closest to the project site is the National Weather Service Cooperative – Riverside Fire Sta. 3, CA (047470) 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	66.8	39.1	53.0	2.01
February	68.3	41.1	54.7	2.20
March	71.3	43.2	57.3	1.84
April	75.6	46.7	61.2	0.77
May	80.0	51.1	65.6	0.23
June	87.0	54.8	70.9	0.05
July	94.2	59.5	76.9	0.04
August	94.4	59.6	77.0	0.13
September	90.9	56.2	73.6	0.19
October	82.9	50.0	66.5	0.44
November	74.5	42.8	58.7	0.84
December	67.8	39.2	53.5	1.46
Annual	**79.5**	**48.6**	**64.1**	**10.21**

[1] Source: Western Regional Climate Center. Averages derived from measurements recorded between 1893 and 2016 at the Riverside Fire Sta. 3, CA (047470) monitoring station.

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 Riverside Valley general forecasting area and Metropolitan Riverside air monitoring area (SRA-23).

Table 2-4 summarizes the published air quality monitoring data in SRA-23 for the most recent 3-year period available. 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]	2022	2023	2024
Carbon Monoxide -- Metropolitan Riverside County 1	1 Hour	Max 1-Hour (ppm)	3.3	1.4	1.8
		Exceeded State Standard (20 ppm)	No	No	No
		Exceeded National Standard (35 ppm)	No	No	No
	8 Hour	Max 8 Hour (ppm)	1.2	1.2	1.4
		Days > State Standard (9 ppm)	No	No	No
		Days >National Standard (9 ppm)	No	No	No
Ozone -- Metropolitan Riverside County 1	1 Hour	Max 1-Hour (ppm)	0.122	0.139	0.135
		Days > State Standard (0.09 ppm)	30.0	48.0	53.0
	8 Hour	Max 8 Hour (ppm)	0.095	0.106	0.111
		Days > State Standard (0.070 ppm)	72	70	102
		Days >National Standard (0.070 ppm)	70	69	98
Nitrogen Dioxide -- Metropolitan Riverside County 1	1 Hour	Max 1-Hour (ppm)	0.056	0.055	0.062
		Exceeded State Standard (0.18 ppm)	No	No	No
	Annual	Annual Average (ppm)	0.013	0.012	0.013
		Exceeded State Standard (0.030 ppm)	No	No	No
		Exceeded National Standard (0.053 ppm)	No	No	No
Sulfur Dioxide -- Metropolitan Riverside County 1	1 Hour	Max 1 Hour (ppm)	0.0067	0.0031	0.0020
		Exceeded State Standard (0.25 ppm)	No	No	No
		Exceeded National Standard (0.075 ppm)	No	No	No
PM_{10} -- Metropolitan Riverside County 1	24 Hour	Max 24-Hour (µg/m³)	153	166	119
		Days > State Standard (50 µg/m³)	5	43	58
		Days >National Standard (150 µg/m³)	0	1	0 (0%)
	Annual	Annual Average (µg/m³)	37.00	32.70	35.90
		Exceeded State Standard (20 µg/m³)	Yes	Yes	Yes
$PM_{2.5}$ -- Metropolitan Riverside County 1	24 Hour	Max 24-Hour (µg/m³)	38.50	48.70	63.50
		Days >National Standard (35 µg/m³)	1	1	5
	Annual	Annual Average (µg/m³)	10.80	10.47	12.09
		Exceeded State Standard (12 µg/m³)	No	No	Yes
		Exceeded National Standard (15 µg/m³)	No	No	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

Global climate change is the change in the average weather of the earth that is measured by such things as alterations in temperature, wind patterns, storms, and precipitation. Current data shows that the recent period of warming is occurring more rapidly than past geological events. The average global surface temperature has increased by approximately 1.4° Fahrenheit since the early 20th Century. 1.4° Fahrenheit may seem like a small change, but it's an unusual event in Earth's recent history, and as we are seeing, even small changes in temperature can cause enormous changes in the environment.

The planet's climate record, preserved in tree rings, ice cores, and coral reefs, shows that the global average temperature has been stable over long periods of time. For example, at the end of the last ice age, when the Northeast United States was covered by more than 3,000 feet of ice, average global temperatures were only 5° to 9° Fahrenheit cooler than today. The Intergovernmental Panel on Climate Change (IPCC), which includes more than 1,300 scientists from the United States and other countries, forecasts a temperature rise of 2.5° to 10° Fahrenheit over the next century. Therefore, significant changes to the environment are expected in the near future.

The consequences of global climate change include more frequent and severe weather, worsening air pollution by increasing ground level ozone, higher rates of plant and animal extinction, more acidic and oxygen depleted oceans, strain on food and water resources, and threats to densely populated coastal and low-lying areas from sea level rise.

The impacts of climate change are already visible in the Southwest United States. In California, the consequences of climate change include:

- A rise in sea levels resulting in the displacement of coastal businesses and residencies;
- A reduction in the quality and supply of water from the Sierra snowpack;
- Increased risk of large wildfires;
- Exacerbation of air quality problems;
- Reductions in the quality and quantity of agricultural products;
- An increased temperature and extreme weather events; and
- A decrease in the health and productivity of California's forests.

3.1 Greenhouse Gases (GHGs)

GHGs comprise less than 0.1 percent of the total atmospheric composition, yet they play an essential role in influencing climate. 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, 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 regulations 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 operational 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 features 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 export of approximately 2,000 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**.

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	2.50
	Excavators	3	8	0.50	1.50	
	Rubber Tired Dozers	2	8	0.50	1.00	
Site Preparation	Rubber Tired Dozers	3	8	0.50	1.50	3.50
	Tractors/Loaders/Backhoes	4	8	0.50	2.00	
Grading	Excavators	1	8	0.50	0.50	3.00
	Graders	1	8	0.50	0.50	
	Rubber Tired Dozers	1	8	0.50	0.50	
	Tractors/Loaders/Backhoes	3	8	0.50	1.50	
Building Construction	Cranes	1	7	0.00	0.00	1.31
	Forklifts	3	8	0.00	0.00	
	Generator Sets	1	8	0.00	0.00	
	Tractors/Loaders/Backhoes	3	7	0.50	1.31	
	Welders	1	8	0.00	0.00	
Paving	Pavers	2	8	0.00	0.00	0.00
	Paving Equipment	2	8	0.00	0.00	
	Rollers	2	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 are the largest source of long-term air pollutants from the 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, 12th Edition. The proposed project consists of 85 single family attached dwelling units. As such, ITE Land Use Code 215 – Single-Family Attached Housing accurately reflects 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)
Apartments Low Rise	2,006,837
Parking Lot	--
Total	**2,006,837**

[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. 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)	51.03%
Light Duty Truck (LDTI)	3.81%
Light Duty Truck (LDT2)	21.47%
Medium Duty Truck (MDV)	16.17%
Light Heavy Truck (LHD1)	3.18%
Light Heavy Truck (LHD2)	0.37%
Medium Heavy Truck (MHD)	0.62%
Heavy Heavy Truck (HHD)	0.68%
Other Bus (OBUS)	0.02%
Urban Bus (UBUS)	0.02%
Motorcycle (MCY)	2.35%
School Bus (SBUS)	0.06%
Motor Home (MH)	0.24%
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 natural gas usage (non-hearth) for heating, while indirect emissions include electricity generated by offsite power plants. Natural gas use is measured in units of thousand British Thermal Units (kBTU) per size metric for each land use subtype and electricity use is measured in kilowatt hours (kWh) per size metric for each land use subtype.

CalEEMod divides building electricity and natural gas 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.

For natural gas, uses are likewise categorized as Title 24 or Non-Title 24. Title 24 uses include building heating and hot water end uses. Non-Title 24 natural gas uses include cooking and appliances (including pool/spa heaters).

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.

The CalEEMod default estimate for the proposed project's energy usage is shown in **Table 4-4**.

Table 4-4 | Electricity and Natural Gas Usage [1]

Land Use	Electricity Usage (KWhr/yr)[2]	Natural Gas Usage (KBTU/yr)[2]
Condo/Townhouse	622,977.01	1,772,307.52
Parking Lot	76,317.12	--
Total	**699,294.13**	**1,772,307.52**

[1] CalEEMod defaults.
[2] KWhr/yr = kilowatt hours per year.
KBTU/yr = thousand British Thermal Units per year.

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 4-5**.

Table 4-5 | Operational Water Usage and Waste Generation [1]

Land Use	Water Usage (gallons/yr)			Waste Generation (tons/yr)
	Indoor	Outdoor	Total	
Condo/Townhouse	3,457,270.88	844,158.05	4,301,428.93	62.96
Parking Lot	--	--	--	--
Total	**3,457,270.88**	**844,158.05**	**4,301,428.93**	**62.96**

[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. LSTs are developed based on the ambient concentrations of four applicable air pollutants for SRA-23 (Metropolitan Riverside).

The nearest existing sensitive receptors are located approximately 52 meters from the project site. Therefore, the LSTs for a distance of 50 meters are utilized.

The daily disturbance area is calculated to be 3.5 acres.

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

Pollutant	Construction (lbs./day)	Operation (lbs./day)
NO_X	247.9	247.9
CO	1,707.9	1,707.9
PM_{10}	29.8	7.4
$PM_{2.5}$	7.9	2.4

[1] Source: SCAQMD Mass Rate Localized Significance Thresholds for 3.5 acres/day in SRA-23 at 50 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).

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**, 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	2.35	25.94	20.82	0.07	6.85	1.94
Site Preparation	3.12	28.04	29.16	0.05	9.07	5.07
Grading	1.66	15.24	18.49	0.03	3.80	2.01
Building Construction	1.28	9.92	17.09	0.03	1.22	0.52
Paving	1.00	6.69	10.61	0.01	0.45	0.28
Architectural Coating	47.18	0.85	1.88	0.00	0.18	0.05
Maximum[1]	**47.18**	**28.04**	**29.16**	**0.05**	**9.07**	**5.07**
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. Compliance with the standard dust control measures is considered to be part of the conditions of approval for the project and built into the design features.

Table 6-1 shows that the project's daily construction emissions will 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. Compliance with dust control measures is considered a standard requirement and included as part of the project's design features.

Therefore, the project's short-term construction impact on localized air resources will 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	27.97	28.28	8.84	5.02
SCAQMD Localized Threshold[2]	247.9	1,707.9	29.8	7.9
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 3.5 acres/day in SRA-23 at 50 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.

To ensure full compliance with the fugitive dust control measures and to reduce potential exposure of sensitive receptors to substantial pollution concentrations, the following design feature will be implemented during construction:

DF-1 The project will follow the SCAQMD rules and requirements for fugitive dust control, which include, but are not limited to the following:

1. All active construction areas shall be watered two (2) times daily.
2. Any visible deposition on any public roadway shall be swept or washed at the site access points within 30 minutes.
3. Any on-site stockpiles of debris, dirt or other dusty material shall be covered or watered twice daily.
4. All operations on any unpaved surface shall be suspended if winds exceed 15 mph.
5. Access points shall be washed or swept daily.
6. Construction sites shall be sandbagged for erosion control.
7. Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
8. Cover all trucks hauling dirt, sand, soil, or other loose materials, and maintain at least 2 feet of freeboard space in accordance with the requirements of California Vehicle Code (CVC) section 23114.
9. Use gravel aprons at truck exits.
10. Replace the ground cover of disturbed areas as quickly possible.

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 will 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 imbedded 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 approximately 2 acres of existing hardscape during construction. Compliance with Rule 1403 will ensure that the project does not result in emissions (such as those leading to odors) 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 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 required asbestos abatement protocols, the project impact will 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]

The HRA Guidelines provide risk factors based on exposure to toxic substances over a 30-year lifetime span. The proposed project's construction activity is not expected to be a long-term (i.e., 30 years) source of toxic air contaminant emissions and short-term risk factors have not been developed. Due to the significantly reduced risk from short-term exposure, SCAQMD does not typically require the evaluation of long-term cancer risk or chronic health impacts for construction operations from a project such as the one being proposed.

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

The following design features will reduce diesel exhaust emissions and are recommended to be included as part of the conditions of approval. With the recommended project design features, the potential DPM exposure to adjacent sensitive receptors is considered less than significant.

DF-2 All diesel construction equipment should have 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.

DF-3 Construction equipment shall be maintained in proper tune.

DF-4 All construction vehicles shall be prohibited from excessive idling. Excessive idling is defined as five (5) minutes or longer.

DF-5 Minimize the simultaneous operation of multiple construction equipment units, to the maximum extent feasible.

DF-6 The use of heavy construction equipment and earthmoving activity shall be suspended during Air Alerts when the Air Quality Index reaches the "Unhealthy" level.

DF-7 Establish an electricity supply to the construction site and use electric-powered equipment instead of diesel-powered equipment or generators, where feasible.

DF-8 Establish staging areas for the construction equipment that are as distant as possible from adjacent residential homes.

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 will 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	1.98	1.54	17.49	0.04	3.90	1.00
Area Sources	3.90	1.46	5.43	0.01	0.12	0.12
Energy Sources	0.03	0.45	0.19	0.00	0.04	0.04
Total	**5.91**	**3.45**	**23.11**	**0.05**	**4.06**	**1.16**
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 will 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	4.03	6.49	0.35	0.20
SCAQMD Localized Threshold[2]	247.9	1,707.9	7.4	2.4
Exceeds Threshold?	**No**	**No**	**No**	**No**

[1] Maximum daily emissions during summer or winter.
[2] Source: SCAQMD Mass Rate Localized Significance Thresholds for 3.5 acres/day in SRA-23 at 50 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 are not expected to meet the criteria of being 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 a 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 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	31.20	51.61	82.81
Site Preparation	24.11	1.01	25.13
Grading	26.95	9.63	36.57
Building Construction	251.72	110.79	362.51
Paving	13.75	1.71	15.46
Architectural Coating	1.22	1.39	2.61
Total	**348.95**	**176.14**	**525.09**
Amortized over 30 years[2]	**11.63**	**5.87**	**17.50**

[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 assessing construction GHG impacts by amortizing 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	664.11
Area Sources	21.78
Energy Sources	263.68
Water	11.49
Waste	19.65
Refrigerant	0.17
Construction (30-Year Amortization)	17.50
Total Annual Emissions	**998.40**
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 will be less than significant.

7.3 Project Consistency with GHG Reduction Plans

The proposed project aligns with the State of California's comprehensive greenhouse gas (GHG) reduction goals, as outlined in key policies such as the Global Warming Solutions Act (AB 32) and the State's Climate Change Scoping Plans. The project achieves this consistency primarily through its adherence to the latest California Building Code, including Title 24 Energy Efficiency Standards and CALGreen regulations, which mandate sustainable design and energy efficiency measures. By incorporating these standards, the project will minimize GHG emissions related to energy use, water consumption, waste management, and transportation. As a result, the project's cumulative contribution to GHG emissions is expected to be minimal, and its impact is considered less than significant.

As part of the latest Energy Code requirements, the project will be required to include rooftop solar panels, community solar panels, and/or other sources of on-site renewable energy capable of meeting the required California Energy Code Energy Design Rating. Therefore, by complying with the State's

building code mandates, the project would not conflict with an applicable plan, policy, or regulation for the purpose of reducing the emissions of greenhouse gases and the impact is considered less than significant.

The following project design features will be implemented to ensure the project is consistent with applicable GHG reduction standards.

DF-10 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:

1. Install low flow fixtures and toilets, water efficient irrigation systems, drought tolerant/native landscaping, and reduce the amount of turf.
2. Provide the necessary infrastructure to support electric vehicle charging.
3. Provide solar installations per the Energy Code Performance and Prescriptive Compliance Approaches for Multifamily Residential Buildings.

DF-11 Participate in the local waste management recycling and composting programs.

As a result, the project would not conflict with an applicable plan, policy, or regulation for the purpose of reducing the emissions of greenhouse gases and **the impact is considered less than significant**.

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TTM 39105 Residential Project Custom Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	TTM 39105 Residential Project
Construction Start Date	2/1/2027
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20000
Precipitation (days)	18.0000
Location	33.97491798352405, -117.4661389784615
County	Riverside-South Coast
City	Jurupa Valley
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5432
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.37

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	85.0000	Dwelling Unit	3.42700	146,395	43,560.0	0.00000	275.000	—

Parking Lot	2.00000	Acre	2.00000	0.00000	0.00000	0.00000	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	47.2096	47.1812	15.1878	18.4942	0.03312	0.61421	3.18625	3.80046	0.56639	1.44532	2.01171	—	3,993.03	3,993.03	0.13837	0.16092	3.25725	4,046.67
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.70681	3.11806	28.0411	29.1580	0.06911	1.17173	7.89497	9.06671	1.07799	3.99357	5.07157	—	8,861.65	8,861.65	0.24267	0.85697	0.27886	9,123.37
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.82138	2.78797	8.10929	11.2456	0.01993	0.28909	1.15899	1.44809	0.26666	0.35416	0.62083	—	2,610.43	2,610.43	0.08526	0.10238	1.03348	2,644.11
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.51490	0.50880	1.47994	2.05233	0.00364	0.05276	0.21152	0.26428	0.04867	0.06463	0.11330	—	432.187	432.187	0.01412	0.01695	0.17110	437.762

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2027	1.99167	1.66036	15.1878	18.4942	0.03312	0.61421	3.18625	3.80046	0.56639	1.44532	2.01171	—	3,993.03	3,993.03	0.13837	0.16092	3.25725	4,046.67
2028	47.2096	47.1812	0.85037	1.87606	0.00173	0.01536	0.15999	0.17534	0.01413	0.03750	0.05163	—	296.101	296.101	0.00730	0.00688	0.46116	298.797
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	3.70681	3.11806	28.0411	29.1580	0.06911	1.17173	7.89497	9.06671	1.07799	3.99357	5.07157	—	8,861.65	8,861.65	0.24267	0.85697	0.27886	9,123.37
2028	1.42592	1.22065	9.44354	15.8893	0.02544	0.30432	0.87768	1.18201	0.28031	0.20898	0.48929	—	3,407.87	3,407.87	0.11229	0.08868	0.07607	3,437.18
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.13978	0.95270	8.10929	11.2456	0.01993	0.28909	1.15899	1.44809	0.26666	0.35416	0.62083	—	2,610.43	2,610.43	0.08526	0.10238	1.03348	2,644.11
2028	2.82138	2.78797	1.55923	2.62414	0.00395	0.05177	0.12456	0.17633	0.04767	0.02957	0.07724	—	523.190	523.190	0.01754	0.01220	0.17766	527.441
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.20801	0.17387	1.47994	2.05233	0.00364	0.05276	0.21152	0.26428	0.04867	0.06463	0.11330	—	432.187	432.187	0.01412	0.01695	0.17110	437.762
2028	0.51490	0.50880	0.28456	0.47890	0.00072	0.00945	0.02273	0.03218	0.00870	0.00540	0.01410	—	86.6201	86.6201	0.00290	0.00202	0.02941	87.3239

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.	6.20401	5.91260	3.33434	23.1110	0.05330	0.17755	3.87180	4.04935	0.17534	0.98097	1.15630	40.5552	7,624.72	7,665.27	4.37940	0.17629	14.5199	7,841.81
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.65118	5.38195	3.40205	15.5406	0.05032	0.17527	3.87180	4.04706	0.17361	0.98097	1.15457	40.5552	7,332.01	7,372.57	4.38648	0.18267	1.39777	7,538.06
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.78686	5.57772	2.15329	18.8222	0.04248	0.07064	3.82689	3.89753	0.06860	0.96974	1.03834	40.5552	5,714.26	5,754.81	4.35591	0.18148	6.86531	5,924.66
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	1.05610	1.01793	0.39298	3.43506	0.00775	0.01289	0.69841	0.71130	0.01252	0.17698	0.18950	6.71437	946.060	952.775	0.72117	0.03005	1.13663	980.894

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.14236	1.98326	1.43079	17.4949	0.04123	0.02508	3.87180	3.89687	0.02342	0.98097	1.00439	—	4,194.03	4,194.03	0.15862	0.14764	13.4714	4,255.47
Area	4.00928	3.90317	1.45607	5.42568	0.00921	0.11629	—	0.11629	0.11574	—	0.11574	0.00000	1,802.64	1,802.64	0.03424	0.00348	—	1,804.54
Energy	0.05236	0.02618	0.44748	0.19042	0.00286	0.03618	—	0.03618	0.03618	—	0.03618	—	1,587.21	1,587.21	0.11349	0.00873	—	1,592.65
Water	—	—	—	—	—	—	—	—	—	—	—	6.62495	40.8308	47.4558	0.68185	0.01645	—	69.4032
Waste	—	—	—	—	—	—	—	—	—	—	—	33.9302	0.00000	33.9302	3.39121	0.00000	—	118.710
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.04848	1.04848
Total	6.20401	5.91260	3.33434	23.1110	0.05330	0.17755	3.87180	4.04935	0.17534	0.98097	1.15630	40.5552	7,624.72	7,665.27	4.37940	0.17629	14.5199	7,841.81
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.03643	1.87588	1.54457	14.7502	0.03846	0.02509	3.87180	3.89688	0.02343	0.98097	1.00439	—	3,914.22	3,914.22	0.16624	0.15412	0.34929	3,964.65
Area	3.56238	3.47988	1.41000	0.60000	0.00900	0.11400	—	0.11400	0.11400	—	0.11400	0.00000	1,789.75	1,789.75	0.03370	0.00337	—	1,791.60
Energy	0.05236	0.02618	0.44748	0.19042	0.00286	0.03618	—	0.03618	0.03618	—	0.03618	—	1,587.21	1,587.21	0.11349	0.00873	—	1,592.65
Water	—	—	—	—	—	—	—	—	—	—	—	6.62495	40.8308	47.4558	0.68185	0.01645	—	69.4032
Waste	—	—	—	—	—	—	—	—	—	—	—	33.9302	0.00000	33.9302	3.39121	0.00000	—	118.710
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.04848	1.04848
Total	5.65118	5.38195	3.40205	15.5406	0.05032	0.17527	3.87180	4.04706	0.17361	0.98097	1.15457	40.5552	7,332.01	7,372.57	4.38648	0.18267	1.39777	7,538.06
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.01971	1.85859	1.57768	15.2855	0.03887	0.02508	3.82689	3.85197	0.02342	0.96974	0.99316	—	3,954.80	3,954.80	0.16669	0.15600	5.81683	4,011.27
Area	3.71478	3.69295	0.12813	3.34636	0.00076	0.00938	—	0.00938	0.00900	—	0.00900	0.00000	131.417	131.417	0.00268	0.00030	—	131.574
Energy	0.05236	0.02618	0.44748	0.19042	0.00286	0.03618	—	0.03618	0.03618	—	0.03618	—	1,587.21	1,587.21	0.11349	0.00873	—	1,592.65

Water	—	—	—	—	—	—	—	—	—	—	—	6.62495	40.8308	47.4558	0.68185	0.01645	—	69.4032
Waste	—	—	—	—	—	—	—	—	—	—	—	33.9302	0.00000	33.9302	3.39121	0.00000	—	118.710
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.04848	1.04848
Total	5.78686	5.57772	2.15329	18.8222	0.04248	0.07064	3.82689	3.89753	0.06860	0.96974	1.03834	40.5552	5,714.26	5,754.81	4.35591	0.18148	6.86531	5,924.66
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.36860	0.33919	0.28793	2.78960	0.00709	0.00458	0.69841	0.70299	0.00427	0.17698	0.18125	—	654.762	654.762	0.02760	0.02583	0.96304	664.111
Area	0.67795	0.67396	0.02338	0.61071	0.00014	0.00171	—	0.00171	0.00164	—	0.00164	0.00000	21.7575	21.7575	0.00044	0.00005	—	21.7836
Energy	0.00956	0.00478	0.08167	0.03475	0.00052	0.00660	—	0.00660	0.00660	—	0.00660	—	262.781	262.781	0.01879	0.00145	—	263.682
Water	—	—	—	—	—	—	—	—	—	—	—	1.09684	6.76001	7.85684	0.11289	0.00272	—	11.4905
Waste	—	—	—	—	—	—	—	—	—	—	—	5.61754	0.00000	5.61754	0.56145	0.00000	—	19.6539
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.17359	0.17359
Total	1.05610	1.01793	0.39298	3.43506	0.00775	0.01289	0.69841	0.71130	0.01252	0.17698	0.18950	6.71437	946.060	952.775	0.72117	0.03005	1.13663	980.894

3. Construction Emissions Details

3.1. Demolition (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	2.63907	2.21478	19.9005	18.6307	0.03253	0.79594	—	0.79594	0.73226	—	0.73226	—	3,426.90	3,426.90	0.13901	0.02780	—	3,438.66
Demolition	—	—	—	—	—	—	4.32475	4.32475	—	0.65489	0.65489	—	—	—	—	—	—	—

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14461	0.12136	1.09044	1.02086	0.00178	0.04361	—	0.04361	0.04012	—	0.04012	—	187.775	187.775	0.00762	0.00152	—	188.420
Demolition	—	—	—	—	—	—	0.23697	0.23697	—	0.03588	0.03588	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02639	0.02215	0.19901	0.18631	0.00033	0.00796	—	0.00796	0.00732	—	0.00732	—	31.0883	31.0883	0.00126	0.00025	—	31.1950
Demolition	—	—	—	—	—	—	0.04325	0.04325	—	0.00655	0.00655	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06432	0.05688	0.05886	0.75315	0.00000	0.00000	0.19606	0.19606	0.00000	0.04596	0.04596	—	186.733	186.733	0.00265	0.00711	0.01636	188.935
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.22119	0.08012	5.98432	1.43686	0.03657	0.10450	1.42983	1.53433	0.10450	0.40100	0.50550	—	5,248.02	5,248.02	0.10102	0.82206	0.26251	5,495.78
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00352	0.00312	0.00356	0.04332	0.00000	0.00000	0.01062	0.01062	0.00000	0.00249	0.00249	—	10.3614	10.3614	0.00014	0.00039	0.01491	10.4961
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Hauling	0.01231	0.00468	0.32972	0.07787	0.00200	0.00573	0.07764	0.08337	0.00573	0.02180	0.02752	—	287.469	287.469	0.00554	0.04495	0.23937	301.242
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00064	0.00057	0.00065	0.00791	0.00000	0.00000	0.00194	0.00194	0.00000	0.00045	0.00045	—	1.71545	1.71545	0.00002	0.00006	0.00247	1.73774
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00225	0.00085	0.06017	0.01421	0.00037	0.00104	0.01417	0.01521	0.00104	0.00398	0.00502	—	47.5938	47.5938	0.00092	0.00744	0.03963	49.8740

3.3. Site Preparation (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	3.63178	3.05170	27.9724	28.2794	0.04891	1.17173	—	1.17173	1.07799	—	1.07799	—	5,297.82	5,297.82	0.21490	0.04298	—	5,316.00
Dust From Material Movement	—	—	—	—	—	—	7.66623	7.66623	—	3.93995	3.93995	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09950	0.08361	0.76637	0.77478	0.00134	0.03210	—	0.03210	0.02953	—	0.02953	—	145.146	145.146	0.00589	0.00118	—	145.644

Dust From Material Movement	—	—	—	—	—	—	0.21003	0.21003	—	0.10794	0.10794	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01816	0.01526	0.13986	0.14140	0.00024	0.00586	—	0.00586	0.00539	—	0.00539	—	24.0305	24.0305	0.00097	0.00019	—	24.1130
Dust From Material Movement	—	—	—	—	—	—	0.03833	0.03833	—	0.01970	0.01970	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07504	0.06636	0.06867	0.87868	0.00000	0.00000	0.22874	0.22874	0.00000	0.05362	0.05362	—	217.856	217.856	0.00309	0.00829	0.01909	220.424
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00206	0.00182	0.00208	0.02527	0.00000	0.00000	0.00619	0.00619	0.00000	0.00145	0.00145	—	6.04417	6.04417	0.00008	0.00023	0.00870	6.12271
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00038	0.00033	0.00038	0.00461	0.00000	0.00000	0.00113	0.00113	0.00000	0.00026	0.00026	—	1.00068	1.00068	0.00001	0.00004	0.00144	1.01368

Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5. Grading (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.88795	1.58640	14.2321	17.2743	0.02733	0.59767	—	0.59767	0.54986	—	0.54986	—	2,960.07	2,960.07	0.12007	0.02401	—	2,970.23
Dust From Material Movement	—	—	—	—	—	—	2.76395	2.76395	—	1.33591	1.33591	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.88795	1.58640	14.2321	17.2743	0.02733	0.59767	—	0.59767	0.54986	—	0.54986	—	2,960.07	2,960.07	0.12007	0.02401	—	2,970.23
Dust From Material Movement	—	—	—	—	—	—	2.76395	2.76395	—	1.33591	1.33591	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.10345	0.08693	0.77984	0.94654	0.00150	0.03275	—	0.03275	0.03013	—	0.03013	—	162.196	162.196	0.00658	0.00132	—	162.752
Dust From Material Movement	—	—	—	—	—	—	0.15145	0.15145	—	0.07320	0.07320	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.01888	0.01586	0.14232	0.17274	0.00027	0.00598	—	0.00598	0.00550	—	0.00550	—	26.8534	26.8534	0.00109	0.00022	—	26.9455
Dust From Material Movement	—	—	—	—	—	—	0.02764	0.02764	—	0.01336	0.01336	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06763	0.06019	0.05208	0.99638	0.00000	0.00000	0.19606	0.19606	0.00000	0.04596	0.04596	—	203.036	203.036	0.00231	0.00711	0.63077	205.844
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.03610	0.01378	0.90362	0.22349	0.00579	0.01653	0.22624	0.24277	0.01653	0.06345	0.07998	—	829.919	829.919	0.01598	0.12980	1.59995	870.598
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06432	0.05688	0.05886	0.75315	0.00000	0.00000	0.19606	0.19606	0.00000	0.04596	0.04596	—	186.733	186.733	0.00265	0.00711	0.01636	188.935
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.03500	0.01268	0.94689	0.22735	0.00579	0.01653	0.22624	0.24277	0.01653	0.06345	0.07998	—	830.383	830.383	0.01598	0.13007	0.04154	869.586
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00352	0.00312	0.00356	0.04332	0.00000	0.00000	0.01062	0.01062	0.00000	0.00249	0.00249	—	10.3614	10.3614	0.00014	0.00039	0.01491	10.4961

Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00195	0.00074	0.05217	0.01232	0.00032	0.00091	0.01228	0.01319	0.00091	0.00345	0.00435	—	45.4857	45.4857	0.00088	0.00711	0.03787	47.6649
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00064	0.00057	0.00065	0.00791	0.00000	0.00000	0.00194	0.00194	0.00000	0.00045	0.00045	—	1.71545	1.71545	0.00002	0.00006	0.00247	1.73774
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00036	0.00014	0.00952	0.00225	0.00006	0.00017	0.00224	0.00241	0.00017	0.00063	0.00079	—	7.53067	7.53067	0.00015	0.00118	0.00627	7.89146

3.7. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23076	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23076	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.62863	0.52602	4.79654	6.60823	0.01195	0.17191	—	0.17191	0.15816	—	0.15816	—	1,224.34	1,224.34	0.04966	0.00993	—	1,228.54
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11472	0.09600	0.87537	1.20600	0.00218	0.03137	—	0.03137	0.02886	—	0.02886	—	202.703	202.703	0.00822	0.00164	—	203.399
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27592	0.24556	0.21250	4.06523	0.00000	0.00000	0.79994	0.79994	0.00000	0.18751	0.18751	—	828.389	828.389	0.00944	0.02901	2.57353	839.843
Vendor	0.01214	0.00565	0.28085	0.08814	0.00204	0.00409	0.07774	0.08183	0.00409	0.02148	0.02557	—	268.519	268.519	0.00629	0.04022	0.68373	281.347
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.26243	0.23207	0.24016	3.07287	0.00000	0.00000	0.79994	0.79994	0.00000	0.18751	0.18751	—	761.873	761.873	0.01079	0.02901	0.06675	770.854
Vendor	0.01194	0.00525	0.29343	0.09075	0.00204	0.00409	0.07774	0.08183	0.00409	0.02148	0.02557	—	268.723	268.723	0.00609	0.04022	0.01777	280.880
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13404	0.11853	0.13542	1.64738	0.00000	0.00000	0.40386	0.40386	0.00000	0.09459	0.09459	—	394.060	394.060	0.00551	0.01482	0.56699	399.180
Vendor	0.00620	0.00278	0.14959	0.04574	0.00104	0.00209	0.03932	0.04141	0.00209	0.01087	0.01296	—	137.193	137.193	0.00321	0.02055	0.15073	143.547
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02446	0.02163	0.02471	0.30065	0.00000	0.00000	0.07370	0.07370	0.00000	0.01726	0.01726	—	65.2412	65.2412	0.00091	0.00245	0.09387	66.0889

Vendor	0.00113	0.00051	0.02730	0.00835	0.00019	0.00038	0.00718	0.00756	0.00038	0.00198	0.00237	—	22.7139	22.7139	0.00053	0.00340	0.02496	23.7659
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.9. Building Construction (2028) - 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	1.18481	0.99143	8.92495	12.9352	0.02340	0.30024	—	0.30024	0.27622	—	0.27622	—	2,397.46	2,397.46	0.09725	0.01945	—	2,405.68
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14375	0.12029	1.08287	1.56944	0.00284	0.03643	—	0.03643	0.03351	—	0.03351	—	290.885	290.885	0.01180	0.00236	—	291.883
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02624	0.02195	0.19762	0.28642	0.00052	0.00665	—	0.00665	0.00612	—	0.00612	—	48.1594	48.1594	0.00195	0.00039	—	48.3246
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22937	0.22397	0.23881	2.86576	0.00000	0.00000	0.79994	0.79994	0.00000	0.18751	0.18751	—	747.765	747.765	0.01079	0.02901	0.05997	756.739
Vendor	0.01174	0.00525	0.27977	0.08830	0.00204	0.00409	0.07774	0.08183	0.00409	0.02148	0.02557	—	262.647	262.647	0.00425	0.04022	0.01610	274.757
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02767	0.02701	0.02898	0.36620	0.00000	0.00000	0.09594	0.09594	0.00000	0.02247	0.02247	—	91.8725	91.8725	0.00131	0.00352	0.12083	93.0749
Vendor	0.00145	0.00066	0.03412	0.01059	0.00025	0.00050	0.00934	0.00984	0.00050	0.00258	0.00308	—	31.8526	31.8526	0.00052	0.00488	0.03254	33.3524
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00505	0.00493	0.00529	0.06683	0.00000	0.00000	0.01751	0.01751	0.00000	0.00410	0.00410	—	15.2105	15.2105	0.00022	0.00058	0.02000	15.4096
Vendor	0.00026	0.00012	0.00623	0.00193	0.00005	0.00009	0.00170	0.00180	0.00009	0.00047	0.00056	—	5.27356	5.27356	0.00009	0.00081	0.00539	5.52187
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.11. Paving (2028) - 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 Equipm	0.81550	0.68524	6.62754	9.90989	0.01395	0.25554	—	0.25554	0.23510	—	0.23510	—	1,511.03	1,511.03	0.06129	0.01226	—	1,516.22
Paving	0.26200	0.26200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04468	0.03755	0.36315	0.54301	0.00076	0.01400	—	0.01400	0.01288	—	0.01288	—	82.7962	82.7962	0.00336	0.00067	—	83.0803
Paving	0.01436	0.01436	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00815	0.00685	0.06628	0.09910	0.00014	0.00256	—	0.00256	0.00235	—	0.00235	—	13.7079	13.7079	0.00056	0.00011	—	13.7549
Paving	0.00262	0.00262	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05622	0.05490	0.05853	0.70239	0.00000	0.00000	0.19606	0.19606	0.00000	0.04596	0.04596	—	183.276	183.276	0.00265	0.00711	0.01470	185.475
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00306	0.00299	0.00321	0.04053	0.00000	0.00000	0.01062	0.01062	0.00000	0.00249	0.00249	—	10.1693	10.1693	0.00014	0.00039	0.01337	10.3024
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00056	0.00055	0.00059	0.00740	0.00000	0.00000	0.00194	0.00194	0.00000	0.00045	0.00045	—	1.68365	1.68365	0.00002	0.00006	0.00221	1.70568
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.13. Architectural Coating (2028) - 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	0.12985	0.10731	0.80814	1.11833	0.00173	0.01536	—	0.01536	0.01413	—	0.01413	—	133.517	133.517	0.00542	0.00108	—	133.975
Architectural Coatings	47.0264	47.0264	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00711	0.00588	0.04428	0.06128	0.00009	0.00084	—	0.00084	0.00077	—	0.00077	—	7.31600	7.31600	0.00030	0.00006	—	7.34111

Architect Coatings	2.57679	2.57679	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00130	0.00107	0.00808	0.01118	0.00002	0.00015	—	0.00015	0.00014	—	0.00014	—	1.21125	1.21125	0.00005	0.00001	—	1.21540
Architectural Coatings	0.47026	0.47026	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05329	0.04749	0.04223	0.75773	0.00000	0.00000	0.15999	0.15999	0.00000	0.03750	0.03750	—	162.584	162.584	0.00189	0.00580	0.46116	164.821
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00250	0.00244	0.00262	0.03308	0.00000	0.00000	0.00867	0.00867	0.00000	0.00203	0.00203	—	8.29816	8.29816	0.00012	0.00032	0.01091	8.40676
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00046	0.00045	0.00048	0.00604	0.00000	0.00000	0.00158	0.00158	0.00000	0.00037	0.00037	—	1.37385	1.37385	0.00002	0.00005	0.00181	1.39184
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

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	2.14236	1.98326	1.43079	17.4949	0.04123	0.02508	3.87180	3.89687	0.02342	0.98097	1.00439	—	4,194.03	4,194.03	0.15862	0.14764	13.4714	4,255.47
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	2.14236	1.98326	1.43079	17.4949	0.04123	0.02508	3.87180	3.89687	0.02342	0.98097	1.00439	—	4,194.03	4,194.03	0.15862	0.14764	13.4714	4,255.47
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	2.03643	1.87588	1.54457	14.7502	0.03846	0.02509	3.87180	3.89688	0.02343	0.98097	1.00439	—	3,914.22	3,914.22	0.16624	0.15412	0.34929	3,964.65
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	2.03643	1.87588	1.54457	14.7502	0.03846	0.02509	3.87180	3.89688	0.02343	0.98097	1.00439	—	3,914.22	3,914.22	0.16624	0.15412	0.34929	3,964.65
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.36860	0.33919	0.28793	2.78960	0.00709	0.00458	0.69841	0.70299	0.00427	0.17698	0.18125	—	654.762	654.762	0.02760	0.02583	0.96304	664.111
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	0.36860	0.33919	0.28793	2.78960	0.00709	0.00458	0.69841	0.70299	0.00427	0.17698	0.18125	—	654.762	654.762	0.02760	0.02583	0.96304	664.111

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	—	—	—	—	—	—	—	—	—	—	—	—	907.981	907.981	0.05632	0.00683	—	911.424
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	111.231	111.231	0.00690	0.00084	—	111.653
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,019.21	1,019.21	0.06322	0.00766	—	1,023.08
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	907.981	907.981	0.05632	0.00683	—	911.424
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	111.231	111.231	0.00690	0.00084	—	111.653
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,019.21	1,019.21	0.06322	0.00766	—	1,023.08
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	150.327	150.327	0.00933	0.00113	—	150.897
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	18.4156	18.4156	0.00114	0.00014	—	18.4854
Total	—	—	—	—	—	—	—	—	—	—	—	—	168.742	168.742	0.01047	0.00127	—	169.382

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	0.05236	0.02618	0.44748	0.19042	0.00286	0.03618	—	0.03618	0.03618	—	0.03618	—	567.999	567.999	0.05027	0.00107	—	569.574
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.05236	0.02618	0.44748	0.19042	0.00286	0.03618	—	0.03618	0.03618	—	0.03618	—	567.999	567.999	0.05027	0.00107	—	569.574
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.05236	0.02618	0.44748	0.19042	0.00286	0.03618	—	0.03618	0.03618	—	0.03618	—	567.999	567.999	0.05027	0.00107	—	569.574
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.05236	0.02618	0.44748	0.19042	0.00286	0.03618	—	0.03618	0.03618	—	0.03618	—	567.999	567.999	0.05027	0.00107	—	569.574
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.00956	0.00478	0.08167	0.03475	0.00052	0.00660	—	0.00660	0.00660	—	0.00660	—	94.0386	94.0386	0.00832	0.00018	—	94.2995
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00956	0.00478	0.08167	0.03475	0.00052	0.00660	—	0.00660	0.00660	—	0.00660	—	94.0386	94.0386	0.00832	0.00018	—	94.2995

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	0.16500	0.08250	1.41000	0.60000	0.00900	0.11400	—	0.11400	0.11400	—	0.11400	0.00000	1,789.75	1,789.75	0.03370	0.00337	—	1,791.60
Consumer Products	3.13970	3.13970	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.25768	0.25768	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.44690	0.42328	0.04607	4.82568	0.00021	0.00229	—	0.00229	0.00174	—	0.00174	—	12.8934	12.8934	0.00054	0.00011	—	12.9388
Total	4.00928	3.90317	1.45607	5.42568	0.00921	0.11629	—	0.11629	0.11574	—	0.11574	0.00000	1,802.64	1,802.64	0.03424	0.00348	—	1,804.54
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.16500	0.08250	1.41000	0.60000	0.00900	0.11400	—	0.11400	0.11400	—	0.11400	0.00000	1,789.75	1,789.75	0.03370	0.00337	—	1,791.60
Consumer Products	3.13970	3.13970	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.25768	0.25768	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	3.56238	3.47988	1.41000	0.60000	0.00900	0.11400	—	0.11400	0.11400	—	0.11400	0.00000	1,789.75	1,789.75	0.03370	0.00337	—	1,791.60
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00206	0.00103	0.01763	0.00750	0.00011	0.00142	—	0.00142	0.00142	—	0.00142	0.00000	20.2954	20.2954	0.00038	0.00004	—	20.3164
Consumer Products	0.57300	0.57300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	0.04703	0.04703	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.05586	0.05291	0.00576	0.60321	0.00003	0.00029	—	0.00029	0.00022	—	0.00022	—	1.46209	1.46209	0.00006	0.00001	—	1.46723
Total	0.67795	0.67396	0.02338	0.61071	0.00014	0.00171	—	0.00171	0.00164	—	0.00164	0.00000	21.7575	21.7575	0.00044	0.00005	—	21.7836

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/Townhouse	—	—	—	—	—	—	—	—	—	—	—	6.62495	40.8308	47.4558	0.68185	0.01645	—	69.4032
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	6.62495	40.8308	47.4558	0.68185	0.01645	—	69.4032
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	6.62495	40.8308	47.4558	0.68185	0.01645	—	69.4032
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	6.62495	40.8308	47.4558	0.68185	0.01645	—	69.4032
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Condo/Townhou	—	—	—	—	—	—	—	—	—	—	—	1.09684	6.76001	7.85684	0.11289	0.00272	—	11.4905
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	1.09684	6.76001	7.85684	0.11289	0.00272	—	11.4905

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	—	—	—	—	—	—	—	—	—	—	—	33.9302	0.00000	33.9302	3.39121	0.00000	—	118.710
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	33.9302	0.00000	33.9302	3.39121	0.00000	—	118.710
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	33.9302	0.00000	33.9302	3.39121	0.00000	—	118.710
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	33.9302	0.00000	33.9302	3.39121	0.00000	—	118.710
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	5.61754	0.00000	5.61754	0.56145	0.00000	—	19.6539

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	5.61754	0.00000	5.61754	0.56145	0.00000	—	19.6539

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.04848	1.04848
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.04848	1.04848
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.04848	1.04848
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.04848	1.04848
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.17359	0.17359
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.17359	0.17359

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	2/1/2027	3/1/2027	5.00000	20.0000	—

Site Preparation	Site Preparation	3/2/2027	3/16/2027	5.00000	10.00000	—
Grading	Grading	3/17/2027	4/14/2027	5.00000	20.0000	—
Building Construction	Building Construction	4/15/2027	3/2/2028	5.00000	230.000	—
Paving	Paving	3/3/2028	3/31/2028	5.00000	20.0000	—
Architectural Coating	Architectural Coating	4/1/2028	4/29/2028	5.00000	20.0000	—

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	1.000000	8.00000	33.0000	0.73000
Demolition	Excavators	Diesel	Average	3.00000	8.00000	36.0000	0.38000
Demolition	Rubber Tired Dozers	Diesel	Average	2.00000	8.00000	367.000	0.40000
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00000	8.00000	367.000	0.40000
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00000	8.00000	84.0000	0.37000
Grading	Excavators	Diesel	Average	1.000000	8.00000	36.0000	0.38000
Grading	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00000	8.00000	84.0000	0.37000
Building Construction	Cranes	Diesel	Average	1.000000	7.00000	367.000	0.29000
Building Construction	Forklifts	Diesel	Average	3.00000	8.00000	82.0000	0.20000
Building Construction	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00000	7.00000	84.0000	0.37000
Building Construction	Welders	Diesel	Average	1.000000	8.00000	46.0000	0.45000
Paving	Pavers	Diesel	Average	2.00000	8.00000	81.0000	0.42000
Paving	Paving Equipment	Diesel	Average	2.00000	8.00000	89.0000	0.36000

Paving	Rollers	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Architectural Coating	Air Compressors	Diesel	Average	1.000000	6.00000	37.0000	0.48000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	Worker	15.0000	18.5000	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2000	HHDT,MHDT
Demolition	Hauling	79.0000	20.0000	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	Worker	17.5000	18.5000	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2000	HHDT,MHDT
Site Preparation	Hauling	0.00000	20.0000	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	15.0000	18.5000	LDA,LDT1,LDT2
Grading	Vendor	—	10.2000	HHDT,MHDT
Grading	Hauling	12.5000	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	61.2000	18.5000	LDA,LDT1,LDT2
Building Construction	Vendor	9.08650	10.2000	HHDT,MHDT
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15.0000	18.5000	LDA,LDT1,LDT2
Paving	Vendor	—	10.2000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	12.2400	18.5000	LDA,LDT1,LDT2

Architectural Coating	Vendor	—	10.2000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	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	296,450	98,816.6	0.00000	0.00000	5,227.20

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	0.00000	0.00000	0.00000	6,316.20	0.00000
Site Preparation	0.00000	0.00000	15.0000	0.00000	0.00000
Grading	0.00000	2,000.00	20.0000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	2.00000

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	2.00000	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	0.00000	531.983	0.03300	0.00400
2028	0.00000	531.983	0.03300	0.00400

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	558.450	558.450	558.450	203,834	5,498.18	5,498.18	5,498.18	2,006,837
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

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	85	85
Condo/Townhouse	Propane Fireplaces	0	0
Condo/Townhouse	Electric Fireplaces	0	0
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)
296,450	98,816.6	0.00000	0.00000	5,227.20

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00000
Summer Days	day/yr	250.000

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	622,977	531.983	0.0330	0.0040	1,772,308
Parking Lot	76,317.1	531.983	0.0330	0.0040	0.00000

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Condo/Townhouse	3,457,271	844,158
Parking Lot	0.00000	0.00000

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Condo/Townhouse	62.9575	0.00000
Parking Lot	0.00000	0.00000

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	2,088.00	0.00225	2.50000	2.50000	10.00000
Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430.00	0.11538	0.60000	0.00000	1.000000

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	The proposed project consists of 85 attached residential dwelling units totaling approximately 146,395 SF and approximately 2 acres of onsite paved surfaces. The total project site area is approximately 5.427 acres.
Operations: Vehicle Data	Trip generation rates are adjusted based on the ITE Trip Generation Manual, 12th Edition rates for Land Use 215 - Single-Family Attached Housing.
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.

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Lot Area	acre	5.31250	3.42700
Building Area	sq. ft	90,100.0	146,395
Landscape Area	sq. ft	—	43,560.0
Special Landscape Area	sq. ft	—	0.00000

8.5. Operations

8.5.1. Mobile Sources

8.5.1.1. Vehicle Data

Land Use	Model Parameter	Units	Default Value	New Value

Condo/Townhouse	Weekday Trip Rate	size/day	7.32000	6.57000
Condo/Townhouse	Saturday Trip Rate	size/day	8.14000	6.57000
Condo/Townhouse	Sunday Trip Rate	size/day	6.28000	6.57000

8.5.1.2. Fleet Mix

Land Use	Season	Model Parameter	Units	Default Value	New Value
Condo/Townhouse	A	Heavy-Heavy-Duty Trucks	%	2%	1%
Condo/Townhouse	A	Passenger Cars	%	50%	51%
Condo/Townhouse	A	Light-Duty Trucks 1	%	4%	4%
Condo/Townhouse	A	Light-Duty Trucks 2	%	21%	21%
Condo/Townhouse	A	Light Heavy-Duty Trucks 1	%	3%	3%
Condo/Townhouse	A	Light Heavy-Duty Trucks 2	%	1%	< 0.5%
Condo/Townhouse	A	Motorcycles	%	2%	2%
Condo/Townhouse	A	Medium-Duty Trucks	%	16%	16%
Condo/Townhouse	A	Motor Homes	%	1%	< 0.5%
Condo/Townhouse	A	Medium-Heavy-Duty Trucks	%	1%	1%
Condo/Townhouse	A	Other Buses	%	< 0.5%	< 0.5%
Condo/Townhouse	A	School Buses	%	< 0.5%	< 0.5%
Condo/Townhouse	A	Urban Buses	%	< 0.5%	< 0.5%
Condo/Townhouse	S	Heavy-Heavy-Duty Trucks	%	2%	1%
Condo/Townhouse	S	Passenger Cars	%	50%	51%
Condo/Townhouse	S	Light-Duty Trucks 1	%	4%	4%
Condo/Townhouse	S	Light-Duty Trucks 2	%	21%	21%
Condo/Townhouse	S	Light Heavy-Duty Trucks 1	%	3%	3%
Condo/Townhouse	S	Light Heavy-Duty Trucks 2	%	1%	< 0.5%
Condo/Townhouse	S	Motorcycles	%	2%	2%
Condo/Townhouse	S	Medium-Duty Trucks	%	16%	16%
Condo/Townhouse	S	Motor Homes	%	1%	< 0.5%

Condo/Townhouse	S	Medium-Heavy-Duty Trucks	%	1%	1%
Condo/Townhouse	S	Other Buses	%	< 0.5%	< 0.5%
Condo/Townhouse	S	School Buses	%	< 0.5%	< 0.5%
Condo/Townhouse	S	Urban Buses	%	< 0.5%	< 0.5%
Condo/Townhouse	W	Heavy-Heavy-Duty Trucks	%	2%	1%
Condo/Townhouse	W	Passenger Cars	%	50%	51%
Condo/Townhouse	W	Light-Duty Trucks 1	%	4%	4%
Condo/Townhouse	W	Light-Duty Trucks 2	%	21%	21%
Condo/Townhouse	W	Light Heavy-Duty Trucks 1	%	3%	3%
Condo/Townhouse	W	Light Heavy-Duty Trucks 2	%	1%	< 0.5%
Condo/Townhouse	W	Motorcycles	%	2%	2%
Condo/Townhouse	W	Medium-Duty Trucks	%	16%	16%
Condo/Townhouse	W	Motor Homes	%	1%	< 0.5%
Condo/Townhouse	W	Medium-Heavy-Duty Trucks	%	1%	1%
Condo/Townhouse	W	Other Buses	%	< 0.5%	< 0.5%
Condo/Townhouse	W	School Buses	%	< 0.5%	< 0.5%
Condo/Townhouse	W	Urban Buses	%	< 0.5%	< 0.5%
Parking Lot	A	Heavy-Heavy-Duty Trucks	%	2%	1%
Parking Lot	A	Passenger Cars	%	50%	51%
Parking Lot	A	Light-Duty Trucks 1	%	4%	4%
Parking Lot	A	Light-Duty Trucks 2	%	21%	21%
Parking Lot	A	Light Heavy-Duty Trucks 1	%	3%	3%
Parking Lot	A	Light Heavy-Duty Trucks 2	%	1%	< 0.5%
Parking Lot	A	Motorcycles	%	2%	2%
Parking Lot	A	Medium-Duty Trucks	%	16%	16%
Parking Lot	A	Motor Homes	%	1%	< 0.5%
Parking Lot	A	Medium-Heavy-Duty Trucks	%	1%	1%
Parking Lot	A	Other Buses	%	< 0.5%	< 0.5%

Parking Lot	A	School Buses	%	< 0.5%	< 0.5%
Parking Lot	A	Urban Buses	%	< 0.5%	< 0.5%
Parking Lot	S	Heavy-Heavy-Duty Trucks	%	2%	1%
Parking Lot	S	Passenger Cars	%	50%	51%
Parking Lot	S	Light-Duty Trucks 1	%	4%	4%
Parking Lot	S	Light-Duty Trucks 2	%	21%	21%
Parking Lot	S	Light Heavy-Duty Trucks 1	%	3%	3%
Parking Lot	S	Light Heavy-Duty Trucks 2	%	1%	< 0.5%
Parking Lot	S	Motorcycles	%	2%	2%
Parking Lot	S	Medium-Duty Trucks	%	16%	16%
Parking Lot	S	Motor Homes	%	1%	< 0.5%
Parking Lot	S	Medium-Heavy-Duty Trucks	%	1%	1%
Parking Lot	S	Other Buses	%	< 0.5%	< 0.5%
Parking Lot	S	School Buses	%	< 0.5%	< 0.5%
Parking Lot	S	Urban Buses	%	< 0.5%	< 0.5%
Parking Lot	W	Heavy-Heavy-Duty Trucks	%	2%	1%
Parking Lot	W	Passenger Cars	%	50%	51%
Parking Lot	W	Light-Duty Trucks 1	%	4%	4%
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Parking Lot	W	Medium-Duty Trucks	%	16%	16%
Parking Lot	W	Motor Homes	%	1%	< 0.5%
Parking Lot	W	Medium-Heavy-Duty Trucks	%	1%	1%
Parking Lot	W	Other Buses	%	< 0.5%	< 0.5%
Parking Lot	W	School Buses	%	< 0.5%	< 0.5%
Parking Lot	W	Urban Buses	%	< 0.5%	< 0.5%

8.5.2. Area Sources

8.5.2.1. Hearths

Land Use	Model Parameter	Default Value	New Value
Condo/Townhouse	Wood Fireplaces	4	0
Condo/Townhouse	Gas Fireplaces	72	85
Condo/Townhouse	No Fireplaces	9	0
Condo/Townhouse	Catalytic Wood Stoves	4	0
Condo/Townhouse	Non-Catalytic Wood Stoves	4	0