

AIR QUALITY ASSESSMENT

**Oakcrest Specific Plan
City of San Marcos, CA**

Prepared for:

**City of San Marcos
1 Civic Center Drive
San Marcos, CA 92069**

Prepared By:

Ldn Consulting, Inc.
**23811 Washington Ave, C110-333
Murrieta, CA 92562**

November 28, 2025

TABLE OF CONTENTS

TABLE OF CONTENTS.....	II
LIST OF FIGURES.....	III
LIST OF TABLES	III
APPENDIX	III
LIST OF COMMON ACRONYMS.....	IV
1.0 INTRODUCTION	1
1.1 PROJECT DESCRIPTION	1
1.2 PROJECT LOCATION	1
1.3 PURPOSE OF THIS STUDY	1
2.0 EXISTING ENVIRONMENTAL SETTING.....	4
2.1 EXISTING SETTING	4
2.2 CLIMATE AND METEOROLOGY	5
2.3 REGULATORY STANDARDS.....	5
2.3.1 FEDERAL STANDARDS AND DEFINITIONS	5
2.3.2 STATE STANDARDS AND DEFINITIONS.....	7
2.3.3 REGIONAL STANDARDS.....	9
2.4 CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) SIGNIFICANCE THRESHOLDS.....	10
2.5 SDAPCD RULE 20.2 – AIR QUALITY IMPACT ASSESSMENT SCREENING THRESHOLDS	11
2.6 LOCAL AIR QUALITY.....	12
3.0 METHODOLOGY.....	14
3.1 CONSTRUCTION EMISSIONS CALCULATIONS.....	14
3.2 CONSTRUCTION ASSUMPTIONS.....	15
3.3 OPERATIONAL EMISSIONS.....	17
3.4 ODOR IMPACTS	17
4.0 FINDINGS.....	18
4.1 CONSTRUCTION FINDINGS	18
4.2 HEALTH RISK.....	19
4.3 ODOR IMPACT FINDINGS	20
4.4 OPERATIONAL FINDINGS.....	20
4.5 CUMULATIVE IMPACTS	21
4.6 CONCLUSION OF FINDINGS.....	23
5.0 REFERENCES	25

List of Figures

FIGURE 1-A: PROPOSED PROJECT SITE DEVELOPMENT PLAN	2
FIGURE 1-B: PROJECT VICINITY MAP.....	3
FIGURE 2-A: EXISTING SITE LAYOUT	4

List of Tables

TABLE 2.1: AMBIENT AIR QUALITY STANDARDS	8
TABLE 2.2: SAN DIEGO COUNTY AIR BASIN ATTAINMENT STATUS BY POLLUTANT.....	10
TABLE 2.3: SCREENING LEVEL THRESHOLDS FOR CRITERIA POLLUTANTS.....	11
TABLE 2.4: TWO-YEAR AMBIENT AIR QUALITY SUMMARY NEAR THE PROJECT SITE	13
TABLE 3.1: EXPECTED CONSTRUCTION EQUIPMENT	16
TABLE 4.1: EXPECTED CONSTRUCTION EMISSIONS SUMMARY	19
TABLE 4.2: DAILY POLLUTANT GENERATION (SUMMER).....	21
TABLE 4.3: DAILY POLLUTANT GENERATION (WINTER).....	21

Appendix

CALEEMOD	27
AERSCREEN FOR PM ₁₀ EXHAUST.....	113
CANCER RISK CALCULATIONS	118

LIST OF COMMON ACRONYMS

Air Quality Impact Assessments (AQIA)
Assembly Bill 32 (AB32)
California Air Resource Board (CARB)
California Ambient Air Quality Standards (CAAQS)
California Environmental Quality Act (CEQA)
Carbon Dioxide (CO₂)
Cubic Yards (CY)
Diesel Particulate Matter (DPM)
Environmental Protection Agency (EPA)
EPA Office of Air Quality Planning and Standards (OAQPS)
Hazardous Air Pollutants (HAPs)
Hydrogen Sulfide (H₂S)
International Residential Code (IRC)
Low Carbon Fuel Standard (LCFS)
Methane (CH₄)
National ambient air quality standards (NAAQS)
Nitrous Oxide (N₂O)
Reactive Organic Gas (ROG)
Regional Air Quality Strategy (RAQS)
San Diego Air Basin (SDAB)
San Diego Air Pollution Control District (SDAPCD)
South Coast Air Quality Management District (SCAQMD)
Specific Plan Area (SPA)
State Implementation Plan (SIP)
Toxic Air Contaminants (TACs)

1.0 INTRODUCTION

1.1 Project Description

The project applicant is proposing to construct 257 all electric residential units (112 courtyard multifamily and 145 single-family residential), 6.22 acres of public park and preserved open space on a 137-acre site in the City of San Marcos. The project applicant is proposing a Specific Plan (SP25-0004), General Plan Amendment (GPA25-0005), a Rezone (R25-0004), Tentative Subdivision Map (TM24-0006), two Site Development Plans (SDP-0002 and SDP-0003) and a Conditional Use Permit (CUP25-0001). Construction would be expected to start sometime in 2027 and be completed by late 2029. The first full year of operations is expected in 2030. The project development plan is shown in Figure 1-A.

1.2 Project Location

The project site is located on the west side of North Twin Oaks Valley Road, north of Legacy Drive, and south of Deerbrook Drive. The project site encompasses the following Assessor's Parcel Numbers (APNs): 218-110-02-00, 218-110-03-00, 218-330-05-00, 218-330-08-00, 218-330-09-00, 218-330-13-00, 218-330-26-00, 218-330-27-00, and 218-330-28-00. A project vicinity map is shown in Figure 1-B.

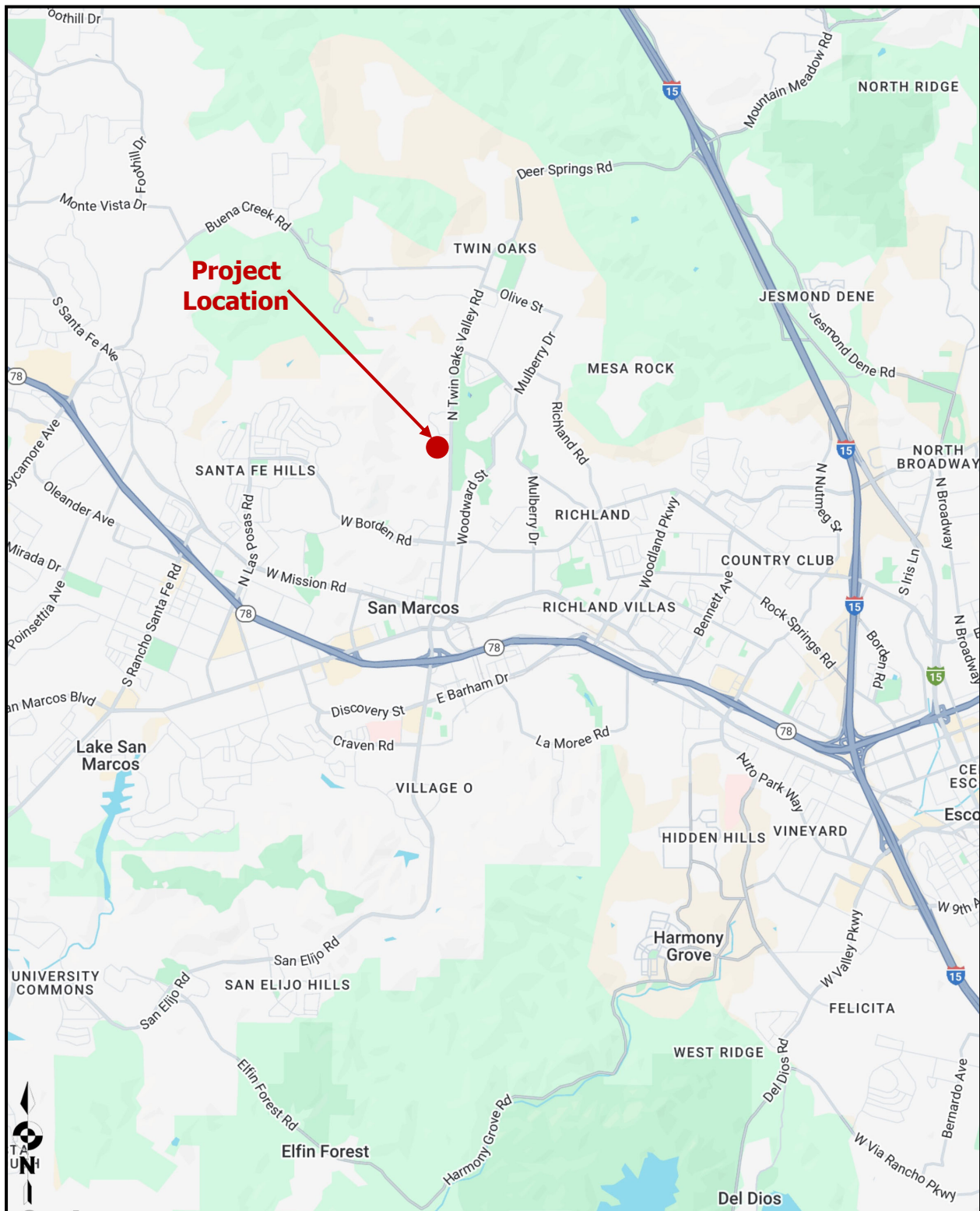
1.3 Purpose of this Study

The purpose of this Air Quality study is to determine potential significant air quality impacts (if any) that may be generated by construction, area or operational emissions from the proposed Project. Should impacts be determined, the intent of this study would be to recommend suitable mitigation measures to bring those impacts to a level that would be considered less than significant under the California Environmental Quality Act (CEQA).

[illegible]

2

Figure 1-B: Project Vicinity Map



Source: (Google, 2023)

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Existing Setting

The 136-acre Project site contains three single-family homes and associated accessory structures, with the majority of the site remaining undeveloped. The site is located on N. Twin Oaks Valley Road in San Marcos. The topography is hilly, with elevations ranging from approximately 630 feet above mean sea level (AMSL) in the valley areas to roughly 1,000 feet AMSL in the higher elevations. An aerial map of the existing site is provided in Figure 2-A. Residential uses are located to the south, north and east of the proposed development area, while undisturbed land, including a mountainous zone, separates the project site from residential areas to the west.

Figure 2-A: Existing Site Layout



Source: (Google Earth Pro, 2023)

2.2 Climate and Meteorology

Climate within the San Diego Air Basin (SDAB) area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing winds from the west heats up. Most of southern California is dominated by high-pressure systems for much of the year, which keeps San Diego mostly sunny and warm. Typically, during the winter months, the high-pressure systems drop to the south and brings cooler, moister weather from the north.

Meteorological trends within the area generally show daytime highs ranging between 64°F in the winter to approximately 88°F in the summer with August usually being the hottest month. Daytime Low temperatures range from approximately 37°F in the winter to approximately 59°F in the summer. Precipitation is generally about 16.2 inches per year (WRCC, 2021). Prevailing wind patterns for the area vary during any given month during the year and also vary depending on the time of day or night. The predominant pattern though throughout the year is usually from the west or westerly (WRCC, 2018).

2.3 Regulatory Standards

2.3.1 Federal Standards and Definitions

The Federal Air Quality Standards were developed per the requirements of The Federal Clean Air Act, which is a federal law that was passed in 1970 and further amended in 1990. This law provides the basis for the national air pollution control effort. An important element of the act included the development of national ambient air quality standards (NAAQS) for major air pollutants.

The Clean Air Act established two types of air quality standards otherwise known as primary and secondary standards. **Primary Standards** set limits to protect public health which includes sensitive populations such as asthmatics, children and elderly. **Secondary Standards** set limits to protect public welfare and include protection against decreased visibility, damage to animals, crops, vegetation and buildings.

The Environmental Protection Agency's (EPA Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards (NAAQS) for principal pollutants, which are called "criteria" pollutants. These pollutants are defined below (EPA, 2022):

1. **Carbon Monoxide (CO):** *is a colorless, odorless, and tasteless gas and is produced from the partial combustion of carbon-containing compounds, notably in internal-combustion engines. Carbon monoxide usually forms when there is a reduced availability of oxygen*

present during the combustion process. Exposure to CO near the levels of the ambient air quality standards can lead to fatigue, headaches, confusion, and dizziness. CO interferes with the blood's ability to carry oxygen (EPA, 2022).

2. **Lead (Pb):** is a potent neurotoxin that accumulates in soft tissues and bone over time. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Because lead is only slowly excreted, exposures to small amounts of lead from a variety of sources can accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms can include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children (EPA, 2022).
3. **Nitrogen Dioxide (NO₂):** is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract and is one of the nitrogen oxides emitted from high-temperature combustion, such as those occurring in trucks, cars, power plants, home heaters, and gas stoves. In the presence of other air contaminants, NO₂ is usually visible as a reddish-brown air layer over urban areas. NO₂ along with other traffic-related pollutants is associated with respiratory symptoms, respiratory illness and respiratory impairment. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO₂ above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO₂ exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children (EPA, 2022).
4. **Particulate Matter (PM₁₀ or PM_{2.5}):** is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary in shape, size and chemical composition, and can be made up of multiple materials such as metal, soot, soil, and dust. PM₁₀ particles are 10 microns (µm) or less and PM_{2.5} particles are 2.5 (µm) or less. These particles can contribute significantly to regional haze and reduction of visibility in California. Exposure to PM levels exceeding current air quality standards increases the risk of allergies such as asthma and respiratory illness (EPA, 2022).
5. **Ozone (O₃):** Ozone at the ground level is a highly oxidative unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Exposure to ozone above ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung functioning. Ozone can also damage materials such as rubber, fabrics and plastics.**Invalid source specified..**

It should be noted that Oxides of Nitrogen (NO_x) is a family of poisonous, highly reactive gases. These gases form when fuel is burned at high temperatures. NO_x pollution is emitted

by automobiles, trucks and various non-road vehicles (e.g., construction equipment, boats, etc.) as well as industrial sources such as power plants, industrial boilers, cement kilns, and turbines. NO_x often appears as a brownish gas. It is a strong oxidizing agent and plays a major role in the atmospheric reactions with Volatile Organic Compounds (VOCs) which produces ozone on hot summer days **Invalid source specified..**

6. **Sulfur Dioxide (SO₂):** is a gaseous compound of sulfur and oxygen and is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO₂ is also emitted from several industrial processes, such as petroleum refining and metal processing. Effects from SO₂ exposures at levels near the one-hour standard include bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Children, the elderly, and people with asthma, cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most susceptible to these symptoms. Continued exposure at elevated levels of SO₂ results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality **Invalid source specified..**

2.3.2 State Standards and Definitions

The State of California Air Resources Board (ARB) sets the laws and regulations for air quality at State level. The California Ambient Air Quality Standards (CAAQS) are either the same as or more restrictive than the NAAQS in that the State standards also restrict four additional contaminants. Table 2.1 on the following page identifies both the NAAQS and CAAQS. The additional contaminants as regulated by the CAAQS are defined below:

1. **Visibility Reducing Particles:** Particles in the Air that obstruct the visibility (CARB, 2023).
2. **Sulfates:** are salts of Sulfuric Acid. Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. They increase the acidity of the atmosphere and form acid rain (CARB, 2023).
3. **Hydrogen Sulfide (H₂S):** is a colorless, toxic and flammable gas with a recognizable smell of rotten eggs or flatulence. H₂S occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. Usually, H₂S is formed from bacterial breakdown of organic matter. Exposure to low concentrations of hydrogen sulfide may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Brief exposures to high concentrations of hydrogen sulfide (greater than 500 ppm) can cause a loss of consciousness and possibly death (CARB, 2023).
4. **Vinyl Chloride:** also known as chloroethene and is a toxic, carcinogenic, colorless gas with a sweet odor. It is an industrial chemical mainly used to produce its polymer, polyvinyl chloride (PVC) (CARB, 2023).

Table 2.1: Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	Average Time	California Standards ¹		Federal Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		-		
Fine Particulate Matter (PM _{2.5}) ⁹	24 Hour	No Separate State Standard		35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	9.0 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	8 hour	9.0 ppm (10mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	-	Non-Dispersive Infrared Photometry
	1 hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		-	-	-
Nitrogen Dioxide (NO ₂) ¹⁰	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³) ⁸	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m ³)		0.100 ppm ⁸ (188/ µg/m ³)	-	
Sulfur Dioxide (SO ₂) ¹¹	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.030 ppm ¹⁰ (for Certain Areas)	-	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method) ⁹
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm ¹⁰ (for Certain Areas) (See Footnote 9)	-	
	3 Hour	-		-	0.5 ppm (1300 µg/m ³)	
	1 Hour	0.25 ppm (655 µg/m ³)		75 ppb (196 µg/m ³)	-	
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	-	Same as Primary Standard	-
	Calendar Quarter	-		1.5 µg/m ³		
	Rolling 3-Month Average	-		0.15 µg/m ³		
Visibility Reducing Particles	8 Hour	See footnote 14				
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			
1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility-reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air-quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations. 2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once per year. The ozone standard is attained when the fourth-highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for current national policies. 3. Concentrations are expressed first in the units in which they were promulgated. Equivalent units in parentheses are based on a reference temperature of 25 °C and a reference pressure of 760 torr. Most measurements of air quality are corrected to these reference conditions; ppm refers to parts per million by volume (micromoles of pollutant per mole of gas). 4. Any equivalent measurement method that can be shown to the satisfaction of the California Air Resources Board (ARB) to give equivalent results at or near the level of the air-quality standard may be used. 5. National Primary Standards: Levels of air quality necessary, with an adequate margin of safety, to protect public health. 6. National Secondary Standards: Levels of air quality necessary to protect public welfare from any known or anticipated adverse effects of a pollutant. 7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a consistent relationship to the reference method and must be approved by the U.S. EPA. 8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. 9. On February 7, 2024, the national annual PM_{2.5} primary standard was lowered from 12.0 µg/m³ to 9.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) remain at 35 µg/m³, as does the annual secondary standard of 15.0 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also remain in effect. The form of the annual primary and secondary standards is the annual mean, averaged over three years. 10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb); California standards are in parts per million (ppm). To directly compare, 100 ppb = 0.100 ppm. 11. On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in nonattainment areas they remain until implementation plans to attain or maintain the 2010 standards are approved. To directly compare units, 75 ppb = 0.075 ppm. 12. The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined. These actions allow for implementation of control measures at levels below the ambient concentrations specified for these pollutants. 13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standards are approved. 14. In 1989, the California Air Resources Board converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents: an extinction of 0.23 per kilometer and 0.07 per kilometer for the statewide and Lake Tahoe Air Basin standards, respectively. Source: (California Air Resources Board, 7/16/2024)						

2.3.3 Regional Standards

The State of California has 35 specific air districts, which are each responsible for ensuring that the criteria pollutants are below the NAAQS and CAAQS. Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as “non-attainment areas” for that pollutant. Currently, there are 15 non-attainment areas for the federal ozone standard and two non-attainment areas for the PM_{2.5} standard and many areas are in non-attainment for PM₁₀ as well. California therefore created the California State Implementation Plan (SIP), which is designed to provide control measures needed to attain ambient air quality standards.

The San Diego Air Pollution Control District (SDAPCD) is the government agency which regulates sources of air pollution within the county. Therefore, the SDAPCD developed a Regional Air Quality Strategy (RAQS) to provide control measures to try to achieve attainment status for state ozone standards with control measures focused on VOCs and NO_x. Currently, San Diego is in “non-attainment” status for federal and state O₃ and state PM₁₀ and PM_{2.5}. An attainment plan is available for O₃. The RAQS was adopted in 1992 and has been updated as recently as 2022 which was the latest update incorporating minor changes to the prior 2016 update.

The 2022 update mostly summarizes how the 2016 update has lowered NO_x and VOCs emissions which reduces ozone and clarifies and enhances emission reductions by introducing for discussion three new VOC and four new NO_x reduction measures. NO_x and VOCs are precursors to the formation of ozone in the atmosphere. The criteria pollutant standards are generally attained when each monitor within the region has had no exceedances during the previous three calendar years. A complete listing of the current attainment status for criteria pollutants with respect to both federal and state nonattainment status by pollutants for County is shown in Table 2.2 on the following page (SDAPCD, 2023).

The RAQS is largely based on population predictions by the San Diego Association of Governments (SANDAG). Projects that produce less growth than predicted by SANDAG would generally conform to the RAQS. Projects that create more growth than projected by SANDAG may create a significant impact if the Project produces unmitigable air quality emissions or if the Project produces cumulative impacts.

Table 2.2: San Diego County Air Basin Attainment Status by Pollutant

Criteria Pollutant	Federal Designation	State Designation
Ozone (8-Hour)	Nonattainment	Nonattainment
Ozone (1-Hour)	Attainment *	Nonattainment
Carbon Monoxide	Attainment	Attainment
PM10	Unclassifiable **	Nonattainment
PM2.5	Attainment	Nonattainment***
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility	No Federal Standard	Unclassified
* The federal 1-hour standard of 12 pphm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans. ** At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable. ***The California Air Resources Board (CARB) has not reclassified the region to attainment yet due to (1) incomplete data, and (2) the use of non-California Approved Samplers (CAS). While data collected does meet the requirements for designation of attainment with federal PM2.5 standards, the data completeness requirements for state PM2.5 standards substantially exceed federal requirements and mandates, and have historically not been feasible for most air districts to adhere to given local resources. APCD has begun replacing most regional filter-based PM2.5 monitors as they reach the end of their useful life with continuous PM2.5 air monitors to ensure collected data meets stringent completeness requirements in the future. APCD anticipates these new monitors will be approved as "CAS" monitors once CARB review the list of approved monitors, which has not been updated since 2013. (SDAPCD, 2023)		

2.4 California Environmental Quality Act (CEQA) Significance Thresholds

The California Environmental Quality Act has provided a checklist to identify the significance of air quality impacts. These guidelines are found in Appendix G of the CEQA guidelines and are as follows:

AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:

- A:* Conflict with or obstruct implementation of the San Diego Regional Air Quality Strategy (RAQS) or applicable portions of the State Implementation Plan (SIP)?
- B:* Result in 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 (PM₁₀, PM_{2.5} or exceed quantitative thresholds for O₃ precursors, oxides of nitrogen [NO_x] and Volatile Organic Compounds [VOCs])?

- C:* Expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, or day-care centers) to substantial pollutant concentrations?
- D:* Result in other emission (such as those leading to odors) adversely affecting a substantial number of people?

2.5 SDAPCD Rule 20.2 – Air Quality Impact Assessment Screening Thresholds

The SDAPCD has established thresholds in Rule 20.2 for new or modified stationary sources (SDAPCD, 2020). These screening criteria can be used to demonstrate that a project's total emissions would not result in a significant impact as defined by CEQA. Also, since SDAPCD does not have AQI threshold for Volatile Organic Compounds (VOCs), it is acceptable to use the Coachella Valley VOC threshold from South Coast Air Quality Management District (County of San Diego, 2007) . Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the project's total air quality impacts are below the state and federal ambient air quality standards. These screening thresholds for construction and daily operations are shown in Table 2.3 below.

Table 2.3: Screening Level Thresholds for Criteria Pollutants

Pollutant	Total Emissions (Pounds per Day)
Construction Emissions	
Respirable Particulate Matter (PM ₁₀ and PM _{2.5})	100 and 55*
Nitrogen Oxide (NO _x)	250
Sulfur Oxide (SO _x)	250
Carbon Monoxide (CO)	550
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75**
Operational Emissions	
Respirable Particulate Matter (PM ₁₀ and PM _{2.5})	100 and 55
Nitrogen Oxide (NO _x)	250
Sulfur Oxide (SO _x)	250
Carbon Monoxide (CO)	550
Lead and Lead Compounds	3.2
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	55***
Notes: * EPA "Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards" published September 8, 2005. Also used by the SCAQMD (County of San Diego, 2007). ** Threshold for VOCs based on the threshold of significance for VOCs from the South Coast Air Quality Management District for the Coachella Valley (County of San Diego, 2007). *** Operational Threshold for VOCs based on the threshold of significance for VOCs from the South Coast Air Quality Management District for the Coachella Valley (SCAQMD, 2023).	

Non-Criteria pollutants such as Hazardous Air Pollutants (HAPs) or Toxic Air Contaminants (TACs) are also regulated by the SDAPCD. Rule 1200 (Toxic Air Contaminants - New Source Review) adopted on June 12, 1996, requires evaluation of potential health risks for any new, relocated, or modified emission unit which may increase emissions of one or more toxic air contaminants. The rule requires that projects that propose to increase cancer risk to between 1 and 10 in one million need to implement toxics best available control technology (T-BACT) or impose the most effective emission limitation, emission control device or control technique to reduce the cancer risk. At no time shall the project increase the cancer risk to over 10 in one million. In addition, a project shall not generate either a chronic or acute health hazard index greater than one. Projects creating cancer risks less than one in one million are not required to implement T-BACT technology.

The U.S. Environmental Protection Agency (U.S. EPA) uses the term Volatile Organic Compounds (VOC) and the California Air Resources Board's (CARB's) Emission Inventory Branch (EIB) uses the term Reactive Organic Gases (ROG) to essentially define the same thing. There are minor deviations between compounds that define each term. However, for purposes of this study we will assume they are essentially the same due to the fact SCAQMD interchanges these words and because CalEEMod directly calculates ROG in place of VOC.

2.6 Local Air Quality

Criteria pollutants are measured continuously throughout the San Diego Air Basin. This data is used to track ambient air quality patterns throughout the County. As mentioned earlier, this data is also used to determine attainment status when compared to the NAAQS and CAAQS. SDAPCD published the five-year air quality summary for all of the monitoring stations within the San Diego basin (SDAPCD, 2025). The proposed development project is closest to the Camp Pendleton and Carmel Mountain Ranch Monitoring stations. Table 2.4 identifies the criteria pollutants monitored at the aforementioned stations.

Table 2.4: Two-Year Ambient Air Quality Summary near the Project Site

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2022	2023	Days Exceeded over 2 years
O ₃ (ppm)	Camp Pendleton or Carmel Mountain Ranch	1 Hour	0.09 ppm	No Standard	0.08	0.08	0
		8 Hour	0.070 ppm	0.070 ppm	0.07	0.08	1
PM ₁₀ (µg/m3)		24 Hour	50 µg/m3	150 µg/m3	-	44.0	
		Annual Arithmetic Mean	20 µg/m3	No Standard	-	19.2	
PM _{2.5} (µg/m ³)		24 Hour	No standard -	35 µg/m3	-	26.5	N/A
		Annual Arithmetic Mean	12 µg/m3	15 µg/m3	-	7.9	N/A
NO ₂ (ppm)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.005	0.005	N/A
		1 Hour	0.18 ppm	0.100 ppm	0.050	0.063	N/A
* CO (ppm)		1 Hour	20 ppm	35 ppm	2.2	1.6	N/A
		8 Hour	9 ppm	9 ppm	1.2	1.1	N/A

Notes:

1. - Yearly maximums marked with "-" indicated data was not available for either monitoring station.

2. * Data was selected from the Carmel Mountain Ranch station which began in 2019. All other data presented was collected at the Camp Pendleton Monitoring Station.

3. SO₂ is only monitored at the El Cajon Monitoring Station. Within the entire County of San Diego, SO₂ emissions within the County are essentially Zero for all metrics including the Average, Maximum 24 hour and 1- hour standards. The Highest 1-hr measurement identified is 0.004 ppm and the most restrictive standard (CAAQS for SO₂) is 0.25 ppm.

Source: (SDAPCD, 2025)

3.0 METHODOLOGY

3.1 Construction Emissions Calculations

Air Quality impacts related to construction and daily operations were calculated using the CalEEMod air quality model (Version 2022.1), which was developed by South Coast Air Quality Management District (SCAQMD). The CalEEMod input/output model is shown in **Attachment A** to this report.

The AERSCREEN dispersion model will be used to determine the concentration of air pollutants at any location near the pollutant generator. Additionally, the model identifies the maximum exposure distance and concentrations. The notable toxic air contaminant from construction is diesel exhaust since exposure to diesel exhaust is known to cause cancer and acute and chronic health effects. Diesel exhaust emissions can be estimated using the annual PM10 exhaust emissions from onsite construction operations obtained from the annual CalEEMod model output by summing each onsite source for the construction duration. The AERSCREEN input/output files for the proposed Project are shown in **Attachment B** of this report.

Once the dispersed concentrations of diesel particulates are estimated in the surrounding air, they are used to evaluate estimated exposure to people. Exposure is evaluated by calculating the dose in milligrams per kilogram body weight per day (mg/kg/d). For residential exposure, the breathing rates are determined for specific age groups, so inhalation dose (Dose-air) is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. The following algorithms calculate this dose for exposure through the inhalation pathways. The worst case cancer risk dose calculation is defined in Equation 1 below (OEHHA, 2015).

Equation 1

$$Dose_{air} = C_{air} * (BR/BW) * A * EF * (1 \times 10^{-6})$$

Dose _{air}	=	Dose through inhalation (mg/kg/d)
C _{air}	=	Concentration in air (µg/m ³) Annual average DPM concentration in µg/m ³ - AERSCREEN predicts a 1-hr concentration and is corrected to an annual average by multiplying the 1-hr average by 0.08 (US EPA, 1992)
BR/BW	=	Daily breathing rate normalized to body weight (L/kg BW-day). See Table I.2 for the daily breathing rate for each age range.
A	=	Inhalation absorption factor (assumed to be 1)
EF	=	Exposure frequency (unitless, days/365 days)
1x10 ⁻⁶	=	Milligrams to micrograms conversion (10 ⁻³ mg/ µg), cubic meters to liters conversion (10 ⁻³ m ³ /l)

Cancer risk is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor, the frequency of time spent at home and the exposure duration divided by averaging time, to yield the excess cancer risk. As described below, the

excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk for any given location. Specific factors within the project models are provided in **Attachment C** to this report. The worst case cancer risk calculation is defined in Equation 2 below (OEHHA, 2015).

Equation 2
$$\text{RISKinh-res} = \text{DOSEair} \times \text{CPF} \times \text{ASF} \times \text{ED/AT} \times \text{FAH}$$

RISKinh-res	=	Residential inhalation cancer risk
DOSEair	=	Daily inhalation dose (mg/kg-day)
CPF	=	Inhalation cancer potency factor (mg/kg-day ⁻¹)
ASF	=	Age sensitivity factor for a specified age group (unitless)
ED	=	Exposure duration (in years) for a specified age group
AT	=	Averaging time for lifetime cancer risk (years)
FAH	=	Fraction of time spent at home (unitless)

The Office of Environmental Health Hazard Assessment (OEHHA) recommends that an exposure duration (residency time) of 30 years be used to estimate long-term individual cancer risk for the Maximally Exposed Individual Resident (MEIR). Long-term would be when a receptor is exposed to a source which continues over the total duration. Cancer risks from short-term exposures, such as those during construction, would also be calculated using the duration of exposure.

Chronic Non-Cancer risks are also known with respect to diesel particulate matter (DPM) and are determined by the hazard index. To calculate hazard index, DPM concentration is divided by its chronic Reference Exposure Levels (REL). Where the total equals or exceeds one, a health hazard is presumed to exist. RELs are published by the Office of Environmental Health Hazard Assessment (OEHHA, 2015). Diesel Exhaust has a REL of 5 µg/m³ and targets the respiratory system.

3.2 Construction Assumptions

The Project is expected to begin in 2027 and would include demolition of approximately 11,000 square feet of existing structures on-site. Following demolition, grading activities would commence, with residential construction to begin shortly thereafter. Proposed earthwork activities include 662,300 cubic yards (CY) of cut and 662,300 CY of fill, creating a balanced grading operation. However, as a worst case assumption, it is assumed that as much as 7,000 CY of export will be required. Earthwork associated with grading within CalEEMod uses a "Grading Equipment Passes" methodology which has been approved by SCAQMD in consultation with building estimator references and is used as the basis of emission generation (CAPCOA, 2021). As a design feature, the project's construction contractor will utilize Tier 3 rated diesel construction equipment to minimize diesel particulates

from construction equipment. In addition, the Project also may require some blasting and rock crushing related activities due to bedrock conditions. Table 3.1 below describes the construction equipment and durations.

Table 3.1: Expected Construction Equipment

Equipment Identification	Proposed Start	Proposed Complete	Quantity
Demolition	1/1/2027	1/28/2027	
Concrete/Industrial Saws			1
Excavators			3
Rubber Tired Dozers			2
Site Preparation	1/29/2027	3/25/2027	
Rubber Tired Dozers			3
Tractors/Loaders/Backhoes			4
Grading	3/26/2027	12/2/2027	
Excavators			2
Graders			1
Rubber Tired Dozers			1
Scrapers			2
Tractors/Loaders/Backhoes			2
Bore/Drill Rigs			1
Crushing/Processing Equipment			1
Building Construction	12/3/2027	12/31/2029	
Cranes			1
Forklifts			3
Generator Sets			1
Tractors/Loaders/Backhoes			3
Welders			1
Paving	11/1/2029	12/31/2029	
Pavers			2
Paving Equipment			2
Rollers			2
Architectural Coating	8/1/2029	12/31/2029	
Air Compressors			1
This equipment list is based upon equipment inventory within CalEEMod as well as discussions with the Project applicant. The quantity and types are based upon assumptions provided by the project applicant.			

During blasting operations, grading operations would temporarily stop and resume once blasting is completed. Per conversations with the project Civil Engineer, it is expected that each blast, limited to once a day, would be limited to six tons Ammonium Nitrate for any given blast operation (source for conversation). The area of each blast would be limited to 20,000 SF or (100-foot x 200-foot) area. Blasting operations usually require a chemical material that is capable of extremely rapid combustion resulting in an explosion or detonation. These materials are usually mixtures of several ingredients but are often oxygen deficient as

combustion reactions take place which causes a formation of carbon monoxide and to a lesser extent, nitrogen oxides. For ammonium nitrate and fuel oil (ANFO) mixtures it is expected that carbon monoxide would be generated in quantities of 67 lbs per every ton of explosives and nitrogen oxides would be generated at 17 lbs per the same quantity (EPA, 1995). Particulate matter will also be generated from blasting and can be estimated using Table 11.9-1 of the aforementioned document (EPA, 1995) using the following equation:

$$PM_{10}(lb/Blast) = 0.000014 * (BlastArea(ft^2)) * 0.52$$

3.3 Operational Emissions

Once construction is completed the proposed project would generate emissions from daily operations which would include sources such as Area, Energy, Mobile, Waste and Water uses, which are also calculated within CalEEMod. Area Sources include consumer products, landscaping and architectural coatings as part of regular maintenance. Energy sources would be from electrical use only since the Project would be all electric. However, emissions from electricity are not included in this analysis because air quality emissions occur offsite at existing permitted power plants which are permitted separately at the point of generation. The operational model results are also shown in **Attachment A** at the end of this report.

The traffic inputs for CalEEMod were adjusted to be consistent with the proposed project traffic study. Based on that study, the proposed project would generate 2,393 daily trips (LL&G, 2025). The CalEEMod 2022.1 Model was run for both the winter and summer scenarios and assumed average winter and summer temperatures.

The model also estimates emission predictions for ROG, NO_x, CO, SO₂, PM₁₀ and PM_{2.5} for area source assumptions. Additionally, it was assumed that an average of 10% of the structural surface area will be re-painted each year. Finally, since the proposed project would not be installing hearth options, CalEEMod default hearth settings were modified to represent no hearth options. CalEEMod includes landscaping and consumer product assumptions which would apply to this project. Consumer product emissions are generated by a wide range of product categories, including air fresheners, automotive products, household cleaners, and personal care products. Emissions associated with these products primarily depend on the increased population associated with residential development.

3.4 Odor Impacts

Potential onsite odor generators would include short-term construction odors from activities such as paving and painting. Under SDAPCD Rule 51, emissions that cause injury, detriment, nuisance, or annoyance to a considerable number of people are prohibited (SDAPCD, 2025).

4.0 FINDINGS

4.1 Construction Findings

The project would start grading sometime in 2027 and all building construction would be completed early late 2029. Proposed earthwork activities include 662,300 cubic yards (CY) of cut and 662,300 CY of fill, creating a balanced grading operation. However, as a worst case assumption, it is assumed that as much as 7,000 CY of export will be required. In addition, some blasting and rock crushing may be required during grading. The following design features were assumed within the CalEEMod analysis:

- *Construction Design Feature 1: all heavy diesel construction equipment will be classified as Tier 3 with Diesel Particulate Filters (DPF) or better.*

Table 4.1 shows the expected construction emissions. Based on the cumulative totals, project construction would not exceed any of the SDAPCD screening thresholds and impacts would be less than significant.

During blasting operations, grading operations would stop and it is expected that each blast operation would require between 10,000 - 12,000 lbs of Ammonium Nitrate.

The proposed project would utilize approximately 6 tons of ammonium nitrate per blast which would generate up to 402 lbs (67 lbs/ton * 6 tons) of carbon monoxide and up to 102 lbs (17 lbs/ton * 6 tons) of nitrogen oxides during a blast utilizing 6 tons of ammonium nitrate. These quantities would be additive to the mass grading operations for the entire project site and could be added to the worst-case mass grading daily CO and NO_x output. Additional particulates derived from each blast are estimated over a 20,000 SF area roughly 100-foot by 200-foot in dimension as identified in Section 3.2 above. Given this, it is estimated that each blast would generate 20.59 lb/blast as is shown in the equation below:

$$PM_{10}(lb/Blast) = 0.000014 * (20,000ft^2)^{1.5} * 0.52 = 20.59(lb/blast)$$

It should be noted, a blasting permit is required from the San Marcos Fire Department which would include required terms and should limit the blasting material to 6 tons per day as this was indicated as the expected blast charge.

Table 4.1: Expected Construction Emissions Summary

Year	ROG	NO_x	CO	SO₂	PM₁₀ (Exhaust)	PM₁₀ (Dust)	PM₁₀ (Total)	PM_{2.5} (Exhaust)	PM_{2.5} (Dust)	PM_{2.5} (Total)
2027	2.71	40	140	0.2	0.25	19.8	19.9	0.22	10.1	10.3
2028	0.85	11.8	19	0.03	0.07	1.3	1.37	0.07	0.31	0.38
2029	24.8	20.5	30	0.04	0.07	1.65	1.37	0.06	0.39	0.37
Blasting Emissions calculations shown in text above		102	402			20.59	20.59			
Construction w/ Blasting (Maximum)	24.8	142	542	0.2	0.39	22.75	40.49	0.22	10.1	10.3
Screening Level Threshold (lb/day)	75	250	550	250	-	-	100	-	-	55
SDAPCD Impact?	No	No	No	No	-	-	No	-	-	No

4.2 Health Risk

Diesel exhaust is the primary source of TAC generated during construction activities. DPM is represented in CalEEMod as the exhaust fraction of PM₁₀ emitted from diesel-fueled construction equipment. Given this, PM₁₀ exhaust emissions were used as a conservative proxy for DPM for this assessment.

Based upon the CalEEMod outputs, worst-case onsite PM₁₀ from onsite construction exhaust would cumulatively produce 0.044 tons over the construction duration (1,095-calendar days) or an average of 4.21x10⁻⁴ grams/second. Utilizing the AERSCREEN dispersion model (Attachment B), the peak maximum 1-hr concentration is 0.0468 µg/m³ during the worst-case construction period. Converting the peak 1-hr concentration to an annual concentration by multiplying it by 0.08 (US EPA, 1992) yields an annual concentration of 0.00374 µg/m³. Therefore, utilizing the risk equation identified above in Section 3.1, the inhalation cancer risk is 1.39 per million over the construction duration. As a condition of project approval, the Project would be required to utilize Tier 3 diesel equipment. Since the threshold is 10 per million exposed with T-BACT installed, the project would have a less than significant impact and would be in compliance with SDAPCD thresholds.

It should be noted that sensitive residential receptors are adjacent to the project site to the north and south. These receptors would have cancer risks at or below 1.39 per million, compared to the 10 per million threshold. Given this, a less than significant health risk impact

is expected to all residential receptors adjacent to the Project site. There are known chronic health risks associated with diesel exhaust which are considered non-cancer risks. These risks are calculated based on methods identified in Section 3.1 of this report. From this we find that the hourly concentration of $0.0468 \mu\text{g}/\text{m}^3$ divided by the REL of $5 \mu\text{g}/\text{m}^3$ yields a Health Hazard Index of 0.009, which is less than one. Therefore, based on thresholds for non-cancer risks in Section 3.1 above, non-cancer health risks are considered less than significant.

4.3 Odor Impact Findings

Potential onsite odor generators would include short-term construction odors from activities such as paving and possibly painting. Under SDAPCD Rule 51, emissions that cause injury, detriment, nuisance, or annoyance to a considerable number of people are prohibited. Construction-related odors would be intermittent, low in intensity, and limited to the immediate work area. In addition, these odors would dissipate rapidly. Given this, significant odors impacts meeting the definition of Rule 51 are not expected. Also, the proposed project would not be expected to generate significant odors during operation since the project is residential in nature. Based on this, odor impacts would be less than significant.

4.4 Operational Findings

The proposed project would generate 2,393 daily trips (LL&G, 2025) once the proposed project is fully operational in the year 2030. This assumption has been incorporated into the CalEEMod file output shown in **Attachment A** to this report.

The expected daily pollutant generation can be calculated utilizing the product of the average daily miles traveled and the expected emissions inventory calculated by CALEEMOD 2022.1 and can be seen in Tables 4.2 and 4.3 for the summer and winter scenarios, respectively. Based upon these calculations, the project's operational emissions in both the summer and winter scenario will not exceed the SDAPCD screening thresholds and impacts are less than significant.

Table 4.2: Daily Pollutant Generation (Summer)

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer Scenario						
Mobile Source Emission Estimates (Lb/Day)	7.83	4.76	53.6	0.14	12.9	3.33
Area Emission Estimates (Lb/Day)	10.9	0.14	14.6	< 0.005	0.01	0.01
Energy Emission Estimates (Lb/Day)	0	0	0	0	0	0
Total (Lb/Day)	18.73	4.9	68.2	0.14	12.91	3.34
Screening Level Thresholds	55	250	550	250	100	55
Significant?	No	No	No	No	No	No
Daily pollutant generation assumes trip distances within CalEEMod						

Table 4.3: Daily Pollutant Generation (Winter)

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Winter Scenario						
Mobile Source Emission Estimates (Lb/Day)	7.7	5.23	50.9	0.13	12.9	3.33
Area Emission Estimates (Lb/Day)	9.62	0	0	0	0	0
Energy Emission Estimates (Lb/Day)	0	0	0	0	0	0
Total (Lb/Day)	17.32	5.23	50.9	0.13	12.9	3.33
Screening Level Thresholds	55	250	550	250	100	55
Significant?	No	No	No	No	No	No
Daily pollutant generation assumes trip distances within CalEEMod						

4.5 Cumulative Impacts

Cumulative construction impact could be expected if construction of the proposed Project and potentially a hypothetical project in the immediate vicinity. An impact would exist if the cumulative totals of both projects when added together exceed the screening significance thresholds. Based upon the City's current cumulative project list, no large construction projects are expected to occur simultaneously and within the immediate vicinity of the Proposed Project. Because of this, a less than significant cumulative construction impact would be expected.

The project site has a General Plan designation of RR (Rural Residential) and AG (Agriculture/Residential). Per the Land Use and Community Design Element of the City's General Plan, Rural Residential is identified for single-family residences with a density of up

to 2 dwelling units/acre (du/ac) and limited agricultural uses such as flower and vegetable gardens, fruit trees and horticultural stock. Under the Agriculture/Residential designation, agricultural uses are the primary use, and could include greenhouses, wholesale nurseries, and agricultural crops. Raising poultry, cattle, birds, small animals, horses, and bovine animals is also permitted under the Agriculture/Residential designation. Agricultural tourism activities may also be allowed. Residential development is an allowable use with the Agriculture/Residential designation with up to 1.0 du/ac based on location and slope (City of San Marcos 2012).

The project site is also noted with an "S" designator in the City's General Plan. The "S" designator indicates the project site could be the location of a future school. In 2021, SMUSD considered the purchase of the site for the construction of a new high school. After further site review, SMUSD decided to drop the site from consideration as a school site in late 2021 (DTSC 2025). However, the "S" designator is still indicated for the project site in the City's General Plan and would allow for the development of a school site.

The project site also has a "P" designator in the General Plan. The "P" designator indicates the project site could be the location of a future park. The City of San Marcos Parks Master Plan Update indicates a potential future park of up to 26.45 acres in the Twin Oaks Valley neighborhood (San Marcos 2018). Per the 1990 Parks Master Plan, as referenced in the 2018 Parks Master Plan Update, amenities for a future Twin Oaks Valley Neighborhood Park could include a large overlay field, softball field, tennis courts, basketball courts, playground and tot lot, picnic and barbeque facilities and other amenities as determined at the time of planning and development.

A possible development scenario under this alternative would include a 16-acre public park (8 acres of playing fields and 8 acres of public park), a 56-acre high school with up to 2,585 students, 89 single family residential units and 52 acres of biological open space. The overall footprint of development would likely be similar to the proposed project, in that the development would be focused outside of the high-quality habitat, steeper elevations and outside of the ROZ buffer. It is expected that the high school would be two stories and have playing fields. The single family residences would be a motor court clustered product that would be two stories high. Trip generation for the alternative project is expected to be 4,868 ADT while the proposed Project would only generate 2,393 trips (LL&G, 2025). Since trip generation is the largest air quality emissions component to the cumulative emissions, the Project would be considered less intense than the GP Buildout would otherwise allow.

Demolition of the existing residences, grading, blasting and rock crushing as well as fire fuel modification would also be required for this alternative.

Given this, the project would not generate significant growth in excess than what the GP Buildout would allow. In addition, projects that are consistent with the currently adopted GP

Buildout are determined to be consistent with SDAB's air quality plans, including the RAQS and the SIP. If a project proposes development that is consistent with or less than estimates provided in the General Plan, the project would not conflict with or obstruct implementation of the RAQS or SIP.

Since no direct or cumulative construction or operational impacts are expected, no cumulative impacts would be expected. Similarly, given these findings, the Project would also be consistent with the County's RAQS and the State's air quality SIP.

4.6 Conclusion of Findings

During construction of the proposed Project, fugitive dust emissions will be expected during grading and equipment usage. However, these emissions would not exceed SDAPCD thresholds and impacts would be less than significant. The project has been designed and planned by incorporating design elements and best management practices which are a condition of approval to the project as shown below:

- *Construction Design Feature 1: all heavy diesel construction equipment will be classified as Tier 3 with DPF or better.*

A cumulative construction impact could be expected if construction of the proposed Project and potentially a hypothetical project in the immediate vicinity. An impact would exist if the cumulative totals of both projects when added together exceed the screening significance thresholds. Based upon the City's current cumulative project list, no large construction projects are expected to occur simultaneously and within the immediate vicinity to the Proposed Project. Because of this, a less than significant cumulative construction impact would be expected.

Additionally, emissions will be generated from both area and operational sources by the proposed Project which are the result of Project generated traffic, landscaping maintenance equipment, consumer products, and annual maintenance and painting. Operational air quality impacts would be less than significant. This analysis assumes the project would not install hearth options within the development and would also be all electric.

Cumulative operational air quality impacts could be expected if the proposed Project generates more emissions than would otherwise be expected from a GP Buildout scenario. The proposed Project was found to be less intense than the GP Buildout scenario so would not be expected to generate an operational cumulative impact. This is largely because a Project's potential to add mobile emission is also the largest source of air quality emissions. The GP Buildout scenario was found to add 4,868 ADT while the proposed Project would only generate 2,393 trips (LL&G, 2025).

Also, since the project would not generate significant direct or cumulative construction or operational impacts, the Project would be consistent with the County's RAQS and the State's air quality SIP.

5.0 REFERENCES

- California Air Resources Board. (05/04/2016). *www.arb.ca.gov*. Retrieved from Ambient Air Quality Standards: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>
- CAPCOA. (2021). CalEEMod Version 2020.4.0 Calculation Details (Appendix A). Retrieved from <http://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/appendix-a2020-4-0.pdf?sfvrsn=6>
- CARB. (2023). <https://ww2.arb.ca.gov>. Retrieved from Visibility reducing particles and health: <https://ww2.arb.ca.gov/resources/visibility-reducing-particles-and-health>
- CARB. (2023). <https://ww2.arb.ca.gov>. Retrieved from Sulfate and Health: <https://ww2.arb.ca.gov/resources/sulfate-and-health>
- CARB. (2023). <https://ww2.arb.ca.gov>. Retrieved from Hydrogen Sulfide & Health: <https://ww2.arb.ca.gov/resources/hydrogen-sulfide-and-health>
- CARB. (2023). <https://ww2.arb.ca.gov>. Retrieved from <https://ww2.arb.ca.gov/resources/vinyl-chloride-and-health>
- County of San Diego. (2007, March 19). *GUIDELINES FOR DETERMINING SIGNIFICANCE AND REPORT FORMAT AND CONTENT REQUIREMENTS*. Retrieved from <https://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/AQ-Guidelines.pdf>
- EPA. (2022). <https://www.epa.gov/>. Retrieved from What is carbon monoxide?: [https://www.epa.gov/indoor-air-quality-iaq/what-carbon-monoxide#:~:text=Carbon%20monoxide%20\(CO\)%20is%20a,soluble%20in%20alcohol%20and%20benzene](https://www.epa.gov/indoor-air-quality-iaq/what-carbon-monoxide#:~:text=Carbon%20monoxide%20(CO)%20is%20a,soluble%20in%20alcohol%20and%20benzene).
- EPA. (2022). <https://www.epa.gov/>. Retrieved from Learn about Lead: <https://www.epa.gov/lead/learn-about-lead#lead>
- EPA. (2022). <https://www.epa.gov/>. Retrieved from What is NO2 and how does it get in the air?
- EPA. (2022). <https://www.epa.gov/>. Retrieved from What is PM, and how does it get into the air?: <https://www.epa.gov/pm-pollution/particulate-matter-pm-basics#PM>
- EPA. (2022). *Initial List of Hazardous Air Pollutants with Modifications*. Retrieved from <https://www.epa.gov/haps/initial-list-hazardous-air-pollutants-modifications>
- EPA, U. (1995). *EPA-AP 42, Fifth Edition Compilation of Air Pollutant Emission Factors*. US EPA. Retrieved from www.epa.gov/ttn/chief/ap42/ch13/final/c13s03.pdf
- Google. (2025). Retrieved 2025, from maps.google.com
- Google Earth Pro. (2025).
- LL&G. (2025). *Oakcrest SP Development Trip Generation*.
- OEHHA. (2015). *Risk Assessment Guidelines - Guidance Manual for Preparation of Health Risk Assessments*. OEHHHA. Retrieved from http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf

- OEHHA. (February 2015). *Air Toxics Hot Spots Program - Risk Assessment Guidelines - Guidance Manual for Preparation of Health Risk Assessments*. OEHHA.
- SDAPCD. (2020). *RULE 20.2 - NEW SOURCE REVIEW - NON - MAJOR STATIONARY SOURCES*. Retrieved from <https://www.sdapcd.org/content/dam/sdapcd/documents/rules/current-rules/Rule-20.2.pdf>
- SDAPCD. (2023). Retrieved 2018, from <https://www.sdapcd.org/content/sdapcd/planning/attainment-status.html>
- SDAPCD. (2025). *5 year air quality summary report*. Retrieved April 14, 2016, from <https://www.sdapcd.org/content/dam/sdapcd/documents/monitoring/5-Year-Air-Quality.pdf>
- US EPA. (1992). *Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised*. US EPA. Retrieved from http://www.epa.gov/scram001/guidance/guide/EPA-454R-92-019_OCR.pdf
- WRCC. (2018). Retrieved from https://wrcc.dri.edu/Climate/comp_table_show.php?stype=wind_dir_avg
- WRCC. (2021). *ESCONDIDO, CALIFORNIA (042862)*. Retrieved from <https://wrcc.dri.edu/summary/Climsmsca.html>: <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca2862>

ATTACHMENT A

CalEEMod

Oak Crest Detailed Report

Table of Contents

- 1. Basic Project Information
 - 1.1. Basic Project Information
 - 1.2. Land Use Types
 - 1.3. User-Selected Emission Reduction Measures by Emissions Sector
- 2. Emissions Summary
 - 2.1. Construction Emissions Compared Against Thresholds
 - 2.2. Construction Emissions by Year, Unmitigated
 - 2.3. Construction Emissions by Year, Mitigated
 - 2.4. Operations Emissions Compared Against Thresholds
 - 2.5. Operations Emissions by Sector, Unmitigated
 - 2.6. Operations Emissions by Sector, Mitigated
- 3. Construction Emissions Details
 - 3.1. Demolition (2027) - Unmitigated
 - 3.2. Demolition (2027) - Mitigated
 - 3.3. Site Preparation (2027) - Unmitigated

3.4. Site Preparation (2027) - Mitigated

3.5. Grading (2027) - Unmitigated

3.6. Grading (2027) - Mitigated

3.7. Building Construction (2027) - Unmitigated

3.8. Building Construction (2027) - Mitigated

3.9. Building Construction (2028) - Unmitigated

3.10. Building Construction (2028) - Mitigated

3.11. Building Construction (2029) - Unmitigated

3.12. Building Construction (2029) - Mitigated

3.13. Paving (2029) - Unmitigated

3.14. Paving (2029) - Mitigated

3.15. Architectural Coating (2029) - Unmitigated

3.16. Architectural Coating (2029) - Mitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.1.2. Mitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.2. Electricity Emissions By Land Use - Mitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.2.4. Natural Gas Emissions By Land Use - Mitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.3.2. Mitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.4.2. Mitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.5.2. Mitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.6.2. Mitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.7.2. Mitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.8.2. Mitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.9.2. Mitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.2.2. Mitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.3.2. Mitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.9.2. Mitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.10.4. Landscape Equipment - Mitigated

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.11.2. Mitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.12.2. Mitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.13.2. Mitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Oak Crest
Construction Start Date	1/1/2027
Operational Year	2030
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	20.8
Location	33.16131403374409, -117.16634716646988
County	San Diego
City	San Marcos
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6215
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.30

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
Single Family Housing	145	Dwelling Unit	47.1	282,750	1,698,364	—	405	—

City Park	6.00	Acre	6.00	0.00	200,000	200,000	—	—
Condo/Townhouse	112	Dwelling Unit	15.0	118,720	80,000	—	312	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-6	Use Diesel Particulate Filters
Energy	E-15	Require All-Electric Development

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	24.4	39.9	140	0.20	1.61	9.51	11.1	1.47	3.73	5.20	—	23,072	23,072	0.88	0.25	23,171
Mit.	24.4	39.9	140	0.20	0.25	9.51	9.75	0.22	3.73	3.95	—	23,072	23,072	0.88	0.25	23,171
% Reduced	—	—	—	—	85%	—	12%	85%	—	24%	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	24.8	40.0	140	0.20	1.61	19.8	20.7	1.47	10.1	11.0	—	23,059	23,059	0.89	0.25	23,157
Mit.	24.8	40.0	140	0.20	0.25	19.8	19.9	0.22	10.1	10.3	—	23,059	23,059	0.89	0.25	23,157
% Reduced	—	—	—	—	85%	—	4%	85%	—	7%	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	7.66	24.0	74.5	0.11	0.97	6.97	7.94	0.88	2.97	3.85	—	12,416	12,416	0.48	0.15	12,472
Mit.	7.66	24.0	74.5	0.11	0.15	6.97	7.12	0.13	2.97	3.11	—	12,416	12,416	0.48	0.15	12,472
% Reduced	—	—	—	—	85%	—	10%	85%	—	19%	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.40	4.38	13.6	0.02	0.18	1.27	1.45	0.16	0.54	0.70	—	2,056	2,056	0.08	0.02	2,065
Mit.	1.40	4.38	13.6	0.02	0.03	1.27	1.30	0.02	0.54	0.57	—	2,056	2,056	0.08	0.02	2,065
% Reduced	—	—	—	—	85%	—	10%	85%	—	19%	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	2.71	39.9	140	0.20	1.61	9.51	11.1	1.47	3.73	5.20	—	23,072	23,072	0.88	0.25	23,171
2028	0.85	11.7	19.0	0.03	0.43	1.30	1.73	0.39	0.31	0.70	—	4,026	4,026	0.13	0.15	4,081
2029	24.4	11.7	19.7	0.03	0.43	1.52	1.95	0.38	0.36	0.75	—	4,221	4,221	0.13	0.16	4,277
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	2.70	40.0	140	0.20	1.61	19.8	20.7	1.47	10.1	11.0	—	23,059	23,059	0.89	0.25	23,157
2028	0.84	11.8	18.4	0.03	0.43	1.30	1.73	0.39	0.31	0.70	—	3,961	3,961	0.14	0.15	4,010
2029	24.8	20.5	30.0	0.04	0.82	1.65	2.47	0.74	0.39	1.14	—	5,779	5,779	0.21	0.18	5,837
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.53	24.0	74.5	0.11	0.97	6.97	7.94	0.88	2.97	3.85	—	12,416	12,416	0.48	0.15	12,472
2028	0.60	8.46	13.2	0.02	0.31	0.92	1.23	0.28	0.22	0.50	—	2,844	2,844	0.10	0.11	2,881
2029	7.66	9.42	14.5	0.02	0.35	1.00	1.35	0.32	0.24	0.56	—	3,068	3,068	0.10	0.11	3,106

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.28	4.38	13.6	0.02	0.18	1.27	1.45	0.16	0.54	0.70	—	2,056	2,056	0.08	0.02	2,065
2028	0.11	1.54	2.41	< 0.005	0.06	0.17	0.22	0.05	0.04	0.09	—	471	471	0.02	0.02	477
2029	1.40	1.72	2.65	< 0.005	0.06	0.18	0.25	0.06	0.04	0.10	—	508	508	0.02	0.02	514

2.3. Construction Emissions by Year, Mitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	2.71	39.9	140	0.20	0.25	9.51	9.75	0.22	3.73	3.95	—	23,072	23,072	0.88	0.25	23,171
2028	0.85	11.7	19.0	0.03	0.07	1.30	1.37	0.07	0.31	0.38	—	4,026	4,026	0.13	0.15	4,081
2029	24.4	11.7	19.7	0.03	0.07	1.52	1.37	0.06	0.36	0.37	—	4,221	4,221	0.13	0.16	4,277
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	2.70	40.0	140	0.20	0.25	19.8	19.9	0.22	10.1	10.3	—	23,059	23,059	0.89	0.25	23,157
2028	0.84	11.8	18.4	0.03	0.07	1.30	1.37	0.07	0.31	0.38	—	3,961	3,961	0.14	0.15	4,010
2029	24.8	20.5	30.0	0.04	0.07	1.65	1.37	0.06	0.39	0.37	—	5,779	5,779	0.21	0.18	5,837
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.53	24.0	74.5	0.11	0.15	6.97	7.12	0.13	2.97	3.11	—	12,416	12,416	0.48	0.15	12,472
2028	0.60	8.46	13.2	0.02	0.05	0.92	0.97	0.05	0.22	0.27	—	2,844	2,844	0.10	0.11	2,881
2029	7.66	9.42	14.5	0.02	NaN	1.00	NaN	NaN	0.24	NaN	—	3,068	3,068	0.10	0.11	3,106
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.28	4.38	13.6	0.02	0.03	1.27	1.30	0.02	0.54	0.57	—	2,056	2,056	0.08	0.02	2,065
2028	0.11	1.54	2.41	< 0.005	0.01	0.17	0.18	0.01	0.04	0.05	—	471	471	0.02	0.02	477
2029	1.40	1.72	2.65	< 0.005	NaN	0.18	NaN	NaN	0.04	NaN	—	508	508	0.02	0.02	514

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	18.8	6.52	68.9	0.15	0.23	12.8	13.0	0.22	3.25	3.47	114	16,767	16,881	12.4	0.59	17,401
Mit.	18.7	4.89	68.2	0.14	0.10	12.8	12.9	0.09	3.25	3.34	114	14,706	14,820	12.2	0.59	15,334
% Reduced	1%	25%	1%	7%	57%	—	1%	59%	—	4%	—	12%	12%	1%	1%	12%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.4	6.85	51.6	0.14	0.22	12.8	13.0	0.22	3.25	3.46	114	16,114	16,227	12.4	0.62	16,728
Mit.	17.3	5.23	50.9	0.13	0.09	12.8	12.9	0.09	3.25	3.33	114	14,053	14,166	12.2	0.62	14,661
% Reduced	1%	24%	1%	7%	59%	—	1%	61%	—	4%	—	13%	13%	1%	1%	12%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.9	6.84	58.7	0.14	0.23	12.6	12.9	0.22	3.20	3.42	114	16,226	16,339	12.4	0.62	16,850
Mit.	17.8	5.22	58.0	0.13	0.09	12.6	12.7	0.09	3.20	3.29	114	14,165	14,278	12.2	0.61	14,783
% Reduced	1%	24%	1%	7%	58%	—	1%	60%	—	4%	—	13%	13%	1%	1%	12%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.27	1.25	10.7	0.03	0.04	2.30	2.35	0.04	0.58	0.62	18.9	2,686	2,705	2.06	0.10	2,790
Mit.	3.26	0.95	10.6	0.02	0.02	2.30	2.32	0.02	0.58	0.60	18.9	2,345	2,364	2.03	0.10	2,448
% Reduced	1%	24%	1%	7%	58%	—	1%	60%	—	4%	—	13%	13%	1%	1%	12%

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.83	4.76	53.6	0.14	0.09	12.8	12.9	0.09	3.25	3.33	—	13,911	13,911	0.63	0.53	14,115
Area	10.9	0.14	14.6	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	39.0	39.0	< 0.005	< 0.005	39.1
Energy	0.10	1.63	0.69	0.01	0.13	—	0.13	0.13	—	0.13	—	2,692	2,692	0.30	0.02	2,705
Water	—	—	—	—	—	—	—	—	—	—	17.3	125	142	1.80	0.05	201
Waste	—	—	—	—	—	—	—	—	—	—	96.6	0.00	96.6	9.65	0.00	338
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.88
Total	18.8	6.52	68.9	0.15	0.23	12.8	13.0	0.22	3.25	3.47	114	16,767	16,881	12.4	0.59	17,401
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.70	5.23	50.9	0.13	0.09	12.8	12.9	0.09	3.25	3.33	—	13,296	13,296	0.67	0.56	13,481
Area	9.62	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.10	1.63	0.69	0.01	0.13	—	0.13	0.13	—	0.13	—	2,692	2,692	0.30	0.02	2,705
Water	—	—	—	—	—	—	—	—	—	—	17.3	125	142	1.80	0.05	201
Waste	—	—	—	—	—	—	—	—	—	—	96.6	0.00	96.6	9.65	0.00	338
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.88
Total	17.4	6.85	51.6	0.14	0.22	12.8	13.0	0.22	3.25	3.46	114	16,114	16,227	12.4	0.62	16,728
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.60	5.15	50.8	0.13	0.09	12.6	12.7	0.09	3.20	3.29	—	13,389	13,389	0.66	0.55	13,584
Area	10.2	0.07	7.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	19.2	19.2	< 0.005	< 0.005	19.3
Energy	0.10	1.63	0.69	0.01	0.13	—	0.13	0.13	—	0.13	—	2,692	2,692	0.30	0.02	2,705
Water	—	—	—	—	—	—	—	—	—	—	17.3	125	142	1.80	0.05	201
Waste	—	—	—	—	—	—	—	—	—	—	96.6	0.00	96.6	9.65	0.00	338

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.88
Total	17.9	6.84	58.7	0.14	0.23	12.6	12.9	0.22	3.20	3.42	114	16,226	16,339	12.4	0.62	16,850
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.39	0.94	9.27	0.02	0.02	2.30	2.32	0.02	0.58	0.60	—	2,217	2,217	0.11	0.09	2,249
Area	1.87	0.01	1.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.18	3.18	< 0.005	< 0.005	3.19
Energy	0.02	0.30	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	446	446	0.05	< 0.005	448
Water	—	—	—	—	—	—	—	—	—	—	2.86	20.7	23.6	0.30	0.01	33.2
Waste	—	—	—	—	—	—	—	—	—	—	16.0	0.00	16.0	1.60	0.00	55.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.48
Total	3.27	1.25	10.7	0.03	0.04	2.30	2.35	0.04	0.58	0.62	18.9	2,686	2,705	2.06	0.10	2,790

2.6. Operations Emissions by Sector, Mitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.83	4.76	53.6	0.14	0.09	12.8	12.9	0.09	3.25	3.33	—	13,911	13,911	0.63	0.53	14,115
Area	10.9	0.14	14.6	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	39.0	39.0	< 0.005	< 0.005	39.1
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	631	631	0.12	0.01	639
Water	—	—	—	—	—	—	—	—	—	—	17.3	125	142	1.80	0.05	201
Waste	—	—	—	—	—	—	—	—	—	—	96.6	0.00	96.6	9.65	0.00	338
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.88
Total	18.7	4.89	68.2	0.14	0.10	12.8	12.9	0.09	3.25	3.34	114	14,706	14,820	12.2	0.59	15,334
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.70	5.23	50.9	0.13	0.09	12.8	12.9	0.09	3.25	3.33	—	13,296	13,296	0.67	0.56	13,481
Area	9.62	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	631	631	0.12	0.01	639
Water	—	—	—	—	—	—	—	—	—	—	17.3	125	142	1.80	0.05	201
Waste	—	—	—	—	—	—	—	—	—	—	96.6	0.00	96.6	9.65	0.00	338
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.88
Total	17.3	5.23	50.9	0.13	0.09	12.8	12.9	0.09	3.25	3.33	114	14,053	14,166	12.2	0.62	14,661
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.60	5.15	50.8	0.13	0.09	12.6	12.7	0.09	3.20	3.29	—	13,389	13,389	0.66	0.55	13,584
Area	10.2	0.07	7.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	19.2	19.2	< 0.005	< 0.005	19.3
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	631	631	0.12	0.01	639
Water	—	—	—	—	—	—	—	—	—	—	17.3	125	142	1.80	0.05	201
Waste	—	—	—	—	—	—	—	—	—	—	96.6	0.00	96.6	9.65	0.00	338
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.88
Total	17.8	5.22	58.0	0.13	0.09	12.6	12.7	0.09	3.20	3.29	114	14,165	14,278	12.2	0.61	14,783
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.39	0.94	9.27	0.02	0.02	2.30	2.32	0.02	0.58	0.60	—	2,217	2,217	0.11	0.09	2,249
Area	1.87	0.01	1.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.18	3.18	< 0.005	< 0.005	3.19
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	104	104	0.02	< 0.005	106
Water	—	—	—	—	—	—	—	—	—	—	2.86	20.7	23.6	0.30	0.01	33.2
Waste	—	—	—	—	—	—	—	—	—	—	16.0	0.00	16.0	1.60	0.00	55.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.48
Total	3.26	0.95	10.6	0.02	0.02	2.30	2.32	0.02	0.58	0.60	18.9	2,345	2,364	2.03	0.10	2,448

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

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	17.3	18.2	0.03	0.79	—	0.79	0.71	—	0.71	—	3,427	3,427	0.14	0.03	3,439
Demolition	—	—	—	—	—	0.54	0.54	—	0.08	0.08	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.95	1.00	< 0.005	0.04	—	0.04	0.04	—	0.04	—	188	188	0.01	< 0.005	188
Demolition	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.17	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	31.2
Demolition	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.05	0.05	0.54	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	129	129	0.01	0.01	131
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.57	0.22	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	436	436	0.02	0.07	457
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.16	7.16	< 0.005	< 0.005	7.26
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.9	23.9	< 0.005	< 0.005	25.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.18	1.18	< 0.005	< 0.005	1.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.96	3.96	< 0.005	< 0.005	4.15

3.2. Demolition (2027) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	17.3	18.2	0.03	0.12	—	0.12	0.11	—	0.11	—	3,427	3,427	0.14	0.03	3,439
Demolition	—	—	—	—	—	0.54	0.54	—	0.08	0.08	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	0.95	1.00	< 0.005	0.01	—	0.01	0.01	—	0.01	—	188	188	0.01	< 0.005	188
Demolition	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.17	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	31.1	31.1	< 0.005	< 0.005	31.2
Demolition	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.54	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	129	129	0.01	0.01	131
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.57	0.22	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	436	436	0.02	0.07	457
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.16	7.16	< 0.005	< 0.005	7.26
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.9	23.9	< 0.005	< 0.005	25.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.18	1.18	< 0.005	< 0.005	1.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.96	3.96	< 0.005	< 0.005	4.15

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.90	24.0	28.3	0.05	0.94	—	0.94	0.84	—	0.84	—	5,298	5,298	0.21	0.04	5,316
Dust From Material Movement	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	2.63	3.10	0.01	0.10	—	0.10	0.09	—	0.09	—	581	581	0.02	< 0.005	583
Dust From Material Movement	—	—	—	—	—	2.15	2.15	—	1.11	1.11	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.48	0.57	< 0.005	0.02	—	0.02	0.02	—	0.02	—	96.1	96.1	< 0.005	< 0.005	96.5
Dust From Material Movement	—	—	—	—	—	0.39	0.39	—	0.20	0.20	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.63	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	151	151	0.01	0.01	153
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.7	16.7	< 0.005	< 0.005	16.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.76	2.76	< 0.005	< 0.005	2.80
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2027) - Mitigated

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

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

Off-Road Equipment	0.90	24.0	28.3	0.05	0.14	—	0.14	0.13	—	0.13	—	5,298	5,298	0.21	0.04	5,316
Dust From Material Movement	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	2.63	3.10	0.01	0.02	—	0.02	0.01	—	0.01	—	581	581	0.02	< 0.005	583
Dust From Material Movement	—	—	—	—	—	2.15	2.15	—	1.11	1.11	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.48	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	96.1	96.1	< 0.005	< 0.005	96.5
Dust From Material Movement	—	—	—	—	—	0.39	0.39	—	0.20	0.20	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.63	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	151	151	0.01	0.01	153
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.7	16.7	< 0.005	< 0.005	16.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.76	2.76	< 0.005	< 0.005	2.80
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.61	39.5	139	0.20	1.60	—	1.60	1.47	—	1.47	—	22,509	22,509	0.86	0.19	22,588
Dust From Material Movement	—	—	—	—	—	9.21	9.21	—	3.65	3.65	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.61	39.5	139	0.20	1.60	—	1.60	1.47	—	1.47	—	22,509	22,509	0.86	0.19	22,588

Dust From Material Movement	—	—	—	—	—	9.21	9.21	—	3.65	3.65	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.29	19.5	68.6	0.10	0.79	—	0.79	0.72	—	0.72	—	11,100	11,100	0.42	0.10	11,139
Dust From Material Movement	—	—	—	—	—	4.54	4.54	—	1.80	1.80	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	3.55	12.5	0.02	0.14	—	0.14	0.13	—	0.13	—	1,838	1,838	0.07	0.02	1,844
Dust From Material Movement	—	—	—	—	—	0.83	0.83	—	0.33	0.33	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.06	1.02	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	228	228	0.01	0.01	232
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.42	0.16	< 0.005	0.01	0.09	0.10	< 0.005	0.02	0.03	—	334	334	0.02	0.05	351
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.09	0.08	0.90	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	216	216	0.01	0.01	219
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.44	0.17	< 0.005	0.01	0.09	0.10	< 0.005	0.02	0.03	—	334	334	0.02	0.05	350
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.45	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	107	107	0.01	< 0.005	109
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.22	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	165	165	0.01	0.03	173
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.8	17.8	< 0.005	< 0.005	18.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	27.3	27.3	< 0.005	< 0.005	28.6

3.6. Grading (2027) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.61	39.5	139	0.20	0.24	—	0.24	0.22	—	0.22	—	22,509	22,509	0.86	0.19	22,588
Dust From Material Movement	—	—	—	—	—	9.21	9.21	—	3.65	3.65	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	2.61	39.5	139	0.20	0.24	—	0.24	0.22	—	0.22	—	22,509	22,509	0.86	0.19	22,588
Dust From Material Movement	—	—	—	—	—	9.21	9.21	—	3.65	3.65	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.29	19.5	68.6	0.10	0.12	—	0.12	0.11	—	0.11	—	11,100	11,100	0.42	0.10	11,139
Dust From Material Movement	—	—	—	—	—	4.54	4.54	—	1.80	1.80	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	3.55	12.5	0.02	0.02	—	0.02	0.02	—	0.02	—	1,838	1,838	0.07	0.02	1,844
Dust From Material Movement	—	—	—	—	—	0.83	0.83	—	0.33	0.33	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.06	1.02	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	228	228	0.01	0.01	232
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.42	0.16	< 0.005	0.01	0.09	0.10	< 0.005	0.02	0.03	—	334	334	0.02	0.05	351

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.90	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	216	216	0.01	0.01	219
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.44	0.17	< 0.005	0.01	0.09	0.10	< 0.005	0.02	0.03	—	334	334	0.02	0.05	350
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.45	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	107	107	0.01	< 0.005	109
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.22	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	165	165	0.01	0.03	173
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.8	17.8	< 0.005	< 0.005	18.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	27.3	27.3	< 0.005	< 0.005	28.6

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	10.6	13.5	0.02	0.42	—	0.42	0.38	—	0.38	—	2,190	2,190	0.09	0.02	2,197
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.60	0.77	< 0.005	0.02	—	0.02	0.02	—	0.02	—	124	124	0.01	< 0.005	125
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.11	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.6	20.6	< 0.005	< 0.005	20.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.41	4.78	0.00	0.00	1.12	1.12	0.00	0.26	0.26	—	1,146	1,146	0.06	0.05	1,162
Vendor	0.02	0.86	0.40	< 0.005	0.01	0.18	0.19	0.01	0.05	0.06	—	661	661	0.03	0.09	689
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.27	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	65.6	65.6	< 0.005	< 0.005	66.6
Vendor	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	37.5	37.5	< 0.005	0.01	39.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	11.0
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.21	6.21	< 0.005	< 0.005	6.48
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2027) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	10.6	13.5	0.02	0.06	—	0.06	0.06	—	0.06	—	2,190	2,190	0.09	0.02	2,197
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.60	0.77	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	124	124	0.01	< 0.005	125
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.11	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.6	20.6	< 0.005	< 0.005	20.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.41	4.78	0.00	0.00	1.12	1.12	0.00	0.26	0.26	—	1,146	1,146	0.06	0.05	1,162
Vendor	0.02	0.86	0.40	< 0.005	0.01	0.18	0.19	0.01	0.05	0.06	—	661	661	0.03	0.09	689
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.27	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	65.6	65.6	< 0.005	< 0.005	66.6
Vendor	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	37.5	37.5	< 0.005	0.01	39.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	11.0
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.21	6.21	< 0.005	< 0.005	6.48
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	10.6	13.5	0.02	0.42	—	0.42	0.38	—	0.38	—	2,190	2,190	0.09	0.02	2,197
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	10.6	13.5	0.02	0.42	—	0.42	0.38	—	0.38	—	2,190	2,190	0.09	0.02	2,197
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	7.61	9.66	0.01	0.30	—	0.30	0.27	—	0.27	—	1,569	1,569	0.06	0.01	1,574

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.39	1.76	< 0.005	0.06	—	0.06	0.05	—	0.05	—	260	260	0.01	< 0.005	261
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.45	0.32	5.15	0.00	0.00	1.12	1.12	0.00	0.26	0.26	—	1,192	1,192	0.02	0.04	1,209
Vendor	0.02	0.79	0.38	< 0.005	0.01	0.18	0.19	0.01	0.05	0.06	—	644	644	0.02	0.09	673
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.45	0.37	4.51	0.00	0.00	1.12	1.12	0.00	0.26	0.26	—	1,126	1,126	0.02	0.04	1,140
Vendor	0.02	0.82	0.39	< 0.005	0.01	0.18	0.19	0.01	0.05	0.06	—	644	644	0.02	0.09	673
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.26	3.27	0.00	0.00	0.79	0.79	0.00	0.19	0.19	—	814	814	0.02	0.03	825
Vendor	0.02	0.58	0.27	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	461	461	0.02	0.07	482
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.60	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	135	135	< 0.005	0.01	137
Vendor	< 0.005	0.11	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	76.4	76.4	< 0.005	0.01	79.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2028) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	10.6	13.5	0.02	0.06	—	0.06	0.06	—	0.06	—	2,190	2,190	0.09	0.02	2,197
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	10.6	13.5	0.02	0.06	—	0.06	0.06	—	0.06	—	2,190	2,190	0.09	0.02	2,197
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	7.61	9.66	0.01	0.05	—	0.05	0.04	—	0.04	—	1,569	1,569	0.06	0.01	1,574
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.39	1.76	< 0.005	0.01	—	0.01	0.01	—	0.01	—	260	260	0.01	< 0.005	261
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.45	0.32	5.15	0.00	0.00	1.12	1.12	0.00	0.26	0.26	—	1,192	1,192	0.02	0.04	1,209
Vendor	0.02	0.79	0.38	< 0.005	0.01	0.18	0.19	0.01	0.05	0.06	—	644	644	0.02	0.09	673

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.45	0.37	4.51	0.00	0.00	1.12	1.12	0.00	0.26	0.26	—	1,126	1,126	0.02	0.04	1,140
Vendor	0.02	0.82	0.39	< 0.005	0.01	0.18	0.19	0.01	0.05	0.06	—	644	644	0.02	0.09	673
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.26	3.27	0.00	0.00	0.79	0.79	0.00	0.19	0.19	—	814	814	0.02	0.03	825
Vendor	0.02	0.58	0.27	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	461	461	0.02	0.07	482
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.60	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	135	135	< 0.005	0.01	137
Vendor	< 0.005	0.11	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	76.4	76.4	< 0.005	0.01	79.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2029) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	10.6	13.5	0.02	0.42	—	0.42	0.38	—	0.38	—	2,189	2,189	0.09	0.02	2,197
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.37	10.6	13.5	0.02	0.42	—	0.42	0.38	—	0.38	—	2,189	2,189	0.09	0.02	2,197
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	7.59	9.63	0.01	0.30	—	0.30	0.27	—	0.27	—	1,564	1,564	0.06	0.01	1,569
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.39	1.76	< 0.005	0.05	—	0.05	0.05	—	0.05	—	259	259	0.01	< 0.005	260
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.44	0.29	4.86	0.00	0.00	1.12	1.12	0.00	0.26	0.26	—	1,172	1,172	0.02	0.04	1,189
Vendor	0.02	0.75	0.37	< 0.005	0.01	0.18	0.19	< 0.005	0.05	0.05	—	626	626	0.02	0.09	654
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.33	4.24	0.00	0.00	1.12	1.12	0.00	0.26	0.26	—	1,107	1,107	0.02	0.04	1,121
Vendor	0.02	0.78	0.37	< 0.005	0.01	0.18	0.19	< 0.005	0.05	0.05	—	626	626	0.02	0.09	653
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.30	0.23	3.07	0.00	0.00	0.79	0.79	0.00	0.19	0.19	—	798	798	0.01	0.03	808
Vendor	0.02	0.56	0.27	< 0.005	0.01	0.12	0.13	< 0.005	0.03	0.04	—	447	447	0.02	0.06	466
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.04	0.56	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	132	132	< 0.005	0.01	134
Vendor	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	74.0	74.0	< 0.005	0.01	77.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.12. Building Construction (2029) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	10.6	13.5	0.02	0.06	—	0.06	0.06	—	0.06	—	2,189	2,189	0.09	0.02	2,197
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	10.6	13.5	0.02	0.06	—	0.06	0.06	—	0.06	—	2,189	2,189	0.09	0.02	2,197
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	7.59	9.63	0.01	0.05	—	0.05	0.04	—	0.04	—	1,564	1,564	0.06	0.01	1,569
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.39	1.76	< 0.005	0.01	—	0.01	0.01	—	0.01	—	259	259	0.01	< 0.005	260

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.44	0.29	4.86	0.00	0.00	1.12	1.12	0.00	0.26	0.26	—	1,172	1,172	0.02	0.04	1,189
Vendor	0.02	0.75	0.37	< 0.005	0.01	0.18	0.19	< 0.005	0.05	0.05	—	626	626	0.02	0.09	654
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.33	4.24	0.00	0.00	1.12	1.12	0.00	0.26	0.26	—	1,107	1,107	0.02	0.04	1,121
Vendor	0.02	0.78	0.37	< 0.005	0.01	0.18	0.19	< 0.005	0.05	0.05	—	626	626	0.02	0.09	653
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.30	0.23	3.07	0.00	0.00	0.79	0.79	0.00	0.19	0.19	—	798	798	0.01	0.03	808
Vendor	0.02	0.56	0.27	< 0.005	0.01	0.12	0.13	< 0.005	0.03	0.04	—	447	447	0.02	0.06	466
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.04	0.56	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	132	132	< 0.005	0.01	134
Vendor	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	74.0	74.0	< 0.005	0.01	77.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.13. Paving (2029) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.62	10.6	0.01	0.39	—	0.39	0.36	—	0.36	—	1,511	1,511	0.06	0.01	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.02	1.25	< 0.005	0.05	—	0.05	0.04	—	0.04	—	178	178	0.01	< 0.005	179
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.19	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	29.5	29.5	< 0.005	< 0.005	29.6
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.48	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	125	125	< 0.005	< 0.005	127
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.9	14.9	< 0.005	< 0.005	15.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.46	2.46	< 0.005	< 0.005	2.49
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.14. Paving (2029) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.62	10.6	0.01	0.06	—	0.06	0.05	—	0.05	—	1,511	1,511	0.06	0.01	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.02	1.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	178	178	0.01	< 0.005	179
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.19	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	29.5	29.5	< 0.005	< 0.005	29.6
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.48	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	125	125	< 0.005	< 0.005	127
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.9	14.9	< 0.005	< 0.005	15.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.46	2.46	< 0.005	< 0.005	2.49
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2029) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Architect ural Coatings	23.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Architect ural Coatings	23.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Architect ural Coatings	7.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Architect ural Coatings	1.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.06	0.97	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	234	234	< 0.005	0.01	238
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.07	0.85	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	221	221	< 0.005	0.01	224
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.26	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	66.7	66.7	< 0.005	< 0.005	67.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.0	11.0	< 0.005	< 0.005	11.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.16. Architectural Coating (2029) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	0.00	NaN	—	NaN	NaN	—	NaN	—	0.00	0.00	0.00	0.00	0.00
Architect ural Coatings	23.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	0.00	NaN	—	NaN	NaN	—	NaN	—	0.00	0.00	0.00	0.00	0.00
Architect ural Coatings	23.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	0.00	NaN	—	NaN	NaN	—	NaN	—	0.00	0.00	0.00	0.00	0.00
Architect ural Coatings	7.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	0.00	NaN	—	NaN	NaN	—	NaN	—	0.00	0.00	0.00	0.00	0.00
Architect ural Coatings	1.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.06	0.97	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	234	234	< 0.005	0.01	238
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.07	0.85	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	221	221	< 0.005	0.01	224
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.26	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	66.7	66.7	< 0.005	< 0.005	67.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.0	11.0	< 0.005	< 0.005	11.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	4.74	2.88	32.4	0.08	0.06	7.73	7.79	0.05	1.96	2.01	—	8,407	8,407	0.38	0.32	8,531
City Park	0.16	0.10	1.16	< 0.005	< 0.005	0.28	0.29	< 0.005	0.07	0.07	—	308	308	0.01	0.01	313
Condo/Townhouse	2.93	1.78	20.0	0.05	0.03	4.78	4.81	0.03	1.21	1.24	—	5,195	5,195	0.24	0.20	5,271
Total	7.83	4.76	53.6	0.14	0.09	12.8	12.9	0.09	3.25	3.33	—	13,911	13,911	0.63	0.53	14,115
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	4.67	3.16	30.8	0.08	0.06	7.73	7.79	0.05	1.96	2.01	—	8,036	8,036	0.41	0.34	8,148
City Park	0.16	0.11	1.09	< 0.005	< 0.005	0.28	0.29	< 0.005	0.07	0.07	—	295	295	0.01	0.01	299
Condo/Townhouse	2.88	1.95	19.0	0.05	0.03	4.78	4.81	0.03	1.21	1.24	—	4,966	4,966	0.25	0.21	5,035
Total	7.70	5.23	50.9	0.13	0.09	12.8	12.9	0.09	3.25	3.33	—	13,296	13,296	0.67	0.56	13,481
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.84	0.57	5.60	0.01	0.01	1.39	1.40	0.01	0.35	0.36	—	1,340	1,340	0.07	0.06	1,359
City Park	0.03	0.02	0.20	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	49.1	49.1	< 0.005	< 0.005	49.8
Condo/Townhouse	0.52	0.35	3.46	0.01	0.01	0.86	0.87	0.01	0.22	0.22	—	828	828	0.04	0.03	840
Total	1.39	0.94	9.27	0.02	0.02	2.30	2.32	0.02	0.58	0.60	—	2,217	2,217	0.11	0.09	2,249

4.1.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
----------	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	4.74	2.88	32.4	0.08	0.06	7.73	7.79	0.05	1.96	2.01	—	8,407	8,407	0.38	0.32	8,531
City Park	0.16	0.10	1.16	< 0.005	< 0.005	0.28	0.29	< 0.005	0.07	0.07	—	308	308	0.01	0.01	313
Condo/Townhouse	2.93	1.78	20.0	0.05	0.03	4.78	4.81	0.03	1.21	1.24	—	5,195	5,195	0.24	0.20	5,271
Total	7.83	4.76	53.6	0.14	0.09	12.8	12.9	0.09	3.25	3.33	—	13,911	13,911	0.63	0.53	14,115
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	4.67	3.16	30.8	0.08	0.06	7.73	7.79	0.05	1.96	2.01	—	8,036	8,036	0.41	0.34	8,148
City Park	0.16	0.11	1.09	< 0.005	< 0.005	0.28	0.29	< 0.005	0.07	0.07	—	295	295	0.01	0.01	299
Condo/Townhouse	2.88	1.95	19.0	0.05	0.03	4.78	4.81	0.03	1.21	1.24	—	4,966	4,966	0.25	0.21	5,035
Total	7.70	5.23	50.9	0.13	0.09	12.8	12.9	0.09	3.25	3.33	—	13,296	13,296	0.67	0.56	13,481
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.84	0.57	5.60	0.01	0.01	1.39	1.40	0.01	0.35	0.36	—	1,340	1,340	0.07	0.06	1,359
City Park	0.03	0.02	0.20	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	49.1	49.1	< 0.005	< 0.005	49.8
Condo/Townhouse	0.52	0.35	3.46	0.01	0.01	0.86	0.87	0.01	0.22	0.22	—	828	828	0.04	0.03	840
Total	1.39	0.94	9.27	0.02	0.02	2.30	2.32	0.02	0.58	0.60	—	2,217	2,217	0.11	0.09	2,249

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	414	414	0.08	0.01	419
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	215	215	0.04	0.01	217
Total	—	—	—	—	—	—	—	—	—	—	—	629	629	0.12	0.01	636
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	414	414	0.08	0.01	419
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	215	215	0.04	0.01	217
Total	—	—	—	—	—	—	—	—	—	—	—	629	629	0.12	0.01	636
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	68.5	68.5	0.01	< 0.005	69.3
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	35.6	35.6	0.01	< 0.005	36.0
Total	—	—	—	—	—	—	—	—	—	—	—	104	104	0.02	< 0.005	105

4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
----------	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	415	415	0.08	0.01	420
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	216	216	0.04	0.01	218
Total	—	—	—	—	—	—	—	—	—	—	—	631	631	0.12	0.01	639
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	415	415	0.08	0.01	420
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	216	216	0.04	0.01	218
Total	—	—	—	—	—	—	—	—	—	—	—	631	631	0.12	0.01	639
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	68.8	68.8	0.01	< 0.005	69.6
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	35.7	35.7	0.01	< 0.005	36.2
Total	—	—	—	—	—	—	—	—	—	—	—	104	104	0.02	< 0.005	106

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
----------	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.06	1.04	0.44	0.01	0.08	—	0.08	0.08	—	0.08	—	1,325	1,325	0.12	< 0.005	1,329
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Condo/Townhouse	0.03	0.58	0.25	< 0.005	0.05	—	0.05	0.05	—	0.05	—	738	738	0.07	< 0.005	740
Total	0.10	1.63	0.69	0.01	0.13	—	0.13	0.13	—	0.13	—	2,063	2,063	0.18	< 0.005	2,069
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.06	1.04	0.44	0.01	0.08	—	0.08	0.08	—	0.08	—	1,325	1,325	0.12	< 0.005	1,329
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Condo/Townhouse	0.03	0.58	0.25	< 0.005	0.05	—	0.05	0.05	—	0.05	—	738	738	0.07	< 0.005	740
Total	0.10	1.63	0.69	0.01	0.13	—	0.13	0.13	—	0.13	—	2,063	2,063	0.18	< 0.005	2,069
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.01	0.19	0.08	< 0.005	0.02	—	0.02	0.02	—	0.02	—	219	219	0.02	< 0.005	220
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Condo/Townhouse	0.01	0.11	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	—	122	122	0.01	< 0.005	123
Total	0.02	0.30	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	342	342	0.03	< 0.005	343

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
----------	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	8.92	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.26	0.14	14.6	< 0.005	0.01	—	0.01	0.01	—	0.01	—	39.0	39.0	< 0.005	< 0.005	39.1
Total	10.9	0.14	14.6	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	39.0	39.0	< 0.005	< 0.005	39.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	8.92	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	9.62	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	1.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscap Equipment	0.11	0.01	1.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.18	3.18	< 0.005	< 0.005	3.19
Total	1.87	0.01	1.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.18	3.18	< 0.005	< 0.005	3.19

4.3.2. Mitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	8.92	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscap e Equipme nt	1.26	0.14	14.6	< 0.005	0.01	—	0.01	0.01	—	0.01	—	39.0	39.0	< 0.005	< 0.005	39.1
Total	10.9	0.14	14.6	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	39.0	39.0	< 0.005	< 0.005	39.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	8.92	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architect ural Coatings	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	9.62	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	1.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.11	0.01	1.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.18	3.18	< 0.005	< 0.005	3.19
Total	1.87	0.01	1.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.18	3.18	< 0.005	< 0.005	3.19

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	9.76	92.6	102	1.02	0.03	136
City Park	—	—	—	—	—	—	—	—	—	—	0.00	16.4	16.4	< 0.005	< 0.005	16.6
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	7.54	16.1	23.6	0.78	0.02	48.6
Total	—	—	—	—	—	—	—	—	—	—	17.3	125	142	1.80	0.05	201
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	9.76	92.6	102	1.02	0.03	136

City Park	—	—	—	—	—	—	—	—	—	—	0.00	16.4	16.4	< 0.005	< 0.005	16.6
Condo/To wnhouse	—	—	—	—	—	—	—	—	—	—	7.54	16.1	23.6	0.78	0.02	48.6
Total	—	—	—	—	—	—	—	—	—	—	17.3	125	142	1.80	0.05	201
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	1.62	15.3	17.0	0.17	< 0.005	22.5
City Park	—	—	—	—	—	—	—	—	—	—	0.00	2.71	2.71	< 0.005	< 0.005	2.74
Condo/To wnhouse	—	—	—	—	—	—	—	—	—	—	1.25	2.66	3.91	0.13	< 0.005	8.04
Total	—	—	—	—	—	—	—	—	—	—	2.86	20.7	23.6	0.30	0.01	33.2

4.4.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	9.76	92.6	102	1.02	0.03	136
City Park	—	—	—	—	—	—	—	—	—	—	0.00	16.4	16.4	< 0.005	< 0.005	16.6
Condo/To wnhouse	—	—	—	—	—	—	—	—	—	—	7.54	16.1	23.6	0.78	0.02	48.6
Total	—	—	—	—	—	—	—	—	—	—	17.3	125	142	1.80	0.05	201
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	9.76	92.6	102	1.02	0.03	136
City Park	—	—	—	—	—	—	—	—	—	—	0.00	16.4	16.4	< 0.005	< 0.005	16.6

Condo/To	—	—	—	—	—	—	—	—	—	—	7.54	16.1	23.6	0.78	0.02	48.6
Total	—	—	—	—	—	—	—	—	—	—	17.3	125	142	1.80	0.05	201
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	1.62	15.3	17.0	0.17	< 0.005	22.5
City Park	—	—	—	—	—	—	—	—	—	—	0.00	2.71	2.71	< 0.005	< 0.005	2.74
Condo/To wnhouse	—	—	—	—	—	—	—	—	—	—	1.25	2.66	3.91	0.13	< 0.005	8.04
Total	—	—	—	—	—	—	—	—	—	—	2.86	20.7	23.6	0.30	0.01	33.2

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	51.7	0.00	51.7	5.17	0.00	181
City Park	—	—	—	—	—	—	—	—	—	—	0.28	0.00	0.28	0.03	0.00	0.97
Condo/To wnhouse	—	—	—	—	—	—	—	—	—	—	44.6	0.00	44.6	4.45	0.00	156
Total	—	—	—	—	—	—	—	—	—	—	96.6	0.00	96.6	9.65	0.00	338
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	51.7	0.00	51.7	5.17	0.00	181
City Park	—	—	—	—	—	—	—	—	—	—	0.28	0.00	0.28	0.03	0.00	0.97

Condo/To	—	—	—	—	—	—	—	—	—	—	44.6	0.00	44.6	4.45	0.00	156
Total	—	—	—	—	—	—	—	—	—	—	96.6	0.00	96.6	9.65	0.00	338
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	8.57	0.00	8.57	0.86	0.00	30.0
City Park	—	—	—	—	—	—	—	—	—	—	0.05	0.00	0.05	< 0.005	0.00	0.16
Condo/To wnhouse	—	—	—	—	—	—	—	—	—	—	7.38	0.00	7.38	0.74	0.00	25.8
Total	—	—	—	—	—	—	—	—	—	—	16.0	0.00	16.0	1.60	0.00	55.9

4.5.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	51.7	0.00	51.7	5.17	0.00	181
City Park	—	—	—	—	—	—	—	—	—	—	0.28	0.00	0.28	0.03	0.00	0.97
Condo/To wnhouse	—	—	—	—	—	—	—	—	—	—	44.6	0.00	44.6	4.45	0.00	156
Total	—	—	—	—	—	—	—	—	—	—	96.6	0.00	96.6	9.65	0.00	338
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	51.7	0.00	51.7	5.17	0.00	181
City Park	—	—	—	—	—	—	—	—	—	—	0.28	0.00	0.28	0.03	0.00	0.97
Condo/To wnhouse	—	—	—	—	—	—	—	—	—	—	44.6	0.00	44.6	4.45	0.00	156

Total	—	—	—	—	—	—	—	—	—	—	96.6	0.00	96.6	9.65	0.00	338
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	8.57	0.00	8.57	0.86	0.00	30.0
City Park	—	—	—	—	—	—	—	—	—	—	0.05	0.00	0.05	< 0.005	0.00	0.16
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	7.38	0.00	7.38	0.74	0.00	25.8
Total	—	—	—	—	—	—	—	—	—	—	16.0	0.00	16.0	1.60	0.00	55.9

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.03
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.85
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.88
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.03
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00

Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.85
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.88
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.34
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.14
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.48

4.6.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.03
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.85
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.88
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.03
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00

Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.85
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.88
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.34
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.14
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.48

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

4.7.2. Mitigated

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

Equipme Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	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)

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

4.8.2. Mitigated

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

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

4.9.2. Mitigated

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

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

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	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	1/1/2027	1/28/2027	5.00	20.0	—
Site Preparation	Site Preparation	1/29/2027	3/25/2027	5.00	40.0	—
Grading	Grading	3/26/2027	12/2/2027	5.00	180	—
Building Construction	Building Construction	12/3/2027	12/31/2029	5.00	542	—

Paving	Paving	11/1/2029	12/31/2029	5.00	43.0	—
Architectural Coating	Architectural Coating	8/1/2029	12/31/2029	5.00	109	—

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	Tier 3	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Tier 3	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Tier 3	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Tier 3	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Tier 3	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 3	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Tier 3	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 3	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Tier 3	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Back hoes	Diesel	Tier 3	2.00	8.00	84.0	0.37
Grading	Bore/Drill Rigs	Diesel	Tier 3	1.00	8.00	83.0	0.50
Grading	Crushing/Proc. Equipment	Diesel	Average	1.00	8.00	310	5.00
Building Construction	Cranes	Diesel	Tier 3	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 3	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Tier 3	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Back hoes	Diesel	Tier 3	3.00	7.00	84.0	0.37
Building Construction	Welders	Electric	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Tier 3	2.00	8.00	81.0	0.42

Paving	Paving Equipment	Diesel	Tier 3	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 3	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Electric	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Tier 3	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Tier 3	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Tier 3	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Tier 3	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Tier 3	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 3	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Tier 3	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 3	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Tier 3	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Back hoes	Diesel	Tier 3	2.00	8.00	84.0	0.37
Grading	Bore/Drill Rigs	Diesel	Tier 3	1.00	8.00	83.0	0.50
Grading	Crushing/Proc. Equipment	Diesel	Average	1.00	8.00	310	5.00
Building Construction	Cranes	Diesel	Tier 3	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 3	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Tier 3	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Back hoes	Diesel	Tier 3	3.00	7.00	84.0	0.37
Building Construction	Welders	Electric	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Tier 3	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 3	2.00	8.00	89.0	0.36

Paving	Rollers	Diesel	Tier 3	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Electric	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	12.0	LDA,LDT1,LDT2
Demolition	Vendor	—	7.63	HHDT,MHDT
Demolition	Hauling	6.35	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	12.0	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.63	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	25.0	12.0	LDA,LDT1,LDT2
Grading	Vendor	—	7.63	HHDT,MHDT
Grading	Hauling	4.86	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	133	12.0	LDA,LDT1,LDT2
Building Construction	Vendor	27.5	7.63	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—

Paving	Worker	15.0	12.0	LDA,LDT1,LDT2
Paving	Vendor	—	7.63	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	26.6	12.0	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.63	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	12.0	LDA,LDT1,LDT2
Demolition	Vendor	—	7.63	HHDT,MHDT
Demolition	Hauling	6.35	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	12.0	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.63	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	25.0	12.0	LDA,LDT1,LDT2
Grading	Vendor	—	7.63	HHDT,MHDT
Grading	Hauling	4.86	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—

Building Construction	Worker	133	12.0	LDA,LDT1,LDT2
Building Construction	Vendor	27.5	7.63	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	12.0	LDA,LDT1,LDT2
Paving	Vendor	—	7.63	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	26.6	12.0	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.63	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

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	812,977	270,992	15,000	5,000	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	11,000	—
Site Preparation	—	—	60.0	0.00	—
Grading	—	7,000	540	0.00	—
Paving	0.00	0.00	0.00	0.00	1.60

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	1.60	0%
City Park	0.00	0%
Condo/Townhouse	—	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	123	589	0.03	< 0.005
2028	123	589	0.03	< 0.005
2029	203	589	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	1,450	1,450	1,450	529,250	10,952	10,952	10,952	3,997,387

City Park	47.0	47.0	47.0	17,170	403	403	403	147,130
Condo/Townhouse	896	896	896	327,040	6,767	6,767	6,767	2,470,109

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VM/Weekday	VM/Saturday	VM/Sunday	VM/Year
Single Family Housing	1,450	1,450	1,450	529,250	10,952	10,952	10,952	3,997,387
City Park	47.0	47.0	47.0	17,170	403	403	403	147,130
Condo/Townhouse	896	896	896	327,040	6,767	6,767	6,767	2,470,109

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	145
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Condo/Townhouse	—
Wood Fireplaces	0
Gas Fireplaces	0

Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	112
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	145
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Condo/Townhouse	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	112
Conventional Wood Stoves	0
Catalytic Wood Stoves	0

Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	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)
812976.75	270,992	15,000	5,000	—

5.10.3. Landscape Equipment

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

5.10.4. Landscape Equipment - Mitigated

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBtu/yr)
Single Family Housing	890,485	170	0.0330	0.0040	4,134,955
City Park	0.00	170	0.0330	0.0040	0.00
Condo/Townhouse	462,488	170	0.0330	0.0040	2,303,250

5.11.2. Mitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	893,711	170	0.0330	0.0040	0.00
City Park	0.00	170	0.0330	0.0040	0.00
Condo/Townhouse	464,329	170	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	5,094,296	31,020,769
City Park	0.00	6,641,851
Condo/Townhouse	3,934,904	1,461,207

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	5,094,296	31,020,769
City Park	0.00	6,641,851
Condo/Townhouse	3,934,904	1,461,207

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	96.0	—
City Park	0.52	—

Condo/Townhouse	82.7	—
-----------------	------	---

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	96.0	—
City Park	0.52	—
Condo/Townhouse	82.7	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Condo/Townhouse	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Condo/Townhouse	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.15.2. Mitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type
----------------	-----------

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
--------------------------	----------------------	---------------	-------------

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
--------------------------	----------------------	---------------	-------------

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
--------------------	---------------	-------------

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres
--------------------	---------------	-------------

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

5.18.2.2. Mitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	14.7	annual days of extreme heat
Extreme Precipitation	5.15	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	10.5	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about $\frac{3}{4}$ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A

Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	42.6
AQ-PM	19.7
AQ-DPM	26.7
Drinking Water	24.2
Lead Risk Housing	16.8
Pesticides	66.9
Toxic Releases	19.2
Traffic	17.5
Effect Indicators	—
CleanUp Sites	33.9
Groundwater	0.00
Haz Waste Facilities/Generators	52.6
Impaired Water Bodies	43.8
Solid Waste	67.6
Sensitive Population	—
Asthma	7.78
Cardio-vascular	21.9
Low Birth Weights	57.6
Socioeconomic Factor Indicators	—
Education	40.1
Housing	18.9
Linguistic	33.9
Poverty	9.27
Unemployment	53.9

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	69.66508405
Employed	40.65186706
Median HI	76.83818812
Education	—
Bachelor's or higher	68.16373669
High school enrollment	20.74939048
Preschool enrollment	62.73578853
Transportation	—
Auto Access	98.98626973
Active commuting	32.86282561
Social	—
2-parent households	70.47350186
Voting	76.18375465
Neighborhood	—
Alcohol availability	91.91582189
Park access	53.67637624
Retail density	14.83382523
Supermarket access	17.56704735
Tree canopy	19.82548441
Housing	—
Homeownership	87.93789298
Housing habitability	80.5338124
Low-inc homeowner severe housing cost burden	50.00641601
Low-inc renter severe housing cost burden	61.01629668

Uncrowded housing	70.21686129
Health Outcomes	—
Insured adults	70.06287694
Arthritis	81.7
Asthma ER Admissions	90.9
High Blood Pressure	90.4
Cancer (excluding skin)	63.4
Asthma	69.3
Coronary Heart Disease	87.2
Chronic Obstructive Pulmonary Disease	76.7
Diagnosed Diabetes	79.4
Life Expectancy at Birth	85.3
Cognitively Disabled	78.9
Physically Disabled	94.1
Heart Attack ER Admissions	88.4
Mental Health Not Good	61.1
Chronic Kidney Disease	85.5
Obesity	71.5
Pedestrian Injuries	42.0
Physical Health Not Good	74.9
Stroke	88.3
Health Risk Behaviors	—
Binge Drinking	16.3
Current Smoker	61.3
No Leisure Time for Physical Activity	65.6
Climate Change Exposures	—
Wildfire Risk	53.8
SLR Inundation Area	0.0

Children	14.1
Elderly	76.6
English Speaking	35.0
Foreign-born	48.4
Outdoor Workers	72.6
Climate Change Adaptive Capacity	—
Impervious Surface Cover	74.4
Traffic Density	32.8
Traffic Access	23.0
Other Indices	—
Hardship	40.9
Other Decision Support	—
2016 Voting	79.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	19.0
Healthy Places Index Score for Project Location (b)	71.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Per PD
Construction: Construction Phases	Constrcution Schedule
Operations: Vehicle Data	Updated to reflect PD
Operations: Hearths	No Hearth options will be installed
Construction: Off-Road Equipment	CE - T3 Design Feature
Construction: Off-Road Equipment EF	Updated Crusher to mach proposed equipment

ATTACHMENT B

AERSCREEN for PM₁₀ Exhaust

AERSCREEN 21112 / AERMOD 22112

07/18/25
05:25:44

TITLE: OAK CREST SAN MARCOS

***** AREA PARAMETERS *****

SOURCE EMISSION RATE: 0.379E-03 g/s 0.301E-02 lb/hr

AREA EMISSION RATE: 0.684E-09 g/(s-m2) 0.543E-08 lb/(hr-m2)

AREA HEIGHT: 3.00 meters 9.84 feet

AREA SOURCE LONG SIDE: 744.59 meters 2442.88 feet

AREA SOURCE SHORT SIDE: 744.59 meters 2442.88 feet

INITIAL VERTICAL DIMENSION: 1.00 meters 3.28 feet

RURAL OR URBAN: URBAN

POPULATION: 79000

FLAGPOLE RECEPTOR HEIGHT: 1.50 meters 4.92 feet

INITIAL PROBE DISTANCE = 5000. meters 16404. feet

***** BUILDING DOWNWASH PARAMETERS *****

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

***** FLOW SECTOR ANALYSIS *****

25 meter receptor spacing: 1. meters - 5000. meters

MAXIMUM IMPACT RECEPTOR

Zo	SURFACE	1-HR CONC	RADIAL	DIST	TEMPORAL
SECTOR	ROUGHNESS	(ug/m3)	(deg)	(m)	PERIOD
1*	1.000	0.4677E-01	45	525.0	WIN

* = worst case diagonal

***** MAKEMET METEOROLOGY PARAMETERS *****

MIN/MAX TEMPERATURE: 250.0 / 310.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban

DOMINANT CLIMATE TYPE: Average Moisture

DOMINANT SEASON: Winter

ALBEDO: 0.35

BOWEN RATIO: 1.50

ROUGHNESS LENGTH: 1.000 (meters)

SURFACE FRICTION VELOCITY (U*) NOT ADJUSTED

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR MO DY JDY HR

10 01 10 10 01

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50		

HT	REF	TA	HT
10.0	310.0	2.0	

***** AERSCREEN AUTOMATED DISTANCES *****
OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
1.00	0.3451E-01	2524.99	0.6427E-02
25.00	0.3474E-01	2550.00	0.6359E-02
50.01	0.3540E-01	2575.00	0.6293E-02
75.00	0.3651E-01	2600.00	0.6227E-02
100.00	0.3812E-01	2625.01	0.6163E-02
125.00	0.3874E-01	2650.00	0.6101E-02
150.01	0.3934E-01	2675.00	0.6040E-02
175.00	0.3982E-01	2700.00	0.5978E-02
200.00	0.3946E-01	2725.01	0.5918E-02
225.00	0.3997E-01	2749.99	0.5859E-02
250.00	0.4055E-01	2775.00	0.5801E-02
274.99	0.4107E-01	2800.00	0.5744E-02
300.00	0.4159E-01	2825.00	0.5688E-02
325.00	0.4210E-01	2849.99	0.5633E-02
350.01	0.4258E-01	2875.00	0.5580E-02
375.01	0.4307E-01	2900.00	0.5527E-02
400.00	0.4351E-01	2925.00	0.5475E-02
425.00	0.4395E-01	2950.01	0.5424E-02
450.00	0.4414E-01	2975.00	0.5373E-02
475.00	0.4478E-01	3000.00	0.5323E-02
500.00	0.4499E-01	3025.00	0.5274E-02
525.00	0.4677E-01	3050.01	0.5226E-02
550.00	0.3735E-01	3075.00	0.5178E-02
575.01	0.3431E-01	3100.00	0.5132E-02
599.99	0.3150E-01	3125.00	0.5086E-02
625.00	0.2937E-01	3150.00	0.5041E-02
650.00	0.2766E-01	3174.99	0.4997E-02
675.00	0.2623E-01	3200.00	0.4953E-02
699.99	0.2499E-01	3225.00	0.4910E-02
725.00	0.2391E-01	3250.00	0.4868E-02
750.00	0.2296E-01	3274.99	0.4826E-02
775.00	0.2209E-01	3300.00	0.4784E-02
800.01	0.2131E-01	3325.00	0.4744E-02
825.00	0.2059E-01	3350.00	0.4703E-02
850.00	0.1994E-01	3375.01	0.4663E-02
875.00	0.1932E-01	3400.00	0.4624E-02
900.01	0.1876E-01	3425.00	0.4585E-02

924.99	0.1823E-01	3450.00	0.4548E-02
950.00	0.1774E-01	3475.01	0.4510E-02
975.00	0.1727E-01	3499.99	0.4474E-02
1000.00	0.1684E-01	3525.00	0.4437E-02
1024.99	0.1639E-01	3550.00	0.4402E-02
1050.00	0.1597E-01	3575.00	0.4366E-02
1075.00	0.1557E-01	3599.99	0.4331E-02
1100.00	0.1519E-01	3625.00	0.4297E-02
1125.01	0.1483E-01	3650.00	0.4263E-02
1150.00	0.1449E-01	3675.00	0.4229E-02
1175.00	0.1417E-01	3700.01	0.4196E-02
1200.00	0.1386E-01	3725.00	0.4164E-02
1225.01	0.1356E-01	3750.00	0.4132E-02
1250.00	0.1328E-01	3775.00	0.4100E-02
1275.00	0.1301E-01	3800.01	0.4069E-02
1300.00	0.1276E-01	3825.00	0.4038E-02
1325.01	0.1251E-01	3850.00	0.4007E-02
1349.99	0.1227E-01	3875.00	0.3977E-02
1375.00	0.1204E-01	3900.00	0.3947E-02
1400.00	0.1182E-01	3924.99	0.3918E-02
1425.00	0.1161E-01	3950.00	0.3889E-02
1449.99	0.1141E-01	3975.00	0.3861E-02
1475.00	0.1121E-01	4000.00	0.3832E-02
1500.00	0.1102E-01	4024.99	0.3804E-02
1525.00	0.1084E-01	4050.00	0.3776E-02
1550.01	0.1066E-01	4075.00	0.3749E-02
1575.00	0.1049E-01	4100.00	0.3722E-02
1600.00	0.1032E-01	4125.01	0.3696E-02
1625.00	0.1016E-01	4150.00	0.3669E-02
1650.01	0.1000E-01	4175.00	0.3643E-02
1674.99	0.9853E-02	4200.00	0.3618E-02
1700.00	0.9705E-02	4225.01	0.3593E-02
1725.00	0.9562E-02	4249.99	0.3568E-02
1750.00	0.9422E-02	4275.00	0.3543E-02
1774.99	0.9286E-02	4300.00	0.3519E-02
1800.00	0.9154E-02	4325.00	0.3495E-02
1825.00	0.9025E-02	4349.99	0.3471E-02
1850.00	0.8901E-02	4375.00	0.3447E-02
1875.01	0.8779E-02	4400.00	0.3424E-02
1900.00	0.8661E-02	4425.00	0.3401E-02
1925.00	0.8545E-02	4450.01	0.3378E-02
1950.00	0.8433E-02	4475.00	0.3356E-02
1975.01	0.8324E-02	4500.00	0.3333E-02
1999.99	0.8217E-02	4525.00	0.3311E-02
2025.00	0.8111E-02	4550.00	0.3289E-02
2050.00	0.8009E-02	4575.00	0.3268E-02
2075.00	0.7908E-02	4599.99	0.3247E-02
2099.99	0.7810E-02	4625.00	0.3225E-02
2125.00	0.7714E-02	4650.00	0.3205E-02
2150.00	0.7620E-02	4675.00	0.3184E-02
2175.00	0.7528E-02	4700.00	0.3163E-02
2199.99	0.7439E-02	4725.00	0.3143E-02
2225.00	0.7352E-02	4750.00	0.3123E-02
2250.00	0.7266E-02	4774.99	0.3104E-02
2275.00	0.7182E-02	4800.00	0.3084E-02
2300.01	0.7099E-02	4825.00	0.3065E-02
2325.00	0.7018E-02	4850.00	0.3046E-02
2350.00	0.6939E-02	4875.01	0.3027E-02
2375.00	0.6862E-02	4900.00	0.3009E-02
2400.01	0.6787E-02	4925.00	0.2990E-02
2424.99	0.6713E-02	4950.00	0.2972E-02
2450.00	0.6641E-02	4975.01	0.2954E-02
2475.00	0.6568E-02	4999.99	0.2936E-02
2500.00	0.6497E-02		

***** AERSCREEN MAXIMUM IMPACT SUMMARY *****

3-hour, 8-hour, and 24-hour scaled concentrations are equal to the 1-hour concentration as referenced in SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY IMPACT OF STATIONARY SOURCES, REVISED (Section 4.5.4)
 Report number EPA-454/R-92-019
http://www.epa.gov/scram001/guidance_permit.htm
 under Screening Guidance

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	0.4622E-01	0.4622E-01	0.4622E-01	0.4622E-01	N/A

DISTANCE FROM SOURCE 526.00 meters

IMPACT AT THE
 AMBIENT BOUNDARY 0.3451E-01 0.3451E-01 0.3451E-01 0.3451E-01 N/A

DISTANCE FROM SOURCE 1.00 meters

ATTACHMENT C

Cancer Risk Calculations

Air Quality Health Risk Calculations (Worst-Case)
Oak Crest San Marcos (PDF Tier 3 with DPF)

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	0.044				
	Construction Start	1/1/2027				
	Construction Complete	12/31/2029				
	Days	1095				
	Construction Emission per day (lb/day)	0.080365297				
	Annual Duration (Days)	365				
	Annualized Emission Rate (Grams/Second)	4.21E-04				
	Project Site Size (Acres)	137				
	Project Site Size (meters^2)	554419.3299				
	Length of Smalles Side (meters)	744.593399				
Used as an input to AERSCREEN	Emission Rate over Grading Area(g/s-m^2)	4.68E-02				
From AERSCREEN *.08	Concentration Annual (Ug/M^3)	0.0037416				
Duration	Days	1095	Days to years			
			3.000000000			
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From F15	0.0037416	0.0037416	0.0037416	0.0037416	0.0037416	0.0037416
Breathing Rate per agegroup BR/BW (Page 5-25)	361	1090	861	745	335	290
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96
10^-6 Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00000130	0.00000392	0.00000309	0.00000268	0.00000120	0.00000104
Construction Days	1095	2	1			
potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor	10	10	3	3	1	1
ED	0.25	2	1	2	2	2
AT	70	70	70	70	70	70
FAH	1	1	0.72	0.72	0.73	0.73
Risk for Each Age Group	5.09413E-08	1.23049E-06	1.04974E-07	1.81662E-07	2.76071E-08	2.38987E-08
Risk per million Exposed	0.050941349	1.230494647	0.104973611	0.18166165	0.027607107	0.02389869
Cancer Risk Over Construction Duration	1.39					