

4590 PATRICK HENRY DRIVE CONSTRUCTION AIR QUALITY & HEALTH RISK ASSESSMENT

Santa Clara, California

November 7, 2023

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Introduction

The purpose of this report is to address construction air quality and health risk impacts associated with the construction of the proposed multi-family residential project located at 4590 Patrick Henry Drive in Santa Clara, California. The project is located in the Patrick Henry Drive Specific Plan and is subject to mitigation measures contained in the Environmental Impact Report prepared for the specific plan. Air quality impacts from this project would be associated with the demolition of the existing land uses and construction of the new building. Air pollutant emissions associated with the construction of the project were estimated using the appropriate models. In addition, the potential project health risks and the impacts of existing toxic air contaminant (TAC) sources affecting nearby sensitive receptors were evaluated. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).¹

Project Description

The 2.79-acre existing project site at 4590 Patrick Henry Drive in Santa Clara includes a vacant, single-story office building, surrounded by an asphalt parking lot. The project proposes to demolish the existing building and parking lot to construct an eight-story, 292,450 square-foot (sf) residential building with a total of 284 units. The project would include a three-story above ground parking lot with a total of 327 parking spaces.

Patrick Henry Drive Specific Plan

The project is consistent with development that would occur as planned under the Patrick Henry Drive Specific Plan. Air quality impacts were evaluated under the Patrick Henry Drive Specific Plan Environmental Impact Report (EIR).² This project is subject to air quality mitigation measures associated with the Patrick Henry Drive Specific Plan EIR. This analysis addresses these mitigation requirements. Specifically:

1. **Mitigation Measure 5-2A** requires implementation of BAAQMD Basic Construction Mitigation Measures.
2. **Mitigation Measure 5-2B** requires a project-level construction assessment for new development proposed under implementation of the Patrick Henry Drive Specific Plan. The City shall require applicants to submit a quantitative project-level construction criteria air pollutant and toxic air contaminant emissions analysis for future development proposed under implementation of the Patrick Henry Drive Specific Plan. The estimated construction criteria air pollutant and toxic air contaminant emissions shall be compared against the thresholds of significance maintained by BAAQMD and, if emissions, are above BAAQMD thresholds, the City shall require the implementation of measures to reduce the emissions below BAAQMD thresholds or to the maximum extent feasible. Mitigation measures to reduce emissions could include, but are not limited to:

¹ Bay Area Air Quality Management District, 2022 *CEQA Guidelines*, April 2023.

² City of Santa Clara. 2021. *Patrick Henry Drive Specific Plan Environmental Impact Report State Clearinghouse (SCH) #2019120515*

- a. Selection of specific construction equipment (e.g., specialized pieces of equipment with smaller engines or equipment that will be more efficient and reduce engine run time);
 - b. Requiring equipment to use alternative fuel sources (e.g., electric-powered and liquefied or compressed natural gas), meet cleaner emission standards (e.g., U.S. EPA Tier IV Final emissions standards for equipment greater than 50-horsepower), and/or utilizing added exhaust devices (e.g., Level 3 Diesel Particulate Filter);
 - c. Minimizing the idling time of diesel-powered equipment to two minutes;
 - d. Requiring that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NOx and PM;
 - e. Requiring all contractors use equipment that meets CARB's most recent certification standard for off-road heavy-duty diesel engines; and
 - f. Application of Low-VOC paints to interior and /or exterior surfaces (e.g., paints that meet SCAQMD rule 1113 "Low-VOC" or "Super-Compliant" requirements.
3. ***Mitigation Measure 5-2C*** requires the use of Low- and Super Compliant VOC Architectural Coatings. The City shall require the use of Low- and Super-Compliant VOC Architectural Coatings in maintaining buildings in the Patrick Henry Drive Specific Plan Area through Covenants Conditions and Restrictions (CC&Rs) and Ground Lease. Developed parcels shall require within their CC&Rs and/or ground leases requirements for all future interior spaces to be repainted with architectural coatings that meet the "Low-VOC" or "Super-Compliant" requirements. "Low-VOC" refers to paints that meet the more stringent regulatory limits of South Coast Air Quality Management District AQMD Rule 1113. "Super-Compliant" refers to paints that have been reformulated to levels well below the "Low-VOC" limit.

Mitigation Measure 5-2A and 5-2C will be required to be implemented by the project applicant and Construction contractor during project construction. Mitigation Measure 5-2B is addressed by providing an assessment of air pollutant emissions caused by project construction.

Per MM5-2A of the Patrick Henry Drive Specific Plan EIR, BAAQMD *Basic Construction Mitigation Measures* would apply to this project since construction period emissions would be below the City-adopted thresholds that are contained in the BAAQMD CEQA Air Quality Guidelines. MM5-2A includes the following measures that are consistent with BAAQMD-recommended basic best management practices:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
7. All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
8. Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.
9. Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.

Setting

The project is located in Santa Clara County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}).

Air Pollutants of Concern

High ozone concentrations in the air basin are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_x). These precursor pollutants react under certain meteorological conditions to form ozone. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ambient ozone concentrations. The highest ozone concentrations in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone concentrations aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant in the air basin. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter

of 10 micrometers or less (PM₁₀) and fine particulate matter where particles have a diameter of 2.5 micrometers or less (PM_{2.5}). Elevated concentrations of PM₁₀ and PM_{2.5} are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter concentrations aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Because chronic exposure of TACs can result in adverse health effects, they are regulated at the regional, State, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This makes the evaluation of health effects from diesel exhaust exposure a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. Health risks from TACs are estimated using the Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines, which were published in February of 2015 and incorporated into BAAQMD's current CEQA guidance.³

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. For cancer risk assessments, infants and children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The closest sensitive receptors to the project site are the single-family residences to the west. Additionally, there are children located at the Fairwood Explorer Elementary School west of the project site. The project would introduce new sensitive receptors (e.g., residents) to the area.

³ OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA. In 2023, the BAAQMD revised the *California Environmental Quality Act (CEQA) Air Quality Guidelines* that include significance thresholds to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The current BAAQMD guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They include assessment methodologies for criteria air pollutants, air toxics, odors, and GHG emissions, as shown in Table 1.⁴ Air quality impacts and health risks are considered potentially significant if they exceed these thresholds.

Table 1. BAAQMD CEQA Significance Thresholds

Criteria Air Pollutant	Construction Thresholds			
	Average Daily Emissions (lbs./day)			
ROG	54			
NO _x	54			
PM ₁₀	82 (Exhaust)			
PM _{2.5}	54 (Exhaust)			
CO	Not Applicable			
Fugitive Dust (PM ₁₀ /PM _{2.5})	Best Management Practices (BMPs)*			
Health Risks and Hazards	Single Sources/ Individual Project		Combined Sources (Cumulative from all sources within 1000-foot zone of influence)	
Excess Cancer Risk	>10 in a million	OR Compliance with Qualified Community Risk Reduction Plan	>100 in a million	OR Compliance with Qualified Community Risk Reduction Plan
Hazard Index	>1.0		>10.0	
Incremental annual PM _{2.5}	>0.3 µg/m ³		>0.8 µg/m ³	
Note: ROG = reactive organic gases, NO _x = nitrogen oxides, PM ₁₀ = coarse particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, PM _{2.5} = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. * BAAQMD strongly recommends implementing all feasible fugitive dust management practices especially when construction projects are located near sensitive communities, including schools, residential areas, or other sensitive land uses.				

Source: Bay Area Air Quality Management District, 2022

The BAAQMD recommends all projects include a “basic” set of best management practices (BMPs) to manage fugitive dust and consider impacts from dust (i.e., fugitive PM₁₀ and PM_{2.5}) to be less than significant if BMPs are implemented. Mitigation Measure 5-2A requires these BMPs as listed above.

⁴ Bay Area Air Quality Management District, 2022 *CEQA Guidelines*, April 2023.

Construction Air Pollutant Impacts
MM 5-2B – Project Construction Assessment

The California Emissions Estimator Model (CalEEMod) Version 2022 was used to estimate emissions from on-site construction activity, construction vehicle trips, and evaporative emissions. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The CalEEMod model output along with construction inputs are included in *Attachment 1*.

CalEEMod Inputs

Land Use Inputs

The proposed project land uses were entered into CalEEMod as described in Table 2.

Table 2. Summary of Project Land Use Inputs

Project Land Uses	Size	Units	Square Feet	Acreage
Apartments Mid Rise	284	Dwelling Unit	292,450	2.79
Unenclosed Parking with Elevator	327	Parking Spaces	126,000	

Construction Inputs

CalEEMod computes annual emissions for construction that are based on the project type, size, and acreage. The model provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The construction build-out scenario, including equipment quantities, average hours per day, total number of workdays, and schedule, were provided by the project applicant (included in *Attachment 1*). The construction schedule assumed that the earliest possible start date would be January 2025 and the project would be built out over a period of approximately 27 months or 572 construction workdays. The earliest year of operation was assumed to be 2028.

Construction Traffic Emissions

Construction would produce traffic in the form of worker trips and truck traffic. The traffic-related emissions are based on worker and vendor trip estimates produced by CalEEMod and haul trips that were computed based on the demolition material to be exported, soil imported and/or exported to the site, and the concrete and asphalt truck trips to and from the site. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. The total trips for those were computed by multiplying the daily trip rate by the number of days in that phase. Haul trips for demolition and grading were estimated from the provided demolition and grading volumes. The number of concrete and asphalt total round haul trips were provided for the project and converted to daily one-way trips, assuming two trips per delivery. These values are shown in the project construction equipment worksheet included in *Attachment 1*.

Summary of Computed Construction Period Emissions

Average daily emissions were annualized for each year of construction by dividing the annual construction emissions by the number of active workdays during that year. Table 3 shows the annualized average daily construction emissions of ROG, NO_x, PM₁₀ exhaust, and PM_{2.5} exhaust during construction of the project. As indicated in Table 3, predicted annualized project construction emissions would not exceed the BAAQMD significance thresholds during any year of construction. Therefore, additional measures to reduce construction period emissions listed under MM 5-2B would not be required.

Table 3. Construction Period Emissions

Year	ROG	NO _x	PM ₁₀ Exhaust	PM _{2.5} Exhaust
<i>Construction Emissions Per Year (Tons)</i>				
2025	0.07	0.94	0.03	0.03
2026	0.66	0.98	0.03	0.03
2027	<1.60*	0.32	0.01	0.01
<i>Annualized Daily Construction Emissions (pounds/day)</i>				
2025 (243 construction workdays)	0.54	7.75	0.23	0.21
2026 (261 construction workdays)	5.04	7.48	0.23	0.21
2027 (68 construction workdays)	<47.15*	9.48	0.24	0.22
<i>BAAQMD Thresholds (pounds per day)</i>	54 lbs./day	54 lbs./day	82 lbs./day	54 lbs./day
Exceed Threshold?	No	No	No	No

*These are unmitigated values. Specific Plan Mitigation Measure 5-2C reduces ROG from construction coatings below these levels.

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM₁₀ and PM_{2.5}. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less-than-significant if best management practices are implemented to reduce these emissions. Per MM5-2A of the Patrick Henry Drive Specific Plan EIR, BAAQMD *Basic Construction Mitigation Measures* would apply to this project since construction period emissions would be below the City-adopted thresholds that are contained in the BAAQMD CEQA Air Quality Guidelines. MM5-2A includes the measures listed above that are consistent with BAAQMD-recommended best management practices.

Construction Health Risk Impacts

Project health risk impacts can occur either by generating emissions of TACs and fine particulate matter (PM_{2.5}) or by introducing a new sensitive receptor in proximity to an existing source of TACs/PM_{2.5}. Construction activity would temporarily generate emissions of DPM from equipment and trucks and dust (PM_{2.5}) that could affect nearby sensitive receptors. A construction health risk assessment was conducted to address impacts on the surrounding off-site sensitive receptors.

There may be sources of existing TACs and localized air pollutants in the vicinity of the project. The cumulative impact of the existing sources of TACs upon the existing sensitive receptors, including the project's contribution was assessed.

Health risk impacts are addressed by predicting increased lifetime cancer risk, the increase in annual PM_{2.5} concentrations, and computing the Hazard Index (HI) for non-cancer health risks. Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust emissions pose health risks for sensitive receptors such as surrounding residents. The primary health risk impact issues associated with construction emissions are cancer risk and exposure to PM_{2.5}. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and PM_{2.5}.⁵ This assessment included dispersion modeling to predict the offsite concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

Construction Emissions

The CalEEMod model provided total annual PM₁₀ exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions from all construction stages being 0.06 tons (125 pounds). The on-road vehicle emissions are a result of haul truck travel on-site during demolition and grading activities, worker travel on-site, and vendor travel on-site during construction. A trip length of a half-mile was used to represent vehicle travel while at or near the construction site. Fugitive PM_{2.5} dust emissions were calculated by CalEEMod as 0.03 tons (70 pounds) for the overall construction period.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict DPM and PM_{2.5} concentrations at sensitive receptors (i.e., residences) in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.⁶ Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive PM_{2.5} dust emissions.

⁵ DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

⁶ BAAQMD, *Appendix E of the 2022 BAAQMD CEQA Guidelines*. April 2023.

Construction Sources

To represent the construction equipment exhaust emissions, an area source was used with an emission release height of 20 feet (6 meters).⁷ The release height incorporates both the physical release height from the construction equipment (i.e., the height of the exhaust pipe) and plume rise after it leaves the exhaust pipe. Plume rise is due to both the high temperature of the exhaust and the high velocity of the exhaust gas. It should be noted that when modeling an area source, plume rise is not calculated by the AERMOD dispersion model as it would do for a point source (exhaust stack). Therefore, the release height from an area source used to represent emissions from sources with plume rise, such as construction equipment, was based on the height the exhaust plume is expected to achieve, not just the height of the top of the exhaust pipe.

For modeling fugitive PM_{2.5} emissions, an area source with a near-ground level release height of 7 feet (2 meters) was used. Fugitive dust emissions at construction sites come from a variety of sources, including truck and equipment travel, grading activities, truck loading (with loaders) and unloading (rear or bottom dumping), loaders and excavators moving and transferring soil and other materials, etc. All of these activities result in fugitive dust emissions at various heights at the point(s) of generation. Once generated, the dust plume will tend to rise as it moves downwind across the site and exit the site at a higher elevation than when it was generated. For all these reasons, a 7-foot release height was used as the average release height across the construction site.

AERMOD Inputs and Meteorological Data

The modeling used a five-year data set (2013 - 2017) of hourly meteorological data from the Moffett Federal Airfield prepared for use with the AERMOD model by BAAQMD. Construction emissions were modeled as occurring daily between 7:00 a.m. to 5:00 p.m., per the project applicant's construction schedule. Annual DPM and PM_{2.5} concentrations from construction activities during the 2025-2027 period were calculated at nearby sensitive receptors using the model. Receptor heights of 5 feet (1.5 meters) were used to represent the breathing height of nearby single-family residences.⁸ A receptor height of 3 feet (1 meter) was used to represent the breathing heights of children at the nearby elementary school.

Summary of Construction Health Risk Impacts

The maximum increased cancer risks were calculated using the modeled TAC concentrations combined with the BAAQMD CEQA guidance for age sensitivity factors and exposure parameters. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. Infant, child, and adult exposures were assumed to occur at all residences during the entire construction period. Third trimester, infant, child, and adult exposures were

⁷ California Air Resource Board, 2007. *Proposed Regulation for In-Use Off-Road Diesel Vehicles, Appendix D: Health Risk Methodology*. April. Web: <https://ww3.arb.ca.gov/regact/2007/ordiesl07/ordiesl07.htm>

⁸ Bay Area Air Quality Management District, 2012, Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0. May. Web: <https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en>

assumed to occur at all residences during the entire construction period, while child exposures were assumed to occur at the school.

Non-cancer health hazards and maximum PM_{2.5} concentrations were also calculated. The maximum modeled annual PM_{2.5} concentration was calculated based on combined exhaust and fugitive concentrations. The maximum computed HI value was based on the ratio of the maximum DPM concentration modeled and the chronic inhalation reference exposure level of 5 µg/m³.

The modeled maximum annual DPM and PM_{2.5} concentrations were identified at nearby sensitive receptors (as shown in Figure 1) to find the maximally exposed individuals (MEI). Results of this assessment indicated that the construction MEI was located at a single-family home northwest of the construction site. Table 4 summarizes the maximum cancer risks, PM_{2.5} concentrations, and HI for project related construction activities affecting the construction MEI. *Attachment 2* to this report includes the emission calculations used for the construction modeling and the cancer risk calculations.

Additionally, modeling was conducted to predict the cancer risks, non-cancer health hazards, and maximum PM_{2.5} concentrations associated with construction activities at the nearby Fairwood Explorer Elementary School. Receptors were placed in part of the closest academic building to the project site. The maximum increased cancer risks were adjusted using child exposure parameters. The uncontrolled cancer risk, PM_{2.5} concentration, and HI at the nearby elementary school do not exceed their respective BAAQMD single-source significance thresholds, as shown in Table 4.

Construction risk impacts are shown in Table 4. The maximum cancer risks, annual PM_{2.5} concentration, and Hazard Index from uncontrolled (i.e., unmitigated) construction activities at the MEI location would not exceed the BAAQMD single-source significance threshold.

Table 4. Construction Risk Impacts at the Off-Site MEI and School Receptors

Source		Cancer Risk (per million)	Annual PM _{2.5} (µg/m ³)	Hazard Index
Project Impact				
Project Construction	Unmitigated	2.76 (infant)	0.02	<0.01
BAAQMD Single-Source Threshold		10	0.3	1.0
Exceed Threshold?	Unmitigated	<i>No</i>	<i>No</i>	<i>No</i>
Impacts at Fairwood Explorer Elementary School				
Project Construction	Unmitigated	0.06 (child)	<0.01	<0.01
BAAQMD Single-Source Threshold		10	0.3	1.0
Exceed Threshold?	Unmitigated	<i>No</i>	<i>No</i>	<i>No</i>

Figure 1. Locations of Project Construction Site, Off-Site Sensitive Receptors, and Maximum TAC Impacts (MEI)

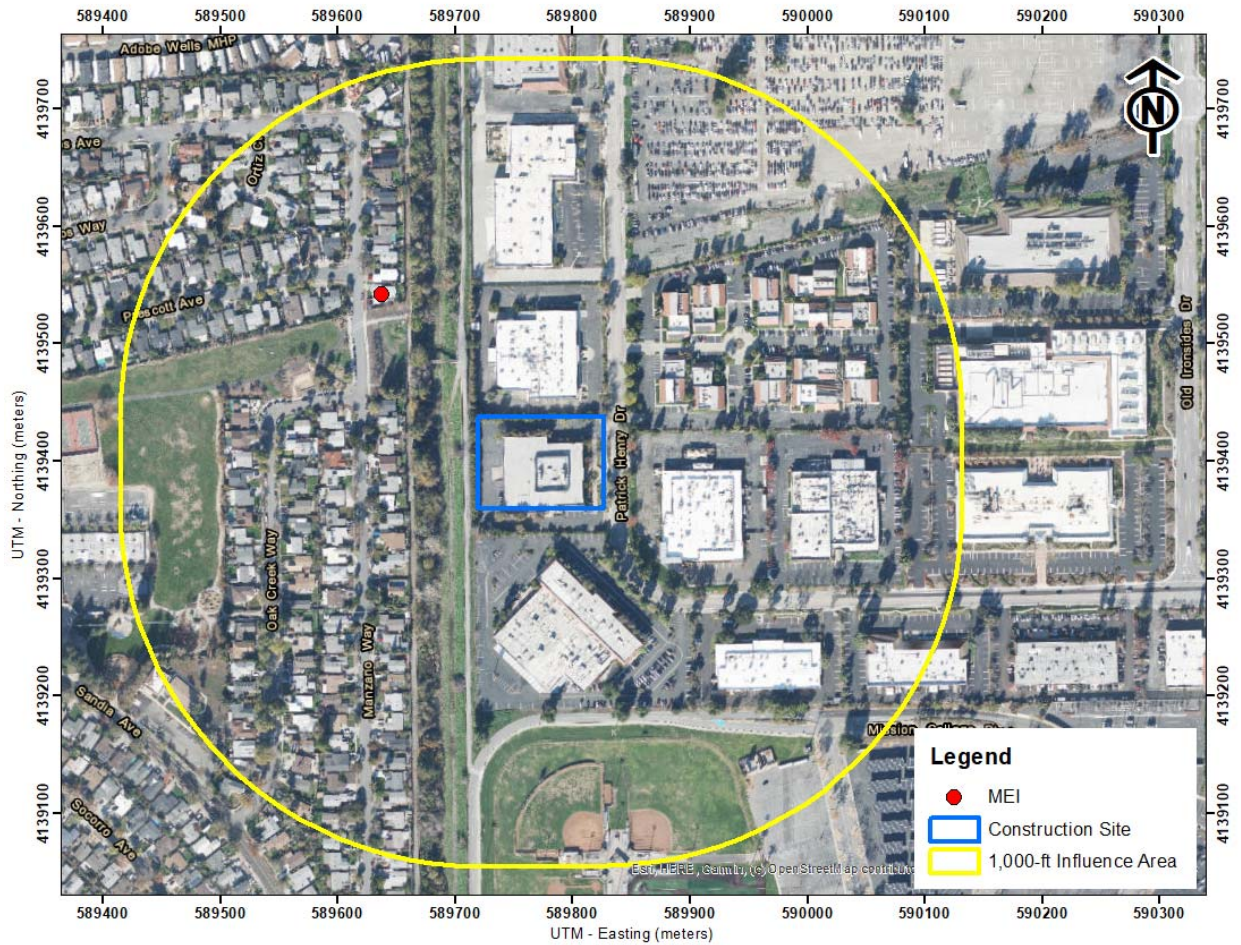


Cumulative Health Risks of all TAC Sources at the Offsite Project MEI

Cumulative health risk assessments look at all substantial sources of TACs located within 1,000 feet of a project site (i.e., influence area) that can affect sensitive receptors. These sources include rail lines, highways, busy surface streets, and stationary sources identified by BAAQMD.

A review of BAAQMD’s geographic information systems (GIS) screening maps identified the existing health risks at the MEI. No stationary sources with the potential to affect the MEI are located within 1,000 feet of the project site. However, screening-level impacts from nearby roadways were estimated. Figure 2 shows the project area included within the influence area and the location of the MEI. Health risk impacts from these sources upon the MEIs are reported in Table 5. Details of the cumulative screening and health risk calculations are included in *Attachment 3*.

Figure 2. Project Site and 1,000-foot Influence Area



Local Roadways

The project site is located in a commercial area with arterial roadways nearby (see Figure 2). Screening-level cancer risks, PM_{2.5} concentrations, and HI associated with traffic on the local roadways were estimated using BAAQMD’s GIS data files (i.e., raster files). BAAQMD raster files were produced using AERMOD and 20x20-meter emissions grid, EMFAC2021 data for vehicle emissions and fleet mix, and applies risk assessment assumptions provided in Appendix E of the Air District’s CEQA Air Quality Guidance. Note that BAAQMD’s screening values are considered higher than values that would be obtained with refined modeling methods. Screening-level cancer risk, PM_{2.5} concentration, and HI at the project MEI are listed in Table 5.

BAAQMD Permitted Stationary Sources

There were no identified sources within the project’s 1,000-foot influence area found using the BAAQMD’s *Permitted Stationary Sources 2021* geographic information system (GIS) map

website.⁹ This mapping tool identifies the location of nearby stationary sources and their estimated risk and hazard impacts.

Nearby Construction Projects

In addition to existing nearby TAC sources and construction of the project, there could be other projects in the area with potentially active construction sites that would occur during the proposed project construction period. The 3000 Patrick Henry Drive project¹⁰ was one such project that was identified southeast of the project site. For developments that did not have available construction impact results at the time of this study, it was assumed the maximum construction risks at sensitive receptors would be less than the BAAQMD single-source thresholds for community risks and hazards. For the purpose of this analysis, it was conservatively assumed the entire construction period from the proposed project would overlap with the 3000 Patrick Henry Drive construction schedule. This approach likely provides an overestimate of the health risk and hazard levels because it assumes that maximum impacts from the nearby development occurs concurrently with the proposed project at the proposed project's MEI. The mitigated construction risks reported in that air quality assessment were included in the cumulative risks Table 5.

Summary of Cumulative Health Risk Impacts

Table 5 reports both the project and cumulative health risk impacts at the sensitive receptors most affected by construction (i.e., the MEI). As shown, the project would not exceed the single-source or cumulative-source thresholds for cancer risk, annual PM_{2.5} concentration, and HI.

Table 5. Impacts from Combined Sources at Construction MEI

Source	Cancer Risk (per million)	Annual PM _{2.5} (µg/m ³)	Hazard Index	
Project Impacts				
Project Construction	Unmitigated	2.76 (infant)	0.02	<0.01
BAAQMD Single-Source Threshold		10	0.3	1.0
Exceed Threshold?	Unmitigated	<i>No</i>	<i>No</i>	<i>No</i>
Cumulative Impacts				
Cumulative Roadways - BAAQMD Screening Raster Data		7.29	0.22	0.03
3000 Patrick Henry Drive Mitigated Construction Impacts		<10.00	<0.30	<1.00
Cumulative Total	Unmitigated	<20.05	<0.54	<1.04
BAAQMD Cumulative Source Threshold		100	0.8	10.0
Exceed Threshold?	Unmitigated	<i>No</i>	<i>No</i>	<i>No</i>

⁹ BAAQMD, *Stationary Source Screening Map*, 2023. Web: <https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=845658c19eae4594b9f4b805fb9d89a3>

¹⁰ Illingworth & Rodkin, Inc., *3000 Patrick Henry Drive Construction Air Quality Assessment*, November 9, 2022. Web: <https://www.santaclaraca.gov/home/showpublisheddocument/79557/638125900181930000>

Supporting Documentation

Attachment 1 includes the CalEEMod output for project construction criteria air pollutant emissions. Also included are any modeling assumptions.

Attachment 2 is the construction health risk assessment. This includes the summary of the dispersion modeling and the cancer risk calculations for construction. AERMOD dispersion modeling files for this assessment, which are quite voluminous, are available upon request and would be provided in digital format.

Attachment 3 includes the cumulative health screening results from sources affecting the construction MEI.

Attachment 1: CalEEMod Modeling Inputs and Outputs

Construction Criteria Air Pollutants							
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	PM2.5 Fugitive	CO2e	
Year	Tons					MT	
Construction Equipment							
2025	0.07	0.94	0.03	0.03	0.04	270.45	
2026	0.66	0.98	0.03	0.03	0.06	503.16	
2027	1.60	0.32	0.01	0.01	0.02	172.77	
<i>Total Construction Emissions</i>							
Tons	2.33	2.24	0.07	0.06		946.38	
<i>Average Daily Emissions</i>							
Pounds/Workdays						Workdays	
2025	0.54	7.75	0.23	0.21			243
2026	5.04	7.48	0.23	0.21			261
2027	47.15	9.48	0.24	0.22			68
Threshold - lbs/day	54.0	54.0	82.0	54.0			
<i>Total Construction Emissions</i>							
Pounds	52.73	24.71	0.70	0.64		0.00	
Average	8.13	7.83	0.23	0.21		0.00	572.00
Threshold - lbs/day	54.0	54.0	82.0	54.0			

Number of Days Per Year

2025	1/27/25	12/31/25	339	243
2026	1/1/26	12/31/26	365	261
2027	1/1/27	4/5/27	95	68
			799	572 Total Workdays

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	1/27/2025	4/25/2025	5	65
Site Preparation	4/28/2025	7/30/2025	5	68
Grading	8/1/2025	9/30/2025	5	43
Building Construction	4/1/2026	3/30/2027	5	260
Paving	2/25/2026	3/24/2026	5	20
Architectural Coating	12/1/2026	4/5/2027	5	90
Trenching	10/1/2025	3/30/2026	5	129

Air Quality/Noise Construction Information Data Request

Project Name: 4590 Patrick Henry Drive, Santa Clara, CA

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

<p>Project Size <u>284</u> Dwelling Units <u>2.79</u> acres total project acres disturbed</p> <p><u>277,500</u> s.f. residential</p> <p><u>0</u> s.f. retail</p> <p><u>14,950</u> s.f. office/commercial</p> <p><u>0</u> s.f. other, specify:</p> <p><u>126,000</u> s.f. parking garage <u>327</u> spaces</p> <p><u>0</u> s.f. parking lot spaces</p> <p>Construction Days <u>Approx 7/24</u> to <u>11/1/2026</u></p> <p>Construction Hours <u>7 am</u> to <u>5</u> pm</p>	<p>Pile Driving? Y/N? No</p> <p>Project include on-site GENERATOR OR FIRE PUMP during project (not construction)? Y/N? N IF YES (if BOTH separate values) --></p> <p>Kilowatts/Horsepower: _____</p> <p>Fuel Type: _____</p> <p>Location in project (Plans Desired if Available):</p>
--	--

DO NOT MULTIPLY EQUIPMENT HOURS/DAY BY THE QUANTITY OF EQUIPMENT

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments
Demolition								
		Start Date:	1/27/2025	Total phase:	65			Overall Import/Export Volumes
		End Date:	4/25/2025					
	Concrete/Industrial Saws	81	0.73			0	0	Demolition Volume
2	Excavators Tier 4	158	0.38	8	30	8	28819	Square footage of buildings to be demolished
2	Skid steer Loaders Tier 4	247	0.4	8	60	8	94848	(or total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37			0	0	<u>?</u> square feet or
	Other Equipment?							<u>500 tons</u> Hauling volume (tons)
								Any pavement demolished and hauled? <u>5,000 tons</u>
Site Preparation								
		Start Date:	4/28/2025	Total phase:	68			
		End Date:	7/30/2025					
	Graders	187	0.41			0	0	
1	Excavators Tier 4	158	0.38	8	25	8	12008	
2	Skid steer Loaders Tier 4	247	0.4	8	30	8	47424	
	Tractors/Loaders/Backhoes	97	0.37			0	0	
	Other Equipment?							
Grading / Excavation								
		Start Date:	8/1/2025	Total phase:	43			Soil Hauling Volume
		End Date:	9/30/2025					Export volume = <u>2,000</u> cubic yards?
	Excavators	158	0.38			0	0	Import volume = <u>0</u> cubic yards?
1	Graders	187	0.41	8	45	8.372093	27601	
1	Rubber Tired Dozers	247	0.4	8	45	8.372093	35588	
	Concrete/Industrial Saws	81	0.73			0	0	
2	Tractors/Loaders/Backhoes	97	0.37	8	45	8.372093	25841	
	Other Equipment?							
Trenching/Foundation								
		Start Date:	10/1/2025	Total phase:	200			
		End Date:	3/30/2026					
2	Tractor/Loader/Backhoe	125	0.37	8	125	8	92500	
0	Excavators	158	0.38			0	0	
10	Concrete Trucks	90	0.37	8	30	6	79920	
	Other Equipment?							
Building - Exterior								
		Start Date:	4/1/2026	Total phase:	260			Cement Trucks? <u>105</u> Total Round-Trips
		End Date:	3/30/2027					
1	Cranes	220	0.29	8	220	6.769231	112288	Electric? (Y/N) N Otherwise assumed diesel
2	Forklifts	220	0.2	8	220	6.769231	154880	Liquid Propane (LPG)? (Y/N) N Otherwise Assumed diesel
0	Generator Sets	84	0.74	0	0	0	0	Or temporary line power? (Y/N) Y
3	Tractors/Loaders/Backhoes	50	0.37	8	200	6.153846	88800	
0	Welders	46	0.45	0	0	0	0	
	Other Equipment?							
Building - Interior/Architectural Coating								
		Start Date:	12/1/2026	Total phase:	90			
		End Date:	6/30/2027					
0	Air Compressors	78	0.48	0	0	0	0	
3	Aerial Lift	90	0.31	8	60	5.333333	40176	
	Other Equipment?							
Paving								
		Start Date:	2/25/2026	Total phase:	20			
		End Date:	6/30/2027					
2	Cement and Mortar Mixers	9	0.56	8	5	6	403	Asphalt? <u>0</u> cubic yards or <u>4</u> round trips?
1	Pavers	5	0.42	8	5	2	84	
2	Paving Equipment	132	0.36	8	5	2	3802	
1	Rollers	80	0.38	8	5	2	1216	
0	Tractors/Loaders/Backhoes	97	0.37			0	0	
	Other Equipment?							
Additional Phases								
		Start Date:		Total phase:				
		Start Date:						
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	

Equipment types listed in "Equipment Types" worksheet tab.

Equipment listed in this sheet is to provide an example of inputs
 It is assumed that water trucks would be used during grading
 Add or subtract phases and equipment, as appropriate
 Modify horsepower or load factor, as appropriate

23-096 4590 Patrick Henry Drive, Santa Clara T4i BMPs 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

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

3.2. Demolition (2025) - Mitigated

3.3. Site Preparation (2025) - Unmitigated

3.4. Site Preparation (2025) - Mitigated

3.5. Grading (2025) - Unmitigated

3.6. Grading (2025) - Mitigated

3.7. Building Construction (2026) - Unmitigated

3.8. Building Construction (2026) - Mitigated

3.9. Building Construction (2027) - Unmitigated

3.10. Building Construction (2027) - Mitigated

3.11. Paving (2026) - Unmitigated

3.12. Paving (2026) - Mitigated

3.13. Architectural Coating (2026) - Unmitigated

3.14. Architectural Coating (2026) - Mitigated

3.15. Architectural Coating (2027) - Unmitigated

3.16. Architectural Coating (2027) - Mitigated

3.17. Trenching (2025) - Unmitigated

3.18. Trenching (2025) - Mitigated

3.19. Trenching (2026) - Unmitigated

3.20. Trenching (2026) - Mitigated

4. Operations Emissions Details

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

5.18. 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	23-096 4590 Patrick Henry Drive, Santa Clara T4i BMPs
Construction Start Date	1/27/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	32.8
Location	4590 Patrick Henry Dr, Santa Clara, CA 95054, USA
County	Santa Clara
City	Santa Clara
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	6705
EDFZ	1
Electric Utility	Silicon Valley Power
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.20

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
Apartments Mid Rise	284	Dwelling Unit	2.79	292,450	0.00	—	849	—

Unenclosed Parking with Elevator	327	Space	0.00	126,000	0.00	—	—	—
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1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Unmit.	46.0	15.5	0.69	3.08	3.77	0.63	1.45	2.08	5,456
Mit.	45.9	10.4	0.17	3.08	3.14	0.16	1.45	1.50	5,456
% Reduced	< 0.5%	33%	75%	—	17%	75%	—	28%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	47.4	10.6	0.28	2.93	3.22	0.26	0.70	0.97	5,990
Mit.	46.9	10.8	0.17	2.93	3.05	0.16	0.70	0.82	5,990
% Reduced	1%	-2%	39%	—	5%	40%	—	16%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	8.78	5.35	0.16	1.36	1.52	0.15	0.33	0.48	3,039
Mit.	8.71	5.11	0.06	1.36	1.40	0.06	0.33	0.36	3,039
% Reduced	1%	4%	61%	—	8%	62%	—	24%	—
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	1.60	0.98	0.03	0.25	0.28	0.03	0.06	0.09	503

Mit.	1.59	0.93	0.01	0.25	0.25	0.01	0.06	0.07	503
% Reduced	1%	4%	61%	—	8%	62%	—	24%	—

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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2025	1.65	15.5	0.69	3.08	3.77	0.63	1.45	2.08	4,535
2026	1.52	8.75	0.27	2.50	2.78	0.25	0.60	0.86	5,456
2027	46.0	1.54	0.01	0.43	0.44	0.01	0.10	0.11	726
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2025	0.43	10.5	0.17	0.60	0.77	0.16	0.14	0.30	4,526
2026	47.4	10.6	0.28	2.93	3.22	0.26	0.70	0.97	5,990
2027	47.4	10.1	0.26	2.93	3.19	0.24	0.70	0.94	5,914
Average Daily	—	—	—	—	—	—	—	—	—
2025	0.36	5.16	0.15	0.49	0.64	0.14	0.20	0.34	1,634
2026	3.60	5.35	0.16	1.36	1.52	0.15	0.33	0.48	3,039
2027	8.78	1.77	0.05	0.50	0.55	0.04	0.12	0.16	1,044
Annual	—	—	—	—	—	—	—	—	—
2025	0.07	0.94	0.03	0.09	0.12	0.03	0.04	0.06	270
2026	0.66	0.98	0.03	0.25	0.28	0.03	0.06	0.09	503
2027	1.60	0.32	0.01	0.09	0.10	0.01	0.02	0.03	173

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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2025	0.43	10.4	0.17	3.08	3.14	0.16	1.45	1.50	4,535
2026	1.09	8.12	0.05	2.50	2.56	0.05	0.60	0.66	5,456
2027	45.9	2.38	0.06	0.43	0.49	0.06	0.10	0.16	726
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2025	0.43	10.5	0.17	0.60	0.77	0.16	0.14	0.30	4,526
2026	46.9	10.8	0.12	2.93	3.05	0.11	0.70	0.82	5,990
2027	46.9	10.6	0.12	2.93	3.05	0.11	0.70	0.82	5,914
Average Daily	—	—	—	—	—	—	—	—	—
2025	0.19	4.41	0.06	0.49	0.55	0.06	0.20	0.26	1,634
2026	3.34	5.11	0.04	1.36	1.40	0.04	0.33	0.36	3,039
2027	8.71	1.87	0.02	0.50	0.53	0.02	0.12	0.14	1,044
Annual	—	—	—	—	—	—	—	—	—
2025	0.03	0.80	0.01	0.09	0.10	0.01	0.04	0.05	270
2026	0.61	0.93	0.01	0.25	0.25	0.01	0.06	0.07	503
2027	1.59	0.34	< 0.005	0.09	0.10	< 0.005	0.02	0.03	173

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.37	8.75	0.15	—	0.15	0.14	—	0.14	3,036
Demolition	—	—	—	0.17	0.17	—	0.03	0.03	—
Onsite truck	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	8.75	0.15	—	0.15	0.14	—	0.14	3,036
Demolition	—	—	—	0.17	0.17	—	0.03	0.03	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	1.56	0.03	—	0.03	0.03	—	0.03	541
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
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.28	< 0.005	—	< 0.005	< 0.005	—	< 0.005	89.5
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
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.00	0.08	0.08	0.00	0.02	0.02	87.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	1.68	0.02	0.35	0.37	0.02	0.10	0.11	1,412
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.00	0.08	0.08	0.00	0.02	0.02	80.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	1.77	0.02	0.35	0.37	0.02	0.10	0.11	1,410

Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	14.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.31	< 0.005	0.06	0.07	< 0.005	0.02	0.02	251
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.06	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	41.6

3.2. Demolition (2025) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	8.75	0.15	—	0.15	0.14	—	0.14	3,036
Demolition	—	—	—	0.17	0.17	—	0.03	0.03	—
Onsite truck	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	8.75	0.15	—	0.15	0.14	—	0.14	3,036
Demolition	—	—	—	0.17	0.17	—	0.03	0.03	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	1.56	0.03	—	0.03	0.03	—	0.03	541
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

Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.28	< 0.005	—	< 0.005	< 0.005	—	< 0.005	89.5
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
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.00	0.08	0.08	0.00	0.02	0.02	87.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	1.68	0.02	0.35	0.37	0.02	0.10	0.11	1,412
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.00	0.08	0.08	0.00	0.02	0.02	80.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	1.77	0.02	0.35	0.37	0.02	0.10	0.11	1,410
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	14.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.31	< 0.005	0.06	0.07	< 0.005	0.02	0.02	251
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.06	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	41.6

3.3. Site Preparation (2025) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	5.64	0.13	—	0.13	0.12	—	0.12	1,764
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.05	0.02	—	0.02	0.02	—	0.02	329
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	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	< 0.005	—	< 0.005	< 0.005	—	< 0.005	54.4
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.06	0.06	0.00	0.01	0.01	65.3
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	11.4
Vendor	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
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.88
Vendor	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

3.4. Site Preparation (2025) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	5.64	0.13	—	0.13	0.12	—	0.12	1,764
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.05	0.02	—	0.02	0.02	—	0.02	329
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	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	< 0.005	—	< 0.005	< 0.005	—	< 0.005	54.4
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.06	0.06	0.00	0.01	0.01	65.3
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	11.4
Vendor	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
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.88
Vendor	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

3.5. Grading (2025) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.61	15.0	0.68	—	0.68	0.63	—	0.63	2,653
Dust From Material Movement	—	—	—	2.89	2.89	—	1.40	1.40	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.19	1.77	0.08	—	0.08	0.07	—	0.07	313
Dust From Material Movement	—	—	—	0.34	0.34	—	0.16	0.16	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.32	0.01	—	0.01	0.01	—	0.01	51.7
Dust From Material Movement	—	—	—	0.06	0.06	—	0.03	0.03	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.00	0.08	0.08	0.00	0.02	0.02	87.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.52	0.01	0.11	0.12	0.01	0.03	0.03	438
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	9.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.06	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	51.5
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.59
Vendor	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	8.53

3.6. Grading (2025) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	8.37	0.05	—	0.05	0.05	—	0.05	2,653
Dust From Material Movement	—	—	—	2.89	2.89	—	1.40	1.40	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.99	0.01	—	0.01	0.01	—	0.01	313
Dust From Material Movement	—	—	—	0.34	0.34	—	0.16	0.16	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.18	< 0.005	—	< 0.005	< 0.005	—	< 0.005	51.7
Dust From Material Movement	—	—	—	0.06	0.06	—	0.03	0.03	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.00	0.08	0.08	0.00	0.02	0.02	87.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.52	0.01	0.11	0.12	0.01	0.03	0.03	438
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	9.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.06	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	51.5
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.59
Vendor	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	8.53

3.7. Building Construction (2026) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	6.45	0.25	—	0.25	0.23	—	0.23	1,772
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	6.45	0.25	—	0.25	0.23	—	0.23	1,772
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	3.47	0.14	—	0.14	0.13	—	0.13	953
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.63	0.02	—	0.02	0.02	—	0.02	158
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.81	0.55	0.00	2.13	2.13	0.00	0.50	0.50	2,198
Vendor	0.04	1.68	0.02	0.36	0.38	0.02	0.10	0.12	1,417
Hauling	< 0.005	0.08	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	70.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.72	0.71	0.00	2.13	2.13	0.00	0.50	0.50	2,033
Vendor	0.04	1.77	0.02	0.36	0.38	0.02	0.10	0.12	1,414
Hauling	< 0.005	0.09	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	70.0
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.38	0.34	0.00	1.12	1.12	0.00	0.26	0.26	1,107
Vendor	0.02	0.93	0.01	0.19	0.20	0.01	0.05	0.06	762
Hauling	< 0.005	0.05	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	37.7
Annual	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.00	0.20	0.20	0.00	0.05	0.05	183
Vendor	< 0.005	0.17	< 0.005	0.03	0.04	< 0.005	0.01	0.01	126
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	6.24

3.8. Building Construction (2026) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.82	0.03	—	0.03	0.03	—	0.03	1,772
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.82	0.03	—	0.03	0.03	—	0.03	1,772
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	3.13	0.02	—	0.02	0.02	—	0.02	953
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.57	< 0.005	—	< 0.005	< 0.005	—	< 0.005	158
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.81	0.55	0.00	2.13	2.13	0.00	0.50	0.50	2,198
Vendor	0.04	1.68	0.02	0.36	0.38	0.02	0.10	0.12	1,417
Hauling	< 0.005	0.08	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	70.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.72	0.71	0.00	2.13	2.13	0.00	0.50	0.50	2,033
Vendor	0.04	1.77	0.02	0.36	0.38	0.02	0.10	0.12	1,414
Hauling	< 0.005	0.09	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	70.0
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.38	0.34	0.00	1.12	1.12	0.00	0.26	0.26	1,107
Vendor	0.02	0.93	0.01	0.19	0.20	0.01	0.05	0.06	762
Hauling	< 0.005	0.05	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	37.7
Annual	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.00	0.20	0.20	0.00	0.05	0.05	183
Vendor	< 0.005	0.17	< 0.005	0.03	0.04	< 0.005	0.01	0.01	126

Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	6.24
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3.9. Building Construction (2027) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	6.11	0.23	—	0.23	0.21	—	0.21	1,771
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.07	0.04	—	0.04	0.04	—	0.04	309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.19	0.01	—	0.01	0.01	—	0.01	51.1
Onsite truck	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	0.69	0.63	0.00	2.13	2.13	0.00	0.50	0.50	1,995
Vendor	0.04	1.68	0.02	0.36	0.38	0.02	0.10	0.12	1,387
Hauling	< 0.005	0.08	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	68.4
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.00	0.36	0.36	0.00	0.08	0.08	352

Vendor	0.01	0.29	< 0.005	0.06	0.06	< 0.005	0.02	0.02	242
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	11.9
Annual	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.07	0.07	0.00	0.02	0.02	58.2
Vendor	< 0.005	0.05	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	40.0
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.97

3.10. Building Construction (2027) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.82	0.03	—	0.03	0.03	—	0.03	1,771
Onsite truck	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	1.01	0.01	—	0.01	0.01	—	0.01	309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.18	< 0.005	—	< 0.005	< 0.005	—	< 0.005	51.1
Onsite truck	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	0.69	0.63	0.00	2.13	2.13	0.00	0.50	0.50	1,995
Vendor	0.04	1.68	0.02	0.36	0.38	0.02	0.10	0.12	1,387
Hauling	< 0.005	0.08	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	68.4
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.00	0.36	0.36	0.00	0.08	0.08	352
Vendor	0.01	0.29	< 0.005	0.06	0.06	< 0.005	0.02	0.02	242
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	11.9
Annual	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.07	0.07	0.00	0.02	0.02	58.2
Vendor	< 0.005	0.05	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	40.0
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.97

3.11. Paving (2026) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	1.80	0.08	—	0.08	0.07	—	0.07	349
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	< 0.005	—	< 0.005	< 0.005	—	< 0.005	19.1
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	< 0.005	—	< 0.005	< 0.005	—	< 0.005	3.17
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.00	0.12	0.12	0.00	0.03	0.03	118
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.04	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	29.5
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	6.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.62
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.09
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.27

3.12. Paving (2026) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.12	1.83	0.04	—	0.04	0.03	—	0.03	349
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	< 0.005	—	< 0.005	< 0.005	—	< 0.005	19.1
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	< 0.005	—	< 0.005	< 0.005	—	< 0.005	3.17
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.00	0.12	0.12	0.00	0.03	0.03	118
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.04	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	29.5
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	6.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.62
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.09
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.27

3.13. Architectural Coating (2026) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	1.44	0.01	—	0.01	0.01	—	0.01	294
Architectural Coatings	45.8	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.09	< 0.005	—	< 0.005	< 0.005	—	< 0.005	17.9
Architectural Coatings	2.78	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	< 0.005	—	< 0.005	< 0.005	—	< 0.005	2.96
Architectural Coatings	0.51	—	—	—	—	—	—	—	—
Onsite truck	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	0.14	0.14	0.00	0.43	0.43	0.00	0.10	0.10	407
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.03	0.03	0.00	0.01	0.01	24.9
Vendor	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
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	4.13
Vendor	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

3.14. Architectural Coating (2026) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	2.27	0.06	—	0.06	0.06	—	0.06	294
Architectural Coatings	45.8	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	< 0.005	—	< 0.005	< 0.005	—	< 0.005	17.9
Architectural Coatings	2.78	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	2.96
Architectural Coatings	0.51	—	—	—	—	—	—	—	—
Onsite truck	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	0.14	0.14	0.00	0.43	0.43	0.00	0.10	0.10	407
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.03	0.03	0.00	0.01	0.01	24.9
Vendor	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
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	4.13
Vendor	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

3.15. Architectural Coating (2027) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	1.43	0.01	—	0.01	0.01	—	0.01	294

Architectural Coatings	45.8	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	1.43	0.01	—	0.01	0.01	—	0.01	294
Architectural Coatings	45.8	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.27	< 0.005	—	< 0.005	< 0.005	—	< 0.005	54.7
Architectural Coatings	8.51	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.05	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.06
Architectural Coatings	1.55	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.14	0.11	0.00	0.43	0.43	0.00	0.10	0.10	432
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.14	0.13	0.00	0.43	0.43	0.00	0.10	0.10	399
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.00	0.08	0.08	0.00	0.02	0.02	75.1
Vendor	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
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	12.4
Vendor	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

3.16. Architectural Coating (2027) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	2.27	0.06	—	0.06	0.06	—	0.06	294
Architectural Coatings	45.8	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	2.27	0.06	—	0.06	0.06	—	0.06	294
Architectural Coatings	45.8	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.42	0.01	—	0.01	0.01	—	0.01	54.7
Architectural Coatings	8.51	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.08	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.06
Architectural Coatings	1.55	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.14	0.11	0.00	0.43	0.43	0.00	0.10	0.10	432
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.14	0.13	0.00	0.43	0.43	0.00	0.10	0.10	399
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.00	0.08	0.08	0.00	0.02	0.02	75.1
Vendor	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
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	12.4
Vendor	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

3.17. Trenching (2025) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	2.20	0.08	—	0.08	0.08	—	0.08	583
Onsite truck	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	0.40	0.02	—	0.02	0.01	—	0.01	105
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	17.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.04	0.04	0.00	0.01	0.01	40.2
Vendor	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	7.52
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.33
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.35

Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.21
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.22

3.18. Trenching (2025) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	2.36	0.01	—	0.01	0.01	—	0.01	583
Onsite truck	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	0.42	< 0.005	—	< 0.005	< 0.005	—	< 0.005	105
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.08	< 0.005	—	< 0.005	< 0.005	—	< 0.005	17.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.04	0.04	0.00	0.01	0.01	40.2
Vendor	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	7.52
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.33
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.35
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.21
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.22

3.19. Trenching (2026) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	2.07	0.07	—	0.07	0.06	—	0.06	583
Onsite truck	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	0.36	0.01	—	0.01	0.01	—	0.01	101
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	16.8
Onsite truck	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	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	39.5
Vendor	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	7.37
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	6.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.28
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.15
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.21

3.20. Trenching (2026) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	2.36	0.01	—	0.01	0.01	—	0.01	583
Onsite truck	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	0.41	< 0.005	—	< 0.005	< 0.005	—	< 0.005	101
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	16.8
Onsite truck	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	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	39.5
Vendor	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	7.37
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	6.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.28
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.15
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.21

4. Operations Emissions Details

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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	1/27/2025	4/25/2025	5.00	65.0	—
Site Preparation	Site Preparation	4/28/2025	7/30/2025	5.00	68.0	—
Grading	Grading	8/1/2025	9/30/2025	5.00	43.0	—
Building Construction	Building Construction	4/1/2026	3/30/2027	5.00	260	—
Paving	Paving	2/25/2026	3/24/2026	5.00	20.0	—
Architectural Coating	Architectural Coating	12/1/2026	4/5/2027	5.00	90.0	—
Trenching	Trenching	10/1/2025	3/30/2026	5.00	129	—

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	Skid Steer Loaders	Diesel	Tier 4 Interim	2.00	8.00	71.0	0.37
Demolition	Excavators	Diesel	Tier 4 Interim	2.00	8.00	359	0.38
Site Preparation	Excavators	Diesel	Tier 4 Interim	1.00	8.00	359	0.38
Site Preparation	Skid Steer Loaders	Diesel	Tier 4 Interim	2.00	8.00	71.0	0.37
Grading	Graders	Diesel	Average	1.00	8.37	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.37	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.37	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	6.77	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.77	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	6.15	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	2.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	2.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	2.00	36.0	0.38
Architectural Coating	Aerial Lifts	Diesel	Average	3.00	5.30	46.0	0.31
Trenching	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Skid Steer Loaders	Diesel	Tier 4 Interim	2.00	8.00	71.0	0.37
Demolition	Excavators	Diesel	Tier 4 Interim	2.00	8.00	359	0.38
Site Preparation	Excavators	Diesel	Tier 4 Interim	1.00	8.00	359	0.38

Site Preparation	Skid Steer Loaders	Diesel	Tier 4 Interim	2.00	8.00	71.0	0.37
Grading	Graders	Diesel	Tier 4 Interim	1.00	8.37	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	8.37	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	8.37	84.0	0.37
Building Construction	Cranes	Diesel	Tier 4 Interim	1.00	6.77	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Interim	2.00	6.77	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	3.00	6.15	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Tier 4 Interim	1.00	2.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Interim	2.00	2.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Interim	1.00	2.00	36.0	0.38
Architectural Coating	Aerial Lifts	Diesel	Tier 4 Interim	3.00	5.30	46.0	0.31
Trenching	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	8.00	84.0	0.37

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	10.0	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	18.8	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	11.7	LDA,LDT1,LDT2

Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	5.81	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	257	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	51.0	8.40	HHDT,MHDT
Building Construction	Hauling	0.95	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	0.40	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	51.5	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	5.00	11.7	LDA,LDT1,LDT2
Trenching	Vendor	—	8.40	HHDT,MHDT
Trenching	Hauling	0.10	20.0	HHDT

Trenching	Onsite truck	—	—	HHDT
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5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	18.8	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	5.81	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	257	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	51.0	8.40	HHDT,MHDT
Building Construction	Hauling	0.95	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT

Paving	Hauling	0.40	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	51.5	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	5.00	11.7	LDA,LDT1,LDT2
Trenching	Vendor	—	8.40	HHDT,MHDT
Trenching	Hauling	0.10	20.0	HHDT
Trenching	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	592,211	197,404	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	500	—

Site Preparation	—	—	0.00	0.00	—
Grading	—	2,000	45.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Unenclosed Parking with Elevator	0.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	387	0.03	< 0.005
2026	0.00	387	0.03	< 0.005
2027	0.00	387	0.03	< 0.005

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
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5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

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

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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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	12.2	annual days of extreme heat

Extreme Precipitation	2.50	annual days with precipitation above 20 mm
Sea Level Rise	0.00	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 ¾ 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	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	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	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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	16.8
AQ-PM	19.6
AQ-DPM	73.9
Drinking Water	50.2
Lead Risk Housing	12.0
Pesticides	0.00

Toxic Releases	38.1
Traffic	88.8
Effect Indicators	—
CleanUp Sites	99.3
Groundwater	93.5
Haz Waste Facilities/Generators	96.1
Impaired Water Bodies	43.8
Solid Waste	75.7
Sensitive Population	—
Asthma	17.8
Cardio-vascular	31.2
Low Birth Weights	62.9
Socioeconomic Factor Indicators	—
Education	26.9
Housing	25.3
Linguistic	48.7
Poverty	14.7
Unemployment	45.8

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	68.7925061
Employed	79.36609778
Median HI	89.15693571
Education	—

Bachelor's or higher	88.31002181
High school enrollment	100
Preschool enrollment	64.42961632
Transportation	—
Auto Access	56.16578981
Active commuting	48.06877967
Social	—
2-parent households	36.23764917
Voting	66.09778006
Neighborhood	—
Alcohol availability	46.61876043
Park access	62.01719492
Retail density	89.61888875
Supermarket access	23.44411651
Tree canopy	61.86321057
Housing	—
Homeownership	33.00397793
Housing habitability	71.61555242
Low-inc homeowner severe housing cost burden	73.55318876
Low-inc renter severe housing cost burden	86.48787373
Uncrowded housing	43.11561658
Health Outcomes	—
Insured adults	78.54484794
Arthritis	97.3
Asthma ER Admissions	87.5
High Blood Pressure	94.2
Cancer (excluding skin)	87.6

Asthma	98.2
Coronary Heart Disease	97.8
Chronic Obstructive Pulmonary Disease	98.8
Diagnosed Diabetes	93.4
Life Expectancy at Birth	91.5
Cognitively Disabled	94.6
Physically Disabled	87.9
Heart Attack ER Admissions	63.3
Mental Health Not Good	95.0
Chronic Kidney Disease	97.1
Obesity	97.1
Pedestrian Injuries	39.7
Physical Health Not Good	97.7
Stroke	97.8
Health Risk Behaviors	—
Binge Drinking	73.8
Current Smoker	92.2
No Leisure Time for Physical Activity	82.1
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	13.7
Children	14.8
Elderly	73.9
English Speaking	66.5
Foreign-born	91.6
Outdoor Workers	78.1
Climate Change Adaptive Capacity	—

Impervious Surface Cover	26.4
Traffic Density	75.6
Traffic Access	56.3
Other Indices	—
Hardship	22.1
Other Decision Support	—
2016 Voting	71.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	44.0
Healthy Places Index Score for Project Location (b)	81.0
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
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Land Use	Total lot acreage, square footages (combined office/commercial sf with residential) and total number of parking spaces/units provided by filled out construction worksheet.
Construction: Construction Phases	Construction schedule provided by construction applicant.
Construction: Off-Road Equipment	Provided by construction worksheet filled out by applicant.
Construction: Trips and VMT	Demolition = 5,000 tons of pavement demo'd/hailed (16.67 trips/day), Trenching = 10 concrete trucks (0.1 trips/day), Building Const = 105 concrete truck round trips (0.95 trips/day), Paving = 4 asphalt truck round trips (0.4 trips/day).
Construction: On-Road Fugitive Dust	Air District BMPs required by Santa Clara - 15 mph.

23-096 4590 Patrick Henry Drive, Santa Clara T4i BMPs HRA 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

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

3.2. Demolition (2025) - Mitigated

3.3. Site Preparation (2025) - Unmitigated

3.4. Site Preparation (2025) - Mitigated

3.5. Grading (2025) - Unmitigated

3.6. Grading (2025) - Mitigated

3.7. Building Construction (2026) - Unmitigated

3.8. Building Construction (2026) - Mitigated

3.9. Building Construction (2027) - Unmitigated

3.10. Building Construction (2027) - Mitigated

3.11. Paving (2026) - Unmitigated

3.12. Paving (2026) - Mitigated

3.13. Architectural Coating (2026) - Unmitigated

3.14. Architectural Coating (2026) - Mitigated

3.15. Architectural Coating (2027) - Unmitigated

3.16. Architectural Coating (2027) - Mitigated

3.17. Trenching (2025) - Unmitigated

3.18. Trenching (2025) - Mitigated

3.19. Trenching (2026) - Unmitigated

3.20. Trenching (2026) - Mitigated

4. Operations Emissions Details

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

5.18. 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	23-096 4590 Patrick Henry Drive, Santa Clara T4i BMPs HRA
Construction Start Date	1/27/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	32.8
Location	4590 Patrick Henry Dr, Santa Clara, CA 95054, USA
County	Santa Clara
City	Santa Clara
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	6705
EDFZ	1
Electric Utility	Silicon Valley Power
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.20

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
Apartments Mid Rise	284	Dwelling Unit	2.79	292,450	0.00	—	849	—

Unenclosed Parking with Elevator	327	Space	0.00	126,000	0.00	—	—	—
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1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Unmit.	46.0	15.1	0.68	2.90	3.58	0.63	1.40	2.03	3,109
Mit.	45.9	9.05	0.15	2.90	2.95	0.14	1.40	1.45	3,109
% Reduced	< 0.5%	40%	78%	—	18%	78%	—	29%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	47.3	9.07	0.27	0.18	0.40	0.24	0.03	0.28	3,109
Mit.	46.9	9.07	0.15	0.18	0.33	0.14	0.03	0.17	3,109
% Reduced	1%	—	43%	—	17%	42%	—	39%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	8.77	4.84	0.15	0.37	0.52	0.14	0.17	0.31	1,304
Mit.	8.69	4.20	0.06	0.37	0.43	0.05	0.17	0.22	1,304
% Reduced	1%	13%	62%	—	17%	61%	—	26%	—
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	1.60	0.88	0.03	0.07	0.09	0.03	0.03	0.06	216

Mit.	1.59	0.77	0.01	0.07	0.08	0.01	0.03	0.04	216
% Reduced	1%	13%	62%	—	17%	61%	—	26%	—

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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2025	1.64	15.1	0.68	2.90	3.58	0.63	1.40	2.03	3,109
2026	1.38	7.19	0.26	0.11	0.37	0.24	0.03	0.26	2,053
2027	46.0	1.47	0.01	0.02	0.03	0.01	< 0.005	0.01	322
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2025	0.41	9.07	0.15	0.18	0.33	0.14	0.03	0.17	3,109
2026	47.3	8.74	0.27	0.13	0.40	0.24	0.03	0.28	2,372
2027	47.3	8.37	0.24	0.13	0.37	0.22	0.03	0.25	2,364
Average Daily	—	—	—	—	—	—	—	—	—
2025	0.35	4.84	0.15	0.37	0.52	0.14	0.17	0.31	1,304
2026	3.56	4.44	0.15	0.06	0.22	0.14	0.01	0.16	1,243
2027	8.77	1.47	0.04	0.02	0.06	0.04	0.01	0.04	415
Annual	—	—	—	—	—	—	—	—	—
2025	0.06	0.88	0.03	0.07	0.09	0.02	0.03	0.06	216
2026	0.65	0.81	0.03	0.01	0.04	0.03	< 0.005	0.03	206
2027	1.60	0.27	0.01	< 0.005	0.01	0.01	< 0.005	0.01	68.8

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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2025	0.41	9.05	0.15	2.90	2.95	0.14	1.40	1.45	3,109
2026	0.95	6.57	0.03	0.11	0.15	0.03	0.03	0.06	2,053
2027	45.9	2.31	0.06	0.02	0.08	0.06	< 0.005	0.06	322
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2025	0.41	9.07	0.15	0.18	0.33	0.14	0.03	0.17	3,109
2026	46.9	8.95	0.10	0.13	0.23	0.09	0.03	0.13	2,372
2027	46.8	8.92	0.10	0.13	0.23	0.09	0.03	0.13	2,364
Average Daily	—	—	—	—	—	—	—	—	—
2025	0.18	4.09	0.06	0.37	0.43	0.05	0.17	0.22	1,304
2026	3.30	4.20	0.03	0.06	0.09	0.03	0.01	0.04	1,243
2027	8.69	1.58	0.02	0.02	0.04	0.02	0.01	0.02	415
Annual	—	—	—	—	—	—	—	—	—
2025	0.03	0.75	0.01	0.07	0.08	0.01	0.03	0.04	216
2026	0.60	0.77	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	206
2027	1.59	0.29	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	68.8

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.37	8.75	0.15	—	0.15	0.14	—	0.14	3,036
Demolition	—	—	—	0.17	0.17	—	0.03	0.03	—
Onsite truck	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	8.75	0.15	—	0.15	0.14	—	0.14	3,036
Demolition	—	—	—	0.17	0.17	—	0.03	0.03	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	1.56	0.03	—	0.03	0.03	—	0.03	541
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
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.28	< 0.005	—	< 0.005	< 0.005	—	< 0.005	89.5
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
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	5.58
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.30	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	67.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	5.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.31	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	67.9

Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	12.0
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.16
Vendor	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	1.99

3.2. Demolition (2025) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	8.75	0.15	—	0.15	0.14	—	0.14	3,036
Demolition	—	—	—	0.17	0.17	—	0.03	0.03	—
Onsite truck	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	8.75	0.15	—	0.15	0.14	—	0.14	3,036
Demolition	—	—	—	0.17	0.17	—	0.03	0.03	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	1.56	0.03	—	0.03	0.03	—	0.03	541
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

Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.28	< 0.005	—	< 0.005	< 0.005	—	< 0.005	89.5
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
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	5.58
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.30	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	67.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	5.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.31	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	67.9
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	12.0
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.16
Vendor	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	1.99

3.3. Site Preparation (2025) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	5.64	0.13	—	0.13	0.12	—	0.12	1,764
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.05	0.02	—	0.02	0.02	—	0.02	329
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	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	< 0.005	—	< 0.005	< 0.005	—	< 0.005	54.4
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	4.19
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.75
Vendor	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
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.12
Vendor	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

3.4. Site Preparation (2025) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	5.64	0.13	—	0.13	0.12	—	0.12	1,764
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.05	0.02	—	0.02	0.02	—	0.02	329
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	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	< 0.005	—	< 0.005	< 0.005	—	< 0.005	54.4
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	4.19
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.75
Vendor	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
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.12
Vendor	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

3.5. Grading (2025) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.61	15.0	0.68	—	0.68	0.63	—	0.63	2,653
Dust From Material Movement	—	—	—	2.89	2.89	—	1.40	1.40	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.19	1.77	0.08	—	0.08	0.07	—	0.07	313
Dust From Material Movement	—	—	—	0.34	0.34	—	0.16	0.16	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.32	0.01	—	0.01	0.01	—	0.01	51.7
Dust From Material Movement	—	—	—	0.06	0.06	—	0.03	0.03	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	5.58
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.09	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	20.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.63
Vendor	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	2.47
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.10
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.41

3.6. Grading (2025) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	8.37	0.05	—	0.05	0.05	—	0.05	2,653
Dust From Material Movement	—	—	—	2.89	2.89	—	1.40	1.40	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.99	0.01	—	0.01	0.01	—	0.01	313
Dust From Material Movement	—	—	—	0.34	0.34	—	0.16	0.16	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.18	< 0.005	—	< 0.005	< 0.005	—	< 0.005	51.7
Dust From Material Movement	—	—	—	0.06	0.06	—	0.03	0.03	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	5.58
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.09	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	20.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.63
Vendor	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	2.47
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.10
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.41

3.7. Building Construction (2026) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	6.45	0.25	—	0.25	0.23	—	0.23	1,772
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	6.45	0.25	—	0.25	0.23	—	0.23	1,772
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	3.47	0.14	—	0.14	0.13	—	0.13	953
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.63	0.02	—	0.02	0.02	—	0.02	158
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.69	0.16	0.00	0.09	0.09	0.00	0.02	0.02	141
Vendor	0.02	0.57	< 0.005	0.02	0.02	< 0.005	0.01	0.01	137
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.35
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.66	0.20	0.00	0.09	0.09	0.00	0.02	0.02	137
Vendor	0.02	0.59	< 0.005	0.02	0.02	< 0.005	0.01	0.01	138
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.38
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.35	0.10	0.00	0.05	0.05	0.00	0.01	0.01	73.1
Vendor	0.01	0.31	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	73.8
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.81
Annual	—	—	—	—	—	—	—	—	—
Worker	0.06	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	12.1
Vendor	< 0.005	0.06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	12.2
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.30

3.8. Building Construction (2026) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.82	0.03	—	0.03	0.03	—	0.03	1,772
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.82	0.03	—	0.03	0.03	—	0.03	1,772
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	3.13	0.02	—	0.02	0.02	—	0.02	953
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.57	< 0.005	—	< 0.005	< 0.005	—	< 0.005	158
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.69	0.16	0.00	0.09	0.09	0.00	0.02	0.02	141
Vendor	0.02	0.57	< 0.005	0.02	0.02	< 0.005	0.01	0.01	137
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.35
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.66	0.20	0.00	0.09	0.09	0.00	0.02	0.02	137
Vendor	0.02	0.59	< 0.005	0.02	0.02	< 0.005	0.01	0.01	138
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.38
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.35	0.10	0.00	0.05	0.05	0.00	0.01	0.01	73.1
Vendor	0.01	0.31	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	73.8
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.81
Annual	—	—	—	—	—	—	—	—	—
Worker	0.06	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	12.1
Vendor	< 0.005	0.06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	12.2

Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.30
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3.9. Building Construction (2027) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	6.11	0.23	—	0.23	0.21	—	0.21	1,771
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.07	0.04	—	0.04	0.04	—	0.04	309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.19	0.01	—	0.01	0.01	—	0.01	51.1
Onsite truck	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	0.63	0.19	0.00	0.09	0.09	0.00	0.02	0.02	133
Vendor	0.02	0.58	< 0.005	0.02	0.02	< 0.005	0.01	0.01	135
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.31
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.11	0.03	0.00	0.02	0.02	0.00	< 0.005	< 0.005	23.2

Vendor	< 0.005	0.10	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	23.5
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.57
Annual	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	3.84
Vendor	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.89
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.10

3.10. Building Construction (2027) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.82	0.03	—	0.03	0.03	—	0.03	1,771
Onsite truck	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	1.01	0.01	—	0.01	0.01	—	0.01	309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.18	< 0.005	—	< 0.005	< 0.005	—	< 0.005	51.1
Onsite truck	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	0.63	0.19	0.00	0.09	0.09	0.00	0.02	0.02	133
Vendor	0.02	0.58	< 0.005	0.02	0.02	< 0.005	0.01	0.01	135
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.31
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.11	0.03	0.00	0.02	0.02	0.00	< 0.005	< 0.005	23.2
Vendor	< 0.005	0.10	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	23.5
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.57
Annual	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	3.84
Vendor	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.89
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.10

3.11. Paving (2026) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	1.80	0.08	—	0.08	0.07	—	0.07	349
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	< 0.005	—	< 0.005	< 0.005	—	< 0.005	19.1
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	< 0.005	—	< 0.005	< 0.005	—	< 0.005	3.17
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.04	0.01	0.00	0.01	0.01	0.00	< 0.005	< 0.005	8.00
Vendor	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	1.42
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.08
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01

3.12. Paving (2026) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.12	1.83	0.04	—	0.04	0.03	—	0.03	349
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	< 0.005	—	< 0.005	< 0.005	—	< 0.005	19.1
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	< 0.005	—	< 0.005	< 0.005	—	< 0.005	3.17
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.04	0.01	0.00	0.01	0.01	0.00	< 0.005	< 0.005	8.00
Vendor	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	1.42
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.08
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01

3.13. Architectural Coating (2026) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	1.44	0.01	—	0.01	0.01	—	0.01	294
Architectural Coatings	45.8	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.09	< 0.005	—	< 0.005	< 0.005	—	< 0.005	17.9
Architectural Coatings	2.78	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	< 0.005	—	< 0.005	< 0.005	—	< 0.005	2.96
Architectural Coatings	0.51	—	—	—	—	—	—	—	—
Onsite truck	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	0.13	0.04	0.00	0.02	0.02	0.00	< 0.005	< 0.005	27.5
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.65
Vendor	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
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.27
Vendor	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

3.14. Architectural Coating (2026) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	2.27	0.06	—	0.06	0.06	—	0.06	294
Architectural Coatings	45.8	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.14	< 0.005	—	< 0.005	< 0.005	—	< 0.005	17.9
Architectural Coatings	2.78	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	2.96
Architectural Coatings	0.51	—	—	—	—	—	—	—	—
Onsite truck	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	0.13	0.04	0.00	0.02	0.02	0.00	< 0.005	< 0.005	27.5
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.65
Vendor	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
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.27
Vendor	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

3.15. Architectural Coating (2027) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	1.43	0.01	—	0.01	0.01	—	0.01	294

Architectural Coatings	45.8	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	1.43	0.01	—	0.01	0.01	—	0.01	294
Architectural Coatings	45.8	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.27	< 0.005	—	< 0.005	< 0.005	—	< 0.005	54.7
Architectural Coatings	8.51	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.05	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.06
Architectural Coatings	1.55	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.13	0.03	0.00	0.02	0.02	0.00	< 0.005	< 0.005	27.7
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.13	0.04	0.00	0.02	0.02	0.00	< 0.005	< 0.005	26.6
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	4.95
Vendor	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
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.82
Vendor	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

3.16. Architectural Coating (2027) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	2.27	0.06	—	0.06	0.06	—	0.06	294
Architectural Coatings	45.8	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	2.27	0.06	—	0.06	0.06	—	0.06	294
Architectural Coatings	45.8	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.42	0.01	—	0.01	0.01	—	0.01	54.7
Architectural Coatings	8.51	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.08	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.06
Architectural Coatings	1.55	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.13	0.03	0.00	0.02	0.02	0.00	< 0.005	< 0.005	27.7
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.13	0.04	0.00	0.02	0.02	0.00	< 0.005	< 0.005	26.6
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	4.95
Vendor	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
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.82
Vendor	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

3.17. Trenching (2025) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	2.20	0.08	—	0.08	0.08	—	0.08	583
Onsite truck	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	0.40	0.02	—	0.02	0.01	—	0.01	105
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	17.4
Onsite truck	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	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.36
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06

Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.08
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01

3.18. Trenching (2025) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	2.36	0.01	—	0.01	0.01	—	0.01	583
Onsite truck	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	0.42	< 0.005	—	< 0.005	< 0.005	—	< 0.005	105
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.08	< 0.005	—	< 0.005	< 0.005	—	< 0.005	17.4
Onsite truck	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	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.36
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.08
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01

3.19. Trenching (2026) - Unmitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	2.07	0.07	—	0.07	0.06	—	0.06	583
Onsite truck	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	0.36	0.01	—	0.01	0.01	—	0.01	101
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	16.8
Onsite truck	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	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.67
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.36
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.46
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.08
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01

3.20. Trenching (2026) - Mitigated

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

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	2.36	0.01	—	0.01	0.01	—	0.01	583
Onsite truck	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	0.41	< 0.005	—	< 0.005	< 0.005	—	< 0.005	101
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	16.8
Onsite truck	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	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.67
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.36
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.46
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.08
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01

4. Operations Emissions Details

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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	1/27/2025	4/25/2025	5.00	65.0	—
Site Preparation	Site Preparation	4/28/2025	7/30/2025	5.00	68.0	—
Grading	Grading	8/1/2025	9/30/2025	5.00	43.0	—
Building Construction	Building Construction	4/1/2026	3/30/2027	5.00	260	—
Paving	Paving	2/25/2026	3/24/2026	5.00	20.0	—
Architectural Coating	Architectural Coating	12/1/2026	4/5/2027	5.00	90.0	—
Trenching	Trenching	10/1/2025	3/30/2026	5.00	129	—

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	Skid Steer Loaders	Diesel	Tier 4 Interim	2.00	8.00	71.0	0.37
Demolition	Excavators	Diesel	Tier 4 Interim	2.00	8.00	359	0.38
Site Preparation	Excavators	Diesel	Tier 4 Interim	1.00	8.00	359	0.38
Site Preparation	Skid Steer Loaders	Diesel	Tier 4 Interim	2.00	8.00	71.0	0.37
Grading	Graders	Diesel	Average	1.00	8.37	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.37	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.37	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	6.77	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.77	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	6.15	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	2.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	2.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	2.00	36.0	0.38
Architectural Coating	Aerial Lifts	Diesel	Average	3.00	5.30	46.0	0.31
Trenching	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Skid Steer Loaders	Diesel	Tier 4 Interim	2.00	8.00	71.0	0.37
Demolition	Excavators	Diesel	Tier 4 Interim	2.00	8.00	359	0.38
Site Preparation	Excavators	Diesel	Tier 4 Interim	1.00	8.00	359	0.38

Site Preparation	Skid Steer Loaders	Diesel	Tier 4 Interim	2.00	8.00	71.0	0.37
Grading	Graders	Diesel	Tier 4 Interim	1.00	8.37	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	8.37	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	8.37	84.0	0.37
Building Construction	Cranes	Diesel	Tier 4 Interim	1.00	6.77	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Interim	2.00	6.77	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	3.00	6.15	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Tier 4 Interim	1.00	2.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Interim	2.00	2.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Interim	1.00	2.00	36.0	0.38
Architectural Coating	Aerial Lifts	Diesel	Tier 4 Interim	3.00	5.30	46.0	0.31
Trenching	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	8.00	84.0	0.37

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	10.0	0.50	LDA,LDT1,LDT2
Demolition	Vendor	—	0.50	HHDT,MHDT
Demolition	Hauling	18.8	0.50	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	0.50	LDA,LDT1,LDT2

Site Preparation	Vendor	—	0.50	HHDT,MHDT
Site Preparation	Hauling	0.00	0.50	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	0.50	LDA,LDT1,LDT2
Grading	Vendor	—	0.50	HHDT,MHDT
Grading	Hauling	5.81	0.50	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	257	0.50	LDA,LDT1,LDT2
Building Construction	Vendor	51.0	0.50	HHDT,MHDT
Building Construction	Hauling	0.95	0.50	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	0.50	LDA,LDT1,LDT2
Paving	Vendor	—	0.50	HHDT,MHDT
Paving	Hauling	0.40	0.50	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	51.5	0.50	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	0.50	HHDT,MHDT
Architectural Coating	Hauling	0.00	0.50	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	5.00	0.50	LDA,LDT1,LDT2
Trenching	Vendor	—	0.50	HHDT,MHDT
Trenching	Hauling	0.10	0.50	HHDT

Trenching	Onsite truck	—	—	HHDT
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5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	0.50	LDA,LDT1,LDT2
Demolition	Vendor	—	0.50	HHDT,MHDT
Demolition	Hauling	18.8	0.50	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	0.50	LDA,LDT1,LDT2
Site Preparation	Vendor	—	0.50	HHDT,MHDT
Site Preparation	Hauling	0.00	0.50	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	0.50	LDA,LDT1,LDT2
Grading	Vendor	—	0.50	HHDT,MHDT
Grading	Hauling	5.81	0.50	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	257	0.50	LDA,LDT1,LDT2
Building Construction	Vendor	51.0	0.50	HHDT,MHDT
Building Construction	Hauling	0.95	0.50	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	0.50	LDA,LDT1,LDT2
Paving	Vendor	—	0.50	HHDT,MHDT

Paving	Hauling	0.40	0.50	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	51.5	0.50	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	0.50	HHDT,MHDT
Architectural Coating	Hauling	0.00	0.50	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	5.00	0.50	LDA,LDT1,LDT2
Trenching	Vendor	—	0.50	HHDT,MHDT
Trenching	Hauling	0.10	0.50	HHDT
Trenching	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	592,211	197,404	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	500	—

Site Preparation	—	—	0.00	0.00	—
Grading	—	2,000	45.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Unenclosed Parking with Elevator	0.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	387	0.03	< 0.005
2026	0.00	387	0.03	< 0.005
2027	0.00	387	0.03	< 0.005

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
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5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

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

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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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	12.2	annual days of extreme heat

Extreme Precipitation	2.50	annual days with precipitation above 20 mm
Sea Level Rise	0.00	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	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	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	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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	16.8
AQ-PM	19.6
AQ-DPM	73.9
Drinking Water	50.2
Lead Risk Housing	12.0
Pesticides	0.00

Toxic Releases	38.1
Traffic	88.8
Effect Indicators	—
CleanUp Sites	99.3
Groundwater	93.5
Haz Waste Facilities/Generators	96.1
Impaired Water Bodies	43.8
Solid Waste	75.7
Sensitive Population	—
Asthma	17.8
Cardio-vascular	31.2
Low Birth Weights	62.9
Socioeconomic Factor Indicators	—
Education	26.9
Housing	25.3
Linguistic	48.7
Poverty	14.7
Unemployment	45.8

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	68.7925061
Employed	79.36609778
Median HI	89.15693571
Education	—

Bachelor's or higher	88.31002181
High school enrollment	100
Preschool enrollment	64.42961632
Transportation	—
Auto Access	56.16578981
Active commuting	48.06877967
Social	—
2-parent households	36.23764917
Voting	66.09778006
Neighborhood	—
Alcohol availability	46.61876043
Park access	62.01719492
Retail density	89.61888875
Supermarket access	23.44411651
Tree canopy	61.86321057
Housing	—
Homeownership	33.00397793
Housing habitability	71.61555242
Low-inc homeowner severe housing cost burden	73.55318876
Low-inc renter severe housing cost burden	86.48787373
Uncrowded housing	43.11561658
Health Outcomes	—
Insured adults	78.54484794
Arthritis	97.3
Asthma ER Admissions	87.5
High Blood Pressure	94.2
Cancer (excluding skin)	87.6

Asthma	98.2
Coronary Heart Disease	97.8
Chronic Obstructive Pulmonary Disease	98.8
Diagnosed Diabetes	93.4
Life Expectancy at Birth	91.5
Cognitively Disabled	94.6
Physically Disabled	87.9
Heart Attack ER Admissions	63.3
Mental Health Not Good	95.0
Chronic Kidney Disease	97.1
Obesity	97.1
Pedestrian Injuries	39.7
Physical Health Not Good	97.7
Stroke	97.8
Health Risk Behaviors	—
Binge Drinking	73.8
Current Smoker	92.2
No Leisure Time for Physical Activity	82.1
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	13.7
Children	14.8
Elderly	73.9
English Speaking	66.5
Foreign-born	91.6
Outdoor Workers	78.1
Climate Change Adaptive Capacity	—

Impervious Surface Cover	26.4
Traffic Density	75.6
Traffic Access	56.3
Other Indices	—
Hardship	22.1
Other Decision Support	—
2016 Voting	71.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	44.0
Healthy Places Index Score for Project Location (b)	81.0
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
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Land Use	Total lot acreage, square footages (combined office/commercial sf with residential) and total number of parking spaces/units provided by filled out construction worksheet.
Construction: Construction Phases	Construction schedule provided by construction applicant.
Construction: Off-Road Equipment	Provided by construction worksheet filled out by applicant.
Construction: Trips and VMT	Demolition = 5,000 tons of pavement demo'd/hailed (16.67 trips/day), Trenching = 10 concrete trucks (0.1 trips/day), Building Const = 105 concrete truck round trips (0.95 trips/day), Paving = 4 asphalt truck round trips (0.4 trips/day). HRA = 0.5 mile trip length for localized emissions.
Construction: On-Road Fugitive Dust	Air District BMPs required by Santa Clara - 15 mph.

Attachment 2: Project Construction Emissions and Health Risk Calculations

Construction Health Risk Assessment and Calculations

4590 Patrick Henry Drive, Santa Clara, CA

DPM Emissions and Modeling Emission Rates - Unmitigated

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions			Modeled Area (m ²)	DPM Emission Rate (g/s/m ²)
				(lb/yr)	(lb/hr)	(g/s)		
2025	Construction	0.0267	CON_DPM	53.4	0.01462	1.84E-03	8,435	2.18E-07
2026	Construction	0.0282	CON_DPM	56.4	0.01545	1.95E-03	8,435	2.31E-07
2027	Construction	0.0076	CON_DPM	15.3	0.00418	5.27E-04	8,435	6.24E-08
Total		0.0625		125.0	0.0342	0.0043		

Construction Hours

hr/day = 10 (7am - 5pm)
 days/yr = 365
 hours/year = 3650

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions			Modeled Area (m ²)	DPM Emission Rate (g/s/m ²)
				(lb/yr)	(lb/hr)	(g/s)		
2025	Construction	0.0106	CON_DPM	21.2	0.00582	7.33E-04	8,435	8.69E-08
2026	Construction	0.0048	CON_DPM	9.7	0.00264	3.33E-04	8,435	3.95E-08
2027	Construction	0.0033	CON_DPM	6.6	0.00181	2.28E-04	8,435	2.70E-08
Total		0.0187		37.5	0.0103	0.0013		

Construction Hours

hr/day = 10 (7am - 5pm)
 days/yr = 365
 hours/year = 3650

4590 Patrick Henry Drive, Santa Clara, CA

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction		Area	PM2.5 Emissions				Modeled Area	PM2.5 Emission Rate
Year	Activity	Source	(ton/year)	(lb/yr)	(lb/hr)	(g/s)	(m ²)	g/s/m ²
2025	Construction	CON_FUG	0.0310	62.1	0.01701	2.14E-03	8,435	2.54E-07
2026	Construction	CON_FUG	0.0027	5.4	0.00148	1.86E-04	8,435	2.21E-08
2027	Construction	CON_FUG	0.0010	2.0	0.00054	6.85E-05	8,435	8.12E-09
Total			0.0347	69.5	0.0190	0.0024		

Construction Hours

hr/day = 10 (7am - 5pm)
 days/yr = 365
 hours/year = 3650

PM2.5 Fugitive Dust Construction Emissions for Modeling - With Mitigation

Construction		Area	PM2.5 Emissions				Modeled Area	PM2.5 Emission Rate
Year	Activity	Source	(ton/year)	(lb/yr)	(lb/hr)	(g/s)	(m ²)	g/s/m ²
2025	Construction	CON_FUG	0.0310	62.1	0.01701	2.14E-03	8,435	2.54E-07
2026	Construction	CON_FUG	0.0027	5.4	0.00148	1.86E-04	8,435	2.21E-08
2027	Construction	CON_FUG	0.0010	2.0	0.00054	6.85E-05	8,435	8.12E-09
Total			0.0347	69.5	0.0190	0.0024		

Construction Hours

hr/day = 10 (7am - 5pm)
 days/yr = 365
 hours/year = 3650

4590 Patrick Henry Drive, Santa Clara, CA - Construction Health Impact Summary

Maximum Impacts at MEI Residential Location - Without Mitigation

Emissions Year	Maximum Concentrations		Cancer Risk (per million)		Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu\text{g}/\text{m}^3$)
	Exhaust PM10/DPM ($\mu\text{g}/\text{m}^3$)	Fugitive PM2.5 ($\mu\text{g}/\text{m}^3$)	Infant/Child	Adult		
	2025	0.0077	0.0099	1.36	0.02	0.002
2026	0.0081	0.0009	1.34	0.02	0.002	0.01
2027	0.0022	0.0003	0.06	0.01	0.0004	0.003
Total	-	-	2.76	0.05	-	-
Maximum	0.0081	0.0099	-	-	0.002	0.02

Maximum Impacts at Fairwood Explorer Elementary School - Without Mitigation

Construction Year	Unmitigated Emissions				
	Maximum Concentrations		Child Cancer Risk (per million)	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu\text{g}/\text{m}^3$)
	Exhaust PM10/DPM ($\mu\text{g}/\text{m}^3$)	Fugitive PM2.5 ($\mu\text{g}/\text{m}^3$)			
2025	0.0004	0.0004	0.03	0.0001	0.001
2026	0.0004	0.00004	0.03	0.0001	0.0005
2027	0.0001	0.00001	0.01	0.00002	0.0001
Total	-	-	0.06	-	-
Maximum	0.0004	0.0004	-	0.0001	0.0008

**4590 Patrick Henry Drive, Santa Clara, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 1.5 meter receptor height (1st Floor Level)**

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹
 ASF = Age sensitivity factor for specified age group
 ED = Exposure duration (years)
 AT = Averaging time for lifetime cancer risk (years)
 FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10⁻⁶

Where: C_{air} = concentration in air (µg/m³)
 DBR = daily breathing rate (L/kg body weight-day)
 A = Inhalation absorption factor
 EF = Exposure frequency (days/year)
 10⁻⁶ = Conversion factor

Values

Age -> Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information		Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	Adult - Exposure Information		Age Sensitivity Factor	Adult Cancer Risk (per million)	Maximum					
			DPM Conc (ug/m3)				Modeled				DPM Conc (ug/m3)	Sensitivity	DPM Conc (ug/m3)	Sensitivity	DPM Conc (ug/m3)	Sensitivity
			Year	Annual			Year	Annual								
0	0.25	-0.25 - 0*	2025	0.0077	10	0.10	2025	0.0077	-	-						
1	1	0 - 1	2025	0.0077	10	1.26	2025	0.0077	1	0.02	0.002	0.01	0.02			
2	1	1 - 2	2026	0.0081	10	1.34	2026	0.0081	1	0.02	0.002	0.001	0.01			
3	1	2 - 3	2027	0.0022	3	0.06	2027	0.0022	1	0.01	0.0004	0.0003	0.003			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00						
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00						
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00						
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00						
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00						
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00						
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00						
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00						
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00						
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00						
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00						
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00						
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00						
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00						
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00						
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00						
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00						
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00						
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00						
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00						
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00						
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00						
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00						
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00						
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00						
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00						
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00						
Total Increased Cancer Risk						2.76				0.05						

* Third trimester of pregnancy

**4590 Patrick Henry Drive, Santa Clara, CA - Construction Risks at School Receptors
 Maximum DPM Cancer Risk and PM2.5 Calculations For Construction Emissions - Unmitigated
 Impacts at Fairwood Explorer Elementary School - Child Exposure, 1 meter receptor heights**

Student Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x 1.0E6

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹
 ASF = Age sensitivity factor for specified age group
 ED = Exposure duration (years)
 AT = Averaging time for lifetime cancer risk (years)

Inhalation Dose = C_{air} x SCAF x 8-Hr BR x A x (EF/365) x 10⁻⁶

Where: C_{air} = concentration in air (µg/m³)
 SCAF = School Child Adjustment Factor (unitless) for source operation and exposures different than 8 hours/day
 = (24/SHR) x (7days/SDay) x (SCHR/8 hrs)
 SHR = Hours/day of emission source operation
 SDay = Number of days per week of source operation
 SCHR = School operation hours while emission source in operation
 8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
 A = Inhalation absorption factor
 EF = Exposure frequency (days/year)
 10⁻⁶ = Conversion factor

Values

	Infant	Child
Age -->	0 - <2	2 - <16
Parameter		
ASF =	10	3
DPM CPF =	1.10E+00	1.10E+00
8-Hr BR* =	1200	520
SCHR =	10	10
SHR =	10	10
SDay =	5	5
A =	1	1
EF =	250	250
AT =	70	70
SCAF =	4.20	4.20

* 95th percentile 8-hr breathing rates for moderate intensity activities

Construction Cancer Risk by Year - Head Start Center Receptor

Exposure Year	Exposure Duration (years)	Age	Child - Exposure Information			Child Cancer Risk (per million)	Maximum		
			DPM Conc (ug/m3)		Age* Sensitivity Factor		Hazard Index	Fugitive PM2.5	Total PM2.5
			Year	Annual					
1	1	4 - 5	2025	0.0004	3	0.03	0.0001	0.0004	0.001
2	1	5 - 6	2026	0.0004	3	0.03	0.0001	0.00004	0.0005
3	1	6 - 7	2027	0.0001	3	0.01	0.00002	0.00001	0.0001
Total Increased Cancer Risk						0.06			

* Children assumed to be 4 years and older during 3 years of construction activities

Attachment 3: Cumulative Screening Information and Calculations

BAAQMD RASTER Screening Data – Roadway Cancer Risk Impacts at the MEI



BAAQMD RASTER Screening Data – Roadway PM_{2.5} Concentration Impacts at the MEI



BAAQMD RASTER Screening Data – Roadway Hazard Index Impacts at the MEI



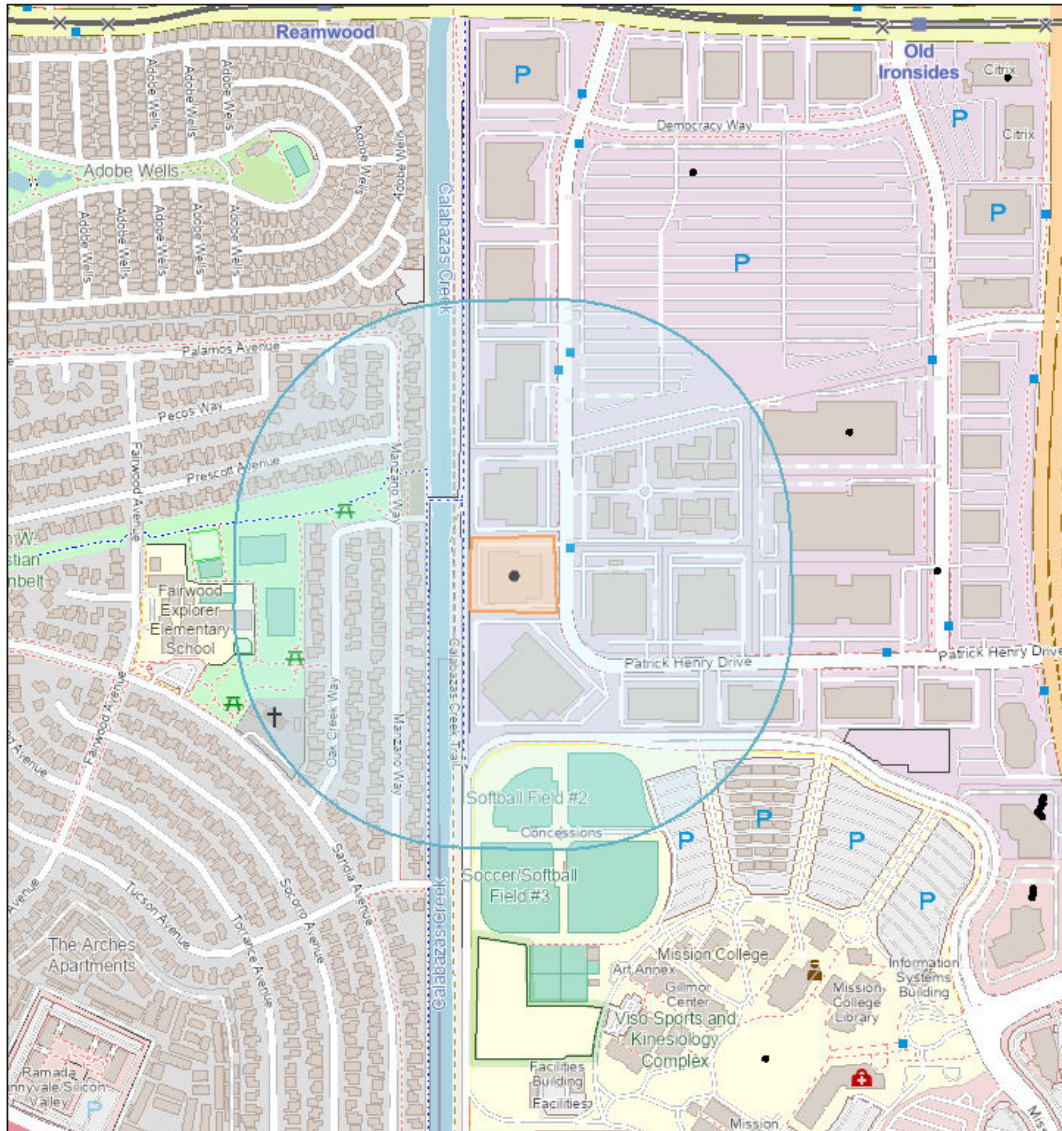


Screening Report

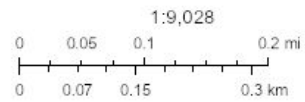
Area of Interest (AOI) Information

Area : 4,600,464.41 ft²

Jun 21 2023 16:18:56 Pacific Daylight Time



- Permitted Stationary Sources



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Summary

Name	Count	Area(ft ²)	Length(ft)
Permitted Stationary Sources	0	N/A	N/A

NOTE: A larger buffer than 1000 feet may be warranted depending on proximity to significant sources.