October 30, 2024

Ms. Shannon Miller
Land Development Manager
Thompson Builders Corporation
5400 Hanna Ranch Road
Novato, CA 94945
Office: (415) 456-8972
Cell: (415) 747-4670

Subject: Air Quality and Greenhouse Gas Analysis for the Stonehouse Renovation and Hotel Project in Santa Rosa, California

Dear Ms. Miller:

Yorke Engineering, LLC (Yorke) is pleased to provide this Air Quality (AQ) and Greenhouse Gas (GHG) Report. This AQ/GHG Report includes CalEEMod emissions estimates, criteria pollutant analysis, and GHG analysis for the proposed Stonehouse Renovation and Hotel improvement in Santa Rosa, California, which is the county seat of Sonoma County and within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD).

PROJECT DESCRIPTION AND LOCATION

The existing Stonehouse building is a 14-room boutique hotel at 3555 Sonoma Highway in Santa Rosa, California. The project proposes to renovate the existing building to a 5-room hotel. Additionally, a 70-room hotel with a courtyard would be constructed on the central portion of the site. The existing Stonehouse would eventually utilize its ground floor lobby, reception area, lounges, and kitchen to serve its guest rooms, and the new hotel building. Ancillary facilities include a pool and spa, exercise room, shower facilities, conference room, bocce ball court, restrooms, as plaza and gardens.

The two project parcels, located on the northwest side of Sonoma Highway (Highway 12), approximately 0.6 miles northeast of the intersection of Farmers Lane and Fourth Street, are designated as Retail and Business Services in the General Plan. They have a Planned Development Zoning (PD 0441, approved in 1998 and revised in 2005), which permits, among other uses, "Hotels, Motels, and Related Uses" with a Conditional Use Permit.

The northern portion of the project site slopes relatively gently from east to west and is currently occupied by the historic Stonehouse building and the existing parking lot west of the Stonehouse. The central part of the site features a large level pad, a remnant of a long-demolished warehouse building. The remaining southerly area of the site slopes steeply from east to west and includes a grove of primarily oak trees in the southwest corner. The adjacent properties to the south, west, and north are single-family residential homes on relatively large parcels. Figure 1 is satellite imagery showing the location of the proposed facility, the surrounding area, highways, and the nearest sensitive receptors.

Surface parking will be provided west of the new hotel, in addition to a single-level parking garage located below the upper two floors of the new hotel. Much of the parking garage will be below grade and tucked into the hillside. This will provide a total of 75 parking spaces for the 75 guest rooms. The parking areas will include standard, compact, accessible, and electric vehicle charging spaces. The primary site entrance will be the existing driveway location south of the existing Stonehouse building. A gated emergency vehicle access is proposed to connect to Sunridge Avenue at the southerly corner of the project site.

Figure 0: Proposed Project Location

The Project is within the jurisdiction of the BAAQMD, which provides the applicable California Environmental Quality Act (CEQA) thresholds of significance used for the evaluation of potential air quality and greenhouse gas impacts.

ENVIRONMENTAL SETTING

The project site is situated within the San Francisco Bay Area Air Basin (SFBAAB), which includes the counties of San Francisco, Alameda, Contra Costa, Marin, San Mateo, Santa Clara, and Napa, as well as the southern and southwestern regions of Sonoma and Solano counties. The BAAQMD is the regional air district responsible for managing air quality planning across this extensive area.

AIR POLLUTANTS

The U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have set national and state air quality standards for seven key pollutants, known as criteria pollutants: ozone (O_3), particulate matter (PM_{10} and $PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. Additionally, CARB has established state-specific ambient air quality standards for four more pollutants: visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

Below is a brief overview of each criteria pollutant and its associated health impacts.

O_3: Ozone is a nearly colorless gas created through a photochemical reaction, where nitrogen dioxide is broken down by sunlight. At ground level, ozone exposure can lead to various health issues, including lung irritation, wheezing, coughing, pain during deep breaths, and breathing difficulties during physical activities. It can also cause permanent lung damage, worsen asthma, and increase the risk of respiratory illnesses.

CO: Carbon monoxide is a colorless, odorless, and toxic gas primarily produced by the incomplete combustion of fossil fuels in vehicles. CO binds with hemoglobin in the blood, reducing the amount of oxygen that can be transported throughout the body. High concentrations of CO can result in headaches, exacerbate cardiovascular conditions, and impair central nervous system functions.

NOx: Nitrogen oxides are yellowish-brown gases that can cause breathing difficulties at elevated levels. They are formed when nitric oxide, a pollutant from internal combustion processes, reacts with oxygen.

SO_2: Sulfur dioxide is a colorless gas with a pungent odor, mainly produced by burning sulfur-containing fossil fuels. It can lead to acute respiratory symptoms and breathing difficulties, particularly in children.

PM_{10} and $PM_{2.5}$: Particulate matter refers to tiny particles suspended in the air. PM10 includes particles with diameters of ten microns or smaller, while $PM_{2.5}$ refers to particles with diameters of 2.5 microns or smaller. These fine particles pose a greater health risk than larger particles, as they can more easily cause irritation. Examples include fugitive dust. Short-term exposure to high levels of $PM_{2.5}$ is linked to increased mortality rates and higher rates of hospital admissions and emergency visits. Long-term exposure to high $PM_{2.5}$ levels is associated with premature mortality and chronic respiratory diseases. Short-term exposure to high PM_{10} levels can lead to hospital admissions for cardiopulmonary conditions, increased respiratory symptoms, and potentially premature mortality.

ATTAINMENT STATUS

The federal Clean Air Act (CAA) mandates that EPA set health-based National Ambient Air Quality Standards (NAAQS) for six criteria pollutants, designate nonattainment areas, and establish planning requirements. In California, the state sets its own ambient air quality standards, known as California Ambient Air Quality Standards (CAAQS), which require gradual progress toward meeting these standards. The attainment status is shown in Table 1 for the SFBAAB.

To achieve the NAAQS, the District and CARB have developed several State Implementation Plans (SIPs). These plans, which build on the achievements of previous ones, outline strategies for

continued air quality improvements in the Bay Area. After each SIP is adopted, the BAAQMD works to implement the plan's strategies through regulatory development, outreach, research, and incentive programs.

Table 1: SFBAAB Designation Status

Pollutant	Averaging Time	California Standard	California Designation Status	National Standard	National Designation Status
Ozone	1-hour	0.09 ppm	N	—	—
	8-hour	0.070 ppm	N	0.070 ppm	N
CO	1-hour	20 ppm	A	35 ppm	U/A
	8-hour	9 ppm	A	9 ppm	U/A
$PM_{2.5}$	24-hour	—	—	35 µg/m^3	N
	Annual	12 µg/m^3	N	12 µg/m^3	U/A
PM_{10}	24-hour	50 µg/m^3	N	150 µg/m^3	U
	Annual	20 µg/m^3	N	—	—
SO_2	1-hour	0.25 ppm	A	75 ppb	A/U
	hour	0.04 ppm	A	—	—
NO_2	Annual	0.030 ppm	A	0.053 ppm	U
	1-hour	0.18 ppm	A	100 ppb	U/A

Notes: µg/m^3 = micrograms per cubic meter; CO = carbon monoxide; NO_2 = nitrogen dioxide; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; SO_2 = sulfur dioxide; ppb = parts per billion; ppm = parts per million; A = Attainment, N = Non-Attainment, U = Unclassified. Updated information regarding designation status can be found at https://www.epa.gov/green-book , updated May 31, 2022.

Source: BAAQMD 2024

GREENHOUSE GASES

GHG emissions play a critical role in determining the Earth's surface temperature. A portion of the solar radiation that enters the Earth's atmosphere is absorbed by the Earth's surface, and a smaller portion of this radiation is reflected back toward space. Infrared radiation (i.e., thermal heat) is absorbed by GHGs. As a result, infrared radiation released from the Earth that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the "greenhouse effect," is responsible for maintaining a habitable climate on Earth. However, high atmospheric concentrations of GHG due to anthropogenic GHG emissions are thought to contribute to climate change (i.e., global warming).

GHGs are present in the atmosphere naturally, are released by natural sources, and are formed from secondary reactions taking place in the atmosphere. The following are GHGs that are widely seen as the principal contributors to human-induced global climate change: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). Common refrigerant GHGs (abbreviated as "R") used in air conditioning and refrigeration equipment, some of which are HFCs are also included in this analysis.

Global warming potential (GWP) is a concept developed to evaluate the ability of each GHG to trap heat in the atmosphere in comparison to carbon dioxide. The GWP of a GHG is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and the length of time that the gas remains in the atmosphere (atmospheric lifetime). The GWP of each gas is measured relative to carbon dioxide. GHGs with lower emissions rates than carbon dioxide may still contribute to climate change because they are more effective than carbon dioxide at

absorbing outgoing infrared radiation (i.e., high GWP). The concept of carbon dioxide equivalent (CO_2e) is used to account for the different GWP potentials of GHGs to absorb infrared radiation.

REGULATORY SETTING

Criteria Air Pollutants

The BAAQMD has been delegated authority under the federal and California CAAs to implement measures to protect air quality within the SFBAAB. The BAAQMD regulates stationary sources (with respect to federal, state, and local regulations), monitors regional air pollutant levels, and develops air quality control strategies. The BAAQMD requires Permits to Operate (PTOs) for stationary equipment and operations that emit criteria pollutants and/or Toxic Air Contaminants (TACs) into the atmosphere unless excluded by exemption. Permits issued by the BAAQMD include an assessment of compliance with CEQA.

The most recent air quality plan developed by the BAAQMD is the 2017 Clean Air Plan that was adopted by the BAAQMD in April 2017. The 2017 Clean Air Plan provides a regional strategy to protect public health and the climate. To protect public health, the plan describes how the BAAQMD will continue making progress toward attaining all state and federal air quality standards and eliminating exposure to air pollution among Bay Area communities. The 2017 Clean Air Plan includes a wide range of control measures designed to decrease emissions of the air pollutants that are most harmful, such as PM, ozone precursors, and TACs, and to decrease emissions of CO_2 by reducing fossil fuel combustion. The 2017 Clean Air Plan represents the Bay Area's most recent assessment of the region's strategy to attain the state and national O_3 and $PM_{2.5}$ standards.

On April 20, 2022, the BAAQMD's Board of Directors adopted *CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans* (BAAQMD 2022) (CEQA Guidelines). The Air District's CEQA Guidelines supports lead agencies in assessing air quality and climate impacts from proposed land use projects and plans in the air basin. These Guidelines provide nonbinding recommendations on how lead agencies can evaluate, measure, and mitigate air quality and climate impacts resulting from construction and operational activities associated with land use.

Greenhouse Gases

AB 32, signed into law by Governor Arnold Schwarzenegger in 2006, established regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and established a cap on statewide GHG emissions. It required that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 identifies CARB as the state agency responsible for the design and implementation of emission limits, regulations, and other measures to meet the targets. In 2016, California's GHG emissions dropped below the AB 32 limit and have remained below the 2020 GHG limit since that time. In 2020, emissions from GHG emitting activities statewide were 369.2 million metric tons (MMT) of CO_2e, 35.3 $MMTCO_2e$ lower than 2019 levels and 61.8 $MMTCO_2e$ below the 2020 GHG limit of 431 $MMTCO_2e$ (CARB 2022c).

The 2017 Clean Air Plan lays the groundwork for a long-term effort to reduce Bay Area GHG emissions to 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050. In addition, the BAAQMD established a climate protection program to reduce pollutants that contribute to global climate change and affect air quality in the SFBAAB. The program includes GHG-

reduction measures that promote energy efficiency, reduce VMT, and develop alternative energy sources (BAAQMD 2017).

On a local level, the City's of Santa Rosa Climate Action Plan (CAP) incorporates the BAAQMD's expectations for a Qualified GHG Reduction Strategy and represents a comprehensive approach to addressing climate change and reducing GHG emissions within the city. This plan articulates Santa Rosa's commitment to environmental stewardship and provides a roadmap for transitioning towards greater sustainability. At its core, the 2012 CAP sets ambitious GHG reduction targets. It aims to cut emissions by 25% below 1990 levels by the year 2020 and by 80% below 1990 levels by 2050. These targets align with broader regional and state climate goals, signaling Santa Rosa's dedication to making a significant impact on climate change over the coming decades.

The plan outlines strategies tailored to various sectors that are major contributors to GHG emissions. In the energy sector, the CAP emphasizes improving energy efficiency and promoting the use of renewable energy sources. It includes initiatives for reducing energy consumption across residential, commercial, and municipal buildings. For transportation, the CAP focuses on expanding alternative modes of transport such as public transit, enhancing infrastructure for pedestrians and cyclists, and supporting the adoption of electric vehicles. This sector-specific approach aims to reduce emissions from one of the largest sources of GHGs.

Waste management is another critical area addressed in the CAP. The plan advocates for increased recycling and composting, aiming to minimize the amount of waste sent to landfills. By encouraging the use of sustainable materials and reducing waste, Santa Rosa seeks to cut down on emissions associated with waste processing.

Water conservation also features prominently in the plan. It highlights the need for efficient water use to lower the energy required for water treatment and distribution, thereby contributing to GHG reductions.

To ensure the effectiveness of these strategies, the CAP emphasizes the importance of both implementation and ongoing monitoring. Regular reviews and updates to the plan are intended to keep it aligned with new data, technological advancements, and evolving regulations. This adaptive approach helps maintain progress towards the city's climate goals.

Appendix E of the City of Santa Rosa's 2012 Climate Action Plan is specifically focused on the "CAP New Development Checklist." This checklist is an essential tool designed to ensure that new development projects align with the city's climate action goals and contribute to its GHG reduction targets.

The checklist serves as a practical guide for developers and city planners, outlining the key measures and best practices that new projects should incorporate to minimize their environmental impact. It provides a structured approach to integrating sustainability into the development process, helping to ensure that new projects are designed and implemented in a way that supports the city's overall climate objectives.

Key Components of the Checklist

The CAP New Development Checklist includes various criteria related to different aspects of a development project. These typically cover:

1. **Energy Efficiency**: The checklist emphasizes the importance of incorporating energy-efficient design and technologies in new buildings. This may include measures such as high-performance insulation, energy-efficient windows, and advanced heating, ventilation, and air conditioning (HVAC) systems. By prioritizing energy efficiency, new developments can significantly reduce their energy consumption and associated GHG emissions.
2. **Renewable Energy**: Developers are encouraged to integrate renewable energy sources, such as solar panels, into their projects. This aligns with the CAP's goals by promoting the use of clean energy and reducing reliance on fossil fuels.
3. **Water Conservation**: The checklist includes criteria for water-saving measures, such as low-flow fixtures and drought-tolerant landscaping. Efficient water use is crucial for reducing the energy needed for water treatment and distribution, thus lowering GHG emissions.
4. **Sustainable Transportation**: The checklist promotes transportation-related measures such as providing bicycle parking, access to public transit, and infrastructure that supports alternative transportation modes. These strategies help reduce the reliance on single-occupancy vehicles, which is a significant source of GHG emissions.
5. **Waste Reduction**: Developers are encouraged to implement practices that minimize waste generation during construction and encourage recycling and reuse of materials. This not only reduces the environmental footprint of the project but also supports the city's waste management goals.
6. **Green Building Standards**: The checklist may include recommendations or requirements for adhering to green building certifications, such as LEED (Leadership in Energy and Environmental Design). These standards provide a framework for designing and constructing buildings that are environmentally responsible and resource-efficient.

The CAP New Development Checklist is intended to guide developers in making environmentally conscious decisions and to ensure that new projects contribute positively to the city's climate goals. By providing clear guidelines and expectations, the checklist helps streamline the development review process and promotes consistency in how new developments are assessed for their climate impacts.

Moreover, the checklist supports the city's broader climate action strategy by integrating sustainability into the early stages of project planning and design. This proactive approach helps to embed GHG reduction measures into new developments, ultimately contributing to the city's overall emissions reduction targets.

In summary, Appendix E of the Santa Rosa 2012 Climate Action Plan, with its focus on the CAP New Development Checklist, plays a crucial role in guiding new development projects toward sustainability. By outlining specific criteria and best practices, the checklist ensures that new developments align with the city's climate action goals, contributing to a more sustainable and resilient urban environment.

SIGNIFICANCE THRESHOLDS

In order to evaluate the potential for Air Quality impacts of a proposed project, quantitative significance criteria established by the BAAQMD, was used to make significance determinations based on mass emissions of criteria pollutants and air quality. Climate action plan consistency criteria was used for GHG impact analysis, as presented in this report.

Table 2: BAAQMD CEQA Thresholds of Significance

Criteria Pollutants, Precursors, GHGs, Risks and Odors	Construction-Average Daily Emissions	Operation - Average Daily Emissions	
	lbs/day	lbs/day	tons/yr
Reactive Organic Gases (ROG)	54	54	10
Nitrogen Oxides (NO_X)	54	54	10
PM_{10}	82 (exhaust)	82 (total)	15 (total)
$PM_{2.5}$	54 (exhaust)	54 (total)	10 (total)
PM_{10} / $PM_{2.5}$ (fugitive dust)	Best management practices**	None	
Local Carbon Monoxide (CO)	None	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)	
Local Risks and Hazards			
Risks and hazards for new sources and receptors (cumulative threshold)	Same as operational thresholds	Cancer Risk: > 100 in a million (from all local sources) Non-cancer: > 10.0 Hazard Index (chronic, from all local sources) PM2.5: > 0.8 µg/m^3 annual average (from all local sources) OR Compliance with Qualified Community Risk Reduction Plan	
Risks and hazards for new sources and receptors (individual project)	Same as operational thresholds	Increased Cancer Risk >10.0 in a million Increased Non-cancer > 1.0 Hazard Index (chronic or acute) PM2.5 increase: > 0.3 µg/m^3 annual average OR Compliance with Qualified Community Risk Reduction Plan	
Accidental release of acutely hazardous air pollutants			
	None	Storage or use of acutely hazardous materials locating near receptors or new receptors locating near stored or used acutely hazardous materials considered significant	
Odors			
	None	Five confirmed complaints per year averaged over 3 years	
GHGs			
GHGs - Stationary Sources	None	10,000 MT CO_2e/year	
GHGs – Project-Level	None	Thresholds of Significance for Land Use Projects (Must Include A or B) A. Projects must include, at a minimum, the following project design elements: 1. Buildings a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).	

Criteria Pollutants, Precursors, GHGs, Risks and Odors	Construction-Average Daily Emissions	Operation - Average Daily Emissions	
	lbs/day	lbs/day	tons/yr
		b. The project will not result in any wasteful, inefficient, or unnecessary energy use as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines. 2. Transportation a. The project will achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target that reflects the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory: Evaluating Transportation Impacts in CEQA: i. Residential projects: 15 percent below the existing VMT per capita ii. Office projects: 15 percent below the existing VMT per employee iii. Retail projects: no net increase in existing VMT b. The project will achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2. B. Projects must be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).	
GHGs – Plan-Level	None	1. Meet State's goals to reduce emissions to 40% below 1990 levels by 2030 and carbon neutrality by 2045; or 2. Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b)	

Notes: µg/m3 = micrograms per cubic meter; CO = carbon monoxide; lb/day = pounds per day; NOx = oxides of nitrogen; $PM_{2.5}$= fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ppm = parts per million; ROG = reactive organic gases; TACs = toxic air contaminants; tpy = tons per year; VMT =vehicle miles traveled.
The air quality project-level thresholds of significance were adopted by the Air District's Board of Directors on June 2, 2010.
* The Air District recommends for construction projects that require less than 1 year to complete, lead agencies should annualize impacts over the scope of actual days that peak impacts would occur rather than over the full year. Additionally, for phased projects that results in concurrent construction and operational emissions. Construction-related exhaust emissions should be combined with operational emissions for all phases where construction and operations overlap.
** $PM_{10}/PM_{2.5}$ (fugitive dust) is also recognized to impact local communities. The Air District 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. These measures are detailed in Chapter 5, Section 5.2.2 Construction-Related Criteria Air Pollutant Emissions.
Source: BAAQMD 2022

QUANTIFICATION METHODOLOGY

The construction and operation analyses were performed using the California Emissions Estimation Model® (CalEEMod) version 2022.1.1.28, the official statewide land use computer model designed to provide a uniform platform for estimating potential criteria pollutant and GHG emissions associated with both construction and operations of land use projects under CEQA. The

model quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The mobile source emission factors used in the model – published by the California Air Resources Board (CARB) – include the Pavley standards and Low Carbon Fuel standards. The model also identifies project design features, regulatory measures, and mitigation measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from the selected measures. CalEEMod was developed by the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the South Coast Air Quality Management District (SCAQMD), BAAQMD, the San Joaquin Valley Air Pollution Control District (SJVAPCD), and other California air districts. Default land use data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) were provided by the various California air districts to account for local requirements and conditions. As the official assessment methodology for land use projects in California, CalEEMod is relied upon herein for construction and operational emissions quantification, which forms the basis for the impact analysis.

ASSUMPTIONS

The following basic assumptions were used in developing the emission estimates for the proposed Project using CalEEMod:

- Project design features including parcel dimensions, grading quantities, parking spaces, and sizes of the proposed hotel were defined by the Applicant.
- Default construction equipment horsepower ratings and load factors contained in CalEEMod were applied to all phases of the project.
- Consumer product usage for maintenance during project operation are CalEEMod defaults.
- Energy efficiency and water conservation measures are generally required by codes.
- Use of low- reactive organic gases (ROG) architectural coatings (rule-compliant).

The CalEEMod output files for this analysis are contained in Attachment 1.

AIR QUALITY IMPACT ANALYSIS

The Project would result in air pollutant emissions from both the construction and operations phases. These emissions are evaluated against the CEQA significance thresholds adopted by the BAAQMD.

Criteria Pollutants from Project Construction

A project's construction phase produces many types of emissions. Fugitive dust emissions can result from a variety of construction activities, including excavation, grading, demolition, vehicle travel on paved and unpaved surfaces, and vehicle exhaust. Construction-related emissions can cause substantial increases in localized concentrations of PM_{10}, as well as affecting PM_{10} compliance with ambient air quality standards on a regional basis. Particulate emissions from construction activities can lead to adverse health effects as well as nuisance concerns such as reduced visibility and soiling of exposed surfaces. The use of diesel-powered construction equipment emits ozone precursors oxides of nitrogen (NO_x) and reactive organic gases (ROG), and diesel particulate matter (DPM), the latter being a composite of TACs containing a variety of

hazardous substances. Large construction projects using multiple large earthmoving equipment are evaluated to determine if operations may exceed the District's daily threshold for NO_x emissions and could temporarily expose area residents to hazardous levels of DPM. Use of architectural coatings and other materials associated with finishing buildings may also emit ROG and TACs. CEQA significance thresholds address the impacts of construction activity emissions on local and regional air quality. Thresholds are also provided for other potential impacts related to project construction, such as odors and TACs.

The BAAQMD's approach to CEQA analyses of fugitive dust impacts is to require implementation of effective and comprehensive dust control measures rather than to require detailed quantification of emissions. PM_{10} emitted during construction can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors, making quantification difficult. Despite this variability in emissions, experience has shown that there are several feasible control measures that can be reasonably implemented to significantly reduce fugitive dust emissions from construction. For larger projects, the BAAQMD has determined that compliance with an approved fugitive dust control plan comprising Best Management Practices (BMPs), primarily through frequent water application, constitutes sufficient mitigation to reduce PM_{10} impacts to a level considered less than significant.

Table 3 shows the air pollutant emissions attributable to the Project and evaluates the emissions against BAAQMD significance thresholds. As shown in this Table, Project related emissions are less than the significance thresholds adopted by the BAAQMD. As such, the Project would not result in excessive levels of regional criteria pollutants for the construction phase.

Table 3: Construction Emissions Summary and Significance Evaluation

Criteria Pollutants	Average Daily Emissions (lbs/day)	Significance Threshold (lbs/day)	Significant?
ROG (VOC)	3	54	No
NO_X	8	54	No
Exhaust PM_{10}	<1	82	No
Exhaust $PM_{2.5}$	<1	54	No

Sources: BAAQMD 2022, CalEEMod version 2022.1.1.28

For a project to have a less-than-significant criteria air pollutant impact related to construction-related fugitive dust emissions, it must implement all Air District's basic BMPs shown below in Table 4. The proposed Project will comply with all the applicable requirements. Thus, impacts would be less than significant.

Table 4: Basic BMPs for Construction-Related Fugitive Dust Emissions

BMP ID	Basic BMP
AQ-BMP-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.
AQ-BMP-2	All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
AQ-BMP-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.
AQ-BMP-4	All vehicle speeds on unpaved roads shall be limited to 15 mph.
AQ-BMP-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.
AQ-BMP-6	All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
AQ-BMP-7	All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
AQ-BMP-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.
AQ-BMP-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.

Sources: BAAQMD 2022

Criteria Pollutants from Project Operation

The term "project operations" refers to the full range of activities that can or may generate criteria pollutant, GHG, and TAC emissions when the project is functioning in its intended use. For projects such as office parks, shopping centers, apartment buildings, residential subdivisions, hotels, and other indirect sources, motor vehicles traveling to and from the project represents the primary source of air pollutant emissions. For industrial projects and some commercial projects, equipment operation and manufacturing processes, i.e., permitted stationary sources, can be of greatest concern from an emissions standpoint. CEQA significance thresholds address the impacts of operational emission sources on local and regional air quality. Thresholds are also provided for other potential impacts related to project operations, such as odors.

Tables 5 and 6 shows criteria operational emissions associated with the Project and evaluates these emissions against BAAQMD significance thresholds. As shown in these Tables, the operations phase of the Project would result in emissions which are less than the significance thresholds

adopted by the BAAQMD for the operations phase. Consequently, the project would result in less than significant impacts from operations phase emissions.

Table 5: Operational Emissions Summary and Significance Evaluation

Criteria Pollutants	Average Daily Emissions (lbs/day)	Significance Threshold (lbs/day)	Significant?
ROG (VOC)	5	54	No
NO_X	3	54	No
PM_{10}	<1	82	No
$PM_{2.5}$	<1	54	No

Sources: BAAQMD 2022, CalEEMod version 2022.1.1.28

Table 6: Operational Annual Emissions Summary and Significance Evaluation

Criteria Pollutants	Annual Emissions (tons/year)	Significance Threshold (tons/year)	Significant?
ROG (VOC)	<1	10	No
NO_X	<1	10	No
PM_{10}	<1	15	No
$PM_{2.5}$	<1	10	No

Sources: BAAQMD 2022, CalEEMod version 2022.1.1.28

Construction and operational emissions from the proposed Project would not exceed the applicable thresholds. Further, construction emissions would permanently cease upon completion of the new facilities. Any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact. Therefore, since temporary construction emissions and projected changes in operational emissions would be less than significant, the resultant air quality impact is not considered by the BAAQMD to be cumulatively considerable and would result in a less than significant cumulative impact.

PROJECTED IMPACT: Less Than Significant

GHG IMPACT ANALYSIS

Table 7 shows project related GHG emissions. Operational measures incorporate typical code-required energy and water conservation features. Off-site traffic impacts are included in these emissions estimates, along with construction emissions amortized over 30 years.

Table 7: Greenhouse Gas Emissions Summary

Greenhouse Gases	Amortized Construction Emissions (MT/yr)	Operational Emissions (MT/yr)	Total[1] (MT/yr)
CO_2	12	694	706
CH_4	<1	<1	<1
N_2O	<1	<1	<1
R	<1	29	<1
CO_2e	12	743	755

Sources: CalEEMod version 2022.1.1.28

Notes:

[1]Comprises annual operational emissions plus construction emissions amortized over 30 years.

As mentioned above, the City of Santa Rosa has adopted a qualified CAP in 2012 to address the effects of climate change and minimize greenhouse gas emissions within the City. Through this framework, the Air District has identified key design elements that new land use projects and plans must incorporate to meet California's goal of carbon neutrality by 2045. When these elements are included in a project's design and construction, the project fulfills its fair share of necessary reductions, allowing the lead agency to conclude that it does not significantly contribute to global climate change when evaluated under CEQA. As previously shown in Table 2, the BAAQMD's Climate Impact Thresholds allows for projects to either include building and transportation design elements, which reduce GHG emissions, or projects must be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b). The City of Santa Rosa's CAP meets the programmatic threshold of the BAAQMD guidelines.

The City of Santa Rosa has accounted for the City's fair share of emissions within CAP. "To ensure new development projects are compliant with the City's Climate Action Plan, the following checklist has been developed. This checklist should be filled out for each new project, subject to discretionary review, to allow new development to find a less than significant impact for greenhouse gas emissions in the environmental review process." (Santa Rosa 2012). The project developer has filled out the CAP New Development Checklist and demonstrated consistency with the GHG reduction goals adopted by the City. Therefore, the Project would not directly or indirectly generate GHG emissions that would have a significant impact on the environment and the projected impact would be less than significant and no additional mitigation measures would be required. (BAAQMD 2017b). The CAP New Development Checklist for the proposed Project can be found in Attachment 2.

PROJECTED IMPACT: Less Than Significant

CLOSING

Thank you very much for the opportunity to be of assistance with this air quality and greenhouse gas report. Please contact me at (949) 797-1372 (mobile) if you have any questions or comments in regard to this Report.

Sincerely,

Tin Cheung | Diamond Bar Office
Principal Scientist
Yorke Engineering, LLC
TCheung@YorkeEngr.com

Cc: Tina Darjazanie, Yorke Engineering, LLC
Wendy Fairchild, Yorke Engineering, LLC

Enclosures/Attachments:

1. CalEEMod Outputs
2. CAP New Development Checklist

REFERENCES

AccuWeather. 2024. Website (https://www.accuweather.com/en/us/sonoma/95476/weather-forecast/337254) Accessed September 23, 2024.

Bay Area Air Quality Management District (BAAQMD). 2024. Air Quality Standards and Attainment Status. Website (https://www.baaqmd.gov/en/about-air-quality/research-and-data/air-quality-standards-and-attainment-status#eight).

Bay Area Air Quality Management District. 2022. CEQA Air Quality Guidelines. Website (https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines).

Bay Area Air Quality Management District (BAAQMD). 2017. 2017 Clean Air Plan: Spare the Air, Cool the Climate. Website (https://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans).

California Air Resources Board (CARB). 2017. California's 2017 Climate Change Scoping Plan. Website (https://ww3.arb.ca.gov/cc/scopingplan/scopingplan.htm).

California Emissions Estimation Model (CalEEMod®). 2022. Version 2022.1.1.28 Website (http://www.caleemod.com/) accessed October 1, 2024.

City of Santa Rosa. Climate Action. 2012. Website (https://www.srcity.org/DocumentCenter/View/10762/Climate-Action-Plan-PDF?bidId=).

ATTACHMENT 1 – CALEEMOD OUTPUTS

Sonoma Stonehouse Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Sonoma Stonehouse
Construction Start Date	1/2/2025
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	44.8
Location	3555 Sonoma Hwy, Santa Rosa, CA 95405, USA
County	Sonoma-San Francisco
City	Santa Rosa
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	957
EDFZ	2
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Hotel	75.0	Room	2.00	108,900	87,120	—	—	—

Parking Lot	75.0	Space	0.67	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.73	1.44	11.4	14.4	0.03	0.41	0.50	0.91	0.38	0.12	0.50	—	3,095	3,095	0.13	0.11	2.95	3,132
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	115	115	15.8	15.8	0.04	0.66	3.12	3.78	0.61	1.43	2.04	—	3,704	3,704	0.17	0.21	0.08	3,770
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.15	3.14	8.19	9.89	0.02	0.30	0.38	0.68	0.28	0.10	0.38	—	2,130	2,130	0.09	0.07	0.82	2,155
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.57	0.57	1.49	1.81	< 0.005	0.05	0.07	0.12	0.05	0.02	0.07	—	353	353	0.02	0.01	0.14	357

2.2. Construction Emissions by Year, Unmitigated

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

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

2025	1.73	1.44	11.4	14.4	0.03	0.41	0.50	0.91	0.38	0.12	0.50	—	3,095	3,095	0.13	0.11	2.95	3,132
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.93	1.57	15.8	15.8	0.04	0.66	3.12	3.78	0.61	1.43	2.04	—	3,704	3,704	0.17	0.21	0.08	3,770
2026	115	115	5.93	8.79	0.01	0.25	0.12	0.37	0.23	0.03	0.26	—	1,363	1,363	0.05	0.02	0.01	1,369
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.20	1.00	8.19	9.89	0.02	0.30	0.38	0.68	0.28	0.10	0.38	—	2,130	2,130	0.09	0.07	0.82	2,155
2026	3.15	3.14	0.06	0.09	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.7	13.7	< 0.005	< 0.005	< 0.005	13.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.22	0.18	1.49	1.81	< 0.005	0.05	0.07	0.12	0.05	0.02	0.07	—	353	353	0.02	0.01	0.14	357
2026	0.57	0.57	0.01	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.26	2.26	< 0.005	< 0.005	< 0.005	2.28

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.78	5.52	2.55	19.2	0.03	0.10	2.53	2.63	0.10	0.64	0.74	25.8	4,429	4,455	2.89	0.17	182	4,759
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.85	4.65	2.75	14.3	0.03	0.09	2.53	2.62	0.09	0.64	0.73	25.8	4,266	4,292	2.91	0.18	171	4,589
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.15	4.92	2.60	15.5	0.03	0.09	2.35	2.45	0.09	0.60	0.69	25.8	4,164	4,190	2.90	0.17	175	4,488
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.94	0.90	0.47	2.82	0.01	0.02	0.43	0.45	0.02	0.11	0.13	4.27	689	694	0.48	0.03	29.0	743

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.20	2.05	1.66	13.8	0.03	0.03	2.53	2.56	0.03	0.64	0.67	—	2,988	2,988	0.15	0.15	11.4	3,048
Area	3.49	3.42	0.04	4.74	< 0.005	0.01	—	0.01	0.01	—	0.01	—	19.5	19.5	< 0.005	< 0.005	—	19.5
Energy	0.09	0.05	0.85	0.71	0.01	0.06	—	0.06	0.06	—	0.06	—	1,416	1,416	0.15	0.01	—	1,422
Water	—	—	—	—	—	—	—	—	—	—	—	3.65	6.00	9.65	0.37	0.01	—	21.7
Waste	—	—	—	—	—	—	—	—	—	—	—	22.1	0.00	22.1	2.21	0.00	—	77.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	170	170
Total	5.78	5.52	2.55	19.2	0.03	0.10	2.53	2.63	0.10	0.64	0.74	25.8	4,429	4,455	2.89	0.17	182	4,759
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.11	1.95	1.91	13.6	0.03	0.03	2.53	2.56	0.03	0.64	0.67	—	2,844	2,844	0.17	0.16	0.29	2,897
Area	2.65	2.65	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.09	0.05	0.85	0.71	0.01	0.06	—	0.06	0.06	—	0.06	—	1,416	1,416	0.15	0.01	—	1,422
Water	—	—	—	—	—	—	—	—	—	—	—	3.65	6.00	9.65	0.37	0.01	—	21.7
Waste	—	—	—	—	—	—	—	—	—	—	—	22.1	0.00	22.1	2.21	0.00	—	77.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	170	170
Total	4.85	4.65	2.75	14.3	0.03	0.09	2.53	2.62	0.09	0.64	0.73	25.8	4,266	4,292	2.91	0.18	171	4,589
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.99	1.85	1.73	12.4	0.03	0.03	2.35	2.38	0.02	0.60	0.62	—	2,733	2,733	0.15	0.15	4.69	2,787
Area	3.06	3.03	0.02	2.34	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.60	9.60	< 0.005	< 0.005	—	9.64
Energy	0.09	0.05	0.85	0.71	0.01	0.06	—	0.06	0.06	—	0.06	—	1,416	1,416	0.15	0.01	—	1,422
Water	—	—	—	—	—	—	—	—	—	—	—	3.65	6.00	9.65	0.37	0.01	—	21.7
Waste	—	—	—	—	—	—	—	—	—	—	—	22.1	0.00	22.1	2.21	0.00	—	77.4

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	170	170
Total	5.15	4.92	2.60	15.5	0.03	0.09	2.35	2.45	0.09	0.60	0.69	25.8	4,164	4,190	2.90	0.17	175	4,488
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.36	0.34	0.32	2.27	< 0.005	< 0.005	0.43	0.43	< 0.005	0.11	0.11	—	452	452	0.03	0.02	0.78	461
Area	0.56	0.55	< 0.005	0.43	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.59	1.59	< 0.005	< 0.005	—	1.60
Energy	0.02	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	234	234	0.03	< 0.005	—	235
Water	—	—	—	—	—	—	—	—	—	—	—	0.60	0.99	1.60	0.06	< 0.005	—	3.59
Waste	—	—	—	—	—	—	—	—	—	—	—	3.66	0.00	3.66	0.37	0.00	—	12.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.2	28.2
Total	0.94	0.90	0.47	2.82	0.01	0.02	0.43	0.45	0.02	0.11	0.13	4.27	689	694	0.48	0.03	29.0	743

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.75	1.47	13.9	15.1	0.02	0.57	—	0.57	0.52	—	0.52	—	2,494	2,494	0.10	0.02	—	2,502
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.76	0.83	< 0.005	0.03	—	0.03	0.03	—	0.03	—	137	137	0.01	< 0.005	—	137
Demolition	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.14	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.7
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.54	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	101	101	< 0.005	< 0.005	0.01	103
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.01	0.57	0.21	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	392	392	0.02	0.06	0.02	411
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.61	5.61	< 0.005	< 0.005	0.01	5.69
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	21.5	21.5	< 0.005	< 0.005	0.02	22.6

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.93	0.93	< 0.005	< 0.005	< 0.005	0.94
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.56	3.56	< 0.005	< 0.005	< 0.005	3.73

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.42	1.19	10.9	11.0	0.03	0.47	—	0.47	0.43	—	0.43	—	2,717	2,717	0.11	0.02	—	2,726
Dust From Material Movement	—	—	—	—	—	—	0.62	0.62	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22.3	22.3	< 0.005	< 0.005	—	22.4
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.70	3.70	< 0.005	< 0.005	—	3.71
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.33	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	60.9	60.9	< 0.005	< 0.005	0.01	61.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.50	0.50	< 0.005	< 0.005	< 0.005	0.51
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 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	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.80	1.51	14.1	14.5	0.02	0.64	—	0.64	0.59	—	0.59	—	2,455	2,455	0.10	0.02	—	2,463
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.23	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	40.4	40.4	< 0.005	< 0.005	—	40.5
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.68	6.68	< 0.005	< 0.005	—	6.70
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.43	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	81.2	81.2	< 0.005	< 0.005	0.01	82.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.09	0.02	1.69	0.64	0.01	0.01	0.28	0.29	0.01	0.08	0.09	—	1,168	1,168	0.06	0.19	0.06	1,225
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.35	1.35	< 0.005	< 0.005	< 0.005	1.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	19.2	19.2	< 0.005	< 0.005	0.02	20.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.18	3.18	< 0.005	< 0.005	< 0.005	3.34

3.7. Building Construction (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.49	1.24	10.6	11.9	0.02	0.40	—	0.40	0.37	—	0.37	—	2,201	2,201	0.09	0.02	—	2,209
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.49	1.24	10.6	11.9	0.02	0.40	—	0.40	0.37	—	0.37	—	2,201	2,201	0.09	0.02	—	2,209
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.90	0.75	6.39	7.15	0.01	0.24	—	0.24	0.22	—	0.22	—	1,327	1,327	0.05	0.01	—	1,331
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.14	1.17	1.30	< 0.005	0.04	—	0.04	0.04	—	0.04	—	220	220	0.01	< 0.005	—	220
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.19	0.14	2.24	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	399	399	0.02	0.02	1.67	405
Vendor	0.04	0.01	0.66	0.27	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	495	495	0.02	0.07	1.28	518
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.18	1.98	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	371	371	0.01	0.02	0.04	376
Vendor	0.04	0.01	0.69	0.27	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	495	495	0.02	0.07	0.03	517
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.10	1.16	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	226	226	0.01	0.01	0.44	229
Vendor	0.02	0.01	0.41	0.16	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	298	298	0.01	0.04	0.33	312
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.21	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	37.4	37.4	< 0.005	< 0.005	0.07	37.9
Vendor	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	49.4	49.4	< 0.005	0.01	0.06	51.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.70	6.13	8.21	0.01	0.27	—	0.27	0.25	—	0.25	—	1,244	1,244	0.05	0.01	—	1,248
Paving	0.18	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.14	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	29.2	29.2	< 0.005	< 0.005	—	29.3
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.84	4.84	< 0.005	< 0.005	—	4.85
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.65	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	122	122	< 0.005	0.01	0.01	123

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.88	2.88	< 0.005	< 0.005	0.01	2.93
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.48	0.48	< 0.005	< 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	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.79	0.67	5.88	8.19	0.01	0.25	—	0.25	0.23	—	0.23	—	1,244	1,244	0.05	0.01	—	1,248
Paving	0.18	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	< 0.005	< 0.005	0.03	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.30	7.30	< 0.005	< 0.005	—	7.33
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.21
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.61	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	120	120	< 0.005	0.01	0.01	121
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.71	0.71	< 0.005	< 0.005	< 0.005	0.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.12	0.12	< 0.005	< 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	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	114	114	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.66	3.66	< 0.005	< 0.005	—	3.67
Architectural Coatings	3.13	3.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 0.005	< 0.005	—	0.61
Architectural Coatings	0.57	0.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.37	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	72.9	72.9	< 0.005	< 0.005	0.01	73.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.01	2.01	< 0.005	< 0.005	< 0.005	2.04
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.34
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	2.20	2.05	1.66	13.8	0.03	0.03	2.53	2.56	0.03	0.64	0.67	—	2,988	2,988	0.15	0.15	11.4	3,048
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.20	2.05	1.66	13.8	0.03	0.03	2.53	2.56	0.03	0.64	0.67	—	2,988	2,988	0.15	0.15	11.4	3,048
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	2.11	1.95	1.91	13.6	0.03	0.03	2.53	2.56	0.03	0.64	0.67	—	2,844	2,844	0.17	0.16	0.29	2,897
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.11	1.95	1.91	13.6	0.03	0.03	2.53	2.56	0.03	0.64	0.67	—	2,844	2,844	0.17	0.16	0.29	2,897
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.36	0.34	0.32	2.27	< 0.005	< 0.005	0.43	0.43	< 0.005	0.11	0.11	—	452	452	0.03	0.02	0.78	461
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.36	0.34	0.32	2.27	< 0.005	< 0.005	0.43	0.43	< 0.005	0.11	0.11	—	452	452	0.03	0.02	0.78	461

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	390	390	0.06	0.01	—	394
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	14.4	14.4	< 0.005	< 0.005	—	14.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	405	405	0.07	0.01	—	409
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	390	390	0.06	0.01	—	394
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	14.4	14.4	< 0.005	< 0.005	—	14.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	405	405	0.07	0.01	—	409
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	64.6	64.6	0.01	< 0.005	—	65.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	2.38	2.38	< 0.005	< 0.005	—	2.41
Total	—	—	—	—	—	—	—	—	—	—	—	—	67.0	67.0	0.01	< 0.005	—	67.7

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.09	0.05	0.85	0.71	0.01	0.06	—	0.06	0.06	—	0.06	—	1,011	1,011	0.09	< 0.005	—	1,014
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.09	0.05	0.85	0.71	0.01	0.06	—	0.06	0.06	—	0.06	—	1,011	1,011	0.09	< 0.005	—	1,014

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.09	0.05	0.85	0.71	0.01	0.06	—	0.06	0.06	—	0.06	—	1,011	1,011	0.09	< 0.005	—	1,014
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.09	0.05	0.85	0.71	0.01	0.06	—	0.06	0.06	—	0.06	—	1,011	1,011	0.09	< 0.005	—	1,014
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.02	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	167	167	0.01	< 0.005	—	168
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.02	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	167	167	0.01	< 0.005	—	168

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	2.33	2.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.31	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.84	0.78	0.04	4.74	< 0.005	0.01	—	0.01	0.01	—	0.01	—	19.5	19.5	< 0.005	< 0.005	—	19.5
Total	3.49	3.42	0.04	4.74	< 0.005	0.01	—	0.01	0.01	—	0.01	—	19.5	19.5	< 0.005	< 0.005	—	19.5

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	2.33	2.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.31	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	2.65	2.65	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.43	0.43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.06	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.08	0.07	< 0.005	0.43	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.59	1.59	< 0.005	< 0.005	—	1.60
Total	0.56	0.55	< 0.005	0.43	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.59	1.59	< 0.005	< 0.005	—	1.60

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

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

Hotel	—	—	—	—	—	—	—	—	—	—	—	3.65	6.00	9.65	0.37	0.01	—	21.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.65	6.00	9.65	0.37	0.01	—	21.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	3.65	6.00	9.65	0.37	0.01	—	21.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.65	6.00	9.65	0.37	0.01	—	21.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	0.60	0.99	1.60	0.06	< 0.005	—	3.59
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.60	0.99	1.60	0.06	< 0.005	—	3.59

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	22.1	0.00	22.1	2.21	0.00	—	77.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	22.1	0.00	22.1	2.21	0.00	—	77.4

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	22.1	0.00	22.1	2.21	0.00	—	77.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	22.1	0.00	22.1	2.21	0.00	—	77.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	3.66	0.00	3.66	0.37	0.00	—	12.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.66	0.00	3.66	0.37	0.00	—	12.8

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	170	170
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	170	170
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	170	170
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	170	170
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.2	28.2
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.2	28.2

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/2/2025	1/30/2025	5.00	20.0	—
Site Preparation	Site Preparation	1/31/2025	2/4/2025	5.00	3.00	—
Grading	Grading	2/5/2025	2/13/2025	5.00	6.00	—
Building Construction	Building Construction	2/14/2025	12/19/2025	5.00	220	—
Paving	Paving	12/20/2025	1/3/2026	5.00	10.0	—
Architectural Coating	Architectural Coating	1/4/2026	1/18/2026	5.00	10.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	7.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74

Building Construction	Tractors/Loaders/Back	Diesel	Average	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	12.5	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	5.15	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	15.3	20.0	HHDT

Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	45.7	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	17.8	8.40	HHDT,MHDT
Building Construction	Hauling	0.00	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	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	9.15	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

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	0.00	0.00	163,350	54,450	1,764

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	412	—
Site Preparation	—	—	4.50	0.00	—
Grading	—	732	6.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.67

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Hotel	0.00	0%
Parking Lot	0.67	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	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Hotel	487	477	347	169,918	3,549	3,477	2,526	1,238,335
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	163,350	54,450	1,764

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Hotel	698,472	204	0.0330	0.0040	3,154,180
Parking Lot	25,757	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Hotel	1,902,508	780,436
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Hotel	41.1	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Hotel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Hotel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Hotel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

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	12.6	annual days of extreme heat
Extreme Precipitation	12.2	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	9.99	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	4	0	0	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	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	4	1	1	4
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
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	10.6
AQ-PM	7.50
AQ-DPM	18.1
Drinking Water	49.7
Lead Risk Housing	4.46
Pesticides	56.1
Toxic Releases	1.21
Traffic	40.9
Effect Indicators	—
CleanUp Sites	68.9
Groundwater	94.0
Haz Waste Facilities/Generators	90.0
Impaired Water Bodies	43.8
Solid Waste	53.4
Sensitive Population	—
Asthma	33.6
Cardio-vascular	24.9
Low Birth Weights	0.87
Socioeconomic Factor Indicators	—
Education	14.2
Housing	7.07
Linguistic	17.3
Poverty	1.75
Unemployment	43.1

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	98.07519569
Employed	55.33170794
Median HI	87.052483
Education	—
Bachelor's or higher	88.81047094
High school enrollment	100
Preschool enrollment	95.7141024
Transportation	—
Auto Access	83.51084306
Active commuting	18.63210574
Social	—
2-parent households	95.77826254
Voting	98.57564481
Neighborhood	—
Alcohol availability	81.76568716
Park access	41.13948415
Retail density	20.60823816
Supermarket access	26.48530733
Tree canopy	97.34377005
Housing	—
Homeownership	83.93430001
Housing habitability	64.21147183
Low-inc homeowner severe housing cost burden	88.87463108
Low-inc renter severe housing cost burden	39.12485564
Uncrowded housing	96.93314513
Health Outcomes	—

Insured adults	94.43089953
Arthritis	6.3
Asthma ER Admissions	85.4
High Blood Pressure	10.7
Cancer (excluding skin)	2.0
Asthma	76.7
Coronary Heart Disease	9.8
Chronic Obstructive Pulmonary Disease	47.8
Diagnosed Diabetes	64.3
Life Expectancy at Birth	45.1
Cognitively Disabled	52.2
Physically Disabled	60.6
Heart Attack ER Admissions	97.4
Mental Health Not Good	91.8
Chronic Kidney Disease	35.4
Obesity	86.0
Pedestrian Injuries	39.5
Physical Health Not Good	76.2
Stroke	34.3
Health Risk Behaviors	—
Binge Drinking	80.1
Current Smoker	94.0
No Leisure Time for Physical Activity	89.3
Climate Change Exposures	—
Wildfire Risk	5.3
SLR Inundation Area	0.0
Children	79.8
Elderly	5.7

English Speaking	69.6
Foreign-born	34.7
Outdoor Workers	65.6
Climate Change Adaptive Capacity	—
Impervious Surface Cover	90.7
Traffic Density	38.1
Traffic Access	50.4
Other Indices	—
Hardship	13.6
Other Decision Support	—
2016 Voting	98.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	11.0
Healthy Places Index Score for Project Location (b)	95.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Based on project specifications
Operations: Vehicle Data	from traffic study

ATTACHMENT 2 – CAP NEW DEVELOPMENT CHECKLIST

APPENDIX E: CAP NEW DEVELOPMENT CHECKLIST

To ensure new development projects are compliant with the City's Climate Action Plan, the following checklist has been developed. This checklist should be filled out for each new project, subject to discretionary review, to allow new development to find a less than significant impact for greenhouse gas emissions in the environmental review process.

#	Description	Compliance			
		Complies	Does Not Comply	N/A	See Discussion
1.1.1	Comply with CALGreen Tier 1 standards*	X			
1.1.3	After 2020, all new development will utilize zero net electricity*			X	Suspended due to litigation
1.3.1	Install real-time energy monitors to track energy use*	X			
1.4.2	Comply with the City's tree preservation ordinance*	X			
1.4.3	Provide public & private trees in compliance with the Zoning Code*	X			
1.5	Install new sidewalks and paving with high solar reflectivity materials*	X			
2.1.3	Pre-wire and pre-plumb for solar thermal or PV systems	X			
3.1.2	Support implementation of station plans and corridor plans			X	
3.2.1	Provide on-site services such as ATMs or dry cleaning to site users			X	
3.2.2	Improve non-vehicular network to promote walking, biking		X		
3.2.3	Support mixed-use, higher-density development near services			X	
3.3.1	Provide affordable housing near transit			X	
3.5.1	Unbundle parking from property cost			X	
3.6.1	Install calming features to improve ped/bike experience		X		
4.1.1	Implement the Bicycle and Pedestrian Master Plan			X	
4.1.2	Install bicycle parking consistent with regulations*	X			
4.1.3	Provide bicycle safety training to residents, employees, motorists			X	
4.2.2	Provide safe spaces to wait for bus arrival			X	

APPENDIX E

NEW DEVELOPMENT CHECKLIST

#	Description	Compliance			
		Complies	Does Not Comply	N/A	See Discussion
4.3.2	Work with large employers to provide rideshare programs			X	
4.3.3	Consider expanding employee programs promoting transit use			X	
4.3.4	Provide awards for employee use of alternative commute options	X			
4.3.5	Encourage new employers of 50+ to provide subsidized transit passes*			X	
4.3.7	Provide space for additional park-and-ride lots			X	
4.5.1	Include facilities for employees that promote telecommuting			X	
5.1.2	Install electric vehicle charging equipment	X			
5.2.1	Provide alternative fuels at new refueling stations*			X	
6.1.3	Increase diversion of construction waste*	X			
7.1.1	Reduce potable water use for outdoor landscaping*	X			
7.1.3	Use water meters which track real-time water use*	X			
7.3.2	Meet on-site meter separation requirements in locations with current or future recycled water capabilities*			X	
8.1.3	Establish community gardens and urban farms			X	
9.1.2	Provide outdoor electrical outlets for charging lawn equipment			X	
9.1.3	Install low water use landscapes*	X			
9.2.1	Minimize construction equipment idling time to 5 minutes or less*	X			
9.2.2	Maintain construction equipment per manufacturer's specs*	X			
9.2.3	Limit GHG construction equipment emissions by using electrified equipment or alternative fuels*	X			

**To be in compliance with the CAP, all measures denoted with an asterisk are required in all new development projects unless otherwise specified. If a project cannot meet one or more of the mandatory requirements, substitutions may be made from other measures listed at the discretion of the Community Development Director.*