Appendix A

Air Quality and Greenhouse Gas Analysis

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PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

MEMORANDUM

DATE: July 7, 2023

TO: James Pierson, Solano Landing, LLC

FROM: Amy Fischer, President
Cara Cunningham, Associate

SUBJECT: Air Quality and Greenhouse Gas Analysis for the proposed Solano Landing Project, Solano County, California

INTRODUCTION

LSA prepared this Air Quality and Greenhouse Gas Emissions Analysis for the proposed Solano Landing Project (project) in Solano County, California using methods and assumptions recommended by the Bay Area Air Quality Management District (BAAQMD) (2023). This analysis includes a description of the proposed project, the existing regulatory framework, an assessment of project construction and operation-period air quality and greenhouse gas (GHG) emissions, an assessment of potential health risks, and an evaluation of the project's compliance with adopted plans related to the reduction of clean air and GHG emissions.

PROJECT DESCRIPTION

The 24.42-acre project site is located at 2316 Rockville Road, (Assessor's Parcel Number 0027-200-150), in Solano County, California. The project site is currently undeveloped and is accessible via Suisun Valley Road and Rockville Road (Figure 1, Regional Project Location, and Figure 2, Site Plan; all figures provided as Attachment B).

The proposed project would include the construction of a total of 32,141 square feet (sf) of commercial development. The development of the property would include the following.

- Boutique Market: The market would be known as the "Icehouse Market". The market would help to preserve some of the history of the property through its name as well as the iconic red building that has been known as the "Icehouse". The market would be 5,496 sf and would sell locally grown products grown in the Suisun Valley and promoted on the property. The market would help celebrate and further the Suisun Valley's agricultural traditions and help satisfy the local regional demand for fresh, locally grown food. The market would have a deli with a custom lunch menu including sandwiches, meats, salads and other items. The market would also have a barista and assortment of coffee-related items. The hours of operation for the market would be Monday through Sunday, 7:00 a.m. to 8:00 p.m.

- Tasting Rooms: There would be six stand-alone tasting rooms with 1,500 sf each. Three of the six tasting rooms would feature wines from wineries and/or breweries that are locally grown or brewed in Solano County. The remaining three tasting rooms would have high-quality wines from outside Solano County that would only enhance the Suisun Valley wines. Grapes would be locally sourced from on-site, in Solano County and bordering counties. Food and wine pairings are proposed in the tasting rooms, consistent with approval of similar requests and during agricultural promotional events. The hours of operation for the tasting rooms would be Thursday through Sunday, 10:00 a.m. to 5:00 p.m.

- Multi-Purpose/Dining Hall: The Multi-Purpose/Dining Hall would be 3,655 sf. This facility would host no more than 24 events per year and would host a maximum of 300 guests at one time. The Multi-Purpose/Dining Hall would support the hotel and other property-related events and educational seminars related to agriculture, vineyards, and safety. The hours of operation of this facility would be event specific and no event would go past 10:00 p.m.

- Restaurant: The restaurant would be 7,462 sf. Its menu would feature local produce, meats, and poultry. The restaurant would have a beer and wine license. The hours of operation for the restaurant would be Wednesday through Monday (closed on Tuesday), 10:00 a.m. to 3:00 p.m. for lunch and 5:30 p.m. – 10:00 p.m. for dinner.

- Hotel Concierge: The hotel concierge building would consist of 1,728 sf. This building would be used for administering the daily needs of the Boutique Hotel. The hours of operation for the hotel concierge would be Monday through Sunday, 24 hours per day.

- Boutique Hotel: The Boutique hotel would consist of 10 prefabricated, standalone cottages with approximate square footage of 480 per unit for a total of 4,800 sf. The hotel would be owner-operated by the current landowners. The hours of operation for the hotel would be Monday through Sunday, 24 hours per day.

The proposed project would include a total of 192 parking spaces and would include a shuttle service from the project site to designated spots within the Suisun Valley. The proposed project is expected to generate 1,179 average daily trips. In addition, the proposed project would include three natural gas, 350-kilowatt (kW) generators with a runtime of 4 hours per month for testing, plus any emergency events, and three annual events with run times of 72 hours each.

Construction is expected to begin in 2024 and would be completed by 2025. Construction would include grading, site preparation, building, paving, and architectural coating (painting) activities. The project site would be balanced, with no import or export activities.

EXISTING SENSITIVE RECEPTORS IN THE PROJECT AREA

For the purposes of this analysis, sensitive receptors are areas of population that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include residences, schools, day care centers, hospitals, parks, and similar uses which are sensitive to air quality. Impacts on sensitive receptors are of particular concern because they are the population most vulnerable to the effects of air pollution. The project site is surrounded by existing single-

family residential uses, commercial uses, and undeveloped land. The closest sensitive receptors to the project site include single-family homes immediately adjacent to the project site boundary, approximately 5 feet away.

ENVIRONMENTAL SETTING

Air Quality Background

Air quality is primarily a function of both local climate, local sources of air pollution and regional pollution transport. The amount of a given pollutant in the atmosphere is determined by the amount of the pollutant released and the atmosphere's ability to transport and dilute the pollutant. The major determinants of transport and dilution are wind, atmospheric stability, terrain, and for photochemical pollutants, sunshine.

A region's topographic features have a direct correlation with air pollution flow and, therefore, are used to determine the boundary of air basins. Solano County is within the San Francisco Bay Area Air Basin (Air Basin), a large shallow air basin ringed by hills that taper into a number of sheltered valleys around the perimeter. Two primary atmospheric outlets exist. One is through the strait known as the Golden Gate, a direct outlet to the Pacific Ocean. The second extends to the northeast, along the west delta region of the Sacramento and San Joaquin rivers.

Solano County is within the jurisdiction of the BAAQMD, which regulates air quality in the Bay Area. Air quality conditions in the Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants and the number of days during which the region exceeds air quality standards have fallen dramatically. Neither State nor national ambient air quality standards of the following chemicals have been violated in recent decades: nitrogen dioxide, sulfur dioxide, sulfates, lead, hydrogen sulfide, and vinyl chloride. Those exceedances of air quality standards that do occur primarily happen during meteorological conditions conducive to high pollution levels, such as cold, windless nights or hot, sunny summer afternoons.

Both State and federal governments have established health-based Ambient Air Quality Standards for six criteria air pollutants: carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Two criteria pollutants, O_3 and NO_2, are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. Pollutants such as CO, SO_2, and Pb are considered local pollutants that tend to accumulate in the air locally. The BAAQMD is under State nonattainment status for O_3 and particulate matter standards. The BAAQMD is classified as nonattainment for the federal O_3 8-hour standard and nonattainment for the federal $PM_{2.5}$ 24-hour standard. As such, the primary pollutants of concern in the project area are O_3, CO, and $PM_{2.5}$.

Because of the conservative nature of the significance thresholds, and the basin-wide context of individual development project emissions, there is no direct correlation between a single project and localized air quality-related health effects. One individual project that generates emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds

are those with regional effects, such as O_3 precursors like nitrogen oxides (NO_x) and reactive organic gases (ROG).

Further, by its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to by itself result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, the air districts have considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

Occupants of facilities such as schools, daycare centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with greater associated exposure to ambient air quality conditions. Recreational uses are also considered sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise. These populations are referred to as sensitive receptors.

Greenhouse Gas and Global Climate Change Background

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- Carbon dioxide (CO_2);
- Methane (CH_4);
- Nitrous oxide (N_2O);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs); and
- Sulfur Hexafluoride (SF_6).

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which is believed to be causing global warming. While manmade GHGs include naturally occurring GHGs such as CO_2, CH_4, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its

atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG; the definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e).

REGULATORY FRAMEWORK

This section provides regulatory background information for air quality and GHGs.

Air Quality

Federal Regulations

The 1970 federal Clean Air Act (CAA) authorized the establishment of national health-based air quality standards and set deadlines for their attainment. The CAA Amendments of 1990 changed deadlines for attaining national standards as well as the remedial actions required for areas of the nation that exceed the standards. Under the CAA, State and local agencies in areas that exceed the national standards are required to develop State Implementation Plans to demonstrate how they will achieve the national standards by specified dates.

State Regulations

In 1988, the California Clean Air Act (CCAA) required that all air districts in the State endeavor to achieve and maintain California Ambient Air Quality Standards (CAAQS) for CO, O_3, sulfur dioxide (SO_2), and nitrogen dioxide (NO_2) by the earliest practical date. The CCAA provides districts with authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each nonattainment district is required to adopt a plan to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. A Clean Air Plan shows how a district would reduce emissions to achieve air quality standards. Generally, the State standards for these pollutants are more stringent than the national standards.

The California Air Resources Board (CARB) is the State's "clean air agency." The CARB's goals are to attain and maintain healthy air quality, protect the public from exposure to toxic air contaminants, and oversee compliance with air pollution rules and regulations.

Regional Regulations

The BAAQMD seeks to attain and maintain air quality conditions in the Air Basin through a comprehensive program of planning, regulation, enforcement, technical innovation, and education.

The clean air strategy includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. The BAAQMD also inspects stationary sources and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by law.

Clean Air Plan. The Clean Air Plan guides the region's air quality planning efforts to attain the CAAQS (BAAQMD 2017). The BAAQMD 2017 Clean Air Plan, adopted on April 19, 2017, by the BAAQMD Board of Directors, is the current Clean Air Plan that contains district-wide control measures to reduce ozone precursor emissions (e.g., ROG and NO_x), particulate matter and GHG emissions.

The Bay Area 2017 Clean Air Plan:

- Describes the BAAQMD plan towards attaining all State and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities
- Defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG reduction targets for 2030 and 2050.
- Provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve GHG reduction targets.
- Includes a wide range of control measures designed to decrease emissions of air pollutants that are most harmful to Bay Area residents, such as particulate matter, O_3, and toxic air contaminants; to reduce emissions of methane and other "Super-GHGs" that are potent climate pollutants in the near term; and to decrease emissions of CO_2 by reducing fossil fuel combustion.

BAAQMD CEQA Guidelines. The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area (BAAQMD 2023). The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and GHG emissions.

In 2023, the BAAQMD published an updated version of the CEQA Guidelines. The BAAQMD CEQA Guidelines include thresholds to evaluate project impacts to protectively evaluate the potential effects of the project on air quality. These protective thresholds are appropriate in the context of the size, scale, and location of the proposed project.

Local Regulations

The Public Health and Safety Chapter of the *Solano County General Plan* (County of Solano 2008) includes air quality policies and implementation programs that work to improve air quality in Solano County. The following policies are applicable to the proposed project.

- **Policy HS.P-43:** Support land use, transportation management, infrastructure and environmental planning programs that reduce vehicle emissions and improve air quality.

- **Policy HS.P-44:** Minimize health impacts from sources of toxic air contaminants, both stationary (e.g., refineries, manufacturing plants) as well as mobile sources (e.g., freeways, rail yards, commercial trucking operations).

- **Policy HS.P-45:** Promote consistency and cooperation in air quality planning efforts.

Greenhouse Gas Emissions

This section describes regulations related to global climate change at the federal, State, and local level.

Federal Regulations

The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled that the United States Environmental Protection Agency (EPA) has the authority to regulate CO_2 emissions under the CAA.

While there currently are no adopted federal regulations for the control or reduction of GHG emissions, the EPA commenced several actions in 2009 to implement a regulatory approach to global climate change, including the 2009 EPA final rule for mandatory reporting of GHGs from large GHG emission sources in the United States. Additionally, the EPA Administrator signed an endangerment finding action in 2009 under the CAA, finding that seven GHGs (CO_2, CH_4, N_2O, HFCs, nitrogen trifluoride [NF_3], PFCs, and SF_6) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to global climate change, leading to national GHG emission standards.

State Regulations

The CARB is the lead agency for implementing climate change regulations in the State. Since its formation, the CARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problems. Key efforts by the State are described below.

Assembly Bill 32 (2006), California Global Warming Solutions Act. California's major initiative for reducing GHG emissions is Assembly Bill (AB) 32, passed by the State legislature on August 31, 2006. This effort set a GHG emission reduction target to reduce GHG emissions to 1990 levels by 2020. The CARB has established the level of GHG emissions in 1990 at 427 million metric tons (MMT) CO_2e. The emissions target of 427 MMT requires the reduction of 169 MMT from the State's projected business-as-usual 2020 emissions of 596 MMT. AB 32 requires the CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The CARB approved the Scoping Plan on December 11, 2008. It contains the main strategies California will implement to achieve the reduction of 169 MMT of CO_2e, or approximately 30 percent, from the State's projected 2020 emission level of 596 MMT of CO_2e under a business-as-usual scenario (this is a reduction of 42 MMT CO_2e, or almost 10 percent from 2002–2004 average emissions). The Scoping Plan also includes CARB-recommended GHG reductions

for each emissions sector of the State's GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- Improved emissions standards for light-duty vehicles (estimated reduction of 31.7 MMT CO_2e)
- The Low-Carbon Fuel Standard (15.0 MMT CO_2e)
- Energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO_2e)
- A renewable portfolio standard for electricity production (21.3 MMT CO_2e)

The Scoping Plan identifies 18 emission reduction measures that address cap-and-trade programs, vehicle gas standards, energy efficiency, low carbon fuel standards, renewable energy, regional transportation-related GHG targets, vehicle efficiency measures, goods movement, solar roof programs, industrial emissions, high-speed rail, green building strategies, recycling, sustainable forests, water, and air. The measures would result in a total reduction of 174 MMT CO_2e by 2020.

On August 24, 2011, the CARB unanimously approved both the new supplemental assessment and reapproved its Scoping Plan, which provides the overall roadmap and rule measures to carry out AB 32. The CARB also approved a more robust California Environmental Quality Act (CEQA) equivalent document supporting the supplemental analysis of the cap-and-trade program. The cap-and-trade took effect on January 1, 2012, with an enforceable compliance obligation that began January 1, 2013.

The CARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines CARB climate change priorities until 2020 and sets the groundwork to reach long-term goals set forth in Executive Orders (EO) S-3-05 and B-16-2012. The Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals as defined in the initial Scoping Plan. It also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. The CARB released a second update to the Scoping Plan, the 2017 Scoping Plan (CARB 2017), to reflect the 2030 target set by EO B-30-15 and codified by Senate Bill (SB) 32.

The 2022 Scoping Plan (CARB 2022) was approved in December 2022 and assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan Update focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

Senate Bill 375 (2008). Signed into law on October 1, 2008, SB 375 supplements GHG reductions from new vehicle technology and fuel standards with reductions from more efficient land use patterns and improved transportation. Under the law, the CARB approved GHG reduction targets in

February 2011 for California's 18 federally designated regional planning bodies, known as Metropolitan Planning Organizations (MPO). The CARB may update the targets every 4 years and must update them every 8 years. MPOs, in turn, must demonstrate how their plans, policies and transportation investments meet the targets set by the CARB through Sustainable Community Strategies (SCS). The SCSs are included with the Regional Transportation Plan, a report required by State law. However, if an MPO finds that its SCS will not meet the GHG reduction target, it may prepare an Alternative Planning Strategy (APS). The APS identifies the impediments to achieving the targets.

Executive Order B-30-15 (2015). Governor Jerry Brown signed EO B-30-15 on April 29, 2015, which added the immediate target of:

- GHG emissions should be reduced to 40 percent below 1990 levels by 2030.

All State agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. The CARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target, and, therefore, is moving forward with the update process. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue reducing emissions.

Senate Bill 350 (2015) Clean Energy and Pollution Reduction Act. SB 350, signed by Governor Jerry Brown on October 7, 2015, updates and enhances AB 32 by introducing the following set of objectives in clean energy, clean air, and pollution reduction for 2030:

- Raise California's renewable portfolio standard from 33 percent to 50 percent; and
- Increase energy efficiency in buildings by 50 percent by the year 2030.

The 50 percent renewable energy standard will be implemented by the California Public Utilities Commission for the private utilities and by the California Energy Commission (CEC) for municipal utilities. Each utility must submit a procurement plan showing it will purchase clean energy to displace other nonrenewable resources. The 50 percent increase in energy efficiency in buildings must be achieved through the use of existing energy efficiency retrofit funding and regulatory tools already available to State energy agencies under existing law. The addition made by this legislation requires State energy agencies to plan for and implement those programs in a manner that achieves the energy efficiency target.

Senate Bill 32, California Global Warming Solutions Act of 2016, and Assembly Bill 197. In summer 2016, the Legislature passed and the Governor signed SB 32 and AB 197. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown's April 2015 EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an Intergovernmental Panel on Climate Change analysis of the emission trajectory that would stabilize atmospheric GHG concentrations at 450 parts per million CO_2e and reduce the likelihood of catastrophic impacts from climate change.

The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 meant to provide easier public access to air pollutant emissions data that are collected by the CARB was posted in December 2016.

Senate Bill 100. On September 10, 2018, Governor Brown signed SB 100, which raises California's renewable portfolio standard requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the Western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Executive Order B-55-18. EO B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." EO B-55-18 directs the CARB to work with relevant State agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Regional Regulations

The BAAQMD is the regional government agency that regulates sources of air pollution within the nine Bay Area counties.

BAAQMD CEQA Guidelines. The BAAQMD's CEQA Guidelines identify applicable GHG significance thresholds. The BAAQMD recommends these thresholds of significance for use in determining whether a proposed project will have a significant impact related to climate change. These thresholds evaluate a project based on its effect on California's efforts to meet the State's long-term climate goals. Applying this approach, the BAAQMD identifies and provides supporting documentation outlining the requirements that new land use development projects must comply with to achieve California's long-term climate goal of carbon neutrality by 2045. Based on this research, the BAAQMD has determined that new land use development projects need to incorporate design elements to contribute the "fair share" towards implementation of the goal of carbon neutrality by 2045. If a project is designed and built to incorporate the identified design elements, then it will contribute its portion of what is necessary to achieve California's long-term climate goals—its "fair share"—and an agency reviewing the project under CEQA can conclude that the project will not make a cumulatively considerable contribution to global climate change.

Local Regulations

The County of Solano (County) has developed a Climate Action Plan (CAP) (2011) to address GHG emissions at the local level. The CAP recommends measures and implementing actions that the community can take to reduce both emissions and communitywide contributions to global climate

change. In addition, the CAP establishes a communitywide GHG emissions reduction goal of 20 percent below 2005 levels by 2020.

METHODOLOGY

Construction Emissions

Construction activities can generate a substantial amount of air pollution. Construction activities are considered temporary; however, short-term impacts can contribute to exceedances of air quality standards. Construction activities include demolition, site preparation, earthmoving, and general construction. The emissions generated from these common construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel- and gasoline-powered equipment, portable auxiliary equipment, and worker commute trips. The California Emissions Estimator Model (CalEEMod) Version 2022.1 computer program was used to calculate emissions from on-site construction equipment and emissions from worker and vehicle trips to the site. This analysis assumes construction would begin in 2024 and would be completed by 2025. Construction would include grading, site preparation, building, paving, and architectural coating (painting) activities. This analysis assumes that the project site would be balanced with no import or export activities and use of Tier 2 construction equipment, which was also included in CalEEMod. Other detailed construction information is currently unavailable; therefore, this analysis uses CalEEMod default assumptions.

Construction Health Risk Assessment

A construction health risk assessment (HRA), which evaluates construction-period health risk to off-site receptors, was performed for the proposed project, and the analysis is presented below. To estimate the potential cancer risk associated with construction of the proposed project from equipment exhaust (including diesel particulate matter), a dispersion model was used to translate an emission rate from the source location to a concentration at the receptor location of interest (i.e., a nearby residence and worksites). Dispersion modeling varies from a simpler, more conservative screening-level analysis to a more complex and refined detailed analysis. This refined assessment was conducted using the CARB exposure methodology with the air dispersion modeling performed using the EPA dispersion model AERMOD. The model provides a detailed estimate of exhaust concentrations based on site and source geometry, source emissions strength, distance from the source to the receptor, and meteorological data.

Operational Emissions

This air quality analysis includes estimating emissions associated with long-term operation of the project. Indirect emissions of criteria pollutants with regional impacts would be emitted by project-generated vehicle trips. In addition, localized air quality impacts (i.e., higher CO concentrations or "hot-spots") near intersections or roadway segments in the project vicinity would also potentially occur due to project-generated vehicle trips.

Consistent with BAAQMD's guidance for estimating emissions, the CalEEMod computer program was used to calculate the long-term operational emissions associated with the project. The analysis was conducted using land use codes *Supermarket, Quality Restaurant, Hotel,* and *Parking Lot.* The

proposed project is expected to generate 1,179 average daily trips, which was included in CalEEMod. In addition, the proposed project would include three natural gas 350 kW generators with a run time of 4 hours per month for testing, plus any emergency events, and 3 annual events with run times of 72 hours each. Where project-specific data were not available, default assumptions (e.g., energy usage, water usage, and solid waste generation) from CalEEMod were used to estimate project emissions. CalEEMod output sheets are included in Attachment C.

Greenhouse Gas Emissions

GHG emissions associated with the project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust. There would also be long-term GHG emissions associated with project-related area sources, energy consumption, water conveyance and treatment, and waste generation.

THRESHOLDS OF SIGNIFICANCE

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse air quality impact if project-generated pollutant emissions would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under an applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

According to the BAAQMD CEQA Guidelines, to meet air quality standards for criteria air pollutant and air precursor impacts, the proposed project must not:

- Contribute to CO concentrations exceeding the State ambient air quality standards;
- Generate average daily construction emissions of ROG, NO_x or $PM_{2.5}$ (exhaust) greater than 54 pounds per day or PM_{10} [particulate matter 10 microns or less in diameter] exhaust emissions greater than 82 pounds per day;
- Generate operational emissions of ROG, NO_x or $PM_{2.5}$ of greater than 10 tons per year or 54 pounds per day or PM_{10} emissions greater than 15 tons per year or 82 pounds per day; or
- Exceed a cancer risk level of more than 10 in one million, a non-cancer risk (i.e., chronic or acute) hazard index greater than 1.0, or result in incremental increase of greater than 0.3 micrograms per cubic meter annual average $PM_{2.5}$.

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse GHG emission impact if the project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

- Conflict with an applicable plan, policy or regulation adopted for the purpose of reduction the emissions of greenhouse gases.

Solano County, as the Lead Agency for this project, applies a qualitative significance threshold for the determination of significance for GHG emissions and has determined that a project's GHG emissions would not be considered a significant impact if the project would be consistent with the County's CAP.

PROJECT IMPACTS

The sections below describe the proposed project's consistency with applicable air quality plans, estimated project emissions, and the significance of impacts for both air quality and GHG emissions with respect to BAAQMD and County thresholds.

Air Quality

Consistency with Applicable Air Quality Plans

The applicable air quality plan is the BAAQMD 2017 Clean Air Plan, which defines control strategies to reduce emissions and ambient concentrations of air pollutants; safeguard public health by reducing exposure to air pollutants that pose the greatest heath risk, with an emphasis on protecting the communities most heavily affected by air pollution; and reduce GHG emissions to protect the climate. Consistency with the Clean Air Plan can be determined if the project (1) supports the goals of the Clean Air Plan, (2) includes applicable control measures from the Clean Air Plan, and (3) would not disrupt or hinder implementation of any control measures from the Clean Air Plan.

Clean Air Plan Goals. The primary goals of the Bay Area Clean Air Plan are to attain air quality standards, reduce population exposure and protect public health in the Bay Area, and reduce GHG emissions and protect the climate.

The BAAQMD has established significance thresholds for project construction and operational impacts at a level at which the cumulative impact of exceeding these thresholds would have an adverse impact on the region's attainment of air quality standards. The health and hazards thresholds were established to help protect public health. As discussed below, construction and operation of the proposed project would not result in the generation of criteria air pollutants that would exceed BAAQMD thresholds of significance. Therefore, the proposed project would not conflict with the Clean Air Plan goals.

Clean Air Plan Control Measures. The control strategies of the Clean Air Plan include measures in the following categories: Stationary Source Measures, Transportation Measures, Energy Measures,

Building Measures, Agriculture Measures, Natural and Working Lands Measures, Waste Management Measures, Water Measures, and Super-GHG Pollutants Measures. The proposed project's compliance with each of these control measures is discussed below.

Stationary Source Control Measures. The Stationary Source Control Measures, which are designed to reduce emissions from stationary sources such as metal melting facilities, cement kilns, refineries, and glass furnaces, are incorporated into rules adopted by the BAAQMD and then enforced by the BAAQMD Permit and Inspection programs. Since the proposed project would not include any of these stationary sources, the Stationary Source Control Measures of the Clean Air Plan are not applicable to the proposed project.

Transportation Control Measures. The BAAQMD identifies Transportation Control Measures as part of the Clean Air Plan to decrease emissions of criteria pollutants, toxic air contaminants (TAC), and GHGs by reducing demand for motor vehicle travel, promoting efficient vehicles and transit service, decarbonizing transportation fuels, and electrifying motor vehicles and equipment. The proposed project would include a boutique market, tasting rooms, multi-purpose/dining hall, restaurant, and hotel within the County's Agriculture Tourist Center Zone. In addition, the project site includes a supermarket and restaurant that would provide residents with local shopping and dining destinations, which would increase opportunities for these uses closer to the trip origins and would decrease overall vehicle miles traveled (VMT) by substituting short trips for longer ones. By having a consolidation of wineries, visitors to the region are likely to visit this location rather than driving between wineries farther north and west of the project site. Further, the proposed project provides residents with local shopping and dining options, which would provide more local services. The project site also provides a proximate location relative to customers living in the area and customers visiting this geographic area. In addition, the proposed project would include a shuttle service from the project site to designated spots within the Suisun Valley, reducing the demand for travel by single-occupancy vehicles and VMT. Therefore, the proposed project would not conflict with the identified Transportation and Mobile Source Control Measures of the Clean Air Plan.

Energy Control Measures. The Clean Air Plan also includes Energy Control Measures, which are designed to reduce emissions of criteria air pollutants, TACs, and GHGs by decreasing the amount of electricity consumed in the Bay Area and decreasing the carbon intensity of the electricity used by switching to less GHG-intensive fuel sources for electricity generation. Since these measures apply to electrical utility providers and local government agencies (and not individual projects), the energy control measures of the Clean Air Plan are not applicable to the proposed project.

Building Control Measures. The BAAQMD has authority to regulate emissions from certain sources in buildings such as boilers and water heaters but has limited authority to regulate buildings themselves. Therefore, the strategies in the control measures for this sector focus on working with local governments that do have authority over local building codes, to facilitate adoption of best GHG control practices and policies. The proposed project would be required to comply with the latest Title 24 standards of the California Code of Regulations regarding energy conservation and green building standards. Therefore, the proposed project would not conflict with any of the Building Control Measures.

Agriculture Control Measures. The Agriculture Control Measures are designed to primarily reduce emissions of methane associated with emissions from animal waste in the form of enteric fermentation and manure management. The proposed project would include landscaping and vineyards to preserve the site's agricultural character; however, the Agriculture Control Measures of the Clean Air Plan are not applicable to the proposed project.

Natural and Working Lands Control Measures. The Natural and Working Lands Control Measures focus on increasing carbon sequestration on rangelands and wetlands and encouraging local governments to adopt ordinances that promote urban tree plantings. Since the proposed project does not include the disturbance of any rangelands or wetlands, the Natural and Working Lands Control Measures of the Clean Air Plan are not applicable to the proposed project.

Waste Management Control Measures. The Waste Management Control Measures focus on reducing or capturing methane emissions from landfills and composting facilities, diverting organic materials away from landfills, and increasing waste diversion rates through efforts to reduce, reuse, and recycle. The proposed project would comply with local requirements for waste management (e.g., recycling and composting services). Therefore, the proposed project would be consistent with the Waste Management Control Measures of the Clean Air Plan.

Water Control Measures. The Water Control Measures focus on reducing emissions of criteria pollutants, TACs, and GHGs by encouraging water conservation, limiting GHG emissions from publicly owned treatment works (POTW), and promoting the use of biogas recovery systems. Since these measures apply to POTWs and local government agencies (and not individual projects), the Water Control Measures are not applicable to the proposed project.

Super GHG Control Measures. The Super-GHG Control Measures are designed to facilitate the adoption of best GHG control practices and policies through the BAAQMD and local government agencies. Since these measures do not apply to individual projects, the Super-GHG Control Measures are not applicable to the proposed project.

Clean Air Plan Implementation. As discussed above, the proposed project would generally implement the applicable measures outlined in the Clean Air Plan, including Transportation Control Measures. Therefore, the project would not disrupt or hinder implementation of a control measure from the Clean Air Plan.

Criteria Pollutant Analysis

The BAAQMD is currently designated as a nonattainment area for State and national O_3 standards and national particulate matter ambient air quality standards. The BAAQMD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the

cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary. The following analysis assesses the potential project-level construction- and operation-related air quality impacts.

Short-Term Construction Emissions. During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by demolition, grading, building, paving, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, ROG, directly emitted particulate matter ($PM_{2.5}$ and PM_{10}), and TACs such as diesel exhaust particulate matter.

Project construction activities would include demolition, site preparation, grading, building, paving, and architectural coating (painting). Construction-related effects on air quality from the proposed project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The BAAQMD has established standard measures for reducing fugitive dust emissions (PM_{10}). With the implementation of these Basic Construction Mitigation Measures, fugitive dust emissions from construction activities would not result in adverse air quality impacts.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_x, ROG, and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

As discussed above, CalEEMod was used to calculate emissions from on-site construction equipment and emissions from worker and vehicle trips to the site. Construction-related emissions are presented in Table A, below.

Table A: Project Construction Emissions (in Pounds Per Day)

Project Construction	ROG	NO_X	Exhaust PM_{10}	Fugitive Dust PM_{10}	Exhaust $PM_{2.5}$	Fugitive Dust $PM_{2.5}$
Average Daily Emissions	1.1	14.5	0.5	0.5	0.5	0.2
BAAQMD Thresholds	54.0	54.0	82.0	BMP	54.0	BMP
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (March 2023).
BAAQMD = Bay Area Air Quality Management District
BMP = best management practices
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
PM_{10} = particulate matter 10 microns or less in diameter
ROG = reactive organic gases

As shown in Table A, construction emissions associated with the project would not exceed the BAAQMD's thresholds for ROG, NO_x, CO, exhaust PM_{10}, and exhaust $PM_{2.5}$ emissions. In addition to the construction period thresholds of significance, the BAAQMD requires the implementation of Basic Construction Mitigation Measures to reduce construction fugitive dust impacts to a less than significant level. Implementation of Mitigation Measure AIR-1 would ensure that the proposed project incorporates the Basic Construction Mitigation Measures and ensures that short-term construction period air quality impacts would be less than significant.

Mitigation Measure AIR-1 Consistent with the Bay Area Air Quality Management District (BAAQMD) Basic Construction Mitigation Measures, the following controls are required to be included as specifications for the proposed project and implemented at the construction site:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off site shall be covered.
- All visible mud or dirt tracked-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.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- 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.

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

- All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

- A publicly visible sign shall be posted with the telephone number and person to contact at Solano County regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

As shown in Table A, construction emissions associated with the project would not exceed the significance criteria for ROG, NO_x, PM_{10}, or $PM_{2.5}$ emissions. Therefore, with implementation of Mitigation Measure AIR-1, construction of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under applicable federal or State ambient air quality standards.

Long-Term Operational Emissions. Long-term air pollutant emission impacts are those associated with mobile sources (e.g., vehicle trips), energy sources (e.g., natural gas), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment) related to the proposed project.

PM_{10} emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM_{10} occurs when vehicle tires pulverize small rocks and pavement, and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles.

Energy source emissions result from activities in buildings that use natural gas. The quantity of emissions is the product of usage intensity (i.e., the amount of natural gas) and the emission factor of the fuel source. Major sources of energy demand for the proposed project could include building mechanical systems, such as heating and air conditioning and lighting. Greater building or appliance efficiency reduces the amount of energy for a given activity and thus lowers the resultant emissions. The emission factor is determined by the fuel source, with cleaner energy sources, like renewable energy, producing fewer emissions than conventional sources.

Area source emissions associated with the project would include emissions from the use of landscaping equipment.

Emission estimates for operation of the project were calculated using CalEEMod. The primary emissions associated with the project are regional in nature, meaning that air pollutants are rapidly dispersed on release or, in the case of vehicle emissions associated with the project, emissions are released in other areas of the Air Basin. The daily and annual emissions associated with project operational trip generation, energy, and area sources are identified in Table B for ROG, NO_x, PM_{10}, and $PM_{2.5}$.

The results shown in Table B indicate the project would not exceed the significance criteria for daily or annual ROG, NO_x, PM_{10}, and $PM_{2.5}$ emissions; therefore, operation of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under applicable federal or State ambient air quality standards.

Table B: Project Operational Emissions

	ROG	NO_x	PM_{10}	$PM_{2.5}$
Pounds per Day				
Mobile Source Emissions	4.9	4.8	3.0	0.6
Area Source Emissions	0.8	<0.1	<0.1	<0.1
Energy Source Emissions	<0.1	0.7	<0.1	0.1
Stationary Source Emissions	9.0	0.9	0.1	0.1
Total Emissions	**14.8**	**6.3**	**3.1**	**0.7**
BAAQMD Thresholds	54.0	54.0	82.0	54.0
Exceeds Threshold?	**No**	**No**	**No**	**No**
Tons per Year				
Mobile Source Emissions	0.9	0.9	0.6	0.1
Area Source Emissions	0.2	<0.1	<0.1	<0.1
Energy Source Emissions	<0.1	0.1	<0.1	<0.1
Stationary Source Emissions	1.6	0.2	<0.1	<0.1
Total Emissions	**2.7**	**1.2**	**0.6**	**0.1**
BAAQMD Thresholds	10.0	10.0	15.0	10.0
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (March 2023).
BAAQMD = Bay Area Air Quality Management District
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
PM_{10} = particulate matter 10 microns or less in diameter
ROG = reactive organic gases

Localized CO Impacts. Emissions and ambient concentrations of CO have decreased dramatically in the Bay Area with the introduction of the catalytic converter in 1975. No exceedances of the State or federal CO standards have been recorded at Bay Area monitoring stations since 1991. The BAAQMD's 2023 CEQA Guidelines include recommended methodologies for quantifying concentrations of localized CO levels for proposed transportation projects. A screening level analysis using guidance from the BAAQMD CEQA Guidelines was performed to determine the impacts of the project. The screening methodology provides a conservative indication of whether the

implementation of a proposed project would result in significant CO emissions. According to the BAAQMD's CEQA Guidelines, a proposed project would result in a less than significant impact to localized CO concentrations if the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, and the regional transportation plan and local congestion management agency plans.
- Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The project would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, or below-grade roadway).

Implementation of the proposed project would not conflict with the Solano Transportation Authority. The proposed project would generate approximately 211 Friday PM peak-hour trips, 293 Saturday peak-hour inbound special event trips, and 289 Saturday peak-hour, outbound, special-event trips (KD Anderson & Associates, Inc. 2022). As such, the project's contribution to peak-hour traffic volumes at intersections in the vicinity of the project site would be well below 44,000 vehicles per hour. Therefore, the proposed project would not result in localized CO concentrations that exceed State or federal standards.

Health Risk on Nearby Sensitive Receptors

Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to diesel particulate matter are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to diesel particulate matter. Exposure from diesel exhaust associated with construction activity contributes to both cancer and chronic non-cancer health risks.

The project site is surrounded by existing single-family residential uses, commercial uses, and undeveloped land. The closest sensitive receptors to the project site include single-family homes immediately adjacent to the project site boundary, approximately 5 feet away. The following sections describe the potential impacts on sensitive receptors from construction and operation of the proposed project.

LSA performed a construction HRA, which evaluates construction-period health risk to off-site receptors, for the proposed project. The analysis is presented below. Table C, below, identifies the results of the analysis assuming the use of Tier 2 construction equipment, as proposed by the project, at the maximally exposed individual (MEI), which is the nearest sensitive receptor. Model snapshots of the sources and results are shown in Attachment D.

Table C: Unmitigated Inhalation Health Risks from Project Construction to Off-Site Receptors

	Carcinogenic Inhalation Health Risk in One Million	Chronic Inhalation Hazard Index	Acute Inhalation Hazard Index	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)
Maximally Exposed Individual	76.41	0.096	0.000	0.479
Threshold	**10.0**	**1.0**	**1.0**	**0.3**
Exceeds Threshold?	**Yes**	**No**	**No**	**Yes**

Source: Compiled by LSA (March 2023).
$\mu g/m^3$ = micrograms per cubic meter
$PM_{2.5}$ = particulate matter less than 2.5 microns in size

As shown in Table C, the risk associated with project construction at the MEI would be 76.41 in one million, which would exceed the BAAQMD cancer risk threshold of 10 in one million. The total chronic hazard index would be 0.096, which is below the threshold of 1.0. In addition, the total acute hazard index would be nominal (0.0), which would also not exceed the threshold of 1.0. The results of the analysis indicate that the total $PM_{2.5}$ concentration would be 0.479 micrograms per cubic meter ($\mu g/m^3$), which would also exceed the BAAQMD significance threshold of 0.3 $\mu g/m^3$. Therefore, since cancer risk and $PM_{2.5}$ concentrations would exceed the BAAQMD's threshold, implementation of Mitigation Measure AIR-2 would be required to reduce substantial pollutant concentrations during project construction.

Mitigation Measure AIR-2 During construction of the proposed project, the project contractor shall ensure all off-road diesel-powered construction equipment of 50 horsepower or more used for the project construction at a minimum meets the California Air Resources Board Tier 4 emissions standards or equivalent.

Table D identifies the results of the analysis with implementation of Mitigation Measure AIR-2.

Table D: Mitigated Inhalation Health Risks from Project Construction to Off-Site Receptors

	Carcinogenic Inhalation Health Risk in One Million	Chronic Inhalation Hazard Index	Acute Inhalation Hazard Index	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)
Maximally Exposed Individual	5.07	0.006	0.000	0.032
Threshold	**10.0**	**1.0**	**1.0**	**0.3**
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (March 2023).
$\mu g/m^3$ = micrograms per cubic meter
$PM_{2.5}$ = particulate matter less than 2.5 microns in size

As shown in Table D, the mitigated cancer risk at the MEI would be 5.07 in one million, which would not exceed the BAAQMD cancer risk of 10 in one million. In addition, the mitigated total $PM_{2.5}$ concentration would be 0.032 µg/m^3, which would also be below the BAAQMD significance threshold of 0.3 µg/m^3. Therefore, with implementation of Mitigation Measure AIR-2, construction of the proposed project would not exceed BAAQMD thresholds and would not expose nearby sensitive receptors to substantial pollutant concentrations.

Once the proposed project is constructed, the proposed project would not be a source of substantial emissions. Therefore, implementation of the proposed project would not result in new sources of TACs. Therefore, the project would not expose sensitive receptors to substantial levels of TACs.

Objectionable Odors

During construction, the various diesel-powered vehicles and equipment in use on site would create localized odors. These odors would be temporary and are not likely to be noticeable for extended periods of time beyond the project site. Additionally, the proposed uses that would be developed within the project site are not expected to produce any offensive odors that would result in frequent odor complaints.

Greenhouse Gas Emissions

Generate Greenhouse Gas Emissions

As discussed above, a project would have a less than significant impact related to GHG emissions if it would be consistent with the County's CAP which is designed to streamline environmental review of future development projects in Solano County consistent with *State CEQA Guidelines* Section 15183.5(b). Therefore, this section evaluates the proposed project's consistency with the County's CAP.

The CAP includes reduction measures in the following categories: Agriculture, Transportation and Land Use, Energy Use and Efficiency, Water use and Efficiency, and Waste Reduction and Recycling. The project's consistency with the CAP reduction measures are evaluated in Table E below.

Table E: Proposed Project Consistency with the CAP

CAP Measure	Consistency
Agriculture	
AG-1: Develop a program that provides outreach, technical assistance, and incentives to promote soil management techniques that reduce nitrous oxide emissions and increase carbon sequestration within agricultural operations.	***Consistent.*** The project site is in an agricultural area and is composed of an undeveloped vegetated field. The project would include a "Hotel Resort" comprised of 6 tasting rooms, a restaurant that would serve alcoholic beverages, a boutique market, a multi-purpose facility, 10 cottages that would make up the boutique hotel, a hotel concierge building, and accompanying landscaping and vineyards. With implementation of the proposed project, the project would include 9.1 acres of Agricultural Tourist Center (ATC) development and 10.5 acres of planted vineyards. The remaining acreage would be retained as agricultural land. The existing Ice House

Table E: Proposed Project Consistency with the CAP

CAP Measure	Consistency
	and Fruit Stand buildings within the northernmost point of the project site immediately south of Rockville Road would be retained. Implementation of the proposed project is not expected to increase nitrous oxide emissions and would increase carbon sequestration.
AG-2: Develop an outreach program aimed at reducing field equipment emissions and fuel costs.	***Not Applicable.*** This measure applies to the County, not individual development projects.
AG-3: Encourage confined livestock operations within the County to develop biogas control systems and biogas power-generation systems.	***Not Applicable.*** The proposed project would not include livestock operations.
AG-4: Encourage the use of alternatives to the fumigant and potent greenhouse gas Methyl Bromide and other fumigants with high global warming potential.	***Consistent.*** As described above, 10.5 acres of the project site would consist of planted vineyards. It is not expected that implementation of the proposed project would increase the use of fumigants.
AG-5: Assist agricultural producers and processors in efforts to increase the sale of locally grown-products to local/regional markets.	***Consistent.*** As discussed in the Project Description, the proposed project would include a market, which would sell locally grown products grown in the Suisun Valley and promoted on the property. The market would help celebrate and further the Suisun Valley's agricultural traditions and help satisfy the local regional demand for fresh, locally grown food.
AG-6: Allocate financial resources towards the position of a County Agricultural Ombudsman.	***Not Applicable.*** This measure applies to the County, not individual development projects.
Energy and Efficiency	
E-1: Investigate the potential to establish a countywide community choice aggregation program and increase the community's use of locally produced renewable energy	***Not Applicable.*** This measure applies to the County, not individual development projects. Pacific Gas and Electric services would be utilized for gas and electricity for the property. However, future tenants may elect to join a community choice provider.
E-2: Develop a comprehensive renewable energy program that provides outreach, financing, and other forms of assistance to residential, commercial, agricultural, and industrial uses.	***Not Applicable.*** This measure applies to the County, not individual development projects. However, the proposed project would be required to comply with the latest Title 24 standards of the California Code of Regulations regarding energy conservation and green building standards.
E-3: Develop a comprehensive energy efficiency program that provides outreach, financing, and other forms of assistance to residential, commercial, agricultural, and industrial uses.	***Not Applicable.*** This measure applies to the County, not individual development projects. However, the proposed project would be required to comply with the latest Title 24 standards of the California Code of Regulations regarding energy conservation and green building standards.
E-4: Adopt green building and energy efficiency ordinances to require green building practices, programs and design elements.	***Not Applicable.*** This measure applies to the County, not individual development projects. However, the proposed project would be required to comply with the latest Title 24 standards of the California Code of Regulations regarding energy conservation and green building standards.
E-5: Work with Cal Recycle, Bay Area waste agencies, other jurisdictions, and interested private sector parties to develop an agricultural and food waste-to-energy biomass facility in Solano County.	***Not Applicable.*** This measure applies to the County, not individual development projects.

Table E: Proposed Project Consistency with the CAP

CAP Measure	Consistency
E-6: Partner with Solano Economic Development Corporation, Pacific Gas & Electric, and agricultural processing and industrial energy businesses to increase building and process energy efficiency.	***Not Applicable.*** This measure applies to the County, not individual development projects. However, the proposed project would be required to comply with the latest Title 24 standards of the California Code of Regulations regarding energy conservation and green building standards.
E-7: Work with Solano Economic Development Corporation and cities to establish an eco-agriculture and food processing park that incorporates industrial ecology, renewable energy generation, and zero-waste practices.	***Not Applicable.*** This measure applies to the County, not individual development projects.
E-M1: Reduce total energy consumption in County facilities cost-effectively by 20% by 2020.	***Not Applicable.*** This measure applies to the County, not individual development projects.
E-M2: Increase the use of renewable energy in County operations.	***Not Applicable.*** This measure applies to the County, not individual development projects.
Transportation and Land Use	
TC-1: Solano County will work with STA to enhance countywide rideshare infrastructure and services.	***Consistent.*** The proposed project would include a shuttle service from the project site to designated spots within the Suisun Valley.
TC-2: Work with STA to increase public transit ridership by expanding express bus service and improving transit stop amenities and transit connections.	***Consistent.*** The proposed project would include a shuttle service from the project site to designated spots within the Suisun Valley.
TC-3: Work with cities and STA to improve bicycle and pedestrian connectivity in the county.	***Consistent.*** The proposed project would include a boutique market, tasting rooms, multi-purpose/dining hall, restaurant, and hotel within the County's Agriculture Tourist Center Zone. In addition, the project site includes a supermarket and restaurant that would provide residents with local shopping and dining destinations, which would increase opportunities for these uses closer to the trip origins and would decrease overall VMT by substituting short trips for longer ones. By having a consolidation of wineries, visitors to the region are likely to visit this location rather than driving between wineries farther north and west of the project site. Further, the proposed project provides residents with local shopping and dining options, which would provide more local services. The project site also provides a proximate location relative to customers living in the area and customers visiting this geographic area.
TC-4: Educate residents and businesses about options to reduce motor vehicle emissions.	***Not Applicable.*** This measure applies to the County, not individual development projects.
TC-M1: Replace County vehicles with fuel efficient, electric, or alternative fuel vehicle models as the existing fleet is retired. (Emergency Vehicles are exempt, unless appropriate alternative vehicle options become available.)	***Not Applicable.*** This measure applies to the County, not individual development projects.
LU-1: Update the zoning ordinance to allow live-work uses in residential zones as long as such uses are compatible with existing community character.	***Not Applicable.*** This measure applies to the County, not individual development projects.
LU-2: Protect and preserve forested areas, agricultural lands, wildlife habitat, and wetlands that provide carbon sequestration.	***Consistent.*** The project site is in an agricultural area and is composed of an undeveloped vegetated field. The project would include a "Hotel Resort" comprised of 6

Table E: Proposed Project Consistency with the CAP

CAP Measure	Consistency
	tasting rooms, a restaurant that would serve alcoholic beverages, a boutique market, a multi-purpose facility, 10 cottages that would make up the boutique hotel, a hotel concierge building, and accompanying landscaping and vineyards. With implementation of the proposed project, the project would include 9.1 acres of ATC development and 10.5 acres of planted vineyards. The remaining acreage would be retained as agricultural land. The existing Ice House and Fruit Stand buildings within the northernmost point of the project site immediately south of Rockville Road would be retained. Implementation of the proposed project would maintain agricultural use on a portion of the project site.
LU-3: Protect oak woodlands and heritage trees and encourage the planting of native tree species in new developments and along road rights-of-way. Require the planting of shade and roadside trees in development projects.	***Consistent.*** The proposed project would include landscaping and vineyards to preserve the site's agricultural character.
Waste Reduction and Recycling	
W-1: Work with the Local Task Force and other organizations to create a zero-waste plan and provide public education regarding zero-waste strategies and implementation.	***Not Applicable.*** This measure applies to the County, not individual development projects.
W-2: Adopt a Construction and Demolition Ordinance to require 65% of construction and demolition debris to be recycled or reused by 2020.	***Not Applicable.*** This measure applies to the County, not individual development projects.
W-3: Work with State agencies to provide free audits to commercial generators and recommend strategies to reduce waste and increase recycling and composting.	***Not Applicable.*** This measure applies to the County, not individual development projects. However, solid waste generated by the proposed project would not be substantial. As described above, both of the landfills that serve Solano County have sufficient capacity to accommodate the solid waste generated as a result of the proposed project.
W-4: Facilitate CalRecycle and the State Air Resources Board's (ARB) implementation of the Landfill Methane Capture Strategy by requiring landfills to capture methane to the greatest extent feasible.	***Consistent.*** The proposed project would increase the diversion of solid waste to 75 percent as required under AB 341.
Water Conservation	
WC-1: Work with the Agricultural Water Conservation Committee of the Solano Water Advisory Commission to promote efficient irrigation and agricultural water management.	***Not Applicable.*** This measure applies to the County, not individual development projects. However, the proposed project would be required to comply with the latest Title 24 standards, which include a variety of different measures, including reduction of wastewater and water use. In addition, the proposed project would be required to comply with the California Model Water Efficient Landscape Ordinance.
WC-2: Work with Solano County water providers, including representatives for well users that share water with their neighbors for residential water use, to expand and promote outreach programs and incentives for water conservation.	***Not Applicable.*** This measure applies to the County, not individual development projects. However, the proposed project would be required to comply with the latest Title 24 standards, which include a variety of different measures, including reduction of wastewater and water

Table E: Proposed Project Consistency with the CAP

CAP Measure	Consistency
	use. In addition, the proposed project would be required to comply with the California Model Water Efficient Landscape Ordinance.
WC-3: Increase water-efficiency requirements for major (>2,500 square feet) landscape projects in new construction and remodels.	***Not Applicable.*** This measure applies to the County, not individual development projects. However, the proposed project would be required to comply with the latest Title 24 standards, which include a variety of different measures, including reduction of wastewater and water use. In addition, the proposed project would be required to comply with the California Model Water Efficient Landscape Ordinance.
WC-M1: Reduce water use in County buildings and landscape irrigation.	***Not Applicable.*** This measure applies to the County, not individual development projects.

Source: Compiled by LSA (July 2023).
Note: Not applicable refers to measures that are not relevant to new development and measures not within the project applicant's control.

As shown in Table E, the proposed project is consistent with the applicable measures included in the Solano County CAP. Because many aspects of the project's emissions inventory would benefit from further regulatory and technological advancements, the project is not expected to obstruct the attainment of the State's long-term GHG reduction goal for 2045. Therefore, the proposed project would be consistent with the County's CAP and would not generate GHG emissions that may have a significant effect on the environment.

Consistency with Greenhouse Gas Reduction Plans

The following discussion evaluates the proposed project according to the goals of the 2022 Scoping Plan, EO B-30-15, SB 32, and AB 197.

EO B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan (CARB 2017), to reflect the 2030 target set by EO B-30-15 and codified by SB 32. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 intended to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

In addition, the 2022 Scoping Plan (CARB 2022) assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-

term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

The 2022 Scoping Plan focuses on building clean energy production and distribution infrastructure for a carbon-neutral future, including transitioning existing energy production and transmission infrastructure to produce zero-carbon electricity and hydrogen, and utilizing biogas resulting from wildfire management or landfill and dairy operations, among other substitutes. The 2022 Scoping Plan states that in almost all sectors, electrification will play an important role. The 2022 Scoping Plan evaluates clean energy and technology options and the transition away from fossil fuels, including adding four times the solar and wind capacity by 2045 and about 1,700 times the amount of current hydrogen supply. As discussed in the 2022 Scoping Plan, EO N-79-20 requires that all new passenger vehicles sold in California will be zero-emission by 2035, and all other fleets will have transitioned to zero-emission as fully possible by 2045, which will reduce the percentage of fossil fuel combustion vehicles.

Energy efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. As discussed above, the proposed project would comply with the CALGreen Code, regarding energy conservation and green building standards. Therefore, the proposed project would comply with applicable energy measures.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, the project would comply with the CALGreen Code, which includes a variety of different measures, including the reduction of wastewater and water use. In addition, the proposed project would be required to comply with the California Model Water Efficient Landscape Ordinance. Therefore, the proposed project would not conflict with any of the water conservation and efficiency measures.

The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. Specific regional emission targets for transportation emissions would not directly apply to the proposed project. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all vehicles by 2020. Vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. Therefore, the proposed project would not conflict with the identified transportation and motor vehicle measures.

The proposed project would comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in SB 32 and EO B-30-15. In addition, as demonstrated above, the proposed project would not conflict with the County's CAP. Therefore, the proposed project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the GHG emissions.

CONCLUSION

Based on the analysis presented above, with implementation of Mitigation Measure AIR-1, construction of the proposed project would not result in the generation of criteria air pollutants that would exceed BAAQMD thresholds of significance. Operational emissions associated with the proposed project would also not exceed BAAQMD established significance thresholds. With implementation of Mitigation Measure AIR-2, the proposed project is not expected to expose sensitive receptors to substantial pollutant concentrations. The proposed project would also not result in objectionable odors affecting a substantial number of people. In addition, the proposed project would be consistent with the County's CAP and therefore would not result in the emission of substantial GHG emissions. Additionally, the project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the GHG emissions. Therefore, the proposed project's incremental contribution to cumulative GHG emissions would not be cumulatively considerable.

Attachments: A: References
B: Figures
Figure 1—Project Location
Figure 2—Site Plan
C: CalEEMod Output Sheets
D: HRA Model Snapshots and Input Assumptions

ATTACHMENT A

REFERENCES

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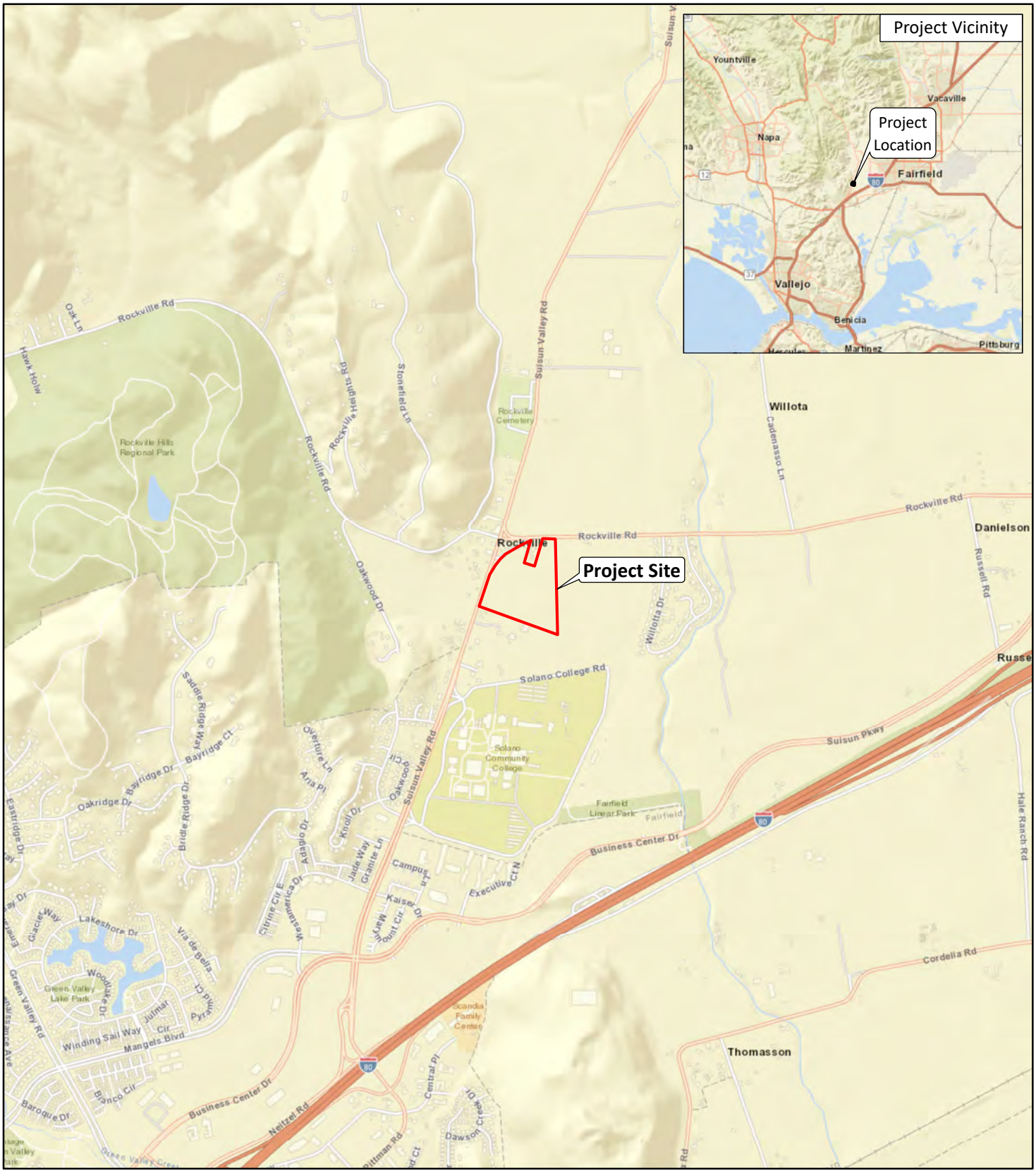
ATTACHMENT B

FIGURES



LSA

LEGEND

Project Site

FIGURE 1

N

0 1000 2000

FEET

Solano Landing Project
Fairfield, Solano County, California

Project Location

SOURCE: Esri World Street Map (2023).

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LSA

FIGURE 2

N

0 75 150

FEET

SOURCE: Cleaver Design Associates

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Solano Landing Project
Fairfield, Solano County, California

Site Plan

ATTACHMENT C

CALEEMOD OUTPUT SHEETS

Solano Landing Custom Report

Table of Contents

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Solano Landing
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.60
Precipitation (days)	37.6
Location	2316 Rockville Rd, Fairfield, CA 94534, USA
County	Solano-San Francisco
City	Unincorporated
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	857
EDFZ	4
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric

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
Supermarket	5.50	1000sqft	1.00	5,496	10,000	—	—	—
Quality Restaurant	16.5	1000sqft	1.00	16,462	10,000	—	—	—
Hotel	10.0	Room	1.00	10,183	10,000	—	—	—

Parking Lot	192	Space	4.00	0.00	35,000	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

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

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.68	19.1	14.9	0.02	0.69	0.14	0.83	0.64	0.04	0.68	—	2,659	2,659	0.10	0.05	2,676
Mit.	0.29	2.26	14.9	0.02	0.05	0.14	0.19	0.05	0.04	0.08	—	2,659	2,659	0.10	0.05	2,676
% Reduced	57%	88%	—	—	93%	—	77%	93%	—	88%	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	19.2	39.9	29.0	0.05	1.12	7.81	8.93	1.02	3.97	4.99	—	5,443	5,443	0.22	0.05	5,464
Mit.	19.2	2.66	29.0	0.05	0.10	7.81	7.91	0.10	3.97	4.07	—	5,443	5,443	0.22	0.05	5,464
% Reduced	< 0.5%	93%	—	—	91%	—	11%	90%	—	18%	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.11	14.5	11.2	0.02	0.51	0.46	0.97	0.47	0.21	0.68	—	1,995	1,995	0.08	0.03	2,007

Mit.	1.09	1.63	11.2	0.02	0.03	0.46	0.50	0.03	0.21	0.24	—	1,995	1,995	0.08	0.03	2,007
% Reduced	2%	89%	—	—	93%	—	49%	93%	—	65%	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.20	2.64	2.05	< 0.005	0.09	0.08	0.18	0.09	0.04	0.12	—	330	330	0.01	0.01	332
Mit.	0.20	0.30	2.05	< 0.005	0.01	0.08	0.09	0.01	0.04	0.04	—	330	330	0.01	0.01	332
% Reduced	2%	89%	—	—	93%	—	49%	93%	—	65%	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.68	19.1	14.9	0.02	0.69	0.14	0.83	0.64	0.04	0.68	—	2,659	2,659	0.10	0.05	2,676
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.14	39.9	29.0	0.05	1.12	7.81	8.93	1.02	3.97	4.99	—	5,443	5,443	0.22	0.05	5,464
2025	19.2	13.4	11.1	0.01	0.58	0.12	0.70	0.54	0.03	0.57	—	1,636	1,636	0.06	0.02	1,642
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.50	14.5	11.2	0.02	0.51	0.46	0.97	0.47	0.21	0.68	—	1,995	1,995	0.08	0.03	2,007
2025	1.11	0.69	0.58	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	—	85.4	85.4	< 0.005	< 0.005	85.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.09	2.64	2.05	< 0.005	0.09	0.08	0.18	0.09	0.04	0.12	—	330	330	0.01	0.01	332
2025	0.20	0.13	0.11	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	—	14.1	14.1	< 0.005	< 0.005	14.2

2.3. Construction Emissions by Year, Mitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.29	2.26	14.9	0.02	0.05	0.14	0.19	0.05	0.04	0.08	—	2,659	2,659	0.10	0.05	2,676
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.74	2.66	29.0	0.05	0.10	7.81	7.91	0.10	3.97	4.07	—	5,443	5,443	0.22	0.05	5,464
2025	19.2	1.98	11.1	0.01	0.03	0.12	0.15	0.03	0.03	0.06	—	1,636	1,636	0.06	0.02	1,642
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.22	1.63	11.2	0.02	0.03	0.46	0.50	0.03	0.21	0.24	—	1,995	1,995	0.08	0.03	2,007
2025	1.09	0.13	0.58	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	85.4	85.4	< 0.005	< 0.005	85.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.04	0.30	2.05	< 0.005	0.01	0.08	0.09	0.01	0.04	0.04	—	330	330	0.01	0.01	332
2025	0.20	0.02	0.11	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.1	14.1	< 0.005	< 0.005	14.2

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	18.7	6.24	72.9	0.10	0.19	2.97	3.16	0.19	0.52	0.71	39.1	11,491	11,530	6.18	0.45	13,036
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	18.2	6.98	70.6	0.09	0.19	2.97	3.16	0.18	0.52	0.70	39.1	10,946	10,985	6.25	0.49	12,470
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14.8	6.32	60.3	0.09	0.17	2.97	3.14	0.17	0.52	0.69	39.1	10,808	10,847	5.75	0.47	12,329
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.71	1.15	11.0	0.02	0.03	0.54	0.57	0.03	0.09	0.13	6.48	1,789	1,796	0.95	0.08	2,041

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.26	4.36	38.7	0.09	0.07	2.97	3.04	0.06	0.52	0.58	—	9,221	9,221	0.41	0.41	9,389
Area	1.04	0.01	1.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.75	5.75	< 0.005	< 0.005	5.77
Energy	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	1,447	1,447	0.18	0.01	1,456
Water	—	—	—	—	—	—	—	—	—	—	11.4	23.6	35.0	1.17	0.03	72.6
Waste	—	—	—	—	—	—	—	—	—	—	27.8	0.00	27.8	2.77	0.00	97.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,181
Stationary	12.4	1.19	32.3	< 0.005	0.07	—	0.07	0.07	—	0.07	—	793	793	1.66	0.00	834
Total	18.7	6.24	72.9	0.10	0.19	2.97	3.16	0.19	0.52	0.71	39.1	11,491	11,530	6.18	0.45	13,036
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.96	5.12	37.7	0.09	0.07	2.97	3.04	0.06	0.52	0.58	—	8,682	8,682	0.47	0.45	8,829
Area	0.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	1,447	1,447	0.18	0.01	1,456
Water	—	—	—	—	—	—	—	—	—	—	11.4	23.6	35.0	1.17	0.03	72.6

Waste	—	—	—	—	—	—	—	—	—	—	27.8	0.00	27.8	2.77	0.00	97.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,181
Stationary	12.4	1.19	32.3	< 0.005	0.07	—	0.07	0.07	—	0.07	—	793	793	1.66	0.00	834
Total	18.2	6.98	70.6	0.09	0.19	2.97	3.16	0.18	0.52	0.70	39.1	10,946	10,985	6.25	0.49	12,470
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.91	4.78	35.7	0.09	0.07	2.97	3.04	0.06	0.52	0.58	—	8,761	8,761	0.44	0.43	8,916
Area	0.92	0.01	0.69	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.83	2.83	< 0.005	< 0.005	2.85
Energy	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	1,447	1,447	0.18	0.01	1,456
Water	—	—	—	—	—	—	—	—	—	—	11.4	23.6	35.0	1.17	0.03	72.6
Waste	—	—	—	—	—	—	—	—	—	—	27.8	0.00	27.8	2.77	0.00	97.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,181
Stationary	8.97	0.86	23.4	< 0.005	0.05	—	0.05	0.05	—	0.05	—	573	573	1.20	0.00	603
Total	14.8	6.32	60.3	0.09	0.17	2.97	3.14	0.17	0.52	0.69	39.1	10,808	10,847	5.75	0.47	12,329
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.90	0.87	6.51	0.02	0.01	0.54	0.55	0.01	0.09	0.11	—	1,450	1,450	0.07	0.07	1,476
Area	0.17	< 0.005	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.47	0.47	< 0.005	< 0.005	0.47
Energy	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	240	240	0.03	< 0.005	241
Water	—	—	—	—	—	—	—	—	—	—	1.88	3.91	5.80	0.19	< 0.005	12.0
Waste	—	—	—	—	—	—	—	—	—	—	4.59	0.00	4.59	0.46	0.00	16.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	196
Stationary	1.64	0.16	4.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	94.9	94.9	0.20	0.00	99.9
Total	2.71	1.15	11.0	0.02	0.03	0.54	0.57	0.03	0.09	0.13	6.48	1,789	1,796	0.95	0.08	2,041

2.6. Operations Emissions by Sector, Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.26	4.36	38.7	0.09	0.07	2.97	3.04	0.06	0.52	0.58	—	9,221	9,221	0.41	0.41	9,389
Area	1.04	0.01	1.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.75	5.75	< 0.005	< 0.005	5.77
Energy	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	1,447	1,447	0.18	0.01	1,456
Water	—	—	—	—	—	—	—	—	—	—	11.4	23.6	35.0	1.17	0.03	72.6
Waste	—	—	—	—	—	—	—	—	—	—	27.8	0.00	27.8	2.77	0.00	97.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,181
Stationary	12.4	1.19	32.3	< 0.005	0.07	—	0.07	0.07	—	0.07	—	793	793	1.66	0.00	834
Total	18.7	6.24	72.9	0.10	0.19	2.97	3.16	0.19	0.52	0.71	39.1	11,491	11,530	6.18	0.45	13,036
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.96	5.12	37.7	0.09	0.07	2.97	3.04	0.06	0.52	0.58	—	8,682	8,682	0.47	0.45	8,829
Area	0.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	1,447	1,447	0.18	0.01	1,456
Water	—	—	—	—	—	—	—	—	—	—	11.4	23.6	35.0	1.17	0.03	72.6
Waste	—	—	—	—	—	—	—	—	—	—	27.8	0.00	27.8	2.77	0.00	97.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,181
Stationary	12.4	1.19	32.3	< 0.005	0.07	—	0.07	0.07	—	0.07	—	793	793	1.66	0.00	834
Total	18.2	6.98	70.6	0.09	0.19	2.97	3.16	0.18	0.52	0.70	39.1	10,946	10,985	6.25	0.49	12,470
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.91	4.78	35.7	0.09	0.07	2.97	3.04	0.06	0.52	0.58	—	8,761	8,761	0.44	0.43	8,916
Area	0.92	0.01	0.69	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.83	2.83	< 0.005	< 0.005	2.85
Energy	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	1,447	1,447	0.18	0.01	1,456
Water	—	—	—	—	—	—	—	—	—	—	11.4	23.6	35.0	1.17	0.03	72.6
Waste	—	—	—	—	—	—	—	—	—	—	27.8	0.00	27.8	2.77	0.00	97.1

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,181
Stationary	8.97	0.86	23.4	< 0.005	0.05	—	0.05	0.05	—	0.05	—	573	573	1.20	0.00	603
Total	14.8	6.32	60.3	0.09	0.17	2.97	3.14	0.17	0.52	0.69	39.1	10,808	10,847	5.75	0.47	12,329
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.90	0.87	6.51	0.02	0.01	0.54	0.55	0.01	0.09	0.11	—	1,450	1,450	0.07	0.07	1,476
Area	0.17	< 0.005	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.47	0.47	< 0.005	< 0.005	0.47
Energy	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	240	240	0.03	< 0.005	241
Water	—	—	—	—	—	—	—	—	—	—	1.88	3.91	5.80	0.19	< 0.005	12.0
Waste	—	—	—	—	—	—	—	—	—	—	4.59	0.00	4.59	0.46	0.00	16.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	196
Stationary	1.64	0.16	4.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	94.9	94.9	0.20	0.00	99.9
Total	2.71	1.15	11.0	0.02	0.03	0.54	0.57	0.03	0.09	0.13	6.48	1,789	1,796	0.95	0.08	2,041

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	39.9	28.3	0.05	1.12	—	1.12	1.02	—	1.02	—	5,296	5,296	0.21	0.04	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	1.09	0.78	< 0.005	0.03	—	0.03	0.03	—	0.03	—	145	145	0.01	< 0.005	146
Dust From Material Movement	—	—	—	—	—	0.21	0.21	—	0.11	0.11	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.20	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	24.1
Dust From Material Movement	—	—	—	—	—	0.04	0.04	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.68	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	148	148	< 0.005	0.01	150
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.09	4.09	< 0.005	< 0.005	4.16
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.68	0.68	< 0.005	< 0.005	0.69
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
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.2. Site Preparation (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	2.59	28.3	0.05	0.10	—	0.10	0.10	—	0.10	—	5,296	5,296	0.21	0.04	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.78	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	145	145	0.01	< 0.005	146
Dust From Material Movement	—	—	—	—	—	0.21	0.21	—	0.11	0.11	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.0	24.0	< 0.005	< 0.005	24.1
Dust From Material Movement	—	—	—	—	—	0.04	0.04	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.68	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	148	148	< 0.005	0.01	150
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.09	4.09	< 0.005	< 0.005	4.16
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.68	0.68	< 0.005	< 0.005	0.69
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
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.73	23.2	17.8	0.03	0.75	—	0.75	0.69	—	0.69	—	2,958	2,958	0.12	0.02	2,969
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.27	0.97	< 0.005	0.04	—	0.04	0.04	—	0.04	—	162	162	0.01	< 0.005	163
Dust From Material Movement	—	—	—	—	—	0.15	0.15	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.23	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	26.9
Dust From Material Movement	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.59	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	127	127	< 0.005	0.01	128
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.02	7.02	< 0.005	< 0.005	7.12
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
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.16	1.16	< 0.005	< 0.005	1.18
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.4. Grading (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	2.04	17.8	0.03	0.06	—	0.06	0.06	—	0.06	—	2,958	2,958	0.12	0.02	2,969

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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.11	0.97	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	162	162	0.01	< 0.005	163
Dust From Material Movement	—	—	—	—	—	0.15	0.15	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.8	26.8	< 0.005	< 0.005	26.9
Dust From Material Movement	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.59	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	127	127	< 0.005	0.01	128
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.02	7.02	< 0.005	< 0.005	7.12
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
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.16	1.16	< 0.005	< 0.005	1.18
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	—	2,398	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	—	2,398	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	11.9	9.01	0.01	0.43	—	0.43	0.40	—	0.40	—	1,511	1,511	0.06	0.01	1,516

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	2.17	1.64	< 0.005	0.08	—	0.08	0.07	—	0.07	—	250	250	0.01	< 0.005	251
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.57	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	118	118	< 0.005	< 0.005	120
Vendor	0.01	0.19	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	143	143	< 0.005	0.02	150
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.51	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	109	109	< 0.005	< 0.005	111
Vendor	0.01	0.20	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	143	143	< 0.005	0.02	150
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.31	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	69.7	69.7	< 0.005	< 0.005	70.7
Vendor	< 0.005	0.12	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	90.1	90.1	< 0.005	0.01	94.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	11.7
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.9	14.9	< 0.005	< 0.005	15.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.6. Building Construction (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	2.03	14.3	0.02	0.04	—	0.04	0.04	—	0.04	—	2,398	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	2.03	14.3	0.02	0.04	—	0.04	0.04	—	0.04	—	2,398	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	1.28	9.01	0.01	0.03	—	0.03	0.03	—	0.03	—	1,511	1,511	0.06	0.01	1,516
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.23	1.64	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	250	250	0.01	< 0.005	251
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.57	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	118	118	< 0.005	< 0.005	120
Vendor	0.01	0.19	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	143	143	< 0.005	0.02	150
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.51	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	109	109	< 0.005	< 0.005	111
Vendor	0.01	0.20	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	143	143	< 0.005	0.02	150
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.31	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	69.7	69.7	< 0.005	< 0.005	70.7
Vendor	< 0.005	0.12	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	90.1	90.1	< 0.005	0.01	94.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	11.7
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.9	14.9	< 0.005	< 0.005	15.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.7. Paving (2024) - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	13.3	10.6	0.01	0.58	—	0.58	0.54	—	0.54	—	1,512	1,512	0.06	0.01	1,517
Paving	0.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.92	5.92	< 0.005	< 0.005	5.94
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.98	0.98	< 0.005	< 0.005	0.98
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.59	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	127	127	< 0.005	0.01	128
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 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	0.51
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
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.08	0.08	< 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
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.8. Paving (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.93	10.6	0.01	0.03	—	0.03	0.03	—	0.03	—	1,512	1,512	0.06	0.01	1,517
Paving	0.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.92	5.92	< 0.005	< 0.005	5.94
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.98	0.98	< 0.005	< 0.005	0.98
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.59	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	127	127	< 0.005	0.01	128
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 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	0.51
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
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.08	0.08	< 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
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	13.3	10.6	0.01	0.58	—	0.58	0.54	—	0.54	—	1,511	1,511	0.06	0.01	1,517
Paving	0.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.62	0.50	< 0.005	0.03	—	0.03	0.03	—	0.03	—	71.0	71.0	< 0.005	< 0.005	71.2
Paving	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.11	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.8	11.8	< 0.005	< 0.005	11.8
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.54	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	124	124	< 0.005	0.01	126
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.90	5.90	< 0.005	< 0.005	5.99
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.98	0.98	< 0.005	< 0.005	0.99
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.10. Paving (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.93	10.6	0.01	0.03	—	0.03	0.03	—	0.03	—	1,511	1,511	0.06	0.01	1,517
Paving	0.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.09	0.50	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	71.0	71.0	< 0.005	< 0.005	71.2

Paving	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.8	11.8	< 0.005	< 0.005	11.8
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.54	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	124	124	< 0.005	0.01	126
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.90	5.90	< 0.005	< 0.005	5.99
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.98	0.98	< 0.005	< 0.005	0.99
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.09	0.96	< 0.005	0.07	—	0.07	0.06	—	0.06	—	134	134	0.01	< 0.005	134
Architectural Coatings	19.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	7.34
Architectural Coatings	1.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	1.22
Architectural Coatings	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	21.4	21.4	< 0.005	< 0.005	21.7
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
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.19	1.19	< 0.005	< 0.005	1.21
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.20	0.20	< 0.005	< 0.005	0.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.12. Architectural Coating (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.65	0.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	134	134	0.01	< 0.005	134

Architectu Coatings	19.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	7.34
Architectu ral Coatings	1.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	1.22
Architectu ral Coatings	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	21.4	21.4	< 0.005	< 0.005	21.7
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
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.19	1.19	< 0.005	< 0.005	1.21
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.20	0.20	< 0.005	< 0.005	0.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hotel	5.26	4.36	38.7	0.09	0.07	2.97	3.04	0.06	0.52	0.58	—	9,221	9,221	0.41	0.41	9,389
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
Total	5.26	4.36	38.7	0.09	0.07	2.97	3.04	0.06	0.52	0.58	—	9,221	9,221	0.41	0.41	9,389
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Supermarket	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hotel	4.96	5.12	37.7	0.09	0.07	2.97	3.04	0.06	0.52	0.58	—	8,682	8,682	0.47	0.45	8,829
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
Total	4.96	5.12	37.7	0.09	0.07	2.97	3.04	0.06	0.52	0.58	—	8,682	8,682	0.47	0.45	8,829
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hotel	0.90	0.87	6.51	0.02	0.01	0.54	0.55	0.01	0.09	0.11	—	1,450	1,450	0.07	0.07	1,476
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
Total	0.90	0.87	6.51	0.02	0.01	0.54	0.55	0.01	0.09	0.11	—	1,450	1,450	0.07	0.07	1,476

4.1.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hotel	5.26	4.36	38.7	0.09	0.07	2.97	3.04	0.06	0.52	0.58	—	9,221	9,221	0.41	0.41	9,389
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

Total	5.26	4.36	38.7	0.09	0.07	2.97	3.04	0.06	0.52	0.58	—	9,221	9,221	0.41	0.41	9,389
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hotel	4.96	5.12	37.7	0.09	0.07	2.97	3.04	0.06	0.52	0.58	—	8,682	8,682	0.47	0.45	8,829
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
Total	4.96	5.12	37.7	0.09	0.07	2.97	3.04	0.06	0.52	0.58	—	8,682	8,682	0.47	0.45	8,829
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hotel	0.90	0.87	6.51	0.02	0.01	0.54	0.55	0.01	0.09	0.11	—	1,450	1,450	0.07	0.07	1,476
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
Total	0.90	0.87	6.51	0.02	0.01	0.54	0.55	0.01	0.09	0.11	—	1,450	1,450	0.07	0.07	1,476

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	—	157	157	0.03	< 0.005	159

Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	369	369	0.06	0.01	373
Hotel	—	—	—	—	—	—	—	—	—	—	—	34.9	34.9	0.01	< 0.005	35.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	85.3	85.3	0.01	< 0.005	86.1
Total	—	—	—	—	—	—	—	—	—	—	—	647	647	0.10	0.01	653
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	—	157	157	0.03	< 0.005	159
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	369	369	0.06	0.01	373
Hotel	—	—	—	—	—	—	—	—	—	—	—	34.9	34.9	0.01	< 0.005	35.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	85.3	85.3	0.01	< 0.005	86.1
Total	—	—	—	—	—	—	—	—	—	—	—	647	647	0.10	0.01	653
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	—	26.0	26.0	< 0.005	< 0.005	26.3
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	61.2	61.2	0.01	< 0.005	61.8
Hotel	—	—	—	—	—	—	—	—	—	—	—	5.77	5.77	< 0.005	< 0.005	5.83
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	14.1	14.1	< 0.005	< 0.005	14.3
Total	—	—	—	—	—	—	—	—	—	—	—	107	107	0.02	< 0.005	108

4.2.2. Electricity Emissions By Land Use - Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	—	157	157	0.03	< 0.005	159
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	369	369	0.06	0.01	373
Hotel	—	—	—	—	—	—	—	—	—	—	—	34.9	34.9	0.01	< 0.005	35.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	85.3	85.3	0.01	< 0.005	86.1
Total	—	—	—	—	—	—	—	—	—	—	—	647	647	0.10	0.01	653
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	—	157	157	0.03	< 0.005	159
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	369	369	0.06	0.01	373
Hotel	—	—	—	—	—	—	—	—	—	—	—	34.9	34.9	0.01	< 0.005	35.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	85.3	85.3	0.01	< 0.005	86.1
Total	—	—	—	—	—	—	—	—	—	—	—	647	647	0.10	0.01	653
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	—	26.0	26.0	< 0.005	< 0.005	26.3
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	61.2	61.2	0.01	< 0.005	61.8
Hotel	—	—	—	—	—	—	—	—	—	—	—	5.77	5.77	< 0.005	< 0.005	5.83
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	14.1	14.1	< 0.005	< 0.005	14.3
Total	—	—	—	—	—	—	—	—	—	—	—	107	107	0.02	< 0.005	108

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	53.3	53.3	< 0.005	< 0.005	53.4
Quality Restaurant	0.03	0.54	0.45	< 0.005	0.04	—	0.04	0.04	—	0.04	—	643	643	0.06	< 0.005	645
Hotel	< 0.005	0.09	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	104	104	0.01	< 0.005	105
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
Total	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	800	800	0.07	< 0.005	803
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	53.3	53.3	< 0.005	< 0.005	53.4
Quality Restaurant	0.03	0.54	0.45	< 0.005	0.04	—	0.04	0.04	—	0.04	—	643	643	0.06	< 0.005	645
Hotel	< 0.005	0.09	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	104	104	0.01	< 0.005	105
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
Total	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	800	800	0.07	< 0.005	803
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.82	8.82	< 0.005	< 0.005	8.84
Quality Restaurant	0.01	0.10	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	106	106	0.01	< 0.005	107
Hotel	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.3	17.3	< 0.005	< 0.005	17.3

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
Total	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	133	133	0.01	< 0.005	133

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	53.3	53.3	< 0.005	< 0.005	53.4
Quality Restaurant	0.03	0.54	0.45	< 0.005	0.04	—	0.04	0.04	—	0.04	—	643	643	0.06	< 0.005	645
Hotel	< 0.005	0.09	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	104	104	0.01	< 0.005	105
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
Total	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	800	800	0.07	< 0.005	803
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	53.3	53.3	< 0.005	< 0.005	53.4
Quality Restaurant	0.03	0.54	0.45	< 0.005	0.04	—	0.04	0.04	—	0.04	—	643	643	0.06	< 0.005	645
Hotel	< 0.005	0.09	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	104	104	0.01	< 0.005	105
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
Total	0.04	0.67	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	800	800	0.07	< 0.005	803
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.82	8.82	< 0.005	< 0.005	8.84

Quality Restaurant	0.01	0.10	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	106	106	0.01	< 0.005	107
Hotel	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.3	17.3	< 0.005	< 0.005	17.3
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
Total	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	133	133	0.01	< 0.005	133

4.3. Area Emissions by Source

4.3.2. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.23	0.01	1.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.75	5.75	< 0.005	< 0.005	5.77
Total	1.04	0.01	1.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.75	5.75	< 0.005	< 0.005	5.77
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	0.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.02	< 0.005	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.47	0.47	< 0.005	< 0.005	0.47
Total	0.17	< 0.005	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.47	0.47	< 0.005	< 0.005	0.47

4.3.1. Mitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.23	0.01	1.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.75	5.75	< 0.005	< 0.005	5.77
Total	1.04	0.01	1.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.75	5.75	< 0.005	< 0.005	5.77
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectu Coatings	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectu ral Coatings	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscap e Equipmen t	0.02	< 0.005	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.47	0.47	< 0.005	< 0.005	0.47
Total	0.17	< 0.005	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.47	0.47	< 0.005	< 0.005	0.47

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermar ket	—	—	—	—	—	—	—	—	—	—	1.30	2.79	4.09	0.13	< 0.005	8.39
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	9.57	18.4	28.0	0.98	0.02	59.7
Hotel	—	—	—	—	—	—	—	—	—	—	0.49	1.26	1.74	0.05	< 0.005	3.35
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	1.18	1.18	< 0.005	< 0.005	1.19
Total	—	—	—	—	—	—	—	—	—	—	11.4	23.6	35.0	1.17	0.03	72.6

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	1.30	2.79	4.09	0.13	< 0.005	8.39
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	9.57	18.4	28.0	0.98	0.02	59.7
Hotel	—	—	—	—	—	—	—	—	—	—	0.49	1.26	1.74	0.05	< 0.005	3.35
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	1.18	1.18	< 0.005	< 0.005	1.19
Total	—	—	—	—	—	—	—	—	—	—	11.4	23.6	35.0	1.17	0.03	72.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	0.21	0.46	0.68	0.02	< 0.005	1.39
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	1.59	3.05	4.64	0.16	< 0.005	9.88
Hotel	—	—	—	—	—	—	—	—	—	—	0.08	0.21	0.29	0.01	< 0.005	0.56
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.20	0.20	< 0.005	< 0.005	0.20
Total	—	—	—	—	—	—	—	—	—	—	1.88	3.91	5.80	0.19	< 0.005	12.0

4.4.1. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	1.30	2.79	4.09	0.13	< 0.005	8.39
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	9.57	18.4	28.0	0.98	0.02	59.7
Hotel	—	—	—	—	—	—	—	—	—	—	0.49	1.26	1.74	0.05	< 0.005	3.35

Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	1.18	1.18	< 0.005	< 0.005	1.19
Total	—	—	—	—	—	—	—	—	—	—	11.4	23.6	35.0	1.17	0.03	72.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	1.30	2.79	4.09	0.13	< 0.005	8.39
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	9.57	18.4	28.0	0.98	0.02	59.7
Hotel	—	—	—	—	—	—	—	—	—	—	0.49	1.26	1.74	0.05	< 0.005	3.35
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	1.18	1.18	< 0.005	< 0.005	1.19
Total	—	—	—	—	—	—	—	—	—	—	11.4	23.6	35.0	1.17	0.03	72.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	0.21	0.46	0.68	0.02	< 0.005	1.39
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	1.59	3.05	4.64	0.16	< 0.005	9.88
Hotel	—	—	—	—	—	—	—	—	—	—	0.08	0.21	0.29	0.01	< 0.005	0.56
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.20	0.20	< 0.005	< 0.005	0.20
Total	—	—	—	—	—	—	—	—	—	—	1.88	3.91	5.80	0.19	< 0.005	12.0

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

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

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

Supermar	—	—	—	—	—	—	—	—	—	—	16.7	0.00	16.7	1.67	0.00	58.4
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	8.10	0.00	8.10	0.81	0.00	28.3
Hotel	—	—	—	—	—	—	—	—	—	—	2.95	0.00	2.95	0.29	0.00	10.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	27.8	0.00	27.8	2.77	0.00	97.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermar ket	—	—	—	—	—	—	—	—	—	—	16.7	0.00	16.7	1.67	0.00	58.4
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	8.10	0.00	8.10	0.81	0.00	28.3
Hotel	—	—	—	—	—	—	—	—	—	—	2.95	0.00	2.95	0.29	0.00	10.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	27.8	0.00	27.8	2.77	0.00	97.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermar ket	—	—	—	—	—	—	—	—	—	—	2.77	0.00	2.77	0.28	0.00	9.68
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	1.34	0.00	1.34	0.13	0.00	4.69
Hotel	—	—	—	—	—	—	—	—	—	—	0.49	0.00	0.49	0.05	0.00	1.71
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	4.59	0.00	4.59	0.46	0.00	16.1

4.5.1. Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	16.7	0.00	16.7	1.67	0.00	58.4
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	8.10	0.00	8.10	0.81	0.00	28.3
Hotel	—	—	—	—	—	—	—	—	—	—	2.95	0.00	2.95	0.29	0.00	10.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	27.8	0.00	27.8	2.77	0.00	97.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	16.7	0.00	16.7	1.67	0.00	58.4
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	8.10	0.00	8.10	0.81	0.00	28.3
Hotel	—	—	—	—	—	—	—	—	—	—	2.95	0.00	2.95	0.29	0.00	10.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	27.8	0.00	27.8	2.77	0.00	97.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	2.77	0.00	2.77	0.28	0.00	9.68
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	1.34	0.00	1.34	0.13	0.00	4.69
Hotel	—	—	—	—	—	—	—	—	—	—	0.49	0.00	0.49	0.05	0.00	1.71
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	4.59	0.00	4.59	0.46	0.00	16.1

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,139
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.7
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,181
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,139
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.7
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,181
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	189
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.26
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.64
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	196

4.6.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,139
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.7
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,181
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,139
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.7
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,181
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supermarket	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	189
Quality Restaurant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.26
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.64
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	196

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.7.2. Mitigated

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

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

4.8. 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	12.4	1.19	32.3	< 0.005	0.07	—	0.07	0.07	—	0.07	—	793	793	1.66	0.00	834
Total	12.4	1.19	32.3	< 0.005	0.07	—	0.07	0.07	—	0.07	—	793	793	1.66	0.00	834
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	12.4	1.19	32.3	< 0.005	0.07	—	0.07	0.07	—	0.07	—	793	793	1.66	0.00	834
Total	12.4	1.19	32.3	< 0.005	0.07	—	0.07	0.07	—	0.07	—	793	793	1.66	0.00	834
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	1.64	0.16	4.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	94.9	94.9	0.20	0.00	99.9
Total	1.64	0.16	4.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	94.9	94.9	0.20	0.00	99.9

4.8.2. Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	12.4	1.19	32.3	< 0.005	0.07	—	0.07	0.07	—	0.07	—	793	793	1.66	0.00	834
Total	12.4	1.19	32.3	< 0.005	0.07	—	0.07	0.07	—	0.07	—	793	793	1.66	0.00	834
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	12.4	1.19	32.3	< 0.005	0.07	—	0.07	0.07	—	0.07	—	793	793	1.66	0.00	834
Total	12.4	1.19	32.3	< 0.005	0.07	—	0.07	0.07	—	0.07	—	793	793	1.66	0.00	834
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	1.64	0.16	4.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	94.9	94.9	0.20	0.00	99.9
Total	1.64	0.16	4.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	94.9	94.9	0.20	0.00	99.9

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

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

4.9.2. Mitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

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

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

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	1/1/2024	1/12/2024	5.00	10.0	—
Grading	Grading	1/15/2024	2/9/2024	5.00	20.0	—
Building Construction	Building Construction	2/12/2024	12/27/2024	5.00	230	—
Paving	Paving	12/30/2024	1/24/2025	5.00	20.0	—
Architectural Coating	Architectural Coating	1/27/2025	2/21/2025	5.00	20.0	—

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
Site Preparation	Rubber Tired Dozers	Diesel	Tier 2	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 2	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 2	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Tier 2	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 2	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 2	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Tier 2	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 2	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Tier 2	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 2	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Tier 2	1.00	8.00	46.0	0.45

Paving	Pavers	Diesel	Tier 2	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 2	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 2	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 2	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Final	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Tier 4 Final	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Final	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Tier 2	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Tier 4 Final	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Final	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Final	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	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
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	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	15.0	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	12.9	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	5.27	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	2.59	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

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	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	15.0	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	12.9	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	5.27	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	2.59	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

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

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	48,212	16,071	10,454

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	15.0	0.00	—
Grading	—	—	20.0	0.00	—
Paving	0.00	0.00	0.00	0.00	4.00

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Supermarket	0.00	0%
Quality Restaurant	0.00	0%
Hotel	0.00	0%
Parking Lot	4.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	204	0.03	< 0.005
2025	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
Supermarket	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hotel	1,179	1,179	1,179	430,335	10,871	10,871	10,871	3,967,820
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Supermarket	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Quality Restaurant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hotel	1,179	1,179	1,179	430,335	10,871	10,871	10,871	3,967,820

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

5.10.1.2. Mitigated

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	48,212	16,071	10,454

5.10.3. Landscape Equipment

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

5.10.4. Landscape Equipment - Mitigated

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Supermarket	281,487	204	0.0330	0.0040	166,186
Quality Restaurant	661,009	204	0.0330	0.0040	2,005,909
Hotel	62,402	204	0.0330	0.0040	325,418
Parking Lot	152,634	204	0.0330	0.0040	0.00

5.11.2. Mitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Supermarket	281,487	204	0.0330	0.0040	166,186
Quality Restaurant	661,009	204	0.0330	0.0040	2,005,909
Hotel	62,402	204	0.0330	0.0040	325,418
Parking Lot	152,634	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)
Supermarket	677,482	122,282
Quality Restaurant	4,996,772	122,282
Hotel	253,668	122,282
Parking Lot	0.00	427,987

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Supermarket	677,482	122,282

Quality Restaurant	4,996,772	122,282
Hotel	253,668	122,282
Parking Lot	0.00	427,987

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Supermarket	31.0	0.00
Quality Restaurant	15.0	0.00
Hotel	5.47	0.00
Parking Lot	0.00	0.00

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Supermarket	31.0	0.00
Quality Restaurant	15.0	0.00
Hotel	5.47	0.00
Parking Lot	0.00	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
Supermarket	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Supermarket	Supermarket refrigeration and condensing units	R-404A	3,922	26.5	16.5	16.5	18.0
Quality Restaurant	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Quality Restaurant	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Quality Restaurant	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
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

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Supermarket	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Supermarket	Supermarket refrigeration and condensing units	R-404A	3,922	26.5	16.5	16.5	18.0
Quality Restaurant	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Quality Restaurant	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Quality Restaurant	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
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

5.15.2. Mitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	CNG	3.00	1.00	264	470	0.73

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

5.18.2.2. Mitigated

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

8. User Changes to Default Data

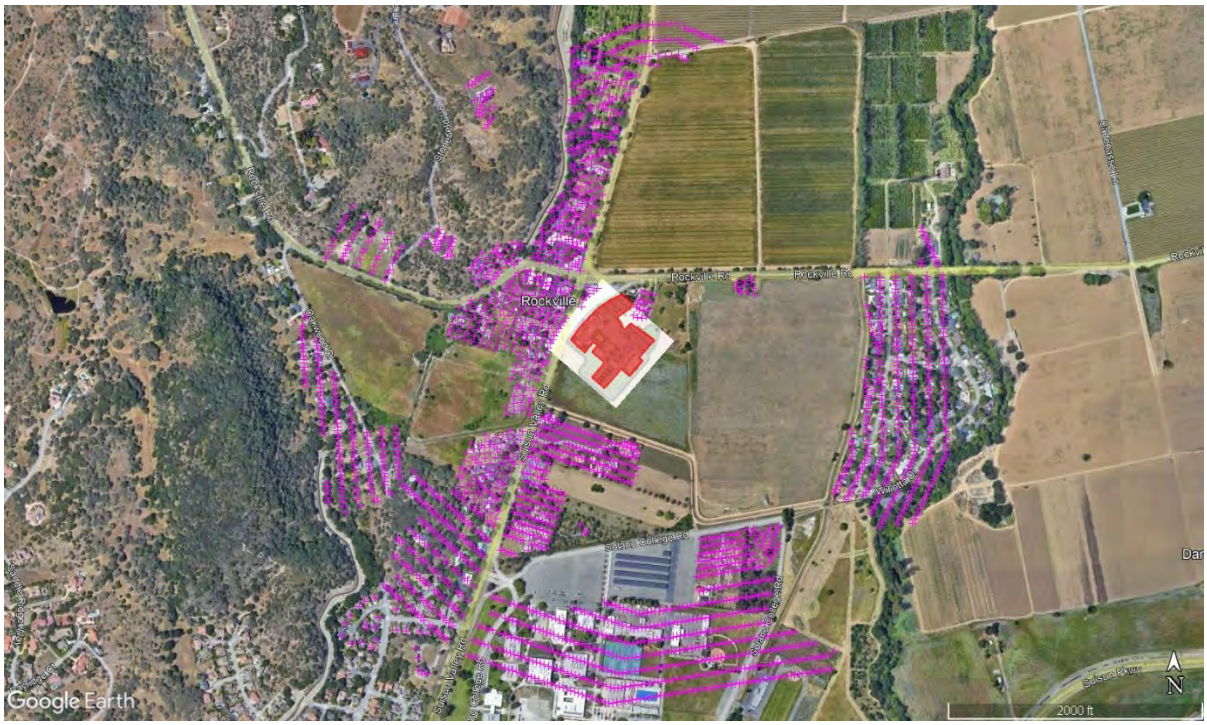
Screen	Justification
Land Use	Supermarket includes Boutique Market (5,495 sf). Quality Restaurant includes Tasting Rooms (9,000 sf) and Restaurant (7,462 sf). Hotel includes Boutique Hotel Concierge (1,728 sf), Boutique Hotel Cottages (4,800 sf), and Multi-Purpose/Dining Hall Event Space (3,655 sf). Total additional developed project site acreage is 7.4 acres. The project site would include 65,000 acres of landscaped area.
Construction: Construction Phases	Default construction schedule except for removal of the demolition phase.
Construction: Off-Road Equipment	Assuming the use of Tier 2 construction equipment.
Operations: Emergency Generators and Fire Pumps	The project would include three natural gas 350kW generators with a runtime of 4 hours a month for testing, plus any emergency events, and 3 annual events with run times of 72 hours each.
Operations: Vehicle Data	The proposed project would generate approximately 1,179 daily trips.

ATTACHMENT D

HRA MODEL SNAPSHOTS AND INPUT ASSUMPTIONS

Project Location

Receptor Grid



Construction Cancer Risk – Unmitigated

Construction Chronic Hazard Index – Unmitigated

Construction $PM_{2.5}$ Concentrations – Unmitigated

Construction Cancer Risk – Mitigated

Construction Chronic Hazard Index – Mitigated

Construction $PM_{2.5}$ Concentrations – Mitigated

General AERMOD Input Parameters			
Project Boundary			
	Based on site plan		
Project Elevation Data			
	Source	**Lakes Environmental**	
	Link	http://www.webgis.com/terraindata.html	
	Evel Data Descr.	**7.5 min DEM**	
Project Receptor Grid			
	Telescoping Grid	Spacing (m)	Distance (m)
	Grid 1	**20**	**310**
	Grid 2	**40**	**300**
	Grid 3		
	Grid 4		
	Comments	**Receptors on roads or parking lot areas have been removed.**	
Meteorological Dataset			
	Location	**Suisun STP**	
	Provided By	**Bay Area AQMD**	
	Years	**2013-2017**	
	Elevation (m)	**5.3**	
Construction Modeling Specific Inputs			
AERMOD Input Options			
	Regulatory Options	**Default**	
	Pollutant Type	**Other**	
	Averaging Period	**Period & Hourly**	
	Dispersion Coefficient	**Rural**	
	County	**Solano**	
	Urban Grouping / Pop	**N**	
	# of Receptors	**2,468**	
Construction Area Parameters			
	Source Type	**Polygon Area**	
	Project Area (m^2)	**20876.8**	
	Ht. of Source (m)	**3.048**	

General HARP Input Parameters		
Construction		
Sensitive Receptors		
Sensitive Scenario Parameters		
	Starting Age	**3rd Trimester**
	Age Range	**3rd Trimester - 2 Year**
	Receptor Type	**Individual Resident**
	Assessment Type	**Cancer / Chronic / Acute**
	Exposure Duration	**1**
	Intake Rate	**RMP using the Derived Method**

	Comments	**Each year of construction is modeled separately and the impact to each receptor is summed to estimate the total exposure from construction emissions. Additionally, the starting age is increased for each year of construction.**
Sensitive Pathway Parameters		
	Pathways	**SCAQMD Mandatory minimum Pathways**
	Deposition Rate	**0.02**
	TAH < 16 yrs	**Y**
	TAH ≥ 16 yrs	**Y**
Worker Receptors		
Worker Scenario Parameters		
	Starting Age	**16**
	Age Range	**16 - 17**
	Receptor Type	**Worker**
	Assessment Type	**Cancer / Chronic / Acute**
	Exposure Duration	**1**
	Intake Rate	**OEHHA Derived Method**
	Comments	**Each year of construction is modeled separately and the impact to each receptor is summed to estimate the total exposure from construction emissions. Additionally, the starting age is increased for each year of construction.**
Worker Pathway Parameters		
	Pathways	**OEHHA minimum Pathways**
	Deposition Rate	**0.02**
	TAH < 16 yrs	**N**
	TAH ≥ 16 yrs	**N**

Construction MEI (Sensitive) - Cancer Risk (in a Million) HARP Rec #: 426 X: 576948.42 Y: 4233178.88			
Unmitigated	T2	T3	T4
76.41	76.41	11.61	5.07
MEI (Sensitive) - Chronic Hazard Index HARP Rec #: 426 X: 576948.42 Y: 4233178.88			
Unmitigated	T2	T3	T4
9.58E-02	9.58E-02	1.46E-02	6.45E-03
MEI (Sensitive) - Acute Hazard Index HARP Rec #: NA X: NA Y: NA			
Unmitigated	T2	T3	T4
0.00E+00	0.00E+00	0.00E+00	0.00E+00
MEI (Sensitive) - PM 2.5 HARP Rec #: 426 X: 576948.42 Y: 4233178.88			
Unmitigated	T2	T3	T4
0.479	0.479	0.073	0.032

Construction MEI (Worker) - Cancer Risk (in a Million) HARP Rec #: 531 X: 576814.89 Y: 4233203.16			
Unmitigated	T2	T3	T4
8.53	8.53	1.29	0.56
MEI (Worker) - Chronic Hazard Index HARP Rec #: 531 X: 576814.89 Y: 4233203.16			
Unmitigated	T2	T3	T4
2.60E-02	2.60E-02	3.95E-03	1.75E-03
MEI (Worker) - Acute Hazard Index HARP Rec #: NA X: NA Y: NA			
Unmitigated	T2	T3	T4
0.00E+00	0.00E+00	0.00E+00	0.00E+00
MEI (Worker) - PM 2.5 HARP Rec #: 531 X: 576814.89 Y: 4233203.16			
Unmitigated	T2	T3	T4
0.130	0.130	0.020	0.009

Construction MEI (School) - Cancer Risk (in a Million) HARP Rec #: 1 X: 0 Y: 0			
Unmitigated	T2	T3	T4
0.00	0.00	0.00	0.00
MEI (School) - Chronic Hazard Index HARP Rec #: 1 X: 0 Y: 0			
Unmitigated	T2	T3	T4
0.00E+00	0.00E+00	0.00E+00	0.00E+00
MEI (School) - Acute Hazard Index HARP Rec #: NA X: NA Y: NA			
Unmitigated	T2	T3	T4
0.00E+00	0.00E+00	0.00E+00	0.00E+00
MEI (School) - PM 2.5 HARP Rec #: 1 X: 0 Y: 0			
Unmitigated	T2	T3	T4
0.0000	0.0000	0.0000	0.0000