

# Appendix A

---

Air Quality and Greenhouse Gas Emissions Technical Report

# ALCO IRON AND METAL

## Air Quality & Greenhouse Gas Emissions Technical Report

**Prepared by:**



**September 17, 2024**

# TABLE OF CONTENTS

<b>INTRODUCTION .....</b>	<b>4</b>
<b>SETTING.....</b>	<b>5</b>
Regulatory Setting – Air Quality.....	5
AMBIENT AIR QUALITY STANDARDS .....	5
TOXIC AIR CONTAMINANTS .....	6
REGIONAL AIR QUALITY PLANS.....	7
2017 Clean Air Plan .....	8
Regulatory Setting – GHG Emissions.....	8
Federal .....	8
GREENHOUSE GAS EMISSIONS AND FUEL EFFICIENCY .....	9
State .....	9
ASSEMBLY BILL 1493.....	9
EXECUTIVE ORDER S-3-05 .....	10
ASSEMBLY BILL 32 .....	10
CLIMATE CHANGE SCOPING PLAN .....	11
Low Carbon Fuel Standard.....	11
Senate Bill 97.....	12
Senate Bill 375 .....	12
EXECUTIVE ORDER NO. B-30-15.....	13
SENATE BILL 32 .....	13
Senate Bill 100 .....	13
Executive Order B-55-18 .....	13
California Environmental Quality Act .....	14
Assembly Bill 341 .....	14
Assembly Bill 1826 .....	14
Senate Bill 1383 .....	14
California Building Energy Efficiency Standards (Title 24, Part 6).....	15
California Green Building Standards Code (Title 24, Part 11).....	15
Local .....	15
San Leandro 2035 General Plan.....	15
San Leandro 2021 Climate Action Plan.....	15
Environmental Setting – AIR QUALITY .....	15
PROJECT LOCATION.....	15
REGIONAL METEOROLOGY .....	16
LOCAL AIR QUALITY.....	16
Environmental Setting – GHG EMISSIONS .....	17
GLOBAL CLIMATE CHANGE .....	17
GREENHOUSE GASES.....	18
REGIONAL GHG EMISSIONS ESTIMATES .....	19
<b>STANDARDS OF SIGNIFICANCE .....</b>	<b>20</b>
<b>IMPACTS AND MITIGATION MEASURES .....</b>	<b>22</b>

Impact Analysis .....	22
IMPACT AQ-1.....	22
Mitigation Measures AQ-1.....	22
IMPACT AQ-2.....	22
Construction EMISSIONS.....	23
Operational Emissions .....	24
Mitigation Measures AQ-2.....	24
IMPACT AQ-3.....	24
Mitigation Measures AQ-3.....	25
IMPACT AQ-4.....	25
Mitigation Measures AQ-4.....	25
IMPACT GHG-1.....	26
Mitigation Measures GHG-1 .....	27

**ATTACHMENTS**

**ATTACHMENT A – CALEMOD MODELING OUTPUT**

**ATTACHMENT B – GHG EMISSIONS REDUCTION FROM REDUCED IDLING**

# INTRODUCTION

This Air Quality (AQ) and Greenhouse Gas (GHG) Emissions Technical Report (Report) addresses potential AQ and GHG emissions impacts associated with the proposed additional use of a two-acre parcel for storage and processing of metal scrap for Alco Iron & Metal operations (the “project”) at Doolittle Drive and Eden Road (1091 Doolittle Drive) in San Leandro, CA. The primary purpose of the project is to relocate the large scrap metal piles away from view from Doolittle Drive and allow for better traffic circulation onsite. The additional two acres will be used to store materials for processing and allow for better circulation of truck traffic and required storm water treatment measures. A new truck scale will also be added on the existing site to allow for separate in-bound and out-bound truck scales, which will facilitate more efficient truck circulation and help eliminate queuing. The project also includes the replacement of a frontage wall and landscaping installation.

As directed by the City of San Leandro, this AQ and GHG Emissions Technical Report is consistent with the construction schedule, phasing, and equipment assumptions in the Energy Technical Report prepared by RCH Group. Supporting calculations and assumptions are provided in **Attachment A – CalEEMod Modeling Output** and **Attachment B – Diesel Fuel Use Reduction From Reduced Idling** to this Report.

The project would generate AQ and GHG emissions during construction from onsite heavy equipment and vehicles (worker automobiles and haul trucks). The project would also generate a small amount of GHG emissions from the additional truck scale (electric use) and would decrease AQ and GHG emissions by reducing truck idling through improved truck circulation during project operations. This AQ and GHG Emissions Technical Report provides an analysis of potential AQ and GHG emissions impacts that would result from the implementation of the project, consistent with the Appendix G Checklist of the State *CEQA Guidelines* and the Bay Area Air Quality Management District (BAAQMD) *CEQA Guidelines*.<sup>1</sup>

---

<sup>1</sup> Bay Area Air Quality Management District (BAAQMD). 2023. *CEQA Air Quality Guidelines*. April 2023.

# SETTING

## REGULATORY SETTING – AIR QUALITY

### AMBIENT AIR QUALITY STANDARDS

Regulation of air pollutants is achieved through both national and state ambient air quality standards (AAQS) and emissions limits for individual sources. Regulations implementing the federal Clean Air Act and its subsequent amendments established national ambient air quality standards (NAAQS) for the six criteria pollutants.<sup>2</sup> California has adopted more stringent California ambient air quality standards (CAAQS) for most of the criteria air pollutants. In addition, California has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Because of the meteorological conditions in the state, there is considerable difference between state and federal standards in California.

The AAQS are intended to protect the public health and welfare, and they incorporate an adequate margin of safety. They are designed to protect those segments of the public most susceptible to respiratory distress, known as sensitive receptors, including asthmatics, the very young, elderly, people weak from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels somewhat above the ambient air quality standards before adverse health effects are observed.

Under amendments to the federal Clean Air Act, United States Environmental Protection Agency (U.S. EPA) has classified air basins or portions thereof, as either “attainment” or “non-attainment” for each criteria air pollutant, based on whether or not the NAAQS have been achieved. The California Clean Air Act, which is patterned after the federal Clean Air Act, also requires areas to be designated as “attainment” or “non-attainment” for the CAAQS. Thus, areas in California have two sets of attainment / non-attainment designations: one set with respect to the NAAQS and one set with respect to the CAAQS.

Based upon the Bay Area’s attainment status (discussed below), pollutants of concern include criteria pollutant emissions such as nitrogen oxides (NO<sub>x</sub>)<sup>3</sup>, volatile organic compounds (VOC) as reactive organic gases (ROG)<sup>4</sup>, particulate matter less than 10 micrometers (coarse or PM<sub>10</sub>), and particulate matter less than 2.5 micrometers (fine or PM<sub>2.5</sub>).<sup>5</sup>

---

2 Criteria air pollutants refer to those air pollutants for which the U.S. EPA and California Air Resources Board (CARB) has established NAAQS and CAAQS under the Federal Clean Air Act and California Clean Air Act.

3 When combustion temperatures are extremely high, as in aircraft, truck and automobile engines, atmospheric nitrogen combines with oxygen to form various oxides of nitrogen (NO<sub>x</sub>). Nitric oxide (NO) and NO<sub>2</sub> are the most significant air pollutants generally referred to as NO<sub>x</sub>. Nitric oxide is a colorless and odorless gas that is relatively harmless to humans, quickly converts to NO<sub>2</sub> and can be measured. Nitrogen dioxide has been found to be a lung irritant capable of producing pulmonary edema.

4 VOC means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions and thus, a precursor of ozone formation. ROG are any reactive compounds of carbon, excluding methane, CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and other exempt compounds. The terms VOC and ROG are often used interchangeably.

5 PM<sub>10</sub> and PM<sub>2.5</sub> consists of airborne particles that measure 10 micrometers or less in diameter and 2.5 micrometers or less in diameter, respectively. PM<sub>10</sub> and PM<sub>2.5</sub> represent fractions of particulate matter that can be inhaled into the air passages and the lungs, causing adverse health effects.

The Bay Area is currently designated “non-attainment” for 1-hour and 8-hour ozone CAAQS, the 8-hour ozone NAAQS, the PM10 CAAQS (annual and 24-hour), and the PM2.5 CAAQS (annual) and NAAQS (24-hour). The Bay Area is “attainment” or “unclassified” with respect to the other ambient air quality standards.

## TOXIC AIR CONTAMINANTS

Toxic air contaminants (TACs) are regulated under both state and federal laws. Federal laws use the term “Hazardous Air Pollutants” (HAPs) to refer to the same types of compounds that are referred to as TACs under state law. Both terms encompass essentially the same compounds. Under the 1990 Federal Clean Air Act Amendments, 189 substances are regulated as HAPs.

With respect to state law, in 1983 the California legislature adopted Assembly Bill 1807 (AB 1807), which establishes a process for identifying TACs and provides the authority for developing retrofit air toxics control measures on a statewide basis. Air toxics in California may also be regulated because of another state law, the Air Toxics “Hot Spots” Information and Assessment Act of 1987, or Assembly Bill 2588 (AB 2588). Under AB 2588, TACs from individual facilities must be quantified and reported to the local air pollution control agency. The facilities are then prioritized by the local agencies based on the quantity and toxicity of these emissions, and on their proximity to areas where the public may be exposed. In establishing priorities, the air districts are to consider the potency, toxicity, quantity, and volume of hazardous materials released from the facility, the proximity of the facility to potential receptors, and any other factors that the air district determines may indicate that the facility may pose a significant risk. High priority facilities are required to perform a Health Risk Screening Assessment (HRSA), and if specific risk thresholds are exceeded, they are required to communicate the results to the public in the form of notices and public meetings. Depending on the health risk levels, emitting facilities can be required to implement varying levels of risk reduction measures. CARB identified approximately 200 TACs, including the 189 federal HAPs, under AB 2588.

The Bay Area Air Quality Management District (BAAQMD) is responsible for administering federal and state regulations related to TACs. Under federal law, these regulations include National Emission Standards for Hazardous Air Pollutants (NESHAPs) and Maximum Achievable Control Technology (MACT) for affected sources. BAAQMD also administers the state regulations AB1807 and AB2588 which were discussed above. In addition, the agency requires that new or modified facilities that emit TACs perform air toxics screening analyses as part of the permit application. TAC emissions from new and modified sources are limited through the air toxics new source review program, which superseded the BAAQMD Risk Management Policy, in BAAQMD Regulation 2, Rule 5 for New Source Review of Toxic Air Contaminants. Sources must use the Best Available Control Technology for Toxics (T-BACT) if an individual source cancer risk of greater than 1 in a million, or a chronic hazard index greater than 0.20, is identified in health risk modeling.

The California Air Resources Board (CARB) adopted the *Air Quality and Land Use Handbook* to provide guidance to planning agencies and air districts for considering potential impacts to sensitive land uses proposed in proximity to TACs emission source(s). The goal of the guidance document is to protect sensitive receptors, such as children, seniors, and acutely ill and chronically ill persons, from exposure to TACs emissions. CARB's siting guidelines recommend the following: (1) avoid siting sensitive receptors within 500 feet of freeways and high-traffic roads (i.e., roads within urbanized areas carrying more than 100,000 vehicles per day); (2) avoid siting sensitive receptors within 1,000 feet of an applicable distribution center; and (3) avoid siting sensitive receptors within 300 feet of a dry cleaning facility that use the chemical perchloroethylene. The recommendations provided are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts.

In addition, reducing diesel particulate matter (DPM) is one of the CARB's highest public health priorities and the focus of a comprehensive statewide control program that is reducing DPM emissions each year. In 1998, the CARB classified DPM as a TAC, citing its potential to cause cancer and other health problems. U.S. EPA concluded that long-term exposure to diesel engine exhaust is likely to pose a lung cancer hazard to humans and can also contribute to other acute and chronic health effects. The CARB's long-term goal is to reduce DPM emissions 85 percent by 2020.

## REGIONAL AIR QUALITY PLANS

The 1977 Clean Air Act amendments require that regional planning and air pollution control agencies prepare a regional Air Quality Plan to outline the measures by which both stationary and mobile sources of pollutants can be controlled in order to achieve all standards specified in the Clean Air Act. The 1988 California Clean Air Act also requires development of air quality plans and strategies to meet state air quality standards in areas designated as non-attainment (with the exception of areas designated as non-attainment for the state PM standards). Maintenance plans are required for attainment areas that had previously been designated non-attainment in order to ensure continued attainment of the standards. Air quality plans developed to meet federal requirements are referred to as State Implementation Plans.

Bay Area ozone levels have been greatly reduced in recent years, but the region still does not fully attain the CAAQS and NAAQS. The California Clean Air Act, as codified in the California Health & Safety Code, requires regional air districts that do not attain state ozone standards to prepare ozone plans. To that end, BAAQMD's 2017 Clean Air Plan serves to update the most recent Bay Area ozone plan, the 2010 Clean Air Plan. The Health & Safety Code requires that ozone plans propose a control strategy to reduce emissions of ozone precursors—ROG and NO<sub>x</sub>—and reduce transport of ozone and its precursors to neighboring air basins. The control strategy must either reduce emissions 5 percent or more per year, or include "all feasible control measures." Because reducing emissions of ozone precursors by 5 percent per year is not achievable, the control strategy for the 2017 Clean Air Plan is based on the "all feasible measures" approach.

## 2017 CLEAN AIR PLAN

The BAAQMD's *2017 Clean Air Plan* includes the Bay Area's first-ever comprehensive Regional Climate Protection Strategy, which identifies potential rules, control measures, and strategies that BAAQMD can pursue to reduce GHG emissions in the Bay Area. Measures of the 2017 Clean Air Plan addressing the transportation sector are in direct support of Plan Bay Area 2040, which was prepared by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) and includes the region's transportation plan/ sustainable communities strategy. Highlights of the *2017 Clean Air Plan* control strategy include:

- *Limit Combustion*: Develop a region-wide strategy to improve fossil fuel combustion efficiency at industrial facilities, beginning with the three largest sources of industrial emissions: oil refineries, power plants, and cement plants.
- *Stop Methane Leaks*: Reduce methane emissions from landfills, and oil and natural gas production and distribution.
- *Reduce Exposure to Toxics*: Reduce emissions of toxic air contaminants by adopting more stringent limits and methods for evaluating toxic risks at existing and new facilities.
- *Put a Price on Driving*: Implement pricing measures to reduce travel demand.
- *Advance Electric Vehicles*: Accelerate the widespread adoption of electric vehicles.
- *Promote Clean Fuels*: Promote the use of clean fuels and low or zero carbon technologies in trucks and heavy-duty vehicles.
- *Accelerate Low-Carbon Buildings*: Expand the production of low-carbon, renewable energy by promoting on-site technologies such as rooftop solar and ground-source heat pumps.
- *Support More Energy Choices*: Support of community choice energy programs throughout the Bay Area.
- *Make Buildings More Efficient*: Promote energy efficiency in both new and existing buildings.
- *Make Space and Water Heating Cleaner*: Promote the switch from natural gas to electricity for space and water heating in Bay Area buildings.

## REGULATORY SETTING – GHG EMISSIONS

### FEDERAL

The U.S. Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al.* ([2007] 549 U.S. 05-1120) held that the U.S. EPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act. The U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines and requires annual reporting of emissions. In 2012, the U.S. EPA issued a Final Rule that establishes the GHG permitting thresholds that determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

In 2014, the U.S. Supreme Court in *Utility Air Regulatory Group v. EPA* (134 S. Ct. 2427 [2014]) held that the U.S. EPA may not treat GHGs as an air pollutant for purposes of determining whether a source is a major source required to obtain a PSD or Title V permit. The Court also held that PSD permits that are otherwise required (based on emissions of other pollutants) may continue to require limitations on GHG emissions based on the application of Best Available Control Technology (BACT).

#### **GREENHOUSE GAS EMISSIONS AND FUEL EFFICIENCY**

In September 2011, U.S. EPA, in coordination with the National Highway Traffic Safety Administration (NHTSA), adopted fuel consumption and CO<sub>2</sub> emission standards to reduce GHG emissions of heavy-duty vehicles. These Phase 1 federal standards apply to model year 2014 and newer heavy-duty trucks, tractors, pick-up trucks, vans, and vocational vehicles. The category of specialized vocational vehicles includes delivery trucks, emergency vehicles, and refuse trucks such as the “packer” garbage collection trucks used to transport solid waste to transfer stations and landfills. The Phase 1 regulations do not include standards regarding the trailers pulled by these vehicles for improving aerodynamics and fuel efficiency.

In 2016, working together with NHTSA and CARB, U.S. EPA implemented the next phase of federal GHG emissions and fuel-efficiency standards for medium- and heavy-duty vehicles and associated trailers. These federal Phase 2 standards build on the improvements in engine and vehicle efficiency required by the Phase 1 emission standards and aim to achieve further GHG reductions for 2018 and later model year heavy-duty vehicles. The progressively more stringent federal Phase 2 standards are more technology-driven than the Phase 1 standards, in that they require manufacturers to improve existing technologies or develop new technologies for heavy-duty trucks, tractors, and vocational vehicles to achieve the stricter standards. The Phase 2 federal standards were jointly adopted by the U.S. EPA and NHTSA on October 25, 2016. California subsequently enacted its own Phase 2 standards for GHG emissions, which are discussed in further detail below.

## STATE

#### **ASSEMBLY BILL 1493**

Assembly Bill (AB) 1493 (2002), California’s Advanced Clean Cars program (referred to as “Pavley”), requires CARB to develop and adopt regulations to achieve “the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles.” On June 30, 2009, the U.S. EPA granted the waiver of Clean Air Act preemption to California for its GHG emission standards for motor vehicles beginning with the 2009 model year. Pavley I regulates model years from 2009 to 2016 and Pavley II, which is now referred to as “LEV (Low Emission Vehicle) III GHG” regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the Low Emissions Vehicles (LEV), Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs, and would provide major reductions in GHG emissions.

### **EXECUTIVE ORDER S-3-05**

Governor Schwarzenegger established Executive Order S-3-05 in 2005, in recognition of California's vulnerability to the effects of climate change. Executive Order S-3-05 set forth a series of target dates by which statewide emissions of GHG would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The executive order directed the Secretary of the California EPA (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The Secretary will also submit biannual reports to the governor and California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the executive order, the secretary of CalEPA created the California Climate Action Team, made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through state incentive and regulatory programs.

### **ASSEMBLY BILL 32**

California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 required that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction is accomplished by enforcing a statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state reduces GHG emissions enough to meet the cap. AB 32 also includes guidance on instituting emissions reductions in an economically efficient manner, along with conditions to ensure that businesses and consumers are not unfairly affected by the reductions. Using these criteria to reduce statewide GHG emissions to 1990 levels by 2020 would represent an approximate 25 to 30 percent reduction in current emissions levels. However, CARB has discretionary authority to seek greater reductions in more significant and growing GHG sectors, such as transportation, as compared to other sectors that are not anticipated to significantly increase emissions. Under AB 32, CARB must adopt regulations to achieve reductions in GHG to meet the 1990 emissions cap by 2020.

## **CLIMATE CHANGE SCOPING PLAN**

AB 32 required CARB to develop a Scoping Plan that describes the approach California will take to reduce GHG to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was first approved by CARB in 2008 and must be updated every five years. The initial AB 32 Scoping Plan contains the main strategies California will use to reduce the GHG that cause climate change. The initial Scoping Plan has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 program implementation fee regulation to fund the program. In August 2011, the initial Scoping Plan was approved by CARB.

The 2013 Scoping Plan Update builds upon the initial Scoping Plan with new strategies and recommendations. The 2013 Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The 2013 Update defines CARB climate change priorities for the next five years and sets the groundwork to reach California's long-term climate goals set forth in Executive Orders S-3-05 and B-16-2012. The 2013 Update highlights California progress toward meeting the near-term 2020 GHG emission reduction goals defined in the initial Scoping Plan. In the 2013 Update, nine key focus areas were identified (energy, transportation, agriculture, water, waste management, and natural and working lands), along with short-lived climate pollutants, green buildings, and the cap-and-trade program. On May 22, 2014, the First Update to the Climate Change Scoping Plan was approved by the Board, along with the finalized environmental documents. On November 30, 2017, the Second Update to the Climate Change Scoping Plan was approved by the CARB. The 2017 Scoping Plan identifies how the State can reach the 2030 climate target to reduce GHG emissions by 40 percent from 1990 levels (SB 32), and substantially advance toward the 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels.

On December 15, 2022, the CARB adopted its 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan). Consistent with this statutory direction, the Final Scoping Plan, which was released on November 16, 2022, lays out how California can reduce anthropogenic GHG emissions by 85% below 1990 levels and achieve carbon neutrality by 2045. In the 2022 Scoping Plan, CARB acknowledges that meeting these new ambitious targets will require decarbonizing the electricity sector on a rapid — but technically feasible — timescale. Decarbonizing the electricity sector depends on both increasing energy efficiency and deploying renewable and zero carbon resources, including solar, wind, energy storage, geothermal, biomass, and hydroelectric power on a massive scale and at an unprecedented pace. Overall, the 2022 Scoping Plan further strengthens the state's commitments to take bold actions to address the climate crisis. CARB states that the 2022 Scoping Plan represents the most aggressive approach to reach carbon neutrality in the world.

## **LOW CARBON FUEL STANDARD**

Under the Climate Change Scoping Plan, the CARB identified the low carbon fuel standard (LCFS) as one of the nine discrete early action measures to reduce California's GHG emissions. The LCFS is designed to decrease the carbon intensity of California's transportation fuel pool and provide an increasing range of low-carbon and renewable alternatives, which reduce petroleum dependency and achieve air quality benefits.

In 2018, the CARB approved amendments to the regulation, which included strengthening and smoothing the carbon intensity benchmarks through 2030 in-line with California's 2030 GHG emission reduction target enacted through SB 32, adding new crediting opportunities to promote zero emission vehicle adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector.

The LCFS standards are expressed in terms of the "carbon intensity" (CI) of gasoline and diesel fuel and their respective substitutes. The program is based on the principle that each fuel has "life cycle" GHG emissions and the life cycle assessment examines the GHG emissions associated with the production, transportation, and use of a given fuel. The life cycle assessment includes direct emissions associated with producing, transporting, and using the fuels, as well as significant indirect effects on GHG emissions, such as changes in land use for some biofuels. The carbon intensity scores assessed for each fuel are compared to a declining CI benchmark for each year. Low carbon fuels below the benchmark generate credits, while fuels above the CI benchmark generate deficits. Credits and deficits are denominated in metric tons of GHG emissions. Providers of transportation fuels must demonstrate that the mix of fuels they supply for use in California meets the LCFS carbon intensity standards, or benchmarks, for each annual compliance period. A deficit generator meets its compliance obligation by ensuring that the credits it earns or otherwise acquires from another party is equal to, or greater than, the deficits it has incurred.

#### **SENATE BILL 97**

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in CEQA documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State *CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and climate change impacts.

#### **SENATE BILL 375**

SB 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPOs) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035.

#### **EXECUTIVE ORDER NO. B-30-15**

On April 29, 2015, Executive Order No. B-30-15 was issued to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. Executive Order No. B-30-15 sets a new, interim, 2030 reduction goal intended to provide a smooth transition to the existing ultimate 2050 reduction goal set by Executive Order No. S-3-05 (signed by Governor Schwarzenegger in June 2005). It is designed so State agencies do not fall behind the pace of reductions necessary to reach the existing 2050 reduction goal. Executive Order No. B-30-15 orders “All State agencies with jurisdiction over sources of GHG emissions shall implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 targets.” The Executive Order also states that “CARB shall update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.”

#### **SENATE BILL 32**

On September 8, 2016, the governor signed Senate Bill 32 (SB 32) into law, extending AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies and policies, such as SB 350 and SB 1383 (see below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally-appropriate quantitative thresholds consistent with a statewide per capita goal of 6 metric tons of CO<sub>2</sub>e by 2030 and 2 metric tons of CO<sub>2</sub>e by 2050. As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects because they include all emissions sectors in the state.

#### **SENATE BILL 100**

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the state’s Renewables Portfolio Standard Program, which was last updated by SB X 1-2 in 2011. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

#### **EXECUTIVE ORDER B-55-18**

On September 10, 2018, the governor issued Executive Order B-55-18, which established a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction targets established by SB 375, SB 32, SB 1383, and SB 100.

### **CALIFORNIA ENVIRONMENTAL QUALITY ACT**

Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the *CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted *CEQA Guidelines* provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. To date, a variety of air districts have adopted quantitative significance thresholds for GHGs.

### **ASSEMBLY BILL 341**

In 2011, the legislature established a 75 percent statewide solid waste recycling rate goal by 2020 with its passage of AB 341 (Chesbro, Chapter 476, Statutes of 2011). AB 341 directed CalRecycle to develop a strategy to achieve this 75 percent recycling goal. In response, CalRecycle developed the 75 Percent Strategy which includes five strategies and three additional focus areas for its pursuit to achieve the recycling goal. Strategies include moving organics out of the landfill; expanding the recycling/manufacturing infrastructure; exploring new models for state and local funding of materials management program; promoting state procurement of postconsumer recycle content products; and promoting extended producer responsibility. CalRecycle has provided updates to this strategy along with supporting documentation as recently as 2017, which tracks progress towards this goal and summarizes co-benefits from implementation of the 75 Percent Strategy.

### **ASSEMBLY BILL 1826**

In October 2014, the governor signed AB 1826 (Chesbro Chapter 727, Statutes of 2014), requiring local jurisdictions to implement an organic waste recycling program to divert organic waste generated by businesses. The law phases in the mandatory recycling of commercial organics over time. In 2020, CalRecycle is mandated to conduct a formal review of all jurisdictions to determine the total statewide disposal of organic waste. If CalRecycle finds that the statewide disposal of organic waste has not been reduced by 50 percent of the disposal level in 2014, the requirements of this law will expand, and certain exemptions may be removed.

### **SENATE BILL 1383**

Adopted in September 2016, SB 1383 requires CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. The bill requires the strategy to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

SB 1383 also requires the California Department of Resources Recycling and Recovery (CalRecycle), in consultation with the state board, to adopt regulations that achieve specified targets for reducing organic waste in landfills.

### **CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS (TITLE 24, PART 6)**

The energy consumption of new residential and nonresidential buildings in California is regulated by the state's Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The California Energy Code was established by CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and nonresidential buildings. CEC updates the California Energy Code every 3 years with more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions.

The 2025 California Energy Code will be adopted in 2024 and will apply to projects constructed after January 1, 2026. The building efficiency standards are enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary in response to local climatologic, geologic, or topographic conditions, provided that these standards exceed those in the California Energy Code.

### **CALIFORNIA GREEN BUILDING STANDARDS CODE (TITLE 24, PART 11)**

The California Green Building Standards Code (CALGreen) is part 11 of Title 24, California Code of Regulations. CALGreen is the first-in-the-nation mandatory green building standards code, developed in an effort to meet the goals of California's landmark initiative AB 32, which established a comprehensive program of cost-effective reductions of GHG emissions to 1990 levels by 2020. CALGreen includes a waste diversion mandate, which requires that at least 65 percent of construction materials generated during new construction or demolition projects are diverted from landfills.

## LOCAL

### **SAN LEANDRO 2035 GENERAL PLAN**

The City of San Leandro adopted its 2035 General Plan in September 2016. The 2035 General Plan covers 2015 through 2035. State law requires every city and 20-year in California to prepare a long-range "General Plan" which guides decisions about future growth. There are no policies related to GHG emissions from the 2035 General Plan applicable to the project.

### **SAN LEANDRO 2021 CLIMATE ACTION PLAN**

The City of San Leandro adopted its 2021 Climate Action Plan (CAP) in July 2021. The 2021 CAP is San Leandro's comprehensive strategy to reduce greenhouse gas (GHG) emissions and to adapt to changing climate conditions. The CAP allows City decision-makers, staff, and the community to understand the sources and magnitude of local GHG emissions and the impacts of climate change on the community, reduce GHG emissions, prioritize steps to achieve GHG emission-reduction targets, and increase resilience. None of the GHG reduction strategies in the 2021 CAP are applicable to the Project.

## ENVIRONMENTAL SETTING – AIR QUALITY

### PROJECT LOCATION

The Project site is located within the San Francisco Bay Area Air Basin (Air Basin), which encompasses Alameda, Contra Costa, Santa Clara, San Francisco, San Mateo, Marin, and Napa Counties, and the southern portions of Solano and Sonoma Counties.

## REGIONAL METEOROLOGY

Air quality is affected by the rate, amount, and location of pollutant emissions and the associated meteorological conditions that influence pollutant movement and dispersal. Atmospheric conditions, including wind speed, wind direction, stability, and air temperature, in combination with local surface topography (i.e., geographic features such as mountains, valleys, and San Francisco Bay), determine the effect of air pollutant emissions on local air quality.

The climate of the Air Basin, including Alameda County and the City of San Leandro, is a Mediterranean-type climate characterized by warm, dry summers and mild, wet winters. The climate is determined largely by a high-pressure system that is often present over the eastern Pacific Ocean off the West Coast of North America. In winter, the Pacific high-pressure system shifts southward, allowing storms to pass through the region. During summer and fall, air emissions generated within the Bay Area can combine with abundant sunshine under the restraining influences of topography and subsidence inversions to create conditions that are favorable to the formation of photochemical pollutants, such as ozone and secondary particulates, such as sulfates and nitrates.

Along Alameda County's western coast, temperatures are moderated by the bay, which can act as a heat source during cold weather, or cool the air by evaporation during warm weather. It is generally sunnier farther from the coast, although partly cloudy skies are common throughout the summer. Average summer temperatures are mild overnight and moderate during the day. Winter temperatures are cool overnight and mild during the day. Highest temperatures are more common inland. Wind speeds vary throughout Alameda County, with the strongest gusts along the western coast, often aided by dominant westerly winds and a bay-breeze effect. Rainfall totals average about 14 to 23 inches per year.<sup>6</sup>

## LOCAL AIR QUALITY

The BAAQMD maintains a network of monitoring stations within the Air Basin that monitor air quality and compliance with applicable ambient standards. The monitoring station closest to the project site is the Oakland-9925 International Boulevard Monitoring Station, approximately two miles northeast of the project site. The Oakland-9925 International Boulevard Monitoring Station measures levels of ozone, PM<sub>2.5</sub>, and NO<sub>2</sub>.

**Table 1** summarizes the most recent three years of data (2021 through 2023) from the BAAQMD's Oakland-9925 International Boulevard Monitoring Station. The 24-hour PM<sub>2.5</sub> NAAQS was exceeded once in 2023. No other standards were exceeded at the Oakland-9925 International Boulevard Monitoring Station during the three-year period.

---

<sup>6</sup> Bay Area Air Quality Management District (BAAQMD). 2019. *Air District, About the Air District, In Your Community, Alameda County*. February 2019. <https://www.baaqmd.gov/about-the-air-district/in-your-community/alameda-county>.

**TABLE 1. SUMMARY OF ANNUAL MONITORING DATA OF AMBIENT AIR QUALITY**

Pollutant	Standard	2021	2022	2023
<b>Ozone</b>				
Maximum Concentration (1-hour/8-hour average)	ppm	0.083/0.062	0.069/0.056	0.069/0.052
Number of days State standard exceeded (1-hour/8-hour)	0.09/0.070	0/0	0/0	0/0
Number of days National standard exceeded (8-hour)	0.070	0	0	0
<b>Fine Particulate Matter (PM2.5)</b>				
Maximum Concentration (24-hour)	µg/m <sup>3</sup>	33.0	25.7	<b>42.7</b>
Number of days National standard exceeded (24-hour measured)	35	0	0	1
Annual Average (State/National standard)	12/12.0	8.0/7.9	8.3/8.2	6.4/6/4
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>				
Maximum Concentration (24-hour)	ppm	0.049	0.051	0.051
Number of days State standard exceeded (24-hour)	0.18	0	0	0
Annual Average (State standard)	0.030	0.008	0.008	0.007

NOTES:

ppm = parts per million, µg/m<sup>3</sup> = micrograms per cubic meter  
**bold values** exceeded the State and/or National standard

SOURCE: CARB, iADAM: *Air Quality Data Statistics*, <https://www.arb.ca.gov/adam>, Accessed September 17, 2024.

## ENVIRONMENTAL SETTING – GHG EMISSIONS

### GLOBAL CLIMATE CHANGE

Climate is defined as the average statistics of weather, which include temperature, precipitation, and seasonal patterns such as storms and wind, in a particular region. Global climate change refers to the long term and irrevocable shift in these weather-related patterns. Using ice cores and geological records, baseline temperature and carbon dioxide (CO<sub>2</sub>) data extends back to previous ice ages thousands of years ago. Over the last 10,000 years, the rate of temperature change has typically been incremental, with warming and cooling occurring over the course of thousands of years. However, scientists have observed an unprecedented increase in the rate of warming over the past 150 years, roughly coinciding with the global industrial revolution, which has resulted in substantial increases in GHG emissions into the atmosphere. The anticipated impacts of climate change in California range from water shortages to inundation from sea level rise. Transportation systems contribute to climate change primarily through the emissions of certain GHGs (CO<sub>2</sub>, methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O)) from nonrenewable energy (primarily gasoline and diesel fuels) used to operate passenger, commercial and transit vehicles. Land use changes contribute to climate change through construction and operational use of electricity and natural gas, and waste production.

---

The Intergovernmental Panel on Climate Change (IPCC) has reached consensus that human-caused emissions of GHGs in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increases in global average surface temperature from 1951 to 2010 were caused by the anthropogenic increase in GHG concentrations and other anthropogenic forces together. The IPCC predicts that the global mean surface temperature increases by the end of the 21st century (2081–2100) relative to 1986–2005, could range from 0.5 to 8.7 degrees Fahrenheit. Additionally, the IPCC projects that global mean sea level rise will continue during the 21st century, very likely at a faster rate than observed from 1971 to 2010. For the period 2081–2100 relative to 1986–2005, the rise will likely range from 10 to 32 inches.<sup>7</sup>

## GREENHOUSE GASES

Gases that trap heat in the atmosphere are referred to as GHGs because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHGs has been implicated as the driving force for global climate change. The six primary GHGs are:

- carbon dioxide (CO<sub>2</sub>), emitted when solid waste, fossil fuels (oil, natural gas, and coal), and wood and wood products are burned;
- methane (CH<sub>4</sub>), produced through the anaerobic decomposition of waste in landfills, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, incomplete fossil fuel combustion, and water and wastewater treatment;
- nitrous oxide (N<sub>2</sub>O), typically generated as a result of soil cultivation practices, particularly the use of commercial and organic fertilizers, fossil fuel combustion, nitric acid production, and biomass burning;
- hydrofluorocarbons (HFCs), primarily used as refrigerants;
- perfluorocarbons (PFCs), originally introduced as alternatives to ozone depleting substances and typically emitted as by-products of industrial and manufacturing processes; and
- sulfur hexafluoride (SF<sub>6</sub>), primarily used in electrical transmission and distribution.

---

<sup>7</sup> Intergovernmental Panel on Climate Change (IPCC). 2013. *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. 2013.

---

Although there are other contributors to global climate change, these six GHGs are identified by the U.S. Environmental Protection Agency (U.S. EPA) as threatening the public health and welfare of current and future generations. GHGs have varying potential to trap heat in the atmosphere, known as global warming potential (GWP), and atmospheric lifetimes. GWP reflects how long GHGs remain in the atmosphere, on average, and how intensely they absorb energy. Gases with a higher GWP absorb more energy per pound than gases with a lower GWP, and thus contribute more to warming Earth. For example, one ton of CH<sub>4</sub> has the same contribution to the greenhouse effect as approximately 28 tons of CO<sub>2</sub>; hence, CH<sub>4</sub> has a 100-year GWP of 28 while CO<sub>2</sub> has a GWP of 1. GWP ranges from 1 (for CO<sub>2</sub>) to 23,500 (for SF<sub>6</sub>).

In emissions inventories, GHG emissions are typically reported in terms of pounds or metric tons of CO<sub>2</sub> equivalents (CO<sub>2</sub>e). CO<sub>2</sub>e are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH<sub>4</sub> and N<sub>2</sub>O have much higher GWP than CO<sub>2</sub>, CO<sub>2</sub> is emitted in such vastly higher quantities that it accounts for the majority of GHG emissions in CO<sub>2</sub>e.

## REGIONAL GHG EMISSIONS ESTIMATES

In 2021, California emitted approximately 381 million metric tons of CO<sub>2</sub>e, 12 million metric tons of CO<sub>2</sub>e higher than 2020 levels and 50 million metric tons of CO<sub>2</sub>e below the 2020 GHG limit of 431 million metric tons of CO<sub>2</sub>e). The transportation sector represents 39 percent of the total GHG emissions. The industrial sector represents 22 percent of the total GHG emissions, followed by electricity (16 percent), and residential, agricultural, and commercial (8, 8, and 6 percent, respectively).<sup>8</sup>

In the City of San Leandro, GHG emissions have declined steadily from 2005 levels. In the base year of 2005, the City of San Leandro emitted approximately 720,990 metric tons of CO<sub>2</sub>e. Transportation was the largest contributor to community emissions, emitting approximately 50 percent of the city's total. In 2017, GHG emissions totaled 573,580 metric tons of CO<sub>2</sub>e, a decrease of 20 percent from 2005. Transportation remained the largest source of GHG emissions, accounting for approximately 60 percent of the city's total.<sup>9</sup>

---

<sup>8</sup> California Air Resources Board, Emissions Trends Report 2000-2020 (2022 Edition), <https://ww2.arb.ca.gov/ghg-inventory-data>

<sup>9</sup> City of San Leandro. San Leandro 2021 Climate Action Plan. Adopted July 19, 2021. Resolution 21-437.

# STANDARDS OF SIGNIFICANCE

The standards of significance for the analysis of potential air quality and GHG emissions impacts are based on Appendix G of the State *CEQA Guidelines*. Would the project:

- 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 region is nonattainment under an applicable NAAQS or CAAQS;
- 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).
- Generate GHG 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 reducing the emissions of GHGs.

As stated in the CEQA Guidelines, the significance criteria established by the applicable air quality district may be relied upon to make the above determinations. Thus, according to the BAAQMD's CEQA Guidelines, the project would result in a significant impact to air quality if it would result in the following:

- Average daily construction exhaust emissions of 54 pounds per day of ROG, NO<sub>x</sub>, or PM<sub>2.5</sub> or 82 pounds per day of PM<sub>10</sub>;
- Average daily operation emissions of 54 pounds per day of ROG, NO<sub>x</sub>, or PM<sub>2.5</sub> or 82 pounds per day of PM<sub>10</sub>; or result in maximum annual emissions of 10 tons per year of ROG, NO<sub>x</sub>, or PM<sub>2.5</sub> or 15 tons per year of PM<sub>10</sub>;
- Exposure of sensitive receptors to substantial levels of TAC resulting in (a) a cancer risk level greater than 10 in one million, (b) a noncancerous risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average PM<sub>2.5</sub> of greater than 0.3 micrograms per cubic meter (µg/m<sup>3</sup>). For this threshold, sensitive receptors include residential uses, schools, parks, daycare centers, nursing homes, and medical centers; or
- Frequently and for a substantial duration, create or expose sensitive receptors to substantial objectionable odors affecting a substantial number of people.

Because the issue of global climate change is inherently a cumulative issue, the contribution of Project-related GHG emissions to climate change is addressed as a cumulative impact. Some counties, cities, and air districts have developed guidance and thresholds for determining the significance of GHG emissions that occur within their jurisdiction. The City of San Leandro is the CEQA lead agency for the Project and is, therefore, responsible for determining whether GHG emissions with the Project would have a cumulatively considerable contribution to climate change. The City of San Leandro has not adopted GHG emissions significance thresholds, thus defers to BAAQMD's adopted thresholds.

BAAQMD recently updated their CEQA Air Quality Guidelines (BAAQMD, 2023). BAAQMD's thresholds of significance consist of three options for project-level impacts:

- a. Land use project design elements that must be included in a project,
- b. Consistency with a local GHG reduction strategy, and
- c. A stationary source threshold of 10,000 metric tons of CO<sub>2</sub>e per year.

BAAQMD's CEQA Air Quality Guidelines, Appendix B: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans, state the following in reference to the newly adopted land use project design elements significance thresholds:

"The Air District has developed these thresholds of significance based on typical residential and commercial land use projects and typical long-term communitywide planning documents such as general plans and similar long-range development plans. As such, these thresholds may not be appropriate for other types of projects that do not fit into the mold of a typical residential or commercial project or general plan update. Lead agencies should keep this point in mind when evaluating other types of projects. A lead agency does not necessarily need to use a threshold of significance if the analysis and justifications that were used to develop the threshold do not reflect the particular circumstances of the project under review. Accordingly, a lead agency should not use these thresholds if it is faced with a unique or unusual project for which the analyses supporting the thresholds as described in this report do not squarely apply. In such cases, the lead agency should develop an alternative approach that would be more appropriate for the particular project before it, considering all of the facts and circumstances of the project on a case-by-case basis."

The proposed project is not a typical land residential or commercial land use project, as it is a minor industrial facility expansion that would not construct new buildings or vehicle parking. Thus, the land use project design elements significance threshold does not apply. The City of San Leandro adopted its 2021 Climate Action Plan (CAP) in July 2021. Therefore, the project would result in a significant impact to GHG emissions if the project is inconsistent with the 2021 CAP.

# IMPACTS AND MITIGATION MEASURES

The following addresses potential AQ and GHG emissions impacts associated with the proposed additional use of a two-acre parcel for storage and processing of metal scrap for Alco Iron & Metal operations (the “project”) at Doolittle Drive and Eden Road in San Leandro, CA. The primary purpose of the project is to relocate the large scrap metal piles away from view from Doolittle Drive and allow for better traffic circulation onsite. The additional two acres will be used to store materials for processing and allow for better circulation of truck traffic and required storm water treatment measures. A new truck scale will also be added on the existing site to allow for separate in-bound and out-bound truck scales, which will facilitate more efficient truck circulation and help eliminate queuing. The project also includes the replacement of a frontage wall and landscaping installation.

The project would generate AQ and GHG emissions during construction from onsite heavy equipment and vehicles (worker automobiles and haul trucks). The project would also generate a small amount of GHG emissions from the additional truck scale (electric use) and would decrease AQ and GHG emissions by reducing truck idling through improved truck circulation during project operations.

## IMPACT ANALYSIS

### IMPACT AQ-1

**Would the proposed project conflict with or obstruct implementation of the applicable air quality plan? (Less than Significant Impact)**

As discussed previously, the BAAQMD’s *2017 Clean Air Plan* is the applicable air quality plan to the Project (see Regulatory Setting for the primary goals and key highlights of the plan). BAAQMD guidance for project-level analysis focuses on the attainment of criteria air pollutant emissions thresholds. As presented in the subsequent impact discussions, the project would not exceed BAAQMD’s thresholds of significance for criteria pollutant emissions. Furthermore, there are no applicable control measures that are applicable to the project, nor would the project hinder the implementation of the any control measures. The project consists of minor site improvements at an existing industrial facility that would result in a reduction in AQ and GHG emissions over the lifetime of the project. The overall purpose of BAAQMD’s *2017 Clean Air Plan* is to reduce AQ and GHG emissions. Therefore, the project would not conflict with or obstruct implementation of the *2017 Clean Air Plan* and would result in a ***less-than-significant impact***.

### MITIGATION MEASURES AQ-1

*None required.*

### IMPACT AQ-2

**Would the proposed project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? (Less-than-Significant Impact with Mitigation)**

## CONSTRUCTION EMISSIONS

Project construction would require site grading, paving, old wall demolition, new wall construction, broken pavement repair, and installation of the new truck scale. Construction would be very limited and the project site does not include unusual challenges that would require unusually high energy usage. Construction would be short term (approximately 31 working days) and would require various pieces of equipment such as a backhoe, grader, forklift, paving equipment, and concrete trucks. The project would not require the import/export of soil material from grading. Approximately 16 round haul truck trips would be required for bringing construction materials (paving materials and new scale) to the project site and approximately 8 haul truck round trips would be required for hauling the demolished frontage wall, as indicated in the CalEEMod modelling estimates in **Attachment A**.

Construction emissions were calculated by CalEEMod, a Statewide land use emissions computer model developed for the California Air Pollution Officers Association (CAPCOA) in collaboration with the California Air Districts. The model inputs assumed project construction would occur eight hours per day over approximately 31 working days. **Table 2** displays the maximum daily construction emissions for the Project (assuming a construction year of 2025). Maximum daily construction emissions were compared to average daily thresholds to be conservative due to the short duration of construction activities. Detailed modeling assumptions and results are provided in **Attachment A**.

**TABLE 2. PROJECT MAXIMUM DAILY CONSTRUCTION EXHAUST EMISSIONS**

Condition	ROG lbs/day	NOx lbs/day	PM10 <sup>1</sup> lbs/day	PM2.5 <sup>1</sup> lbs/day
Maximum Daily Construction Emissions <sup>1</sup>	0.87	7.78	0.29	0.27
BAAQMD Threshold of Significance	54	54	82	54
Potentially Significant?	No	No	No	No

NOTES:

<sup>1</sup> PM10 and PM2.5 construction thresholds of significance apply to exhaust emission only. Fugitive PM10 and PM2.5 (fugitive dust) are considered to be less than significant if best management practices are implemented.

SOURCE: CAPCOA, 2022 & RCH Group, 2024

Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather. In the absence of mitigation, construction activities may result in significant quantities of dust, and as a result, local visibility and PM10 concentrations may be adversely affected on a temporary and intermittent basis during construction. In addition, the fugitive dust generated by construction would include not only PM10, but also larger particles, which would fall out of the atmosphere within several hundred feet of the project site and could result in nuisance-type impacts. The BAAQMD considers fugitive dust impacts to be significant unless best management practices are implemented. Therefore, project construction would result in a **less-than-significant impact** after implementation of **Mitigation Measure AQ-2A**.

## OPERATIONAL EMISSIONS

Once the project is operational, approximately 1,000 kilowatt hours (kWh) of electricity would be required annually to power the additional truck scale during project operations. This electricity is considered very minor, since in 2020 the average annual electricity consumption for a U.S. residential utility customer was approximately 11,000 kWh per year.<sup>10</sup> This electricity consumption would not generate criteria pollutant emissions.

The project would also decrease criteria air pollutant emissions during project operations by reducing truck idling through improved truck circulation. It is estimated that on average approximately 90 vehicles queue at the scale per day and that each vehicle idles for approximately 10 minutes while onsite. The project would not increase throughput or vehicles at the site but would result in an estimated 50 percent reduction in truck idling through improved truck circulation and reduced queueing time. According to the U.S. Department of Energy, a heavy-duty truck consumes approximately 0.8 gallons of fuel per hour of idling.<sup>11</sup> Thus, the project would result in a reduction of 6 gallons of diesel fuel per day or 2,190 gallons of diesel fuel per year (this calculation is presented in **Attachment B**) and the resulting criteria air pollutant emissions from engine combustion. Therefore, project operation would result in a **less-than-significant** impact.

## MITIGATION MEASURES AQ-2

A. The Applicant shall require the following BAAQMD recommended basic construction mitigation measures during Project construction:

- 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 track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- 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.
- A publicly visible sign shall be posted with the telephone number and person to contact at the Lead Agency 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.

## IMPACT AQ-3

**Would the proposed project expose sensitive receptors to substantial pollutant concentrations? (Less than Significant Impact)**

<sup>10</sup> U.S. Energy Information Administration. Frequently Asked Questions (FAQs). <https://www.eia.gov/tools/faqs/faq.php?id=97&t=3>

<sup>11</sup> U.S. Department of Energy. Energy Efficiency & Renewable Energy. Long-Haul Truck Idling Burns up Profits. [https://afdc.energy.gov/files/u/publication/hdv\\_idling\\_2015.pdf](https://afdc.energy.gov/files/u/publication/hdv_idling_2015.pdf)

Land uses such as schools, children’s daycare centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. According to the BAAQMD, workers are not considered sensitive receptors because all employers must follow regulations set forth by the Occupation Safety and Health Administration to ensure the health and well-being of their employees. BAAQMD considers the relevant zone of influence for an assessment of air quality health impacts to be within 1,000 feet of a project site. The nearest sensitive receptors are residences approximately 2,500 feet east of the project site.

Project construction would generate negligible TAC emissions based upon the short duration (approximately 30 days of construction) and low intensity of construction operations. Per the OEHHA, health risks should not be assessed for less than two months of activity.<sup>12</sup> Furthermore, the nearest sensitive receptors are 2,500 feet away.

Project operation would result in a decrease in TAC emissions by reducing truck idling through improved truck circulation. Because the project would decrease TAC emissions from existing trucks and the project would not add any new sources of TACs, a health risk assessment is not required. Furthermore, because the project would reduce idling from existing trucks and would not generate any new vehicle trips, carbon monoxide hotspots would also be decreased. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations and this impact would be ***less than significant***.

#### MITIGATION MEASURES AQ-3

*None required.*

#### IMPACT AQ-4

**Would the proposed project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? (No Impact)**

The project would not generate substantial odors and the nearest sensitive receptors are approximately 2,500 feet east of the project site. The project does not propose any operational changes at the existing facility and would only include site improvements. Construction activities are not a significant source of odors. Therefore, the project would have ***no impact***.

#### MITIGATION MEASURES AQ-4

*None required.*

---

<sup>12</sup> Office of Environmental Health Hazard Assessment. 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. February 2015.

## IMPACT GHG-1

**Would the proposed project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment? Would the proposed project conflict with the applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs? (Less-than-Significant Impact)**

The Regulatory Setting of this Report describes the regulatory framework for GHG emissions at the federal, State, and local level.

Project construction would generate approximately 40.4 metric tons of CO<sub>2</sub>e over the 31-day construction period. The BAAQMD does not have an adopted threshold of significance for construction GHG emissions. This amount of GHG emissions is negligible and project construction would result in improved truck circulation which would reduce GHG emissions during operations (see discussion below).

Once the project is operational, approximately 1,000 kWh of electricity would be required annually to power the additional truck scale during project operations, which would generate less than one metric ton of CO<sub>2</sub>e per year.

The project would also decrease GHG emissions during project operations by reducing truck idling through improved truck circulation. It is estimated that on average approximately 90 vehicles queue at the scale per day and that each vehicle idles for approximately 10 minutes while onsite. The project would not increase throughput or vehicles at the site but would result in an estimated 50 percent reduction in truck idling through improved truck circulation and reduced queueing time. According to the U.S. Department of Energy, a heavy-duty truck consumes approximately 0.8 gallons of fuel per hour of idling.<sup>13</sup> Thus, the project would result in a reduction of 6 gallons of diesel fuel per day or 2,190 gallons of diesel fuel per year (this calculation is presented in **Attachment B**) and the resulting GHG emissions from engine combustion (approximately 22 metric tons of CO<sub>2</sub>e per year).

---

<sup>13</sup> U.S. Department of Energy. Energy Efficiency & Renewable Energy. Long-Haul Truck Idling Burns up Profits. [https://afdc.energy.gov/files/u/publication/hdv\\_idling\\_2015.pdf](https://afdc.energy.gov/files/u/publication/hdv_idling_2015.pdf)

The project has been reviewed relative to the City of San Leandro 2035 General Plan and 2021 CAP. This analysis finds that the project would not conflict with or obstruct either of these plans because there are no measures applicable to the project. Furthermore, the project would offset its construction GHG emissions (40.4 metric tons of CO<sub>2</sub>e) after approximately 22 months of operation and the project would continue to reduce GHG emissions over the lifetime of the project. The project would result in a reduction in GHG emissions over the lifetime of the project and would support the intent of the 2021 CAP, which is to reduce GHG emissions in the City of San Leandro. Based on the scale of the project and the fact that the project would reduce GHG emissions over the lifetime of the project, the project could not possibly hinder the implementation of GHG reduction measures within the 2035 General Plan and 2021 CAP. Furthermore, the project would not conflict with CARB's 2022 Scoping Plan, as there are no measures that are applicable to the project and the overall goal of the plan is to reduce GHG emissions, which the project would achieve after 22 months of operation and would continue doing so over the project's lifetime. Therefore, the project would result in a ***less-than-significant*** impact.

#### MITIGATION MEASURES GHG-1

*None required.*

# ATTACHMENTS

**ATTACHMENT A – CALEEMOD MODELING OUTPUT**

**ATTACHMENT B – GHG EMISSIONS REDUCTION FROM REDUCED IDLING**

## ATTACHMENT A

# Alco Metals Detailed Report

## Table of Contents

1. Basic Project Information
  - 1.1. Basic Project Information
  - 1.2. Land Use Types
  - 1.3. User-Selected Emission Reduction Measures by Emissions Sector
2. Emissions Summary
  - 2.1. Construction Emissions Compared Against Thresholds
  - 2.2. Construction Emissions by Year, Unmitigated
  - 2.4. Operations Emissions Compared Against Thresholds
  - 2.5. Operations Emissions by Sector, Unmitigated
3. Construction Emissions Details
  - 3.1. Demolition Old Wall (2025) - Unmitigated
  - 3.3. Grading New Site (2025) - Unmitigated
  - 3.5. Building New Wall (2025) - Unmitigated
  - 3.7. Building New Scale (2025) - Unmitigated
  - 3.9. Paving New Site/Fixing Pavement (2025) - Unmitigated

## 4. Operations Emissions Details

### 4.1. Mobile Emissions by Land Use

#### 4.1.1. Unmitigated

### 4.2. Energy

#### 4.2.1. Electricity Emissions By Land Use - Unmitigated

#### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

### 4.3. Area Emissions by Source

#### 4.3.1. Unmitigated

### 4.4. Water Emissions by Land Use

#### 4.4.1. Unmitigated

### 4.5. Waste Emissions by Land Use

#### 4.5.1. Unmitigated

### 4.6. Refrigerant Emissions by Land Use

#### 4.6.1. Unmitigated

### 4.7. Offroad Emissions By Equipment Type

#### 4.7.1. Unmitigated

### 4.8. Stationary Emissions By Equipment Type

#### 4.8.1. Unmitigated

#### 4.9. User Defined Emissions By Equipment Type

##### 4.9.1. Unmitigated

#### 4.10. Soil Carbon Accumulation By Vegetation Type

##### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

##### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

### 5. Activity Data

#### 5.1. Construction Schedule

#### 5.2. Off-Road Equipment

##### 5.2.1. Unmitigated

#### 5.3. Construction Vehicles

##### 5.3.1. Unmitigated

#### 5.4. Vehicles

##### 5.4.1. Construction Vehicle Control Strategies

#### 5.5. Architectural Coatings

#### 5.6. Dust Mitigation

##### 5.6.1. Construction Earthmoving Activities

##### 5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	Alco Metals
Construction Start Date	3/1/2025
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.90
Precipitation (days)	27.6
Location	37.716573171225704, -122.18808311098752
County	Alameda
City	San Leandro
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1409
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.28

## 1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Industrial	1.00	User Defined Unit	2.00	0.00	0.00	0.00	—	—

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

## 2. Emissions Summary

### 2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.92	0.73	6.47	7.73	0.03	0.21	0.38	0.59	0.20	0.10	0.30	—	3,129	3,129	0.14	0.20	2.84	3,195
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.07	0.87	7.78	9.62	0.03	0.29	0.61	0.83	0.27	0.10	0.35	—	3,159	3,159	0.14	0.20	0.07	3,209
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.08	0.06	0.56	0.69	< 0.005	0.02	0.03	0.05	0.02	0.01	0.03	—	240	240	0.01	0.01	0.08	244
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.01	0.10	0.13	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	39.7	39.7	< 0.005	< 0.005	0.01	40.4

### 2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.92	0.73	6.47	7.73	0.03	0.21	0.38	0.59	0.20	0.10	0.30	—	3,129	3,129	0.14	0.20	2.84	3,195

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.07	0.87	7.78	9.62	0.03	0.29	0.61	0.83	0.27	0.10	0.35	—	3,159	3,159	0.14	0.20	0.07	3,209
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.08	0.06	0.56	0.69	< 0.005	0.02	0.03	0.05	0.02	0.01	0.03	—	240	240	0.01	0.01	0.08	244
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.01	0.01	0.10	0.13	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	39.7	39.7	< 0.005	< 0.005	0.01	40.4

## 2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	< 0.005	< 0.005	0.00	0.56
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	< 0.005	< 0.005	0.00	0.56
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	< 0.005	< 0.005	0.00	0.56
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	< 0.005	< 0.005	0.00	0.09

## 2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.56	0.56	< 0.005	< 0.005	—	0.56
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	< 0.005	< 0.005	0.00	0.56
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.56	0.56	< 0.005	< 0.005	—	0.56
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	< 0.005	< 0.005	0.00	0.56
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.56	0.56	< 0.005	< 0.005	—	0.56
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	< 0.005	< 0.005	0.00	0.56
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.09	0.09	< 0.005	< 0.005	—	0.09
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	< 0.005	< 0.005	0.00	0.09

### 3. Construction Emissions Details

#### 3.1. Demolition Old Wall (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66	0.55	3.84	4.87	0.01	0.14	—	0.14	0.13	—	0.13	—	1,622	1,622	0.07	0.01	—	1,628
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.89	8.89	< 0.005	< 0.005	—	8.92
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.47	1.47	< 0.005	< 0.005	—	1.48
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.34	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	80.3	80.3	< 0.005	< 0.005	0.01	81.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.08	0.02	1.43	0.55	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,123	1,123	0.06	0.18	0.06	1,178
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.44	0.44	< 0.005	< 0.005	< 0.005	0.45
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.15	6.15	< 0.005	< 0.005	0.01	6.46
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.07	0.07	< 0.005	< 0.005	< 0.005	0.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.02	1.02	< 0.005	< 0.005	< 0.005	1.07

### 3.3. Grading New Site (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.47	4.16	5.57	0.01	0.21	—	0.21	0.20	—	0.20	—	859	859	0.03	0.01	—	862
Dust From Material Movement	—	—	—	—	—	—	0.53	0.53	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.06	7.06	< 0.005	< 0.005	—	7.08
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.17

Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.34	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	80.3	80.3	< 0.005	< 0.005	0.01	81.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.66	0.66	< 0.005	< 0.005	< 0.005	0.67
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.11	0.11	< 0.005	< 0.005	< 0.005	0.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.5. Building New Wall (2025) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.67	5.09	6.80	0.02	0.19	—	0.19	0.17	—	0.17	—	1,921	1,921	0.08	0.02	—	1,927
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.67	5.09	6.80	0.02	0.19	—	0.19	0.17	—	0.17	—	1,921	1,921	0.08	0.02	—	1,927
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.14	0.19	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	52.6	52.6	< 0.005	< 0.005	—	52.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.71	8.71	< 0.005	< 0.005	—	8.74
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.03	0.03	0.02	0.38	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	86.6	86.6	< 0.005	< 0.005	0.34	87.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.09	0.03	1.36	0.54	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,122	1,122	0.06	0.18	2.49	1,180
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.34	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	80.3	80.3	< 0.005	< 0.005	0.01	81.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.08	0.02	1.43	0.55	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,123	1,123	0.06	0.18	0.06	1,178
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.22	2.22	< 0.005	< 0.005	< 0.005	2.25
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.8	30.8	< 0.005	< 0.005	0.03	32.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.37	0.37	< 0.005	< 0.005	< 0.005	0.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.09	5.09	< 0.005	< 0.005	< 0.005	5.35

### 3.7. Building New Scale (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.74	1.04	< 0.005	0.04	—	0.04	0.04	—	0.04	—	152	152	0.01	< 0.005	—	153

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.42	0.42	< 0.005	< 0.005	—	0.42	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.07	0.07	< 0.005	< 0.005	—	0.07	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.38	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	86.6	86.6	< 0.005	< 0.005	0.34	87.9	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.17	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	140	140	0.01	0.02	0.31	148	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.22	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.38	0.38	< 0.005	< 0.005	< 0.005	0.40	

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.04	0.04	< 0.005	< 0.005	< 0.005	0.04
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.07

### 3.9. Paving New Site/Fixing Pavement (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.97	0.82	6.68	8.87	0.02	0.27	—	0.27	0.25	—	0.25	—	2,237	2,237	0.09	0.02	—	2,244
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.27	0.36	< 0.005	0.01	—	0.01	0.01	—	0.01	—	91.9	91.9	< 0.005	< 0.005	—	92.2
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.2	15.2	< 0.005	< 0.005	—	15.3
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.34	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	80.3	80.3	< 0.005	< 0.005	0.01	81.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.06	0.02	1.07	0.41	0.01	0.02	0.22	0.24	0.02	0.06	0.08	—	842	842	0.04	0.14	0.05	884
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.32	3.32	< 0.005	< 0.005	0.01	3.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	34.6	34.6	< 0.005	0.01	0.03	36.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.55	0.55	< 0.005	< 0.005	< 0.005	0.56
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.73	5.73	< 0.005	< 0.005	0.01	6.02

## 4. Operations Emissions Details

### 4.1. Mobile Emissions by Land Use

#### 4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56	< 0.005	< 0.005	—	0.56
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56	< 0.005	< 0.005	—	0.56
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56	< 0.005	< 0.005	—	0.56
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56	< 0.005	< 0.005	—	0.56
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09	< 0.005	< 0.005	—	0.09
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09	< 0.005	< 0.005	—	0.09

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

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

User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

### 4.3. Area Emissions by Source

#### 4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.4. Water Emissions by Land Use

##### 4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

## 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

### 4.6. Refrigerant Emissions by Land Use

#### 4.6.1. Unmitigated

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

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

### 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)

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

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

### 4.8. Stationary Emissions By Equipment Type

#### 4.8.1. Unmitigated

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

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

### 4.9. User Defined Emissions By Equipment Type

#### 4.9.1. Unmitigated

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

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

#### 4.10. Soil Carbon Accumulation By Vegetation Type

##### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

## 5. Activity Data

### 5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition Old Wall	Demolition	3/27/2025	3/28/2025	5.00	2.00	—
Grading New Site	Grading	3/1/2025	3/5/2025	5.00	3.00	—
Building New Wall	Building Construction	3/29/2025	4/11/2025	5.00	10.0	—
Building New Scale	Building Construction	4/12/2025	4/14/2025	5.00	1.00	—
Paving New Site/Fixing Pavement	Paving	3/6/2025	3/26/2025	5.00	15.0	—

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition Old Wall	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37
Demolition Old Wall	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38
Grading New Site	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading New Site	Graders	Diesel	Average	1.00	8.00	148	0.41
Building New Wall	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37
Building New Wall	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38
Building New Wall	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Building New Scale	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Paving New Site/Fixing Pavement	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving New Site/Fixing Pavement	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving New Site/Fixing Pavement	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving New Site/Fixing Pavement	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Grading New Site	—	—	—	—
Grading New Site	Worker	10.0	11.7	LDA,LDT1,LDT2

Grading New Site	Vendor	—	8.40	HHDT,MHDT
Grading New Site	Hauling	0.00	20.0	HHDT
Grading New Site	Onsite truck	—	—	HHDT
Demolition Old Wall	—	—	—	—
Demolition Old Wall	Worker	10.0	11.7	LDA,LDT1,LDT2
Demolition Old Wall	Vendor	—	8.40	HHDT,MHDT
Demolition Old Wall	Hauling	16.0	20.0	HHDT
Demolition Old Wall	Onsite truck	—	—	HHDT
Building New Wall	—	—	—	—
Building New Wall	Worker	10.0	11.7	LDA,LDT1,LDT2
Building New Wall	Vendor	0.00	8.40	HHDT,MHDT
Building New Wall	Hauling	16.0	20.0	HHDT
Building New Wall	Onsite truck	—	—	HHDT
Paving New Site/Fixing Pavement	—	—	—	—
Paving New Site/Fixing Pavement	Worker	10.0	11.7	LDA,LDT1,LDT2
Paving New Site/Fixing Pavement	Vendor	—	8.40	HHDT,MHDT
Paving New Site/Fixing Pavement	Hauling	12.0	20.0	HHDT
Paving New Site/Fixing Pavement	Onsite truck	—	—	HHDT
Building New Scale	—	—	—	—
Building New Scale	Worker	10.0	11.7	LDA,LDT1,LDT2
Building New Scale	Vendor	0.00	8.40	HHDT,MHDT
Building New Scale	Hauling	2.00	20.0	HHDT
Building New Scale	Onsite truck	—	—	HHDT

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
------------	------------------------------------------	------------------------------------------	----------------------------------------------	----------------------------------------------	-----------------------------

## 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)
Demolition Old Wall	0.00	0.00	0.00	—	—
Grading New Site	—	—	2.00	0.00	—
Paving New Site/Fixing Pavement	0.00	0.00	0.00	0.00	2.00

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Industrial	2.00	0%

## 5.8. Construction Electricity Consumption and Emissions Factors

### kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VM/Weekday	VM/Saturday	VM/Sunday	VM/Year
Total all Land Uses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

### 5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	0.00	0.00	—

### 5.10.3. Landscape Equipment

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

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

#### Electricity (kWh/yr) and CO<sub>2</sub> and CH<sub>4</sub> and N<sub>2</sub>O and Natural Gas (kBtu/yr)

Land Use	Electricity (kWh/yr)	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	Natural Gas (kBtu/yr)
User Defined Industrial	1,000	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)
User Defined Industrial	0.00	0.00

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
User Defined Industrial	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
---------------	----------------	-------------	-----	---------------	----------------------	-------------------	----------------

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

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

## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

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

### 5.16.2. Process Boilers

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

## 5.17. User Defined

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

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

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

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

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

### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

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

## 6. Climate Risk Detailed Report

### 6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.80	annual days of extreme heat
Extreme Precipitation	5.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

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

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

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

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

## 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	2	0	0	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

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

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

## 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	2	1	1	3
Sea Level Rise	1	1	1	2

Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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

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

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

## 6.4. Climate Risk Reduction Measures

# 7. Health and Equity Details

## 7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	6.38
AQ-PM	27.0
AQ-DPM	93.5
Drinking Water	4.21
Lead Risk Housing	80.9
Pesticides	0.00
Toxic Releases	61.7
Traffic	84.0
Effect Indicators	—
CleanUp Sites	90.4
Groundwater	97.4

Haz Waste Facilities/Generators	94.1
Impaired Water Bodies	87.0
Solid Waste	99.0
Sensitive Population	—
Asthma	82.1
Cardio-vascular	58.3
Low Birth Weights	89.3
Socioeconomic Factor Indicators	—
Education	65.7
Housing	52.1
Linguistic	56.9
Poverty	49.1
Unemployment	28.2

## 7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	41.71692545
Employed	41.16514821
Median HI	38.4832542
Education	—
Bachelor's or higher	37.61067625
High school enrollment	100
Preschool enrollment	50.42987296
Transportation	—
Auto Access	43.30809701
Active commuting	81.6501989

Social	—
2-parent households	22.43038624
Voting	50.46836905
Neighborhood	—
Alcohol availability	30.15526755
Park access	46.99088926
Retail density	81.49621455
Supermarket access	65.50750674
Tree canopy	46.49044014
Housing	—
Homeownership	29.00038496
Housing habitability	56.17862184
Low-inc homeowner severe housing cost burden	47.44001027
Low-inc renter severe housing cost burden	73.84832542
Uncrowded housing	41.35762864
Health Outcomes	—
Insured adults	27.75567817
Arthritis	32.0
Asthma ER Admissions	19.0
High Blood Pressure	58.0
Cancer (excluding skin)	47.4
Asthma	46.1
Coronary Heart Disease	40.3
Chronic Obstructive Pulmonary Disease	37.6
Diagnosed Diabetes	34.4
Life Expectancy at Birth	47.0
Cognitively Disabled	33.5
Physically Disabled	57.4

Heart Attack ER Admissions	33.6
Mental Health Not Good	43.4
Chronic Kidney Disease	35.4
Obesity	53.5
Pedestrian Injuries	19.6
Physical Health Not Good	39.2
Stroke	34.3
Health Risk Behaviors	—
Binge Drinking	81.4
Current Smoker	41.5
No Leisure Time for Physical Activity	34.1
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	21.2
Children	81.0
Elderly	59.3
English Speaking	28.9
Foreign-born	76.0
Outdoor Workers	44.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	36.8
Traffic Density	91.9
Traffic Access	23.0
Other Indices	—
Hardship	62.4
Other Decision Support	—
2016 Voting	30.1

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	87.0
Healthy Places Index Score for Project Location (b)	48.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

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

### 7.4. Health & Equity Measures

No Health & Equity Measures selected.

### 7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

### 7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

## 8. User Changes to Default Data

Screen	Justification
Characteristics: Project Details	Project is in a highly urban area
Land Use	Approximately 2 acre site plus addition of one new scale
Construction: Construction Phases	Per Applicant Data Request Response
Construction: Off-Road Equipment	Per Applicant Data Request Response
Construction: Dust From Material Movement	Per Applicant Data Request Response
Construction: Trips and VMT	Per Applicant Data Request Response
Construction: Paving	Per Applicant Data Request Response
Operations: Energy Use	Per Applicant Data Request Response, 1,000 kwh annually for new scale

**Attachment B -- GHG EMISSIONS REDUCTION FROM REDUCED IDLING**

**Project Idling Fuel Reduction**

	<b>Existing Baseline</b>	<b>Project</b>	<b>Project Reduction</b>	
<b>Average Vehicles Per Day</b>		90	90	
<b>Idling Estimate Per Vehicle</b>		10	5	
<b>Fuel Consumption (gal/idling hour)</b>		0.8	0.8	
<b>Total Daily Fuel Consumption</b>		12	6	<b>6 gallons per day</b>
<b>Total Annual Fuel Consumption</b>		4380	2190	<b>2190 gallons per year</b>

**GHG Emissions**

1 kg = 10.16 kg CO<sub>2</sub>/gallon  
 0.001 metric ton

**22.3** metric tons of CO<sub>2</sub>e reduction per year