
IV. ENVIRONMENTAL IMPACT ANALYSIS

C. GREENHOUSE GAS EMISSIONS

INTRODUCTION

The greenhouse gas (“GHG”) data and analysis in this section is based upon evaluation conducted by Baseline Environmental Consulting (“Baseline”) for the proposed 1000 Gibraltar Drive project (“proposed Project”). The analysis contained within this section is based on information contained within Section III (“Project Description”) and modeling of traffic data contained in Section IV.E (“Transportation”), and was prepared in accordance with the Bay Area Air Quality Management District (“BAAQMD”) CEQA Air Quality Guidelines (“CEQA Guidelines”). Refer to Appendix F of this Draft EIR for additional information which supports this GHG section.

ENVIRONMENTAL SETTING

Emissions of GHGs have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change. Climate change refers to change in the Earth’s weather patterns, including the rise in temperature due to an increase in heat-trapping GHGs in the atmosphere. Existing GHGs allow about two-thirds of the visible and ultraviolet light from the sun to pass through the atmosphere and be absorbed by the Earth’s surface. To balance the absorbed incoming energy, the surface radiates thermal energy back to space at longer wavelengths, primarily in the infrared part of the spectrum. Much of the thermal radiation emitted from the surface is absorbed by the GHGs in the atmosphere and is re-radiated in all directions. Because part of the re-radiation is back toward the surface and the lower atmosphere, global surface temperatures are elevated above what they would be in the absence of GHGs. This process of trapping heat in the lower atmosphere is known as the greenhouse effect. The proper context for addressing this issue in an assessment of cumulative impacts, because although it is unlikely that a single project will contribute significantly to climate change, cumulative emissions from many projects could impact global GHG concentrations and the climate system.

Greenhouse Gas Emissions and Contribution to Climate Change

Cumulative impacts are the collective impacts of one or more past, present, and future projects that, when combined, result in adverse changes to the environment. In determining the significance of a proposed project’s contribution to anticipated adverse future conditions, a lead agency should generally undertake a two-step analysis. The first question is whether the combined effects from both the proposed Project and other projects would be cumulatively significant. If the agency answers this inquiry in the affirmative, the second question is whether “the proposed project’s incremental effects are cumulatively considerable” and thus significant in and of themselves.

Legislation and executive orders on the subject of climate change in California have established a Statewide context and process for developing an enforceable cap on GHG emissions. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies consider evaluating the cumulative impacts of GHGs, even relatively small additions, on a global basis. Small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially significant.

Attributing Climate Change—The Physical Scientific Basis

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. The primary GHG emissions of concern are carbon dioxide ("CO₂"), methane ("CH₄"), and nitrous oxide ("N₂O"). Other GHGs of concern include hydrofluorocarbons ("HFCs"), perfluorocarbons ("PFCs"), and sulfur hexafluoride ("SF₆"), but their contribution to climate change is less than 1 percent of the total by well-mixed GHGs (i.e., that have atmospheric lifetimes long enough to be homogeneously mixed in the troposphere). Each GHG has a different global warming potential ("GWP"); for instance, CH₄ traps about 21 times more heat per molecule than does CO₂. Therefore, emissions of GHGs are reported in terms of metric tons of carbon dioxide equivalents ("CO₂e"), wherein each GHG is weighted by its GWP relative to CO₂. GHGs have long atmospheric lifetimes (one year to several thousand years). GHGs persist in the atmosphere for a long enough time to be dispersed around the globe.

Although the exact lifetime of any particular GHG molecule depends on multiple variables and cannot be pinpointed, more CO₂ is currently emitted into the atmosphere than is sequestered. Carbon dioxide sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through photosynthesis and dissolution, respectively. These are two of the most common processes of CO₂ sequestration. Approximately 40 percent of anthropogenic CO₂ emissions remain in the atmosphere every year; the rest has been taken up by the land and oceans in roughly equal proportions.¹

Attributing Climate Change—Greenhouse Gas Emissions Sources

According to the Intergovernmental Panel on Climate Change ("IPCC"), the atmospheric concentrations of CO₂, CH₄, and N₂O have increased to levels unprecedented in at least the past 800,000 years due to anthropogenic sources. In 2011, concentrations of CO₂, CH₄, and N₂O exceeded the pre-industrial era (before 1750) by about 40,150, and 20 percent, respectively.² Earth's global average surface temperature in 2019 was the second warmest since modern-record keeping began in 1880, and the past five years from 2015 to 2019 were

¹ Intergovernmental Panel on Climate Change, 2001. *Climate Change 2001: The Scientific Basis, Chapter 3, the Carbon Cycle and Atmospheric Carbon Dioxide.*

² Bay Area Air Quality Management District (BAAQMD), 2015. *Bay Area Emissions Inventory Summary Report: Greenhouse Gases, Base Year 2011, January.*

collectively the warmest years in the modern record.³ The global increases in CO₂ concentrations are due primarily to fossil fuel combustion, cement production, and land use changes (e.g., deforestation). The dominant anthropogenic sources of CH₄ are ruminant livestock, fossil fuel extraction and use, rice paddy agriculture, and landfills, while the dominant anthropogenic sources of N₂O are ammonia for fertilizer and industry.⁴ No emissions of HFCs, PFCs, and SF₆ are naturally occurring; they all originate from industrial processes such as semiconductor manufacturing, their use as refrigerants and other products, and electric power transmission and distribution.⁵

Land use decisions and development projects can affect the generation of GHG emissions from multiple sectors (e.g., transportation, electricity, and waste), as described in more detail below. Development projects can result in direct or indirect GHG emissions that would occur on- or off-site. For example, electricity consumed on-site in structures within a project would indirectly cause GHGs to be emitted at a utility provider off-site. The residents of and the visitors to a development project would drive vehicles that generate on-site and off-site GHG emissions, which are associated with the transportation sector. The following sections describe the major GHG emission sectors and their associated emissions at the state and local level.

Greenhouse Gas Emissions Inventory

In 2018, the California Air Resources Board (“CARB”) estimated that transportation was responsible for about 40 percent of California’s GHG emissions, followed by industrial sources at about 21 percent, and electrical power generation at about 15 percent.⁶ In 2015, 85 million metric tons of CO₂e was emitted from anthropogenic sources within the San Francisco Bay Area Air Basin (“SFBAAB”). Emissions of CO₂ dominate the GHG inventory in the SFBAAB, accounting for about 90 percent of the total CO₂e emissions reported.⁷ The 2015 GHG emissions in the SFBAAB are summarized in Table IV.C-1.

³ *National Aeronautic and Space Administration (NASA), 2020. NASA, NOAA Analyses Reveal 2019 Second Warmest Year on Record. January 15.*

⁴ *Intergovernmental Panel on Climate Change, 2013. Climate Change 2013; the Physical Science Basis; Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*

⁵ *Bay Area Air Quality Management District (BAAQMD), 2015. Bay Area Emissions Inventory Summary Report: Greenhouse Gases, Base Year 2011, January.*

⁶ *California Air Resources Board (CARB), 2020. California Greenhouse Gas Emissions for 2000 to 2018 – Trends of Emissions and Other Indicators,*

⁷ *Bay Area Air Quality Management District (BAAQMD), 2017. Final 2017 Clean Air Plan, April 19.*

**Table IV.C-1
San Francisco Bay Area 2011 Greenhouse Gas Emissions Inventory**

Pollutant	Percent	CO₂e (MMT/Year)
Carbon Dioxide	90	76.5
Methane	4	3.4
Nitrous Oxide	2	1.7
Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride	4	3.4
Total	100	85

Note: MMT = million metric tons.

Source: Bay Area Air Quality Management District (BAAQMD), 2017. Final 2017 Clean Air Plan, April 19.

The City of Milpitas GHG emissions inventories for the 2005 baseline and 2020 business-as-usual scenarios are summarized in Table IV.C-2 for various land-use sectors.⁸ As indicated in Table IV.C-2, the greatest sources of GHG emissions in the City are the Transportation sector and the Energy sector (electricity and natural gas). Total GHG emissions are expected to increase by 18 percent by 2020 compared to the 2005 baseline levels if the City takes no jurisdictional actions to implement GHG reduction measures.

**Table IV.C-2
City of Milpitas Jurisdictional Business-As-Usual GHG Emissions Trends
(Metric Tons CO₂e)**

Sector	2005	2020 Business-as-Usual	Percent Increase
Transportation	320,990	383,630	20%
Non-residential Energy	183,800	203,000	10%
Residential Energy	64,230	83,090	29%
Solid Waste	54,410	65,290	20%
Off-Road Equipment	15,140	15,460	2%
Water and Wastewater	2,410	2,890	20%
Light Rail	1,070	1,320	23%
Direct Wastewater	620	740	20%
Total	642,670	755,420	18%

Source: City of Milpitas, 2013. Climate Action Plan, a Qualified Greenhouse Gas Reduction Strategy. May 7.

⁸ *City of Milpitas, 2013. Climate Action Plan, a Qualified Greenhouse Gas Reduction Strategy. May 7.*

REGULATORY FRAMEWORK

Federal Regulations

Supreme Court Ruling on California Clean Air Act Waiver

The U.S. EPA is the federal agency responsible for implementing the CAA. The U.S. Supreme Court ruled on April 2, 2007 that CO₂ is an air pollutant as defined under the CAA, and that EPA has the authority to regulate emissions of GHGs. However, there are no federal regulations or policies regarding GHG emissions applicable to the proposed Project under consideration. See Assembly Bill (“AB”) 1493 for further information on the CAA Waiver.

Energy and Independence Security Act of 2007 and Corporate Average Fuel Economy Standards

The Energy and Independence Security Act of 2007 (“EISA”) amended the Energy Policy and Conservation Act (“EPCA”) to further reduce fuel consumption and expand production of renewable fuels. The EISA’s most important amendment includes a statutory mandate for the National Highway Traffic Safety Administration (“NHTSA”) to set passenger car corporate average fuel economy (“CAFE”) standards for each model year (“MY”) at the maximum feasible level. This statutory mandate also eliminates the old default CAFE standard of 27.5 miles per gallon (“mpg”). The EISA requires that CAFE standards for MY 2011-2020 be set sufficiently high to achieve the goal of an industry-wide passenger car and light-duty truck average CAFE standard of 35 mpg. The rule making for this goal has been divided into two separate parts. The first part, which was published in the Federal Register in March 2009, includes CAFE standards for MY 2011 in order to meet the statutory deadline (i.e., March 30, 2009). The second part of the rulemaking applies to MY 2012 and subsequent years. These would be the maximum CAFE standards feasible under the limits of the EPCA and EISA. In May 2010, EPA and NHTSA issued a joint final rule applicable to MY 2012–2016 passenger vehicles and light trucks that mandated a reduction in GHG emissions and a combined CAFE standard of 34.1 mpg by 2016. Combined with improvement of vehicle air conditioning systems and use of flexible-fuel vehicles, fuel economy is expected to result in improvement levels equivalent to 35.5 mpg. In August of 2012, the EPA and NHTSA issued final rulemaking for model years 2017-2025 requiring a phased approach that results in a fleet-wide fuel economy of 48.7-49.7 mpg for MY 2025.

EPA Regulations

In response to the mounting issue of climate change, EPA has taken the following actions to regulate, monitor, and potentially reduce GHG emissions.

Mandatory Reporting of Greenhouse Gases (40 CFR part 98)

On October 30, 2009, the EPA published a rule for the mandatory reporting of GHG (also referred to as 40 CFR part 98) from large GHG emissions sources in the United States.

Implementation of 40 CFR Part 98 is referred to as the Greenhouse Gas Reporting Program (“GHGRP”).

This comprehensive, nationwide emissions data will provide a better understanding of where GHGs are coming from and will guide development of the policies and programs to reduce emissions. The publically available data will allow reporters to track their own emissions, compare them to similar facilities, and aid in identifying cost effective opportunities to reduce emissions in the future. Annual reports are required, and EPA will verify the data submitted rather than requiring third-party verification.

40 CFR part 98 applies to direct GHG emitters, fossil fuel suppliers, and industrial gas suppliers. In general, the threshold for reporting is 25,000 metric tons or more of CO₂e per year. Reporting is at the facility level, except for certain suppliers of fossil fuels and industrial GHGs.

An estimated 85-90 percent of the total U.S. GHG emissions from approximately 10,000 facilities are covered by this final rule.

National Program to Cut Greenhouse Gas Emissions and Improve Fuel Economy for Cars and Trucks

EPA and NHTSA are developing a national program to reduce GHG emissions and fuel use from on-highway transportation sources. The effect of these actions will be to reduce GHG emissions, improve energy security, increase fuel savings, and provide regulatory certainty for manufacturers. The EPA establishes GHG emissions standards under the CAA, whereas NHTSA establishes fuel economy standards under the EISA and the EPCA. The goal of the joint rulemakings is coordinated federal standards that are also harmonized with applicable state standards.

EPA and NHTSA’s May 7, 2010 final rule set GHG and fuel economy standards for light-duty vehicles for model years 2012 through 2016. Light-duty vehicles are responsible for about 60 percent of U.S. transportation GHG emissions.

Next, EPA and NHTSA will address heavy-duty trucks, which are the transportation segment’s second largest contributor to oil consumption and GHG emissions. The heavy-duty sector, from large pickups to 18-wheelers, emits about 20 percent of U.S. transportation GHG emissions.

Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Federal Clean Air Act

On December 7, 2009, EPA adopted its Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under the CAA (“Endangerment Finding”). The Endangerment Finding is based on Section 202(a) of the CAA, which states that the EPA Administrator should regulate and develop standards for “emission[s] of air pollution from any class or classes of new motor vehicles or new motor vehicle engines, which in [its] judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.” The rule addresses Section 202(a) in two distinct findings. The first addresses whether or not the

concentrations of the six key GHGs (i.e., CO₂, CH₄, N₂O, HFCs, perfluorocarbons, and SF₆) in the atmosphere threaten the health and welfare of current and future generations. The second addresses whether or not the combined emissions of GHGs from new motor vehicles and motor vehicle engines contribute to atmospheric concentrations of GHGs and thus to the threat of climate change.

In 2009, the EPA Administrator found that atmospheric concentrations of GHGs endanger public health and welfare within the meaning of Section 202(a) of the CAA. At that time, the EPA Administrator also found that GHG emissions from new motor vehicles and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare.

Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule (40 CFR part 52)

The EPA mandated application of the Prevention of Significant Deterioration (“PSD”) requirements to facilities whose stationary source CO₂e emissions exceed 75,000 tons per year.

National Climate Action Plan

In June 2013, President Obama enacted a national Climate Action Plan that consisted of a wide variety of executive actions and had three pillars discussed below (“EOP 2013”).

Cut Carbon in America

The EOP 2013 consists of actions to help cut carbon by deploying clean energy such as cutting carbon from power plants, promoting renewable energy, and unlocking long-term investment in clean energy innovation.

Prepare the United States for Impacts of Climate Change

The EOP 2013 consists of actions to help prepare for the impacts through building stronger and safer communities and infrastructure by supporting climate resilient investments, supporting communities and tribal areas as they prepare for impacts, and boosting resilience of building and infrastructure; protecting the economy and natural resources by identifying vulnerabilities, promoting insurance leadership, conserving land and water resources, managing drought, reducing wildfire risks, and preparing for future floods; and using sound science to manage climate impacts.

Lead International Efforts

The EOP 2013 consists of actions to help the United States lead international efforts through working with other countries to take action by enhancing multilateral engagements with major economies, expanding bilateral cooperation with major emerging economies, combating short-lived climate pollutants, reducing deforestation and degradation, expanding clean energy use and cutting energy waste, global free trade in environmental goods and services, and phasing

out subsidies that encourage wasteful use of fossil fuels and by leading efforts to address climate change through international negotiations.

In June of 2014, the Center for Climate and Energy Solutions (“C2ES”) published a one-year review of progress in implementation of the EOP 2013.⁹ The C2ES found that the administration had made marked progress in its initial implementation. Notable areas of progress included steps to limit carbon pollution from power plants; improve energy efficiency; reduce CH₄ and HFC emissions; help communities and industry become more resilient to climate change impacts; and end U.S. lending for coal-fired power plants overseas.

State Regulations

Because every nation emits GHGs and thus makes an incremental cumulative contribution to global climate change, cooperation on a global scale will be required to reduce the rate of GHG emissions to a level that can help to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions. Several statewide initiatives relevant to land use planning are discussed below; however, this does not represent a complete list of climate change-related legislation in California.

Assembly Bill 1493

AB 1493 requires that CARB develop and adopt, by January 1, 2005, regulations that achieve “the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the state.”

To meet the requirements of AB 1493, in 2004 CARB approved amendments to the CCR adding GHG emissions standards to California’s existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 (13 CCR 1900, 1961), and adoption of Section 1961.1 (13 CCR 1961.1) require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds that is designed primarily for the transportation of persons), beginning with the 2009 model year. For passenger cars and light-duty trucks with a loaded vehicle weight (“LVW”) of 3,750 pounds or less, the GHG emission limits for the 2016 model year are approximately 37% lower than the limits for the first year of the regulations, the 2009 model year. For light-duty trucks with LVW of 3,751 pounds to gross vehicle weight (“GVW”) of 8,500 pounds, as well as medium-duty passenger vehicles, GHG emissions would be reduced approximately 24% between 2009 and 2016.

In December 2004, a group of car dealerships, automobile manufacturers, and trade groups representing automobile manufacturers filed suit against CARB to prevent enforcement of 13

⁹ Center for Climate and Energy Solutions (C2ES), 2014. *President Obama’s Climate Action Plan: One Year Later*. June.

CCR Sections 1900 and 1961 as amended by AB 1493 and 13 CCR 1961.1.¹⁰ The automobile-makers' suit in the U.S. District Court for the Eastern District of California, contended California's implementation of regulations that, in effect, regulate vehicle fuel economy, violates various federal laws, regulations, and policies.

On December 12, 2007, the court found that if California receives appropriate authorization from EPA (the last remaining factor in enforcing the standard), then these regulations would be consistent with and have the force of federal law, thus, rejecting the automobile-makers' claim. This authorization to implement more stringent standards in California was requested in the form of a CAA Section 209(b), waiver in 2005. Since that time, EPA failed to act on granting California authorization to implement the standards. Governor Schwarzenegger and Attorney General Edmund G. Brown filed suit against EPA for the delay. In December 2007, EPA Administrator Stephen Johnson denied California's request for the waiver to implement AB 1493. Johnson cited the need for a national approach to reducing GHG emissions, the lack of a "need to meet compelling and extraordinary conditions," and the emissions reductions that would be achieved through the Energy Independence and Security Act of 2007 as the reasoning for the denial.¹¹

The State of California filed suit against EPA for its decision to deny the CAA waiver. Under the Obama administration, EPA was directed to reexamine its position for denial of California's CAA waiver and for its past opposition to GHG emissions regulation. California received the waiver on June 30, 2009.

Executive Order S-3-05

Executive Order S-3-05 proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea level. To combat those concerns, the Executive Order established total GHG emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80% below the 1990 level by 2050.

The Executive Order directed the Secretary of the California Environmental Protection Agency ("CalEPA") to coordinate a multiagency effort to reduce GHG emissions to the target levels. The Secretary must also submit biannual reports to the Governor and State Legislature describing: progress made toward reaching the emission targets; impacts of global warming on California's resources; and mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Secretary of the CalEPA created the California Climate Action Team ("CCAT") made up of members from various state agencies and commission. CCAT

¹⁰ *Central Valley Chrysler-Jeep et al. v. Catherine E. Witherspoon, in Her Official Capacity as Executive Director of the California Air Resources Board, et al.*

¹¹ *Stephen Johnson, Environmental Protection Agency Administrator, 2009. Environmental Protection Agency's Waiver Decision on California's Greenhouse Gas Emission Standards for New Motor Vehicles. Available at: <https://www.epa.gov/sites/production/files/2016-10/documents/ghgwaiverexecutivesummary.pdf>. June.*

released its first report in March 2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs.

Assembly Bill 32, the California Global Warming Solutions Act of 2006

AB 32, the California Global Warming Solutions Act of 2006, establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012.

AB 32 requires that CARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves the reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

Senate Bill 32 and Assembly Bill 197

On September 8, 2016, Senate Bill (“SB”) 32, was enacted by the State of California. SB 32 extends the statewide GHG reduction goals established in AB 32 to reach a 40% reduction from 1990 GHG levels by 2030. SB 32 was passed in conjunction with AB 197. Designed to improve the transparency of CARB’s regulatory and policy-oriented processes, AB 197 created the Joint Legislative Committee on Climate Change Policies, a committee with the responsibility to ascertain facts and make recommendations to the Legislature concerning statewide programs, policies and investments related to climate change. AB 197 also requires CARB to make certain GHG emissions inventory data publicly available on its web site; consider the social costs of GHG emissions when adopting rules and regulations designed to achieve GHG emission reductions; and, include specified information in all Scoping Plan updates for the emission reduction measures contained in the Scoping Plan.

Executive Order B-30-15

Executive Order B-30-15, which was signed by Governor Brown on April 29, 2015, proclaims the new interim statewide GHG emissions reduction target is to reduce GHG emissions to 40 percent below 1990 levels by 2030. This expands upon AB32 which established reduction goals for 2020 and is intended to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050 (per Executive Order S-03-05). In compliance with Executive Order B-30-15, State agencies shall take climate change into account in their planning and investment decisions, and employ full life-cycle cost accounting to evaluate and compare infrastructure investments and alternatives.

Executive Order B-16-2012

Executive Order B-16-2012 (March 2012) specifically focuses on reducing emissions from California's vehicle fleet and directs that California achieve a 2050 target for GHG emission reductions from the transportation sector equalling 80% less than 1990 levels. This would be accomplished by achieving benchmarks by 2020 and 2025 for zero-emission vehicle ("ZEV") infrastructure and technology advancement.

Executive Order B-32-15 and Sustainable Freight Action Plan

In July 2015, Governor Brown issued Executive Order B-32-15, which directs the Secretary of the California State Transportation Agency, Secretary of the California Environmental Protection Agency, and the Secretary of the Natural Resources Agency to lead the appropriate State departments in the development of a California Sustainable Freight Action Plan by July 2016. The State departments involved in this effort include the California Department of Transportation, CARB, the California Energy Commission and the Governor's Office of Business and Economic Development.

The California Sustainable Freight Action Plan is an ambitious statewide effort to improve freight efficiency and transition the freight transport system to zero-emission technologies, while continuing to support California's economy. The integrated action plan identifies strategies and actions to achieve a sustainable freight transportation system that meets California's environmental, energy, mobility, safety and economic needs.

The plan also identifies and initiates corridor-level freight pilot projects within the State's primary trade corridors that integrate advanced technologies, alternative fuels, freight and fuel infrastructure and local economic development opportunities.

Senate Bill 1368

SB 1368 requires the CPUC to establish a GHG performance standard for baseload generation from investor-owned utilities by February 1, 2007 and for local publicly owned utilities by June 30, 2007. These standards cannot exceed the GHG emission rate from a baseload combined-cycle natural gas fired plant (1,100 lbs CO₂ per megawatt-hour [MWh]). The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the CPUC and CEC.

Executive Order S-1-07

Executive Order S-1-07, which was signed by Governor Schwarzenegger in 2007, proclaims that the transportation sector is the main source of GHG emissions in California, at over 40% of statewide emissions. It establishes a goal that the carbon intensity of transportation fuels sold in California should be reduced by a minimum of 10% by 2020. This order also directed CARB to determine if this Low Carbon Fuel Standard could be adopted as a discrete early action measure after meeting the mandates in AB 32. CARB adopted the Low Carbon Fuel Standard on April 23, 2009.

Senate Bill 97

SB 97, signed August 2007, acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directs the California Office of Planning and OPR to prepare, develop, and transmit to the California Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA by July 1, 2009. The California Natural Resources Agency adopted those guidelines on December 30, 2009, and the guidelines became effective March 18, 2010.

Senate Bill 375

SB 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (“MPOs”) to adopt a Sustainable Communities Strategy (“SCS”) or Alternative Planning Strategy (“APS”), which will prescribe land use allocation in that MPO’s Regional Transportation Plan (“RTP”). CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every 8 years, but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO’s SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG emission reduction targets, transportation projects would not be eligible for funding programmed after January 1, 2012.

Assembly Bill 32, Climate Change Scoping Plan

On December 11, 2008 CARB adopted its Climate Change Scoping Plan (Scoping Plan), which functions as a roadmap of CARB’s plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations (CARB 2008). The Scoping Plan contains the main strategies California will implement to reduce CO₂e emissions by 169 million metric tons (“MMT”), or approximately 30%, from the state’s projected 2020 emissions level of 596 MMT of CO₂e under a business-as-usual scenario. (This is a reduction of 42 MMT CO₂e, or almost 10%, from 2002–2004 average emissions, but requires the reductions in the face of population and economic growth through 2020). The Scoping Plan also breaks down the amount of GHG emissions reductions CARB recommends for each emissions sector of the state’s GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO₂e),
- the Low Carbon Fuel Standard (15.0 MMT CO₂e),
- energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO₂e), and

- a renewable portfolio standard for electricity production (21.3 MMT CO₂e).

CARB has not yet determined what amount of GHG emissions reductions it recommends from local government land use decisions; however, the Scoping Plan does state that successful implementation of the plan relies on local governments' land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions. CARB further acknowledges that decisions on how land is used will have large effects on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. The Scoping Plan states that the ultimate assignment to local government operations is to be determined.

The Scoping Plan expects a reduction of approximately 5.0 MMT CO₂e from local land use changes associated with implementation of SB 375, discussed above. The Scoping Plan does not include any direct discussion about GHG emissions generated by construction activity.

- CalRecycle and the Department of General Services will need to take the lead in improving the State procurement of recycled-content materials through the State Agency Buy Recycled Campaign reform.

Cap-and-Trade Program (17 CCR 95800 to 96022)

On October 20, 2011, CARB approved the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation ("Cap-and-Trade Program") as part of the AB 32 implementation measures. Cap-and-trade is a market-based regulation that is designed to reduce GHGs from multiple sources. It is viewed as an environmentally effective and economically efficient response to climate change. Cap-and-trade sets a firm limit, or cap on GHG emissions from all sources in the Cap-and-Trade Program, and minimizes the compliance costs of achieving AB 32 goals. The initial cap was established in 2013 for the electrical sector and any large industrial source emitting more than 25,000 MTCO₂e per year. Beginning in 2015, the cap was expanded to include GHG emissions from the combustion of transportation fuels and natural gas. The cap declines approximately 3% each year. In the market, a price on carbon is established for GHGs. Trading and market forces create incentives to reduce GHGs below allowable levels through investments in technological innovation in clean technologies. California has linked its Cap-and-Trade Program with a similar program adopted by Quebec in order to help deliver cost-effective emission reductions.

CARB's Cap-and-Trade Regulation establishes a set of rules that limit GHG emissions from the state's largest sources of GHGs by applying a statewide aggregate GHG allowance budget to covered entities (17 CCR 95800 to 96023). The regulation also provides a trading mechanism for compliance instruments (17 CCR 95920 et seq.). The Cap-and-Trade Program imposes an enforceable statewide cap on GHG emissions at covered facilities (including refineries, electric power providers, cement production facilities, oil and gas production facilities, and fuel suppliers) that steadily declines over time. For each compliance period (2013-2014, 2015-2017, and 2018-2020), each covered facility ultimately is required to surrender GHG compliance

instruments (emission allowances or offset credits) equal to its GHG emissions during the compliance period (with limited exceptions for GHG emissions that are not subject to a compliance obligation). The quantity of compliance instruments required to be surrendered is the facility's compliance obligation. Since a facility's compliance obligation is equal to its actual GHG emissions during the relevant compliance period, the compliance obligation can be reduced by implementing programs within the facility to reduce GHG emissions.

An allowance is a tradable permit to emit 1 MTCO₂e GHG emission. Covered entities may also use a limited number of CARB offset credits to meet their compliance obligation. A covered facility may obtain GHG compliance instruments by any or all of the following methods:

- Receiving free allowances allocated by CARB;
- Purchasing allowances at CARB quarterly allowance auctions;
- Purchasing allowances from other covered facilities or entities in the program;
- Purchasing GHG offset credits generated by emission reduction activities at other facilities; and
- Purchasing compliance instruments (allowances or credits) from other GHG trading programs formally "linked" to California's Cap-and-Trade Program.

If a covered facility does not surrender sufficient compliance instruments to meet its GHG emissions compliance obligation by the applicable deadline following the end of a compliance period, the facility has a limited time following the deadline in which to provide additional compliance instruments to cover its shortfall in surrendering compliance instruments. The shortfall must be covered by providing allowances (not offset credits) in an amount equal to four times the amount of the shortfall.

In general, the total number of allowances available statewide for each calendar year decreases annually through 2020, thus establishing the cap. The cap will decline approximately 3% each year beginning in 2013, representing an 18% reduction from the statewide 1990 baseline, ultimately achieving an 80% reduction from 1990 levels by 2050.¹²

A certain number of allowances are allocated without cost to the recipient (the "direct allocation"), based on rules in the Cap-and-Trade Regulation and depending on the type of facility. The direct allocation to a given facility may be less than the facility's compliance obligation. The remainder of allowances required for annual compliance must be purchased through auctions managed by CARB, from other owners of GHG allowances, or from third-party traders, as discussed above.

¹² California Air Resources Board, 2017. *California's 2017 Climate Change Scoping Plan*. November.

Senate Bill 605

Short-lived climate pollutants (i.e., black carbon, fluorinated gases, and methane) are powerful climate forcers that remain in the atmosphere for a much shorter period of time than longer-lived climate pollutants. Their relative potency, when measured in terms of how they heat the atmosphere, can be tens, hundreds, or even thousands of times greater than that of CO₂. The impacts of short-lived climate pollutants are especially strong over the short term. Reducing these emissions can make an immediate beneficial impact on climate change. Governor Brown signed SB 605 on September 21, 2014, directing CARB to develop a Short-Lived Climate Pollutant Strategy by January 1, 2016. In March, 2017, SB 605, Final Short-Lived Climate Pollutant Reduction Strategy was adopted to mandate a 40 percent reduction in CH₄ and HFCs emissions by 2030 and a 50 percent reduction in anthropogenic emissions of black carbon by 2030.

Other Mobile Source Reduction Requirements

Several other State provisions address the GHG emissions reduction targets set by CARB for mobile sources, including trucks, passenger vehicles, trains, and ships. These measures include:

- Low Carbon Fuel Standard (EO S-01-07)
- Advanced Clean Cars Program
- SmartWay Truck Efficiency Regulation
- AB 32 Cap-and-Trade Program as applicable to transportation fuel suppliers
- SB 375 (Land Use Planning)

Addressing Climate Change at the Project Level: California Attorney General's Office

In January, 2010, the California Attorney General's Office released a document to assist local agencies with addressing climate change and sustainability at the project level under CEQA. The document provides examples of various measures that may reduce the impacts related to climate change at the individual project level. As appropriate, the measures can be included as design features of a project, required as changes to the project, or imposed as mitigation (whether undertaken directly by the project proponent or funded by mitigation fees).

Title 24 Building Efficiency Standards

The State regulates energy consumption under Title 24 Building Standards Code, Part 6 of the California Code of Regulations (also known as the California Energy Code). The Title 24 Building Energy Efficiency Standards were developed by the California Energy Commission and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. The California Energy Commission has estimated that the 2019 Building Energy Efficiency Standards, which took effect on January 1, 2020, will reduce electricity consumption by about 79 percent for newly constructed residential buildings

and 11 percent for newly constructed non-residential buildings on average compared to the 2016 Building Energy Efficiency Standards^{13,14}

Title 24 California Green Building Standards Code

Title 24 Building Standards Code, Part 11 of the California Code of Regulations is referred to as the California Green Building Standards Code (“CALGreen Code”). The purpose of the CALGreen Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5) environmental air quality.

Local Regulations

BAAQMD

The Bay Area Air Quality Management District (BAAQMD) is primarily responsible for planning, implementing, and enforcing the federal and State ambient air quality standards in the Bay Area. The BAAQMD regulates GHG emissions through the plans, programs, and guidelines outlined below:

Regional Clean Air Plans

The BAAQMD and other air districts prepare clean air plans in accordance with the State and federal Clean Air Acts. In April 2017, the BAAQMD adopted the 2017 Clean Air Plan: Spare the Air, Cool the Climate (“2017 CAP”), which is a comprehensive plan to improve Bay Area air quality and protect public health through implementation of a control strategy designed to reduce emissions and ambient concentrations of harmful pollutants.¹⁵ The 2017 CAP also includes measures designed to reduce GHG emissions.

Bay Area Air Quality Management District Climate Protection Program

The BAAQMD established a climate protection program to reduce pollutants that contribute to global climate change and affect air quality in the SFBAAB. The climate protection program includes measures that promote energy efficiency, reduce vehicle miles travelled (“VMTs”), and develop alternative sources of energy, all of which assist in reducing emissions of GHGs and in reducing air pollutants that affect the health of residents. The BAAQMD also seeks to support

¹³ California Energy Commission, 2014. News Release: New Title 24 Standards Will Cut Residential Energy Use by 25 Percent, Save Water, and Reduce Greenhouse Gas Emissions. Available at: <http://calenergycommission.blogspot.com/2014/06/new-title-24-standards-take-effect-july.html>, accessed October 18, 2019.

¹⁴ California Energy Commission, 2018. Impact Analysis, 2019 Update to the California Energy Efficiency Standards for Residential and Non-Residential Buildings. June 29.

¹⁵ Bay Area Air Quality Management District, 2017. The 2017 Clean Air Plan: Spare the Air, Cool the Climate. April 19.

current climate protection programs in the region and to stimulate additional efforts through public education and outreach, technical assistance to local governments and other interested parties, and promotion of collaborative efforts among stakeholders.

City of Milpitas

The City of Milpitas Climate Action Plan (“CAP”) was adopted on May 7, 2013.¹⁶ The CAP meets the BAAQMD requirements for a Qualified GHG Reduction Strategy and is designed to streamline environmental review of future development projects in the City consistent with CEQA Guidelines Section 15.183.5(b) and the BAAQMD CEQA Guidelines. The CAP identifies measures to achieve a reduction of 93,940 metric tons per year of CO₂e, including a reduction of 13,950 metric tons annual CO₂e emissions that would be achieved through State regulations. With implementation of the CAP, existing measures, and State regulations, the City’s GHG emissions are expected to be 16.2 percent below the 2005 levels by the year 2020. This reduction goal is in line with the State’s target of reducing emissions to 1990 levels by 2020.

The CAP identified six action areas with specific GHG reductions, including energy, water, transportation and land use, solid waste, and off-road equipment. For each measure, the CAP specifies the expected GHG reduction, City departments responsible for implementation, performance metrics, regional partners, and additional resources and co-benefits.

¹⁶ City of Milpitas, 2013. *Climate Action Plan, a Qualified Greenhouse Gas Reduction Strategy*. May 7.

ENVIRONMENTAL IMPACTS

This section describes environmental impacts related to GHG emissions that could result from implementation of the Project. The section begins with the criteria of significance that establish the thresholds for determining whether an impact is significant. The latter part of this section presents the impacts associated with the Project and identifies mitigation measures to address these impacts as needed.

Thresholds of Significance

In accordance with Appendix G of Title 14, Chapter 3 of the California Code of Regulations (CCR's), the proposed Project would have a significant environmental impact if it would:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment;
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Methodology

The BAAQMD has adopted and incorporated GHG thresholds of significance into their CEQA Guidelines to assist lead agencies in evaluating and mitigating air quality impacts under CEQA. The BAAQMD's GHG thresholds were developed to evaluate stationary sources and whether land-use sector projects would comply with the Statewide 2020 GHG reduction goal under AB 32 to reduce GHG emissions to 1990 levels. The scientific soundness of the thresholds is supported by substantial evidence presented in the BAAQMD's Revised Draft Options and Justification Report.¹⁷ The BAAQMD is in the process of updating their CEQA Guidelines to include revised significance thresholds to evaluate long-term GHG reduction goals beyond 2020.

For stationary sources, such as an emergency backup generator, the BAAQMD recommends that permit applications be reviewed against a bright-line threshold of 10,000 metric tons of CO₂e per year. This threshold corresponds to a level that would capture approximately 95 percent of stationary source GHG emissions based on all combustion emissions.

Because the proposed Project would be developed after 2020, the Statewide 2030 GHG reduction goal under SB 32 to reduce GHG emissions 40 percent below 1990 levels is considered in this EIR for land-use sector emissions. In the absence of an updated BAAQMD threshold to evaluate if a project's land-use sector GHG emissions will achieve substantial progress toward the Statewide 2030 target, an interim project-specific GHG efficiency threshold of significance has been developed for this analysis. While this interim threshold can serve to

¹⁷ Bay Area Air Quality Management District (BAAQMD), 2009. Revised Draft Options and Justification Report: California Environmental Quality Act Thresholds of Significance, October.

evaluate the significance of GHG emissions from construction and operation of the Project, this significance threshold does not necessarily set precedent for all future City projects.¹⁸

The interim 2030 GHG efficiency threshold of significance was developed using the same methodology used by the BAAQMD to create the 2020 GHG efficiency threshold. GHG efficiency thresholds are quantitative thresholds that account for total GHG emissions relative the forecasted growth in service population¹⁹ over time. As shown in Table IV.C-3, the interim 2030 GHG efficiency threshold used in this analysis is based on a 40 percent reduction of the Statewide GHG emissions in 1990 divided by the projected service population for California in the year 2030. Applying this efficiency metric allows the Project's GHG emissions to be evaluated based on how well the Project is designed from an efficiency standpoint, rather than the size of the Project or the total GHG emissions alone. For example, compact mixed-use infill projects (regardless of size) developed near public transportation hubs promote alternative modes of travel to driving automobiles, which helps to reduce the regional average VMT per service population. Building compact mixed-use infill projects is a critical land-use planning strategy to help achieve the Statewide GHG reductions targets under the CARB's Scope Plan, SB 375, SB 743, and the Metropolitan Transportation Commission's current Regional Transportation Plan, Plan Bay Area 2040. Therefore, attainment of the interim 2030 GHG efficiency threshold (regardless of project size) would demonstrate substantial progress toward meeting the Statewide 2030 GHG reduction target under SB 32 and the project's incremental contribution to Statewide GHG emissions would be considered less than significant. As shown in Table IV.C-3, the interim 2030 GHG threshold was developed by dividing 60 percent of the 1990 land use sector GHG emissions (assuming a 40 percent reduction) by the projected Statewide 2030 service population.

¹⁸ *Project-specific thresholds are not required to be formally adopted because the requirement for formal adoption of thresholds under 14 Cal Code Regs Section 1 5064(b) applies only to thresholds of general application. In addition, a lead agency has discretion to accept a threshold of significance developed by the experts preparing the EIR and supported by substantial evidence (Mount Shasta Bioregional Ecology Ctr. v County of Siskiyou [2012] 2010 CA4th 184, 204) and the threshold of significance may be tailored to the project reviewed in the EIR (Save Cuyama Valley v County of Santa Barbara [2013] 2013 CA4th 1059, 1068). The explanation in this section describe the methodology used to establish the project-specific threshold and provide evidentiary support for its use.*

¹⁹ *Service population is the sum of residents and employees.*

**Table IV.C-3
Interim 2030 Greenhouse Gas Efficiency Thresholds of Significance**

	1990 ^a	2030 ^a
Population	28,758,213	42,850,000
Employment	14,294,100	19,109,000
Service Population	44,052,313	61,959,000
GHG Reduction Goal	--	40%
Land-Use Sector GHG Emissions Goal (MT CO ₂ e)	295,530,000	177,318,000
Interim 2030 GHG Efficiency Threshold (MT CO₂e/SP)	--	2.9

Note: MT CO₂e = metric tons of carbon dioxide equivalent; SP = service population; "--" = not applicable.

Source:

^a The California Economic Forecast, 2018. California-County Level Economic Forecast 2018-2050. September.

Project Impacts and Mitigation Measures

Impact GHG-1: The Project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

The BAAQMD recommends using the most current version of the California Emissions Estimator Model ("CalEEMod" versions 2016.3.2) to estimate emissions of GHGs for a proposed Project. CalEEMod uses widely accepted models for emissions estimates combined with appropriate default data for a variety of land use projects that can be used if site-specific information is not available. The default data used in the model are supported by substantial evidence provided by regulatory agencies and a combination of Statewide and regional surveys of existing land uses. Table IV.C-4 summarizes the primary input data used to estimate the project's GHG emissions. Additional CalEEMod assumptions used to calculate the project's projected GHG emissions in 2022, the earliest expected year of operation, are summarized in Table IV.C-5. A copy of the CalEEMod report, which summarizes the input parameters, assumptions, and findings, is provided in Appendix F.

**Table IV.C-4
Project Land-Use Input Parameters for CalEEMod**

Land Use Type	CalEEMod Land Use Type	Unit	Amount
Commercial	General Office Building	Square Foot	5,000
Industrial	Refrigerated Warehouse	Square Foot	486,000
Parking	Parking Lot	Space	346

Note: These land use input parameters were used to evaluate emissions during both Project construction and operation. Land use square footage is not exact.

Source: CalEEMod (Appendix F).

**Table IV.C-5
Proposed Project Assumptions for CalEEMod**

CalEEMod Input Category	CalEEMod Land Use Type
Construction	As described in Chapter IV.B, Air Quality (Table IV.B-5), site-specific information related to construction equipment use, haul trips, and phase durations were used to estimate GHG emissions during construction.
Utility Provider	The default 2008 CO ₂ intensity factor for Pacific Gas and Electric (641 pounds per megawatt hour) was updated to the most recent CO ₂ intensity factor verified by a third party in 2018 (206 pounds per megawatt hour). ^a
Daily Vehicle Trips	Weekday daily trip rates for each trip type (heavy trucks, vans and other passenger cars, and commutes) were based on the Project trip generation from traffic analysis. Weekend daily trip rates were adjusted based on CalEEMod default ratios between weekday trip rates and weekend trip rates.
Daily Vehicle Miles Travelled (VMT)	Trip lengths for each trip type (heavy trucks, vans and other passenger cars, and commutes) were adjusted so that the resulting daily VMT is consistent with that in the traffic analysis.
Fleet Mix	It was assumed that truck trips consist of 85 percent medium-heavy duty trucks (MHD) and 15 percent heavy-heavy duty trucks (HHD); van and other passenger car trips consist of 40 percent light-heavy duty trucks (LHD), 20 percent medium duty trucks (MDV), 20 percent light-duty trucks, and 20 percent light-duty automobiles (LDA). Fleet age distribution for each vehicle type is default from California On-Road Mobile Source Emission FACTors (EMFAC) model.
Stationary Sources	A 175-horsepower diesel early suppression fast response (ESFR) fire pump would be required for the Project. It was assumed that the fire pump would be used for non-emergency operation up to 50 hours per year (for routine testing and maintenance).
Wastewater	It was assumed that no septic tank or lagoons would be used for wastewater treatment.

Note: Default CalEEMod data was used for all other parameters not described.

^a *Pacific Gas and Electricity, 2018. Fighting Climate Change.*

Source: CalEEMod (Appendix F).

The BAAQMD does not recommend a threshold of significance for GHG emissions during construction because there is not sufficient evidence to determine a level at which temporary construction emissions are significant.²⁰ However, to be conservative the temporary GHG emissions from project construction were amortized over the standard lifetime of a project (30 years) and then combined with the operational emissions of the Project to compare to the interim 2030 GHG efficiency threshold.

The land-use sector GHG emissions from operation of the Project were evaluated based on an average service population of 150 employees. As shown in Table IV.C-6, the Project's estimated CO₂e emissions per service population would be above the interim 2030 GHG efficiency threshold for the year 2030. The largest GHG contributions are from mobile emissions

²⁰ *Bay Area Air Quality Management District (BAAQMD), 2009. Revised Draft Options and Justification Report: California Environmental Quality Act Thresholds of Significance, October.*

and energy use, which account for 90 percent and 6 percent of the total Project GHG emissions, respectively. Among the mobile emissions, vehicles associated with goods movements such as vans and heavy trucks would be the primary contributor to the Project's GHG emissions due to sizes of the vehicles and the associated VMTs. The Project does not demonstrate substantial progress toward meeting the Statewide 2030 GHG reduction target under SB 32. The Project's impact related to the generation of GHG emissions is potentially significant.

Table IV.C-6
Project GHG Emissions from Land-Use Sectors

Emission Source	CO₂e (MT/year)	CO₂e (MT/year/SP)	Overall Contribution
Construction ^a	17.5	0.12	0.2%
Operation – Area	<0.1	<0.01	<0.1%
Operation – Energy	564.5	3.76	6.2%
Operation – Mobile	8,184.4	54.56	89.9%
Operation – Waste	232.1	1.55	2.5%
Operation – Water	127.6	0.85	1.4%
Total Project Emissions	9,109	60.7	--
Interim 2030 GHG Threshold	--	2.9	--
Threshold Exceedance?	--	Yes	--

Note: MT = metric tons; SP = service population; "--" = not applicable.

Source: CalEEMod (Appendix F)

The following mitigation measure would be applied to the Project to reduce GHG emissions to the maximum extent feasible.

Mitigation Measure GHG-1: Greenhouse Gas Reduction Plan

As a part of the application package for construction-related permits, the Project Applicant shall prepare a GHG Reduction Plan to demonstrate that the Project's GHG emissions per employee would be below the interim 2030 GHG threshold (2.9 metric tons carbon dioxide equivalent per service population) with the implementation of GHG reduction measures. Applicable GHG reduction measures include the following options:

- Implementation of the Transportation Demand Management ("TDM") Plan, described in Mitigation Trans-1;
- Increase installation of Level 2 charging stations from 22 to 37;
- Provide conduit for 50 EV charging stations either at the dock doors on in the truck court for future EV trucks;
- Site employers who own and operate truck fleets shall be required to inform their drivers of the anti-idling requirement;

- Future industrial operations shall prohibit idling of on-and-off road heavy-duty diesel vehicles for prolonged periods; and
- The Project will commit to using 10% of renewable energy sources.

Other applicable GHG reduction measures that may be feasible include, but are not limited to, the following options:

- Eliminating idling emissions from trucks and vans by providing electrical connections at the Project site (up to 9 percent reduction in total GHG emissions) for trucks with refrigeration units (TRU's) and require that all electric-capable TRU's utilize the connections when in use;
- Eliminating natural gas use at the Project site (approximately 3 percent reduction in total GHG emissions);
- Enroll in the program to purchase Silicon Valley Clean Air Energy Certificates;
- Installation of solar panels on Project Site where 10% of the project's power is from solar panels;
- Other applicable action items included in the City of Milpitas Climate Action Plan; and
- Concrete Truck courts to reduce Heat Island effect.

For physical GHG reduction measures to be incorporated into the design of the Project, the measures shall be included on the drawings submitted for construction-related permits. If, after exhaustion of feasible physical design features and operational features specific to the Project, the Project's GHG emissions would still exceed the 2030 threshold, discussed above, the Project shall include the purchase of carbon credits as a reduction measure. The amount of carbon credits shall at least cover the difference between the interim 2030 threshold and the Project's GHG emissions after the consideration of design features, to be determined in the GHG Reduction Plan. The cost of carbon credit purchases shall be based on current market value at the time purchased and shall be based on the Project's operational emissions estimated in the GHG Reduction Plan or subsequent approved emissions inventory, which may result in emissions that are higher or lower than those estimated in the GHG Reduction Plan.

All carbon credits shall be purchased from a carbon offset registry (the registry) approved by CARB. The carbon credit shall be verifiable by the City of Milpitas and enforceable in accordance with the registry's applicable standards, practices, or protocols. The purchase of the carbon credits must substantively satisfy the requirements set forth in both subdivisions (d)(1) and (d)(2) of California Health and Safety Code §38562: real, permanent, quantifiable, verifiable, enforceable, and additional. The purchase of the carbon credits shall be approved by the City of Milpitas, and verified by an independent verifier who meets stringent levels of professional qualification (i.e., Accreditation Program for GHG Validation/Verification Bodies under the American National Standards Institute's National Accreditation Board, a GHG Emissions Lead Verifier accredited by CARB, or equivalent).

The amount of the carbon credits and the locations of the GHG-reducing programs generating these carbon credits shall be determined in accordance with the following preferences:

1. Off-site within the immediate neighbourhood surrounding the Project site, bounded by West Calaveras Boulevard to the north, Interstate 680 to the east, Montague Expressway to the South, and Interstate 880 to the west;
2. Within the City of Milpitas;
3. Within the San Francisco Bay Area Air Basin; and
4. Within the State of California.

Implementation of this mitigation measure will reduce the Project's GHG emissions to the maximum extent feasible, and is likely to reduce the Project's GHG emissions to below the applicable thresholds with the purchase of carbon credits. However, the full implementation of this mitigation measure hinges on the availability of carbon credits. There remains uncertainty of availability of sufficient carbon offset opportunities as well as uncertainty of reliabilities with carbon credit purchases through a third party. Therefore, the successful implementation of Mitigation Measure GHG-1 is considered speculative at this time. Thus, the Project's GHG emissions impact on the environment are conservatively considered **significant and unavoidable**.

The BAAQMD recommends analysing GHG emissions from permitted stationary sources separately from a project's operational emissions. As summarized in Table IV.C-7, the average CO₂e emissions from routine testing and maintenance of the fire pump are below the BAAQMD's stationary-source threshold. Therefore, operation of the proposed fire pump would have a **less-than-significant** impact on the environment.

Table IV.C-7
Average Greenhouse Gas Emissions from Fire Pump

Emission Source	CO ₂ e (MT/year)
Fire Pump	3.3
Threshold of Significance	10,000
Threshold Exceedance?	No

Note: MT = metric tons.

Source: CalEEMod (Appendix F)

Impact GHG-2: The Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The City's CAP included a development checklist to assist project applicants and City staff to determine whether a project complies with the CAP and contains applicable measures that will be implemented as part of the Project to demonstrate consistency with the CAP. Applicable actions include Measure 2.1, Energy Efficiency in New Development, Action D, Leadership in Energy and Environmental Design ("LEED") requirement for new non-residential construction; and Measure 4.2, Tiered Water Rates, Action C, Implementation of water-efficient landscaping ordinance and the water conservation ordinance. The development checklist with details on the

Project's consistency with the CAP's action is in Appendix F.

As demonstrated in the development checklist, the Project is consistent with the applicable actions from the CAP, and will incorporate some of the recommended actions in the GHG Reduction Plan, required by Mitigation Measure GHG-1, above. Overall, the mitigated Project would implement GHG reduction measures consistent with the CAP and, therefore, would have a ***less-than-significant*** impact related to conflict with the applicable plan, policy and regulations.

CUMULATIVE IMPACTS

As discussed above, GHG impacts are, by their nature, cumulative impacts because one project by itself cannot significantly contribute to, or cause significant environmental effects. Therefore, because the Project would have potentially ***significant and unavoidable*** impacts related to the generation of GHG emissions, the cumulative impacts of the Project would also be considered ***significant and unavoidable***.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

The following GHG impacts would remain ***significant and unavoidable***: Impact GHG-1.

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