



5.10 Greenhouse Gas Emissions



5.10 GREENHOUSE GAS EMISSIONS

This section evaluates greenhouse gas (GHG) emissions associated with the Project and analyzes Project compliance with applicable regulations. Consideration of the Project's consistency with applicable plans, policies, and regulations, as well as the introduction of new sources of GHGs, is also analyzed. This section is based on the *Azusa Business Center Greenhouse Gas Analysis* (Greenhouse Gas Analysis), and *Azusa Business Center Supplemental AQ & GHG Assessment* (Supplemental AQ & GHG Assessment), dated October 17, 2017, and February 2, 2018, respectively, and both prepared by Urban Crossroads; refer to Appendix 11.8, *Air Quality, Health Risk, and Greenhouse Gas Analyses*.

5.10.1 EXISTING SETTING

The Site lies within the southern portion of the South Coast Air Basin (Basin). The Basin is a 6,600-square mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Geronimo Pass area in Riverside County. The Basin's terrain and geographical location (i.e., a coastal plain with connecting broad valleys and low hills) determine its distinctive climate.

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. The climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of air pollution in the Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the Basin.

SCOPE OF ANALYSIS FOR CLIMATE CHANGE

The study area for climate change and the analysis of GHG emissions is broad as climate change is influenced by world-wide emissions and their global effects. However, the study area is also limited by the California Environmental Quality Act (CEQA) Guidelines [Section 15064(d)], which directs lead agencies to consider an "indirect physical change" only if that change is a reasonably foreseeable impact which may be caused by the project.

The baseline against which to compare potential impacts of the project includes the natural and anthropogenic drivers of global climate change, including world-wide GHG emissions from human activities that have grown more than 70 percent between 1970 and 2004. The State of California is leading the nation in managing GHG emissions. Accordingly, the impact analysis for this Project relies on guidelines, analyses, policy, and plans for reducing GHG emissions established by the California Air Resources Board (CARB).



GLOBAL CLIMATE CHANGE – GREENHOUSE GASES

The natural process through which heat is retained in the troposphere is called the “greenhouse effect.”¹ The greenhouse effect traps heat in the troposphere through a three-fold process as follows: short wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long wave radiation; and GHG in the upper atmosphere absorb this long wave radiation and emit this long wave radiation into space and toward the Earth. This “trapping” of the long wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

The most abundant GHGs are water vapor and carbon dioxide (CO₂). Many other trace gases have greater ability to absorb and re-radiate long wave radiation; however, these gases are not as plentiful. For this reason, and to gauge the potency of GHGs, scientists have established a Global Warming Potential (GWP) for each GHG based on its ability to absorb and re-radiate long wave radiation.

GHGs normally associated with the Project include the following:²

- Water Vapor (H₂O). Although water vapor has not received the scrutiny of other GHGs, it is the primary contributor to the greenhouse effect. Natural processes, such as evaporation from oceans and rivers, and transpiration from plants, contribute 90 percent and 10 percent of the water vapor in our atmosphere, respectively. The primary human related source of water vapor comes from fuel combustion in motor vehicles; however, it does not contribute a significant amount (less than one percent) to atmospheric concentrations of water vapor. The Intergovernmental Panel on Climate Change (IPCC) has not determined a GWP for water vapor.
- Carbon Dioxide (CO₂). Carbon dioxide is primarily generated by fossil fuel combustion in stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources in the past 250 years, CO₂ emissions from fossil fuel combustion increased by a total of 5.6 percent between 1990 and 2015.³ Carbon dioxide is the most widely emitted GHG and is the reference gas (GWP of 1) for determining GWPs for other GHGs.
- Methane (CH₄). Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. The United States’ top three methane sources are landfills, natural gas systems, and enteric fermentation. Methane is the primary component of natural gas, used for space and water heating, steam production, and power generation. The GWP of methane is 25.

¹ The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth’s surface to 10 to 12 kilometers.

² All GWPs are given as 100-year GWP. Unless noted otherwise, all GWPs were obtained from the Intergovernmental Panel on Climate Change.

³ U.S. Environmental Protection Agency, *Inventory of United States Greenhouse Gas Emissions and Sinks 1990 to 2015*, April 2017, https://www.epa.gov/sites/production/files/2017-02/documents/2017_complete_report.pdf, accessed February 26, 2018.



- Nitrous Oxide (N_2O). Nitrous oxide is produced by both natural and human related sources. Primary human related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. The GWP of nitrous oxide is 298.
- Hydrofluorocarbons (HFCs). HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is increasing, as the continued phase out of Chlorofluorocarbons (CFCs) and HCFCs gains momentum. The 100-year GWP of HFCs range from 124 for HFC-152 to 14,800 for HFC-23.⁴
- Perfluorocarbons (PFCs). PFCs are compounds consisting of carbon and fluorine, and are primarily created as a byproduct of aluminum production and semiconductor manufacturing. Perfluorocarbons are potent GHGs with a GWP several thousand times that of CO_2 , depending on the specific PFC. Another area of concern regarding PFCs is their long atmospheric lifetime (up to 50,000 years).⁵ The GWP of PFCs range from 7,390 to 12,200.⁶
- Sulfur hexafluoride (SF_6). SF_6 is a colorless, odorless, nontoxic, nonflammable gas. SF_6 is the most potent GHG that has been evaluated by the IPCC with a GWP of 22,800.⁷ However, its global warming contribution is not as high as the GWP would indicate due to its low mixing ratio compared to CO_2 (4 parts per trillion [ppt] in 1990 versus 365 parts per million [ppm], respectively).⁸

In addition to the six major GHGs discussed above (excluding water vapor), many other compounds have the potential to contribute to the greenhouse effect. Some of these substances were previously identified as stratospheric ozone (O_3) depleters; therefore, their gradual phase out is currently in effect. The following is a listing of these compounds:

- Hydrochlorofluorocarbons (HCFCs). HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, all developed countries that adhere to the Montreal Protocol are subject to a consumption cap and gradual phase out of HCFCs. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The 100-year GWPs of HCFCs range from 90 for HCFC-123 to 1,800 for HCFC-142b.⁹
- 1,1,1 trichloroethane. 1,1,1 trichloroethane or methyl chloroform is a solvent and degreasing agent commonly used by manufacturers. The GWP of methyl chloroform is 146 times that of CO_2 .¹⁰

⁴ Ibid.

⁵ U.S. Environmental Protection Agency, *Overview of Greenhouse Gas Emissions*, <https://www.epa.gov/ghgemissions/overview-greenhouse-gases>, accessed February 26, 2018.

⁶ Ibid.

⁷ Ibid.

⁸ Ibid.

⁹ Intergovernmental Panel on Climate Change, *Climate Change 2007: Working Group I: The Physical Science Basis, 2.10.2, Direct Global Warming Potentials*, 2007, https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html, accessed February 26, 2018.

¹⁰ Ibid.



- *Chlorofluorocarbons (CFCs)*. CFCs are used as refrigerants, cleaning solvents, and aerosols spray propellants. CFCs were also part of the U.S. Environmental Protection Agency's (EPA) Final Rule (57 Federal Register [FR] 3374) for the phase out of O₃ depleting substances. Currently, CFCs have been replaced by HFCs in cooling systems and a variety of alternatives for cleaning solvents. Nevertheless, CFCs remain suspended in the atmosphere contributing to the greenhouse effect. CFCs are potent GHGs with 100-year GWPs ranging from 3,800 for CFC 11 to 14,400 for CFC 13.¹¹

5.10.2 REGULATORY SETTING

FEDERAL LEVEL

To date, no national standards have been established for the nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the Federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Energy Independence and Security Act of 2007. The Energy Independence and Security Act of 2007 (December 2007), among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020, and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

U.S. Environmental Protection Agency Endangerment Finding. The EPA authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs (carbon dioxide [CO₂], methane [CH₄], nitrous oxide [N₂O], hydrofluorocarbons [HFCs], perfluorocarbons [PFCs], and sulfur hexafluoride [SF₆]) constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and the EPA's assessment of the scientific evidence that form the basis for the EPA's regulatory actions.

¹¹ Ibid.



Federal Vehicle Standards. In response to the U.S. Supreme Court ruling discussed above, the George W. Bush Administration issued Executive Order 13432 in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Barack Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated Federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO₂ in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking. On January 12, 2017, the EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program would reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program applies to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO₂ emissions by approximately 1.1 billion metric tons and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.

Clean Power Plan and New Source Performance Standards for Electric Generating Units. On October 23, 2015, the EPA published a final rule (effective December 22, 2015) establishing the carbon pollution emission guidelines for existing stationary sources: electric utility generating units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish CO₂ emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: (1) fossil-fuel-fired electric utility steam-generating units and (2) stationary combustion turbines. Concurrently, the EPA published a final rule (effective October 23, 2015) establishing standards of performance for GHG emissions from new, modified, and reconstructed stationary sources: electric utility generating units (80 FR 64661–65120). The rule prescribes CO₂ emission standards for newly constructed, modified, and reconstructed affected fossil-fuel-fired electric utility generating units. The U.S. Supreme Court stayed implementation of the Clean Power Plan pending resolution of



several lawsuits. Additionally, in March 2017, President Trump directed the EPA Administrator to review the Clean Power Plan in order to determine whether it is consistent with current executive policies concerning GHG emissions, climate change, and energy.

Presidential Executive Order 13783. Presidential Executive Order 13783, Promoting Energy Independence and Economic Growth (March 28, 2017), orders all Federal agencies to apply cost-benefit analyses to regulations of GHG emissions and evaluations of the social cost of carbon, nitrous oxide, and methane.

STATE LEVEL

Various statewide and local initiatives to reduce the State's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way, and there is a real potential for severe adverse environmental, social, and economic effects in the long term. Every nation emits GHGs and as a result makes an incremental cumulative contribution to global climate change; therefore, global cooperation is necessary to reduce the rate of GHG emissions enough to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

Executive Order S-1-07. Executive Order S-1-07 proclaims that the transportation sector is the main source of GHG emissions in California, generating more than 40 percent of statewide emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in California by at least ten percent by 2020. This order also directs CARB to determine whether this Low Carbon Fuel Standard could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

Executive Order S-3-05. Executive Order S-3-05 set forth a series of target dates by which statewide emissions of GHGs 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 Environmental Protection Agency (Cal/EPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The secretary also submits 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 Cal/EPA 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.

Executive Order S-13-08. Executive Order S-13-08 seeks to enhance the State's management of climate impacts including sea level rise, increased temperatures, shifting precipitation, and extreme weather events by facilitating the development of the State's first climate adaptation strategy. This



strategy results in consistent guidance from experts on how to address climate change impacts in the State of California.

Executive Order S-14-08. Executive Order S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. CARB adopted the "Renewable Electricity Standard" on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

Executive Order S-20-04. Executive Order S-20-04, the California Green Building Initiative (signed into law on December 14, 2004) establishes a goal of reducing energy use in State-owned buildings by 20 percent from a 2003 baseline by 2015. It also encourages the private commercial sector to set the same goal. The initiative places the California Energy Commission (CEC) in charge of developing a building efficiency benchmarking system, commissioning and retro-commissioning (commissioning for existing commercial buildings) guidelines, and developing and refining building energy efficiency standards under Title 24 to meet this goal.

Executive Order S-21-09. Executive Order S-21-09, 33 percent Renewable Energy for California, directs CARB to adopt regulations to increase California's Renewable Portfolio Standard (RPS) to 33 percent by 2020. This builds upon SB 1078 (2002), detailed below, which established the California RPS program, requiring 20 percent renewable energy by 2017, and SB 107 (2006) which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Assembly Bill 1493. AB 1493 (also known as the Pavley Bill) requires that CARB develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of GHG 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, CARB approved amendments to the California Code of Regulations (CCR) in 2004 by adding GHG emissions standards to California's existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 and adoption of 13 CCR Section 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 weight classes for passenger vehicles (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds that is designed primarily to transport people), beginning with the 2009 model year. Emissions limits are reduced further in each model year through 2016.

When fully phased in, the near-term standards result in a reduction of about 22 percent in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term standards result in a reduction of about 30 percent.

Assembly Bill 32 (California Global Warming Solutions Act of 2006). 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 requires that statewide GHG emissions be reduced to 1990 levels by 2020. 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.

Assembly Bill 3018. AB 3018 established the Green Collar Jobs Council under the California Workforce Investment Board. The Green Collar Jobs Council develops a comprehensive approach to address California's emerging workforce needs associated with the emerging green economy.

Senate Bill 97. SB 97, signed in August 2007 (Chapter 185, Statutes of 2007; PRC Sections 21083.05 and 21097), acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directs the Governor's Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions (or the effects of GHG emissions), as required by CEQA.

OPR published a technical advisory recommending that CEQA lead agencies make a good-faith effort to estimate the quantity of GHG emissions that would be generated by a proposed project. Specifically, based on available information, CEQA lead agencies should estimate the emissions associated with project-related vehicular traffic, energy consumption, water usage, and construction activities to determine whether project-level or cumulative impacts could occur, and should mitigate the impacts where feasible. OPR requested CARB technical staff to recommend a method for setting CEQA thresholds of significance as described in *CEQA Guidelines* Section 15064.7 that encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the State.

The Natural Resources Agency adopted the *CEQA Guidelines* Amendments prepared by OPR, as directed by SB 97. On February 16, 2010, the Office of Administration Law approved the *CEQA Guidelines* Amendments, and filed them with the Secretary of State for inclusion in the CCR. The *CEQA Guidelines* Amendments became effective on March 18, 2010.

Senate Bill 375. SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG 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) that prescribe land use allocation in that MPOs regional transportation plan. CARB, in consultation with MPOs, 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 are updated every eight years but can be updated every four 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 reduction targets, transportation projects may not be eligible for funding programmed after January 1, 2012.

Senate Bills 1078 and 107. SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010.



Senate Bill 1368. SB 1368 (Chapter 598, Statutes of 2006) is the companion bill of AB 32 and was signed into law in September 2006. SB 1368 required the California Public Utilities Commission to establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007. SB 1368 also required the CEC to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards could not exceed the GHG emissions rate from a baseload combined-cycle, natural gas fired plant. Furthermore, the legislation states that all electricity provided to California, including imported electricity, must be generated by plants that meet the standards set by California Public Utilities Commission and CEC.

Senate Bill 32 (SB 32). Signed into law on September 2016, SB 32 codifies the 2030 GHG reduction target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

CARB Scoping Plan

On December 11, 2008, CARB adopted its Scoping Plan, which functions as a roadmap to achieve the California GHG reductions required by AB 32 through subsequently enacted regulations. CARB's Scoping Plan contains the main strategies California would implement to reduce the projected 2020 "Business as Usual" (BAU) emissions to 1990 levels, as required by AB 32. These strategies are intended to reduce CO₂eq¹² emissions by 174 million metric tons (MT). This reduction of 42 million MT CO₂eq, or almost ten percent from 2002 to 2004 average emissions, would be required despite the population and economic growth forecasted through 2020.

CARB's Scoping Plan calculates 2020 BAU emissions as those expected to occur in the absence of any GHG reduction measures. The 2020 BAU emissions estimate was derived by projecting emissions from a past baseline year using growth factors specific to each of the different economic sectors (e.g., transportation, electrical power, commercial and residential, industrial, etc.). CARB used three-year average emissions, by sector, for 2002 to 2004 to forecast emissions to 2020. When CARB's Scoping Plan process was initiated, 2004 was the most recent year for which actual data was available. The measures described in CARB's Scoping Plan are intended to reduce the projected 2020 BAU to 1990 levels, as required by AB 32. On February 10, 2014, CARB released the draft proposed first update. On May 22, 2014, CARB approved the First Update to the AB 32 Scoping Plan. The update also defines CARB's climate change priorities for the next five years, and sets the groundwork to each long-term goals set forth in Executive Orders S-3-05 and B-15-2012. Lastly, the update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the initial Scoping Plan, and evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities in water, waste, natural resources, clean energy, transportation, and land use.

¹² Carbon Dioxide Equivalent (CO₂eq) - A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.



5.10.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

At this time, there is no absolute consensus in the State of California among CEQA lead agencies regarding the analysis of global climate change and the selection of significance criteria. In fact, numerous organizations, both public and private, have released advisories and guidance with recommendations designed to assist decision-makers in the evaluation of GHG emissions given the current uncertainty regarding when emissions reach the point of significance.

Lead agencies may elect to rely on thresholds of significance recommended or adopted by State or regional agencies with expertise in the field of global climate change (CEQA Guidelines Section 15064.7[c]). CEQA leaves the determination of significance to the reasonable discretion of the lead agency and encourages lead agencies to develop and publish thresholds of significance to use in determining the significance of environmental effects. However, the City has not yet established specific quantitative significance thresholds for GHG emissions for development projects.

The SCAQMD has formed a GHG CEQA Significance Threshold Working Group (Working Group) to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. As of the most recent Working Group meeting (Meeting No. 15) held in September 2010, the SCAQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency.

With the tiered approach, a project is compared with the requirements of each tier sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt under SB 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold. For all non-industrial projects, the SCAQMD is proposing a screening threshold of 3,000 MTCO₂eq per year. SCAQMD concluded that projects with emissions less than the screening threshold would not result in a significant cumulative impact.

Tier 4 consists of three decision tree options. Under the Tier 4 first option, a project would be excluded if design features and/or mitigation measures resulted in emissions 30 percent lower than BAU emissions. However, the Working Group did not provide a recommendation for this approach. The Working Group folded the Tier 4 second option into the third Option. Under the Tier 4 third option, a project would be excluded if it was below an efficiency-based threshold of 4.8 MTCO₂eq per service population (SP) per year. Tier 5 would exclude projects that implement off-site mitigation (GHG reduction projects) or purchase offsets to reduce GHG emission impacts to less than the proposed screening level.

GHG efficiency metrics are utilized as thresholds to assess the GHG efficiency of a project on a per capita basis or on a “service population” basis (the sum of the number of jobs and the number of residents provided by a project) such that a project would allow for consistency with the goals of AB 32 (i.e., 1990 GHG emissions levels by 2020 and 2035). GHG efficiency thresholds can be determined by dividing the GHG emissions inventory goal of the State, by the estimated 2035 population and employment. This method allows highly efficient projects with higher mass emissions to meet the overall reduction goals of AB 32, and is appropriate, because the threshold can be applied evenly to all project types (residential or commercial/retail only and mixed-use).



CEQA SIGNIFICANCE CRITERIA

The issues presented in the Initial Study Environmental Checklist (CEQA Guidelines Appendix G) have been utilized as thresholds of significance in this Section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment (refer to Impact Statement GHG-1); and/or
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases (refer to Impact Statement GHG-2).

Based on these significance thresholds and criteria, the Project's effects have been categorized as either "no impact," a "less than significant impact," or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.10.4 IMPACTS AND MITIGATION MEASURES

GREENHOUSE GAS EMISSIONS

GHG-1 Would greenhouse gas emissions generated by the Project have a significant impact on global climate change?

Impact Analysis:

WAREHOUSE ONLY OPTION

The Warehouse Only Option would involve the demolition of the former Colorama Wholesale Nursery and its associated structures, including an office, greenhouses, potting sheds, shade structures, an agricultural chemical storage building, a tractor repair building, detention/retention basins, parking areas, and other features typical of a wholesale nursery, and construction of a 463,316-square foot warehouse distribution facility.

Warehouse Only Option-related GHG emissions would include emissions from direct and indirect sources. The Warehouse Only Option would result in direct and indirect emissions of CO₂, N₂O, and CH₄, and would not result in other GHGs that would facilitate a meaningful analysis. Therefore, this analysis focuses on these three forms of GHG emissions. Direct Warehouse Only Option-related GHG emissions include emissions from construction activities, area sources, and mobile sources, while indirect sources include emissions from electricity consumption, water demand, and solid waste generation. Operational GHG estimations are based on energy emissions from natural gas usage and automobile emissions (passenger cars and trucks). CalEEMod relies upon trip data within the Project's Traffic Impact Analysis (refer to [Appendix 11.7, Traffic Impact Analysis](#)) and Project-specific land use data to calculate emissions. [Table 5.10-1, Projected Annual Greenhouse Gas Emissions – Warehouse Only Option](#), presents the estimated CO₂, N₂O, and CH₄ emissions of the Warehouse Only Option. CalEEMod outputs are contained within [Appendix 11.8](#).



Direct Project-Related Sources of Greenhouse Gases

Construction Emissions. Construction GHG emissions are typically summed and amortized over the lifetime of a project (assumed to be 30 years), then added to the operational emissions. As shown in [Table 5.10-1](#), the Warehouse Only Option would result in 74.99 metric tons carbon dioxide equivalent per year (MTCO₂eq/yr) (amortized over 30 years), which represents a total of 2,249.7 MTCO₂eq from construction activities (74.99 MTCO₂eq/yr x 30 years).

**Table 5.10-1
Projected Annual Greenhouse Gas Emissions – Warehouse Only Option**

Emission Source	Emissions (MTCO ₂ eq per year)			
	CO ₂	CH ₄	N ₂ O	Total MTCO ₂ eq
Direct Emissions				
Construction (amortized over 30 years)	74.73	0.01	0.00	74.99
Area Source	0.01	0.00003	0.00	0.01
Mobile Source (Passenger Cars)	3,267.15	0.15	0.00	3,270.93
Mobile Source (Trucks)	6,712.94	0.34	0.00	6,721.34
<i>Total Direct Emissions</i>	<i>10,054.83</i>	<i>0.50003</i>	<i>0.00</i>	<i>10,067.27</i>
Indirect Emissions				
Energy	1,472.05	0.04	0.009	1,475.82
Solid Waste	88.40	5.22	0.00	219.02
Water Demand	667.78	3.51	0.09	781.21
<i>Total Indirect Emissions</i>	<i>2,228.23</i>	<i>8.77</i>	<i>0.10</i>	<i>2,476.05</i>
Total Project-Related Emissions	12,543.32 MTCO₂eq/yr			
Threshold of Significance	3,000 MTCO₂eq/yr			
Project Exceed Thresholds?	Yes			

Source: Urban Crossroads, *Azusa Business Center Greenhouse Gas Analysis*, dated October 17, 2017; refer to [Appendix 11.8](#).

Area Source. Area source emissions were calculated using CalEEMod and Project-specific land use data. Project-related area sources include landscape maintenance equipment, such as lawnmowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Site. As noted in [Table 5.10-1](#), the Warehouse Only Option would result in 0.01 MTCO₂eq/yr of area source GHG emissions.

Mobile Source. The CalEEMod model relies upon trip data within the Traffic Impact Analysis and Project-specific land use data to calculate mobile source emissions. Warehouse Only Option-related operational emissions are derived predominantly from mobile sources. Based on the Project-generated daily vehicle trips, the Warehouse Only Option would result in approximately 9,992.27 MTCO₂eq/yr of mobile source-generated GHG emissions; refer to [Table 5.10-1](#).

Indirect Project-Related Sources of Greenhouse Gases

Energy Consumption. Energy consumption emissions were calculated using the CalEEMod model and Project-specific land use data. Electricity would be provided to the Site via Southern California Edison (SCE). The Warehouse Only Option would indirectly result in 1,475.82 MTCO₂eq/yr due to energy consumption; refer to [Table 5.10-1](#).



Solid Waste. Solid waste associated with operations of the Warehouse Only Option would result in 219.02 MTCO₂eq/yr; refer to Table 5.10-1.

Water Demand. Emissions from indirect energy impacts due to water supply would result in 781.21 MTCO₂eq/yr; refer to Table 5.10-1.

Conclusion

Total Project-Related GHG Emissions. As shown in Table 5.10-1, the total amount of Warehouse Only Option-generated GHG emissions from direct and indirect sources combined would total 12,543.32 MTCO₂eq/yr. As such, the Warehouse Only Option would exceed the SCAQMD's recommended numeric threshold of 3,000 MTCO₂eq. Thus, the Warehouse Only Option has the potential to result in a cumulatively considerable impact with respect to GHG emissions.

The Warehouse Only Option would be required to implement Mitigation Measures AQ-2 through AQ-7 to reduce Project-related air quality and GHG emissions. The Warehouse Only Option would comply with Title 24 requirements (e.g., minimum heating, ventilation, and air conditioning and water heating equipment efficiencies), as well as the California Green Building Code standards related to indoor water usage reductions. The Warehouse Only Option would be required to install water efficient irrigation systems and landscapes, as well as incorporate water reducing features and fixtures into the buildings. The Site would be required to include signage requiring truck drivers to turn off engines when not in use and for diesel delivery trucks to not idle for more than five minutes; and signage with telephone numbers of building facilities managers and the CARB to report violations. The Site would be required to provide a minimum of two electric vehicle charging stations. Any buildings utilizing refrigerated storage would be required to provide an electrical hookup for refrigeration units on delivery trucks. Lastly, the Project Applicant would be required to notify tenants of CARB funding opportunities associated with air quality and GHG reduction plans.

Implementation of Mitigation Measures AQ-2 through AQ-7 would help reduce GHG emissions. However, no feasible mitigation measures exist that would reduce emission to less than significant levels. As such, Project-generated GHG emissions under the Warehouse Only Option are considered significant and unavoidable.

WAREHOUSING AND MANUFACTURING OPTION

The Warehousing and Manufacturing Option would result in slightly different operations, compared to the Warehouse Only Option, as warehousing uses would be reduced and additional manufacturing uses would be constructed. Based on this land use mix, the Warehousing and Manufacturing Option would generate approximately 9,502.10 MTCO₂eq/yr as shown in Table 5.10-2, *Projected Annual Greenhouse Gas Emissions – Warehousing and Manufacturing Option*.

As such, similar to the Warehouse Only Option, the Warehousing and Manufacturing Option would also exceed the SCAQMD's recommended numeric threshold of 3,000 MTCO₂e, and the Warehousing and Manufacturing Option would result in a significant GHG impact. Implementation of Mitigation Measures AQ-2 through AQ-7 would help reduce GHG emissions. However, no feasible mitigation measures exist that would reduce emissions to less than significant levels. As such, Warehousing and Manufacturing Option-generated GHG emissions are considered significant and unavoidable.



Table 5.10-2
Projected Annual Greenhouse Gas Emissions – Warehousing and Manufacturing Option

Emission Source	Emissions (MTCO ₂ eq per year)			
	CO ₂	CH ₄	N ₂ O	Total MTCO ₂ eq
Direct Emissions				
Construction (amortized over 30 years)	74.73	0.01	0.00	74.99
Area Source	0.01	0.00003	0.00	0.01
Mobile Source (Passenger Cars)	1,320.35	0.03	0.00	1,321.11
Mobile Source (Trucks)	5,455.54	0.26	0.00	5,462.10
<i>Total Direct Emissions</i>	6,850.63	0.30	0.00	6,858.21
Indirect Emissions				
Energy	1,627.10	0.05	0.01	1,631.52
Solid Waste	93.29	5.51	0.00	231.13
Water Demand	667.79	3.51	0.09	781.21
<i>Total Indirect Emissions</i>	2,388.18	9.07	0.10	2,643.86
Total Project-Related Emissions	9,502.10 MTCO₂eq/yr			
Threshold of Significance	3,000 MTCO₂eq/yr			
Project Exceed Thresholds?	Yes			

Source: Urban Crossroads, Azusa Business Center Supplemental AQ & GHG Assessment, dated February 2, 2018; refer to [Appendix 11.8](#).

Standard Conditions of Approval: No standard conditions of approval are applicable.

Mitigation Measures: Refer to Mitigation Measures AQ-2 through AQ-7.

Level of Significance: Significant and Unavoidable Impact.

CONSISTENCY WITH APPLICABLE GHG PLANS, POLICIES, OR REGULATIONS

GHG-2 Would implementation of the Project conflict with an applicable greenhouse gas reduction plan, policy, or regulation?

Impact Analysis:

WAREHOUSE ONLY OPTION

Scoping Plan Consistency

CARB’s Scoping Plan identifies strategies to reduce California’s GHG emissions in support of AB 32. Many of the strategies identified in the Scoping Plan are not applicable at the project level, such as long-term technological improvements to reduce emissions from vehicles. Some measures are applicable and supported by the Warehouse Only Option, such as energy efficiency. While some measures are not directly applicable, the Warehouse Only Option would not conflict with their implementation. Reduction measures are grouped into 18 action categories by the CARB as follows:



1. California Cap-and-Trade Program Linked to Western Climate Initiative Partner Jurisdictions. Implement a broad-based California cap-and-trade program to provide a firm limit on emissions. Link the California cap-and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.
2. California Light-Duty Vehicle GHG Standards. Implement adopted Pavley standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.
3. Energy Efficiency. Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities).
4. Renewables Portfolio Standards. Achieve 33 percent renewable energy mix Statewide.
5. Low Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard.
6. Regional Transportation-Related GHG Targets. Develop regional GHG emissions reduction targets for passenger vehicles.
7. Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures.
8. Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.
9. Million Solar Roofs Program. Install 3,000 megawatts of solar-electric capacity under California's existing solar programs.
10. Medium- and Heavy-Duty Vehicles. Adopt medium- (MD) and heavy-duty (HD) vehicle efficiencies. Aerodynamic efficiency measures for HD trucks pulling trailers 53-feet or longer that include improvements in trailer aerodynamics and use of rolling resistance tires were adopted in 2008 and went into effect in 2010. Future, yet to be determined improvements, includes hybridization of MD and HD trucks.
11. Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce GHG emissions and provide other pollution reduction co-benefits. Reduce GHG emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.
12. High-Speed Rail. Support implementation of a high-speed rail system.
13. Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.



14. High Global Warming Potential Gases. Adopt measures to reduce high warming global potential gases.
15. Recycling and Waste. Reduce methane emissions at landfills. Increase waste diversion, composting and other beneficial uses of organic materials, and mandate commercial recycling. Move toward zero-waste.
16. Sustainable Forests. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation. The 2020 target for carbon sequestration is 5 million MTCO_{2e}/yr.
17. Water. Continue efficiency programs and use cleaner energy sources to move and treat water.
18. Agriculture. In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.

Table 5.10-3, *Scoping Plan Consistency Analysis*, summarizes the Warehouse Only Option’s consistency with the CARB Scoping Plan. As summarized, the Warehouse Only Option would not conflict with any of the provisions of the Scoping Plan and in fact supports seven of the action categories through energy efficiency, water conservation, recycling, and landscaping.

**Table 5.10-3
Scoping Plan Consistency Analysis**

Action	Supporting Measures ¹	Consistency
Cap-and-Trade Program	--	Not Applicable. These programs involve capping emissions from large-scale electricity generation, industrial facilities, and broad scoped fuels. Caps do not directly affect light industrial or smaller-scale industrial projects.
Light-Duty Vehicle Standards	T-1	Not Applicable. This is a Statewide measure establishing vehicle emissions standards.
Energy Efficiency	E-1	Consistent. The Project would include a variety of building, water, and solid waste efficiencies consistent with 2016 California Green Building Standards Code requirements.
	E-2	
	CR-1	
	CR-2	
Renewables Portfolio Standard	E-3	Not Applicable. Establishes the minimum Statewide renewable energy mix.
Low Carbon Fuel Standard	T-2	Not Applicable. Establishes reduced carbon intensity of transportation fuels.
Regional Transportation-Related GHG Targets	T-3	Not Applicable. This is a Statewide measure and is not within the purview of the Project.
Vehicle Efficiency Measures	T-4	Not Applicable. Identifies measures such as minimum tire-fuel efficiency, lower friction oil, and reduction in air conditioning use.
Goods Movement	T-5	Not Applicable. Identifies measures to improve goods movement efficiencies such as advanced combustion strategies, friction reduction, waste heat recovery, and electrification of accessories. While these measures are yet to be implemented and would be voluntary, the Project would not interfere with their implementation.
	T-6	



Table 5.10-3 [continued]
Scoping Plan Consistency Analysis

Action	Supporting Measures ¹	Consistency
Million Solar Roofs Program	E-4	Consistent. The Million Solar Roofs Program sets a goal for use of solar systems throughout the State as a whole. While the Project currently does not include solar energy generation, the building roof structures would be designed to support solar panels in the future.
Medium- & Heavy-Duty Vehicles	T-7	Consistent. Medium- and heavy-duty trucks and trailers working from the proposed warehouses would be subject to aerodynamic and hybridization requirements as established by the CARB; no feature of the Project would interfere with implementation of these requirements and programs.
	T-8	
Industrial Emissions	I-1	Not Applicable. These measures are applicable to large industrial facilities (greater than 500,000 MTCO ₂ E/yr) and other intensive uses such as refineries.
	I-2	
	I-3	
	I-4	
	I-5	
High Speed Rail	T-9	Not Applicable. Supports increased mobility choice.
Green Building Strategy	GB-1	Consistent. The Project would include a variety of building, water, and solid waste efficiencies consistent with 2016 California Green Building Standards Code requirements.
High Global Warming Potential Gases	H-1	Not Applicable. The proposed warehouse buildings are not substantial sources of high GWP emissions and would comply with any future changes in air conditioning, fire protection suppressant, and other requirements.
	H-2	
	H-3	
	H-4	
	H-5	
	H-6	
	H-7	
Recycling and Waste	RW-1	Consistent. The Project would be required recycle a minimum of 50 percent from construction activities and warehouse operations per State and County requirements.
	RW-2	
	RW-3	
Sustainable Forests	F-1	Not Applicable. The Project is a warehousing facility on a Site designated Light Industrial and zoned West End Light Industrial.
Water	W-1	Consistent. The Project would include use of low-flow fixtures and efficient landscaping per State requirements.
	W-2	
	W-3	
	W-4	
	W-5	
	W-6	
Agriculture	A-1	Not Applicable. The Project is a warehousing facility on a Site designated Light Industrial and zoned West End Light Industrial.
Notes:		
1. California Air Resources Board, <i>Appendix B Status of Initial Scoping Plan Measures</i> , http://www.arb.ca.gov/cc/scopingplan/2013_update/appendix_b.pdf , accessed February 26, 2018.		
Source: Urban Crossroads, <i>Azusa Business Center Greenhouse Gas Analysis</i> , dated October 17, 2017; refer to <u>Appendix 11.8</u> .		



SB 32 Consistency

SB 32 requires the State to reduce Statewide GHG emissions to 40 percent below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving Executive Order S-3-05, which sets a Statewide GHG reduction target of 80 percent below 1990 levels by 2050.

According to research conducted by the Lawrence Berkeley National Laboratory and supported by the CARB, California, under its existing and proposed GHG reduction policies, is on track to meet the 2020 reduction targets under AB 32 and could achieve the 2030 goals under SB 32. The research utilized a new, validated model known as the California Lawrence Berkeley National Laboratory (LBNL) GHG Analysis of Policies Spreadsheet (CALGAPS), which simulates GHG and criteria pollutant emissions in California from 2010 to 2050 in accordance to existing and future GHG-reducing policies. The CALGAPS model showed that GHG emissions through 2020 could range from 317 to 415 MTCO₂eq per year, “indicating that existing State policies will likely allow California to meet its target [of 2020 levels under AB 32].” CALGAPS also showed that by 2030, emissions could range from 211 to 428 MTCO₂e per year, indicating that “even if all modeled policies are not implemented, reductions could be sufficient to reduce emissions 40 percent below the 1990 level [of SB 32].” CALGAPS analyzed emissions through 2050 even though it did not generally account for policies that might be put in place after 2030. Though the research indicated that the emissions would not meet the State’s 80 percent reduction goal by 2050, various combinations of policies could allow California’s cumulative emissions to remain very low through 2050.

The Warehouse Only Option would reduce its GHG emissions to the maximum extent feasible with implementation of Project design features and Mitigation Measures AQ-2 through AQ-7. Additionally, the Project Applicant would not actively interfere with any future City-, State-, or Federally-mandated retrofit obligations or GHG emissions reduction targets, including that established under Executive Order S-3-05, Executive Order B-30-15, or SB 32.

The Warehouse Only Option would not interfere with the State’s implementation of (i) Executive Order B-30-15 and SB 32’s target of reducing Statewide GHG emissions to 40 percent below 1990 levels by 2030 or (ii) Executive Order S-3-05’s target of reducing Statewide GHG emissions to 80 percent below 1990 levels by 2050, as it does not interfere with the State’s implementation of GHG reduction plans described in the Scoping Plan. Specifically, the Warehouse Only Option would not interfere with Scoping Plan goals of the State providing 12,000 megawatts of renewable energy by 2020, the California Building Commission mandating net zero energy homes in the California Building Code after 2020, or existing building retrofits under AB 758. Therefore, the Warehouse Only Option’s impacts on GHG emissions in the 2030 and 2050 horizon years would be less than significant. However, because the Warehouse Only Option exceeds the applicable numeric threshold and results in a significant impact with respect to GHG emissions, and no feasible mitigation measures exist that would ensure Project consistency with applicable GHG plans, policies, or regulations, a significant and unavoidable finding with respect to this criterion would occur.



WAREHOUSING AND MANUFACTURING OPTION

The Warehousing and Manufacturing Option would result in slightly different operations, compared to the Warehouse Only Option, as warehousing uses would be reduced and additional manufacturing uses would be constructed. However, the change in land use mix would not change the Project's consistency analysis with the Scoping Plan and SB 32. As such, the Warehousing and Manufacturing Option would also have significant and unavoidable impacts.

Standard Conditions of Approval: No standard conditions of approval are applicable.

Mitigation Measures: Refer to Mitigation Measures AQ-2 through AQ-7.

Level of Significance: Significant and Unavoidable Impact.

5.10.5 CUMULATIVE IMPACTS

Table 4-1, *Cumulative Projects List*, identifies the related projects and other possible development in the area determined as having the potential to interact with the Project to the extent that a significant cumulative effect may occur. The following discussions are included per topic area to determine whether a significant cumulative effect would occur.

GREENHOUSE GAS EMISSIONS

- Would greenhouse gas emissions generated by the Project and other related cumulative projects have a cumulatively considerable impact on global climate change?

Impact Analysis:

WAREHOUSE ONLY OPTION

It is generally the case that an individual project of this size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory.¹³ GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective.¹⁴ Therefore, significant direct impacts associated with the Project, as discussed in Impact Statement GHG-1, also serve as the Project's cumulative impact.

Mitigation Measures AQ-2 through AQ-7 would reduce Warehouse Only Option-generated GHG emissions. However, GHG emissions would still exceed the SCAQMD's recommended numeric threshold of 3,000 MTCO₂eq/yr. Since no additional feasible mitigation measures are available to further reduce the Warehouse Only Option's GHG emissions, cumulative GHG emissions impacts

¹³ California Air Pollution Control Officers Association, *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*, January 2008, <http://www.capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA-White-Paper.pdf>, accessed February 26, 2018.

¹⁴ Ibid.



under the Warehouse Only Option would remain significant and unavoidable and cumulatively considerable.

WAREHOUSING AND MANUFACTURING OPTION

The Warehousing and Manufacturing Option would result in slightly different operations, compared to the Warehouse Only Option, as warehousing uses would be reduced and additional manufacturing uses would be constructed. However, similar to the Warehouse Only Option, the Warehousing and Manufacturing Option would also generate GHG emissions in exceedance of the SCAQMD's recommended numeric threshold of 3,000 MTCO₂eq/yr. Since no additional feasible mitigation measures are available to further reduce the Warehousing and Manufacturing Option's GHG emissions, beyond Mitigation Measures AQ2 through AQ-7, cumulative GHG emissions impacts under the Warehousing and Manufacturing Option would be similarly significant and unavoidable and cumulatively considerable.

Standard Conditions of Approval: No standard conditions of approval are applicable.

Mitigation Measures: Refer to Mitigation Measure AQ-2 through AQ-7.

Level of Significance: Significant and Unavoidable Impact.

CONSISTENCY WITH APPLICABLE GHG PLANS, POLICIES, OR REGULATIONS

- Would implementation of the Project and other related cumulative projects could cause a cumulatively considerable conflict with an applicable greenhouse gas reduction plan, policy, or regulation?

Impact Analysis:

WAREHOUSE ONLY OPTION

As stated above, GHG impacts are recognized as exclusively cumulative impacts, and there are no non-cumulative GHG emission impacts from a climate change perspective. As such, significant direct impacts associated with the Warehouse Only Option, as discussed in Impact Statement GHG-2, also serve as the Warehouse Only Option's cumulative impact. The analysis above concludes that although the Warehouse Only Option would be consistent with the Scoping Plan and either consistent with or not interfere with SB 32 goals, the Warehouse Only Option-generated GHG emissions would still exceed the SCAQMD's recommended numeric threshold of 3,000 MTCO₂eq/yr. Thus, cumulative GHG impacts under the Warehouse Only Option would remain significant and unavoidable and cumulatively considerable.

WAREHOUSING AND MANUFACTURING OPTION

The Warehousing and Manufacturing Option would result in slightly different operations, compared to the Warehouse Only Option, as warehousing uses would be reduced and additional manufacturing uses would be constructed. However, similar to the Warehouse Only Option, the Warehousing and Manufacturing Option would also generate GHG emissions in exceedance of the



SCAQMD's recommended numeric threshold of 3,000 MTCO₂eq/yr. Thus, even though the Warehousing and Manufacturing Option would either be consistent with or not interfere with any GHG plans, policies, or regulations, cumulative GHG impacts under the Warehousing and Manufacturing Option would remain similarly significant and unavoidable and cumulatively considerable.

Standard Conditions of Approval: No standard conditions of approval are applicable.

Mitigation Measures: Refer to Mitigation Measure AQ-2 through AQ-7.

Level of Significance: Significant and Unavoidable Impact.

5.10.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of both the Warehousing Only Option and the Warehousing and Manufacturing Option would result in significant and unavoidable impacts for the following areas:

- *GHG Emissions* – As identified above, implementation of the Warehouse Only Option would generate approximately 12,543.32 MTCO₂eq/yr and implementation of the Warehousing and Manufacturing Option would generate approximately 9,502.10 MTCO₂eq/yr. Both development options would exceed the SCAQMD's recommended numeric threshold of 3,000 MTCO₂eq/yr. Mitigation Measures AQ-2 through AQ-7 would reduce Project-generated GHG emissions. However, no feasible mitigation measures exist that would reduce emissions to less than significant levels. As such, Project-level and cumulative GHG impacts under both the Warehouse Only and Warehousing and Manufacturing Options are considered significant and unavoidable.
- *GHG Plan, Policies, and Regulation Consistency* – The Project would be consistent with the CARB's Scoping Plan and would not actively interfere with any City-, State-, or Federally-mandated plans, policies, or regulations pertaining to GHG reduction targets, including those established under Executive Order S-3-05, Executive Order B-30-15, and SB 32. However, because the Project exceeds the applicable numeric threshold and results in a cumulatively considerable impact with respect to GHG emissions, Project-level and cumulative impacts related to consistency with GHG plans, policies, and regulations under both the Warehouse Only and Warehousing and Manufacturing Options would remain significant and unavoidable.

If the City approves the Project, the City shall be required to make findings in accordance with CEQA Guidelines Section 15091 and adopt a Statement of Overriding Considerations in accordance with CEQA Guidelines Section 15093.



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