5.5 Greenhouse Gas Emissions

5.5.1 INTRODUCTION

This section evaluates the potential for implementation of the proposed Project to cumulatively contribute to greenhouse gas (GHG) emissions impacts. No single project is large enough to result in a measurable increase in global concentrations of GHG emissions; therefore, impacts of the proposed Project are considered on a cumulative basis. This evaluation is based on the methodology recommended by the South Coast Air Quality Management District (SCAQMD). This section also addresses the proposed Project's consistency with applicable plans, policies, and public agency regulations adopted for the purpose of reducing the emissions of GHGs. The analysis within this section is based on the following:

- *City of Santa Ana General Plan Update*
- *City of Santa Ana General Plan Update FEIR*
- *City of Santa Ana Municipal Code*
- *Greenhouse Gas Emissions Assessment*, Appendix I

5.5.2 REGULATORY SETTING

Federal GHG Endangerment Ruling

In *Massachusetts v. Environmental Protection Agency* 549 U.S. 497 (2007), decided on April 2, 2007, the United States Supreme Court (Supreme Court) found that four GHGs, including CO_2, are air pollutants subject to regulation under Section 202(a)(1) of the Clean Air Act (CAA). The Supreme Court held that the USEPA Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the CAA:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs— CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section "Clean Vehicles" below. After a lengthy legal challenge, the Supreme Court declined to review an Appeals Court ruling that upheld the USEPA Administrator's findings.

Federal Clean Vehicle Requirements

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the U.S. On April 1, 2010, the EPA, and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the U.S.

The first phase of the national program applied to passenger cars, light-duty trucks, and medium-duty (MD) passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon (mpg) to cut CO_2 emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold. The USEPA and the NHTSA issued second-phase national standards for light-duty vehicles for model years 2017 through 2025 to achieve an equivalent to 54.5 mpg.

California Assembly Bill 1493 – Pavley

In 2002, the California legislature adopted regulations to reduce GHG emissions in the transportation sector. In September 2004, pursuant to AB 1493, the California Air Resources Board (CARB or Board) approved regulations to reduce GHG emissions from new motor vehicles beginning with the 2009 model year. In September 2009, CARB adopted amendments to the Pavley regulations to reduce GHG from 2009 to 2016. CARB, the U.S. Environmental Protection Agency (USEPA), and the U.S. Department of Transportation's National Highway Traffic and Safety Administration have coordinated efforts to develop fuel economy and GHG standards for model 2017-2025 vehicles. The GHG standards are incorporated into the "Low Emission Vehicle" Regulations.

California Executive Order S-3-05 – Statewide Emission Reduction Targets

Executive Order S-3-05 was established by Governor Arnold Schwarzenegger in June 2005. Executive Order S-3-05 establishes statewide emission reduction targets through the year 2050:

- 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.

Assembly Bill 1279

Assembly Bill (AB) 1279 requires the state to achieve net zero GHG as soon as possible, but no later than 2045, and achieve and maintain net negative greenhouse gas emissions thereafter. The bill also requires California to reduce statewide GHG emissions by 85 percent compared to 1990 levels and directs the California Air Resources Board to work with relevant state agencies to achieve these goals.

California Assembly Bill 32 (AB 32), Global Warming Solutions Act of 2006 (Chapter 488, Statutes of 2006)

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 [Assembly Bill 32 (AB 32)], which created a comprehensive, multi-year program to reduce GHG emissions in California. AB 32 required CARB to develop a Scoping Plan that describes the approach California will take to reduce GHGs to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was first approved by the Board in 2008 and must be updated at least every five years. Since 2008, there have been two updates to the Scoping Plan. Each of the Scoping Plans have included a suite of policies to help the state achieve its GHG targets, in large part leveraging existing programs whose primary goal is to reduce harmful air pollution. The 2017 Scoping Plan identifies how the state can reach the 2030 climate target to reduce GHG emissions by 40 percent from 1990 levels, and substantially advance toward the 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels.

The AB 32 Scoping Plan also anticipates that local government actions will result in reduced GHG emissions because local governments have the primary authority to plan, zone, approve, and permit development to accommodate population growth and the changing needs of their jurisdictions. The Scoping Plan also relies on the requirements of Senate Bill 375 (discussed below) to align local land use and transportation planning for achieving GHG reductions.

The Scoping Plan must be updated every five years to evaluate AB 32 policies and ensure that California is on track to achieve the GHG reduction goals. On December 15, 2022, CARB adopted the 2022 Scoping Plan. The 2022 Scoping Plan builds on the previous Scoping Plans as well as the requirements set forth by AB 1279, which directs the state to become carbon neutral no later than 2045. To achieve this statutory objective, the 2022 Scoping Plan lays out how California can reduce GHG emissions by 85 percent below 1990 levels and achieve carbon neutrality by 2045. The Scoping Plan scenario to do this is to "deploy a broad portfolio of existing and emerging fossil fuel alternatives and clean technologies, and align with statutes, Executive Orders, Board direction, and direction from the governor." The 2022 Scoping Plan sets one of the most aggressive approaches to reach carbon neutrality in the world.

Senate Bill 375

In August 2008, the legislature passed, and on September 30, 2008, then Governor Schwarzenegger signed, SB 375 (Steinberg), which addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. Regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035, as determined by CARB, are required to consider the emission reductions associated with vehicle emission standards (see SB 1493), the composition of fuels (see Executive Order S-1-07), and other CARB-approved measures to reduce GHG emissions. Regional metropolitan planning organizations (MPOs) will be responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan (RTP). The goal of the SCS is to establish a development plan for the region, which, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If an SCS is unable to achieve the GHG reduction target, an MPO must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies. SB 375 provides incentives for streamlining CEQA requirements by substantially reducing the requirements for "transit priority projects," as specified in SB 375, and eliminating the analysis of the impacts of certain residential projects on global warming and the growth-inducing impacts of those projects when the projects are consistent with the SCS or Alternative Planning Strategy. On September 23, 2010, CARB adopted the SB 375 targets for the regional MPOs.

Executive Order B-30-15 – 2030 Statewide Emission Reduction Target

Executive Order B-30-15 was signed by then Governor Jerry Brown on April 29, 2015, establishing an interim statewide GHG reduction target of 40 percent below 1990 levels by 2030, which is necessary to guide regulatory policy and investments in California in the midterm, and put California on the most cost-effective path for long-term emission reductions. Under this Executive Order, all state agencies with jurisdiction over sources of GHG emissions are required to continue to develop and implement emissions reduction programs to reach the state's 2050 target and attain a level of emissions necessary to avoid dangerous climate change. According to the Governor's Office, this Executive Order is in line with the scientifically established levels needed in the United States to limit global warming below 2°C - the warming threshold at which scientists say there will likely be major climate disruptions such as super droughts and rising sea levels.

Senate Bill 32 (Chapter 249, Statutes of 2016)

Senate Bill 32 was signed on September 8, 2016 by then Governor Jerry Brown. 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 S-3-05, which sets a statewide GHG reduction target of 80 percent below 1990 levels by 2050. A related bill that was also approved in 2016, AB 197

(Chapter 250, Statutes of 2016) creates a legislative committee to oversee regulators to ensure that CARB is not only responsive to the Governor, but also the Legislature.

AB 398 – Extension of Cap-and-Trade Program to 2030 (Chapter 617, Statutes of 2017)

AB 398 was signed by then Governor Brown on July 25, 2017, and became effective immediately as urgency legislation. AB 398, among other things, extended the cap-and-trade program through 2030.

Senate Bill 97 (Chapter 185, Statutes of 2007)

SB 97 (Health and Safety Code Section 21083.5) was adopted in 2007 and required the Office of Planning and Research to prepare amendments to the CEQA Guidelines for the mitigation of GHG impacts. The amendments became effective on March 18, 2010. The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. A new section, CEQA Guidelines Section 15064.4, was added to assist agencies in determining the significance of GHG emissions. The CEQA Section gives discretion to the lead agency whether to: (1) use a model of methodology to quantify GHG emissions resulting from a project, and which model or methodology to use; or (2) rely on a qualitative analysis or performance-based standards. CEQA does not provide guidance to determine whether the project's estimated GHG emissions are significant or cumulatively considerable.

Also amended were CEQA Guidelines Sections 15126.4 and 15130, which address mitigation measures and cumulative impacts respectively. However, GHG mitigation measures are referenced in general terms, and no specific measures are identified. Additionally, the revision to the cumulative impact discussion requirement (Section 15130) simply directs agencies to analyze GHG emissions in an EIR when a project's incremental contribution of emissions may be cumulatively considerable, however it does not answer the question of when emissions are cumulatively considerable.

Section 15183.5 permits programmatic GHG analysis and later project-specific tiering, as well as the preparation of Greenhouse Gas Reduction Plans. Compliance with such plans can support a determination that a project's cumulative effect is not cumulatively considerable, according to proposed Section 15183.5(b).

CARB Advanced Clean Truck Regulation

CARB adopted the Advanced Clean Truck Regulation in June 2020 requiring truck manufacturers to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024. By 2045, every new truck sold in California is required to be zero-emission. This rule directly addresses disproportionate risks and health and pollution burdens and puts California on the path for an all zero-emission short-haul drayage fleet in ports and railyards by 2035, and zero-emission "last-mile" delivery trucks and vans by 2040. The Advanced Clean Truck Regulation accelerates the transition of zero-emission medium-and heavy-duty vehicles from Class 2b to Class 8. The regulation has two components including a manufacturer sales requirement, and a reporting requirement:

- Zero-Emission Truck Sales: Manufacturers who certify Class 2b through 8 chassis or complete vehicles with combustion engines are required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales need to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales.
  Company and Fleet Reporting: Large employers including retailers, manufacturers, brokers and others would be required to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, would be required to report about their existing fleet operations. This information

would help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

CARB Advanced Clean Fleets Regulation

CARB adopted the Advanced Clean Fleets Regulation in April 2023 which requires fleet owners operating vehicles for private services such as last-mile delivery and federal fleets, along with state and local government fleets to begin their transition to zero-emission vehicles in 2024. In addition, drayage trucks are required to be zero-emissions by 2035, work trucks and day cab tractors must be zero-emission by 2039, and sleeper cap tractors and specialty vehicles must be zero-emission by 2042. The Advanced Clean Fleets rule includes an end to combustion truck sales in 2036.

Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code (CALGreen) is updated every three years. The most recent update was the 2022 California Green Building Code Standards which became effective on January 1, 2023.

The 2022 CALGreen standards that reduce GHG emissions and are applicable to the proposed Project include, but are not limited to, the following:

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight, and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).

- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
    - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
    - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 SF or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 SF. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 SF requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 SF and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

The CALGreen Building Standards Code has been adopted by the City of Santa Ana by reference in Municipal Code Section 8-3000.

City of Santa Ana General Plan

The City of Santa Ana General Plan Update Conservation Element and Mobility Element include goals, policies, and objectives that support the reduction of GHGs. The existing General Plan Update goals, policies, and objectives relevant to the proposed Project include:

Mobility Element

POLICY M-1.7 Proactively mitigate existing and new potential air quality, noise, congestion, safety, and other impacts from the transportation network on residents and business, especially in environmental justice communities.

POLICY M-1.8 Consider air and water quality, noise reduction, neighborhood character, and street-level aesthetics when making improvements to travelways.

POLICY M-5.5 Encourage the use of alternative fuel vehicles and mobility technologies through the installation of supporting infrastructure.

Conservation Element

GOAL CN-1: Protect air resources, improve regional and local air quality, and minimize the impacts of climate change.

POLICY CN-1.12 Encourage the use of low or zero emission vehicles, bicycles, nonmotorized vehicles, and car-sharing programs by supporting new and existing development that includes sustainable infrastructure and strategies such as vehicle charging stations, drop-off areas for ride-sharing services, secure bicycle parking, and transportation demand management programs.

POLICY CN-1.18 Coordinate with park renovation and new development to address air quality and climate impacts by reducing the heat island affect by providing green infrastructure and shade, and reducing air pollution by providing vegetation that removes pollutants and air particles.

POLICY CN-1.2 Climate Action Plan. Consistency with emission reduction goals highlighted in the Climate Action Plan shall be considered in all major decisions on land use and investments in public infrastructure.

GOAL CN-3:

Energy Resources Reduce consumption of and reliance on nonrenewable energy, and support the development and use of renewable energy sources.

POLICY CN-3.3 Promote energy-efficient development patterns by clustering mixed use developments and compatible uses adjacent to public transportation.

POLICY CN-3.4 Encourage site planning and subdivision design that incorporates the use of renewable energy systems.

POLICY CN-3.5 Promote and encourage the planting of native and diverse tree species to improve air quality, reduce heat island effect, reduce energy consumption, and contribute to carbon mitigation with special focus in environmental justice areas.

City of Santa Ana Climate Action Plan

The City of Santa Ana adopted a CAP in December 2015 with the goal of reducing carbon emissions and energy use for the community. The CAP includes GHG emissions targets that are consistent with the reduction targets of the state of California and presents a number of strategies for the City to meet the targets. These reduction measures address emissions in five sectors: transportation and land use, energy, solid waste, water, and wastewater. The CAP measures that are relevant to the proposed Project include the following:

Transportation and Land Use Measures

- Development of Local Retail Service Nodes. Development that provides a mix of housing, commercial space, services, and job opportunities close to public transportation reduces dependency on cars and time spent in traffic and more closely links residents to jobs and services.

- Local Residential Nodes near Retail and Employment. Locate new residential development within retail and employment corridors to create a more optimal mix of land uses, which will be conducive to the increase use of transit.
- Local Residential Nodes near Residential and Retail Areas. Develop higher levels of mixed-use development, including employment, retail, and housing, to lower vehicle miles traveled (VMT) compared with areas where only one of these uses predominates.
- End-of-Trip Facilities in New Projects. End-of-trip facilities can include bike lockers, showers, and changing rooms, which can be used by cyclists and encourage cycling use.
- Design Guidelines for External Bike/Pedestrian/Transit Connectivity. The City plans to create guidelines that will mandate minimum levels of connectivity between various locations and the external transportation network.
- Community-wide Bike Sharing Stations. Development of bike-sharing stations at several locations throughout the City, including the Santa Ana Regional Transportation Center, major bus stop locations, City Hall, etc. These bicycles will help to extend trips possible through transit or directly substitute automobile trips.

Community Measures

- Property Assessed Clean Energy (PACE) Financing for Commercial and Residential Properties. PACE financing is available for energy and water saving measures as well as renewable energy generation. Energy efficiency projects financed through the program include air conditioning and heating systems, lighting upgrades, cool roofing materials, and solar installations.
- Southern California Edison (SCE) Small and Medium Business Direct Install. Energy efficiency contractors help small business identify ways to save electricity.
- Title 24 Energy Efficiency Standards. Minimum energy efficiency for new construction in California effective January 1, 2020.

Solid Waste, Water, and Wastewater Measures

- AB 341. Requires businesses that generate 4 cubic yards or more of commercial solid waste per week and multi-family residential dwellings of five units or more to recycle.
- Rainwater Harvesting. Collecting and re-using rainwater can minimize the amount of water flowing into storm drains, sewer systems, and local waterways and can reduce potable water consumption and electricity consumption from distribution.

The CAP describes that many of the commercial and employment corridors throughout the City have limited or no residential development. The CAP strategy envisions that the City would locate new residential development within these retail and employment corridors to create a more optimal mix of land uses. This mix of land uses could potentially divert some work, shopping, and eating trips from automobile use to bicycle and pedestrian travel; and it would result in reducing vehicle miles traveled. This higher level of mixed-use is also more conducive to the increased use of transit. Additionally, the CAP describes that the City will encourage new residential projects to locate within these commercial and employment corridors.

The CAP also describes development of bike sharing stations at several locations throughout the City including the Santa Ana Regional Transportation Center, major bus stop locations, City Hall, and other locations. These easily accessible bicycles can extend the trips possible through transit, or directly substitute for automobile trips on their own.

5.5.3 ENVIRONMENTAL SETTING

Gases that trap heat in the atmosphere are called GHGs. The major concern with GHGs is that increases in their concentrations are causing global climate change. Global climate change is a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the rate of global climate change and the extent of the impacts attributable to human activities, most in the scientific community agree that there is a direct link between increased emissions of GHGs and long-term global temperature increases.

The principal GHGs are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs). Because different GHGs have different warming potential, and CO_2 is the most common reference gas for climate change, GHG emissions are often quantified and reported as CO_2 equivalents (CO_2e). For example, SF_6 is a GHG commonly used in the utility industry as an insulating gas in circuit breakers and other electronic equipment. SF_6, while comprising a small fraction of the total GHGs emitted annually world-wide, is a much more potent GHG, with 22,800 times the global warming potential as CO_2. Therefore, an emission of one metric ton (MT) of SF_6 could be reported as an emission of 22,800 MT of CO_2e. Large emission sources are reported in million metric tons (MMT) of CO_2e. The principal GHGs are described below, along with their global warming potential.

Carbon dioxide: Carbon dioxide (CO_2) is an odorless, colorless, natural GHG. Carbon dioxide's global warming potential is 1. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (manmade) sources are from burning coal, oil, natural gas, and wood.

Methane: Methane (CH_4) is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years, and its global warming potential is 28. Methane is extracted from geological deposits (natural gas fields). Other sources are landfills, fermentation of manure, and decay of organic matter.

Nitrous oxide: Nitrous oxide (N_2O) (laughing gas) is a colorless GHG that has a lifetime of 121 years, and its global warming potential is 265. Sources include microbial processes in soil and water, fuel combustion, and industrial processes.

Sulfur hexafluoride: Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas that has a lifetime of 3,200 years and a high global warming potential of 23,500. This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas.

Perfluorocarbons: Perfluorocarbons (PFCs) have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Their global warming potential ranges from 7,000 to 11,000. Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.

Hydrofluorocarbons: Hydrofluorocarbons (HFCs) are a group of GHGs containing carbon, chlorine, and at least one hydrogen atom. Their global warming potential ranges from 100 to 12,000. Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.

Some of the potential effects in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more forest fires, and more drought years (CARB, 2009). Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects:

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas;
- Increase of heat index over land areas; and
- More intense precipitation events.

Also, there are many secondary effects that are projected to result from global warming, including global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and the feedback mechanisms involved are not fully understood and much research remains to be done, the potential for substantial environmental, social, and economic consequences over the long term may be great.

GHGs are produced by both direct and indirect emissions sources. Direct emissions include consumption of natural gas, heating and cooling of buildings, landscaping activities and other equipment used directly by land uses. Indirect emissions include the consumption of fossil fuels for vehicle trips, electricity generation, water usage, and solid waste disposal.

Existing California GHG Conditions

California has significantly slowed the rate of growth of GHG emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls; but is still a substantial contributor to the U.S. emissions inventory total. CARB compiles GHG inventories for the state. Based upon the 2022 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2020 GHG emissions period, California emitted an average 369.2 million metric tons of CO_2e ($MMTCO_2e$) per year.

Existing City of Santa Ana GHG Conditions

The GPU FEIR describes that operation of existing land uses within the City and the related vehicle trips generate GHG emissions from tail pipe emissions, emissions from natural gas used for energy, heating, and cooking; electricity usage; area sources such as landscaping equipment and consumer cleaning products; water demand; waste generation; and solid waste generation. As shown on Table 5.5-1, the GPU FEIR identified that in 2020, the City generated approximately 2,212,612 $MTCO_2e$/year, which results in 4.8 $MTCO_2e$/year per service population (SP). Of this, 66 percent was generated by transportation sources (vehicle emissions).

Table 5.5-1: Year 2020 City of Santa Ana Greenhouse Gas Emissions

Sector	$MTCO_2e$/year	Percent of Total
Transportation	1,463,006	66%
Energy – Residential	208,050	9%
Energy – Nonresidential	432,202	20%
Solid Waste	56,603	3%
Water/Wastewater	34,084	2%
Other – Off-Road Equipment	18,678	1%
Total	**2,212,622**	**100%**
MTCO2e/Year/SP	**4.8**	**-**

Source: GPU FEIR Table 5.7-5.

Existing Project Site Conditions

The Project site is developed with 16 commercial buildings that generate GHG emissions from natural gas used for heating and hot water, electricity usage, related vehicle trips, use of landscaping equipment, use of consumer cleaning products, water demand, wastewater generation, and solid waste generation. The

estimated GHG emissions from the existing development within each Phase area of the Project site are summarized in Table 5.5-2.

Table 5.5-2: Existing Project Site Generated Greenhouse Gas Emissions

Project Site Area	$MTCO_{2e}$ Per Year
Phase 1 Area	8,472
Phase 2 Area	1,268
Phase 3 Area	6,398
Total	**16,138**

Source: Greenhouse Gas Emissions Assessment, Appendix I

5.5.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of the CEQA Guidelines indicates that a project could have a significant effect if it were to:

GHG-1 Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

GHG-2 Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

CEQA Guidelines Section 15064.4 provides discretion to the lead agency whether to: (1) use a model of methodology to quantify GHG emissions resulting from a project, and which model or methodology to use; or (2) rely on a qualitative analysis or performance-based standards. In addition, CEQA does not provide guidance to determine whether the project's estimated GHG emissions are significant, but recommends that lead agencies consider several factors that may be used in the determination of significance of project related GHG emissions, including:

- The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting.
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

CEQA Guidelines Section 15130(f) describes that the effects of GHG emissions are by their very nature cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis. Additionally, CEQA Guidelines Section 15064(h)3 states that a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides requirements to avoid or lesson the cumulative problem.

The SCAQMD formed a working group to identify greenhouse gas emissions thresholds for land use projects that could be used by local lead agencies in the Basin in 2008. The working group developed several different options that are contained in the SCAQMD Draft Guidance Document – Interim CEQA Greenhouse Gas Significance Threshold, that could be applied by lead agencies, which includes the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.

- Tier 2 consists of determining whether the project is consistent with a greenhouse gas reduction plan. If a project is consistent with a qualifying local greenhouse gas reduction plan, it does not have significant greenhouse gas emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to the project's operational emissions. If a project's emissions are below one of the following screening thresholds, then the project is less than significant:
    - All land use types: 3,000 $MTCO_2e$ per year
    - Based on land use type:
        - Residential: 3,500 $MTCO_2e$ per year
        - Commercial: 1,400 $MTCO_2e$ per year
        - Mixed use: 3,000 $MTCO_2e$ per year
        - Industrial use: 10,000 $MTCO_2e$ per year when SCAQMD is the lead agency

SCAQMD used the Executive Order S-3-05-year 2050 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap CO_2 concentrations at 450 ppm, thus stabilizing global climate.

The City of Santa Ana has not adopted a numeric threshold of significance for GHG emissions. In the absence of an adopted quantitative threshold, the City of Santa Ana, as the Lead Agency, has determined that the proposed Project would not have a significant effect on the environment if the proposed Project is found to be consistent with the applicable regulatory plans and policies to reduce GHG emissions. The proposed Project's GHG emissions are evaluated consistent with CEQA Guidelines Sections 15183.5, 15064.4(a)(2), and 15064.4(b) by considering whether the proposed Project complies with the CARB Scoping Plan and the City's Climate Action Plan. The CARB Scoping Plan provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs.

5.5.5 METHODOLOGY

The California Emissions Estimator Model (CalEEMod) v2022.1 is the most recent version and has been used to determine construction and operational GHG emissions from the proposed Project. The purpose of this model is to calculate construction-source and operational-source GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures, if applied. Construction emissions are quantified and per SCAQMD methodology, the total GHG emissions for construction activities are divided by 30-years, and then added to the annual operational phase of GHG emissions.

In addition, CEQA requires the lead agency to consider the extent to which the proposed Project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Therefore, this section addresses whether the proposed Project complies with various programs and measures designed to reduce GHG emissions. There is no statewide program or regional program or plan that has been adopted with which all new development must comply; thus, this analysis has identified the most relevant to the City of Santa Ana and the proposed Project.

5.5.6 ENVIRONMENTAL IMPACTS

Summary of Impacts Identified in the GPU FEIR

The GPU FEIR identified that if project GHG emissions are below the 3,000 $MTCO_2e$ bright-line screening threshold, GHG emissions impacts would be considered less than significant. The GPU FEIR determined that buildout of the GPU would result in a net decrease of 255,878 $MTCO_2e$ of GHG emissions (12 percent decrease in GHG emissions) from existing conditions and would not exceed the 3,000 $MTCO_2e$ SCAQMD bright-line screening threshold. The GPU FEIR determined that the GPU would decrease emissions per service population to 3.5 $MTCO_2e$/SP in horizon year 2045 from 4.8 $MTCO_2e$/SP for the existing baseline year. The GPU FEIR identified the primary reason for the decrease in overall community-wide GHG emissions, despite an increase in population and employment in the city, is a result of regulations adopted to reduce GHG emissions and turnover of California's on-road vehicle fleets.

The GPU FEIR also analyzes the potential for conflict with the GHG reduction goals established under SB 32 and Executive Order S-03-05, which require a reduction in statewide GHG emissions from existing conditions to achieve a 40 percent reduction in GHG emissions by 2030 and an 80 percent reduction in GHG emissions by 2050, respectively. For a project with a buildout year of 2045, this would be a 70 percent reduction compared to 2020 levels.

The GPU FEIR addressed GHG impacts on pages 5.7-31 through 5.7-40 and determined that implementation of Mitigation Measure GHG-1, which requires the City to update its Climate Action Plan (CAP) every five years, would ensure that the City is tracking and monitoring the City's GHG emissions in order to chart a trajectory to achieve the long-term, year 2050, GHG reduction goal set by Executive Order S-03-05. However, the FEIR determined that at this time, there is no plan past 2030 that achieves the long-term GHG reduction goal established under Executive Order S-03-05. As identified by the California Council on Science and Technology, the state cannot meet the 2050 goal without major advancements in technology. Advancements in technology in the future could provide additional reductions and allow the state and City to meet the 2050 goal, but in the meantime, the GPU FEIR determined that impacts would be significant and unavoidable. The GPU FEIR included a mitigation measure to require the City to update the Climate Action Plan every 5 years. However, this is not a project-specific mitigation measure, and not directly related to development projects. The GPU FEIR also determined that the GPU would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Proposed Specific Plan Project

IMPACT GHG-1: THE PROJECT WOULD NOT GENERATE GHG EMISSIONS, EITHER DIRECTLY OR INDIRECTLY, THAT MAY HAVE A SIGNIFICANT IMPACT ON THE ENVIRONMENT.

Less than Significant Impact with Mitigation Incorporated.

Construction

As described in Section 3.0, *Project Description*, construction of the proposed Project is anticipated to occur in three phases over approximately 10 years. The construction-related activities involve the following: demolition, site preparation, excavation, grading, paving, construction of structures and infrastructure, and architectural coatings. These construction activities would result in the emission of GHGs from equipment exhaust, construction-related vehicular activity and construction worker automobile trips. Total estimated construction related GHG emissions from construction of the proposed Project were amortized over 30 years per SCAQMD methodology.

As shown on Table 5.5-3, construction of Phase 1 of the proposed Project would result in the generation of approximately 36,506 $MTCO_2e$. Construction of Phase 2 would generate approximately 10,091 $MTCO_2e$; and construction of Phase 3 would generate approximately 34,142 $MTCO_2e$. The amortized Project Phase 1 construction emissions would be 1,217 $MTCO_2e$ per year while the amortized Project Phase 2 and Phase 3 construction emissions would be 336 $MTCO_2e$ and 1,138 $MTCO_2e$ per year, respectively. Total construction emissions and total amortized emissions for Project Buildout would be 80,740 $MTCO_2e$ and 2,691 $MTCO_2e$ per year, respectively. However, as detailed in Section 5.1, *Air Quality*, and listed below, the proposed Project would implement Mitigation Measure AQ-1, which requires the use of advanced engine tiers (i.e., equipment engines meeting CARB Tier 4 Final emissions standards), which would reduce total construction emissions to 67,425 $MTCO_2e$ (2,248 $MTCO_2e$ per year).

Table 5.5-3: Summary of Construction Related Greenhouse Gas Emissions

	$MTCO_2e$	
Construction Activities	**Unmitigated**	**Mitigated**
Phase 1 Construction		
Construction Year (2026)	11,888	9,667
Construction Year (2027)	11,290	10,201
Construction Year (2028)	11,133	10,042
Construction Year (2029)	1,910	1,383
Construction Year (2030)	286	270
Total Phase 1 Construction Emissions	**36,506**	**31,564**
Phase 1: 30-Year Amortized Construction Emissions	**1,217**	**1,052**
Phase 2 Construction		
Construction Year (2030)	2,911	1,664
Construction Year (2031)	4,007	2,684
Construction Year (2032)	3,174	2,320
Total Phase 2 Construction Emissions	**10,091**	**6,668**
Phase 2: 30-Year Amortized Construction Emissions	**336**	**222**
Phase 3 Construction		
Construction Year (2033)	12,052	9,333
Construction Year (2034)	4,354	3,386
Construction Year (2035)	13,680	12,690
Construction Year (2036)	4,057	3,784
Total Phase 3 Construction Emissions	**34,142**	**29,193**
Phase 3: 30-Year Amortized Construction Emissions	**1,138**	**973**
Project Buildout Total Construction Emissions	**80,740**	**67,425**
Project Buildout Total Amortized Emissions	**2,691**	**2,248**

Source: Greenhouse Gas Emissions Assessment, Appendix I.

Operation

Operation of the proposed Project would generate GHG emissions from vehicle trips, electricity and natural gas consumption, water, and wastewater transport (the energy used to pump water), and solid waste generation. GHG emissions from electricity consumed by the proposed Project would be generated off site by fuel combustion at the electricity provider. GHG emissions from water transport are also indirect emissions resulting from the energy required to transport water from its source. GHG emissions from solid waste disposal are associated with the anaerobic breakdown of material.

As shown in Table 5.5-4, the proposed Project's total unmitigated increase in GHG emissions for Phase 1 would be approximately 20,597 $MTCO_2e$, for Phase 2 would be 7,325 $MTCO_2e$, for Phase 3 would be 14,147 $MTCO_2e$, and 42,069 $MTCO_2e$ for Project buildout.

Table 5.5-4: Summary of Total Project Generated Increase in Greenhouse Gas Emissions

Emissions Source	$MTCO_2e$ per Year	
	Unmitigated	**Mitigated**
Phase 1		
Construction Amortized Over 30 Years	1,217	1,052
Mobile	12,236	10,123
Area Source	68	0
Energy (Electricity)	4,489	4,178
Energy (Natural Gas)	1,623	1,489
Water and Wastewater	255	255
Waste	612	612
Refrigerants	96	96
TOTAL	**20,597**	**17,806**
Phase 2		
Construction Amortized Over 30 Years	336	222
Mobile	4,600	3,488
Area Source	29	0
Energy (Electricity)	1,501	1,485
Energy (Natural Gas)	527	469
Water and Wastewater	111	111
Waste	219	219
Refrigerants	1	1
TOTAL	**7,325**	**5,995**
Phase 3		
Construction Amortized Over 30 Years	1,138	973
Mobile	6,777	4,884
Area Source	48	0
Energy (Electricity)	1,157	1,111
Energy (Natural Gas)	4,533	4,022
Water and Wastewater	129	129
Waste	362	362
Refrigerants	2	2
TOTAL	**14,147**	**11,484**

Emissions Source	$MTCO_2e$ per Year	
	Unmitigated	**Mitigated**
Project Buildout		
Construction Amortized Over 30 Years	2,691	2,248
Mobile	23,613	18,495
Area Source	146	0
Energy (Electricity)	7,147	6,774
Energy (Natural Gas)	6,683	5,979
Water and Wastewater	496	496
Waste	1,193	1,193
Refrigerants	100	100
BUILDOUT TOTAL	**42,069**	**35,285**
Existing Emissions		
Phase 1 Area Existing Emissions	8,472	8,472
Phase 2 Area Existing Emissions	1,268	1,268
Phase 3 Area Existing Emissions	6,398	6,398
EXISTING TOTAL	**16,138**	**16,138**
NET EMISSIONS	**25,931**	**19,147**

Source: Greenhouse Gas Emissions Assessment, Appendix I.

The Greenhouse Gas Emissions Assessment (Appendix I) describes that a majority of the GHG emissions (56 percent unmitigated and 52 percent mitigated) generated from the proposed Project at buildout are associated with non-construction related mobile sources. As detailed in Section 5.1, *Air Quality*, and listed below, proposed Project Mitigation Measure AQ-3: Vehicle Trip Reduction, Mitigation Measure AQ-4: Prohibition of Fireplaces, Mitigation Measure AQ-5: Electric Landscape Equipment, and Mitigation Measure AQ-6: Low VOC Paint (Operations) would reduce operational air quality emissions and would also reduce GHG emissions.

Additionally, Project Mitigation Measure GHG-1 is included to require installation of photovoltaic solar panels to offset energy emissions; Mitigation Measure GHG-2 is included to require the proposed Project meet or exceed CALGreen Tier 2 standards to further improve energy efficiency; Mitigation Measure GHG-3 is included to require the proposed Project to divert 75 percent of waste from landfills; Mitigation Measure GHG-4 is included to require landscape equipment on the Project site to be 100 percent electric; and Mitigation Measure GHG-5 is included to require use of energy efficient appliances.

Table 5.5-4 shows that implementation of these mitigation measures would reduce GHG emissions to 17,806 $MTCO_2e$ for Phase 1; to 5,995 $MTCO_2e$ for Phase 2; to 11,484 $MTCO_2e$ for Phase 3; and to 35,285 $MTCO_2e$ for Project buildout. The majority of the proposed Project's GHG emissions are generated by mobile emissions. The TDM program required by Mitigation Measure AQ-3 would reduce GHG emissions from commuting. Further, as detailed in Section 5.13, *Transportation*, the Project site is located within a TPA and SCAG identified High Quality Transit Area (HQTA) with direct access to transit, bicycle, and pedestrian facilities; and therefore, would reduce VMT and the related GHG emissions. The proposed Project would also install new bicycle lanes and sidewalks and implements a mixed-use development in an urban area that would provide for non-vehicular travel that would reduce GHG emissions. Additional mitigation to reduce the proposed Project's mobile GHG emissions is not feasible due to the limited ability of the Project Applicant and City of Santa Ana to reduce emissions from mobile sources. Neither the Project Applicant nor the Lead Agency (City of Santa Ana) can substantively or materially affect reductions in proposed Project mobile-source emissions.

As demonstrated in Impact GHG-2, the proposed Project would be consistent with the 2022 CARB Scoping Plan and City of Santa Ana CAP. As the proposed Project would be consistent with these GHG reduction plans, the proposed Project would be consistent with the State's long-term goal to achieve statewide carbon neutrality (zero net emissions) and reduce anthropogenic GHG emissions by 85 percent below 1990 levels by 2045 in accordance with AB 1279.

The GPU FEIR determined that implementation of the GPU and its policies would result in a net decrease in emissions of approximately 255,878 $MTCO_2e$ over existing conditions within the City. The proposed Project would implement the mitigation identified above and detailed below to reduce GHG emissions; and the Project proposes a specific plan that would be consistent with the buildout assumptions and applicable development standards of the GPU. Therefore, impacts related to generation of GHG emissions would be less than significant with mitigation incorporated. As such, Project impacts would be consistent with the impact conclusions set forth in the GPU FEIR, which determined that impacts related to GHG emissions would be less than significant with mitigation incorporated.

IMPACT GHG-2: THE PROJECT WOULD NOT CONFLICT WITH AN APPLICABLE PLAN, POLICY OR REGULATION OF AN AGENCY ADOPTED FOR THE PURPOSE OF REDUCING THE EMISSION OF GHGS.

Less than Significant Impact with Mitigation Incorporated. The proposed Project consists of an infill redevelopment project that would provide housing near freeways and transit in an employment and commercial area to plan for projected growth in the region and help to improve the jobs to housing balance (detailed in Section 5.10, *Population and Housing*). The proposed Project would provide a mixed-use community within a TPA and High-Quality Transit Area which has the potential to reduce GHG emissions from the reduction of VMT. The proposed Project provides for an onsite mix of uses that would limit the need to travel off site for many amenities and retail/service needs. The pedestrian and bicycle infrastructure and site location adjacent to bus stops for seven OCTA bus routes would promote non-vehicular transportation and reduce the vehicle miles traveled and related GHG emissions. Providing a mixed-use development in such a location is consistent with the intent of the AB 32 Scoping Plan and SB 375, which is focused on changing land use patterns and improving transportation alternatives.

The proposed Project would be implemented pursuant to the CALGreen Building/Title 24 requirements and would provide new land uses in a sustainable manner. The City's administration of the Title 24 requirements includes review of proposed energy conservation measures during the permitting process, which ensures that all requirements are met. Typical Title 24 measures include insulation; use of energy-efficient heating, ventilation, and air conditioning equipment; solar-reflective roofing materials; energy-efficient indoor and outdoor lighting systems; reclamation of heat rejection from refrigeration equipment to generate hot water; and incorporation of skylights, and solar infrastructure. In complying with the Title 24 standards, the proposed Project would be implementing regulations that reduce GHG emissions.

Also, the CARB Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32. The CARB Scoping Plan recommendations serve as statewide measures to reduce GHG emissions levels. The proposed Project would be consistent with the applicable measures established in the 2022 Scoping Plan, as shown in Table 5.5-5. The proposed Specific Plan would be consistent with SCAG strategies to provide infill residential and mixed-use development and increase the availability of transit-oriented development. In addition, as shown in Section 5.8, *Land Use and Planning*, in Table 5.8-1, the proposed Project would be consistent with SCAG's 2020 Connect SoCal RTP/SCS.

CARB Scoping Plan

The new development on the Project site pursuant to the proposed Specific Plan would include energy-efficient/energy-conserving design features and operation of the new commercial, residential, and open space areas would not interfere with the state's implementation of AB 1279's target of 85 percent below 1990 levels and carbon neutrality by 2045 because it does not interfere with implementation of the GHG reduction measures listed in CARB's Updated Scoping Plan (2022), as demonstrated in Table 5.5-5. CARB's 2022 Scoping Plan reflects the 2045 target of an 85 percent reduction below 1990 levels, set by Executive Order B-55-18, and codified by AB 1279. In addition, the proposed Project would be consistent with the following state policies that were adopted for the purpose of reducing GHG emissions.

As detailed in Table 5.5-5 and the discussion below, the proposed Project would not conflict with the CARB Scoping Plan and related regulations.

- Pavley emissions standard and Low Carbon Fuel Standard: Pavley emissions standards (AB 1493) apply to all new passenger vehicles and the Low Carbon Fuel Standard became effective in 2010 and regulates the transportation fuel used. The second phase of implementation of the Pavley regulations per AB 1493 is referred to as the Advanced Clean Car program, which combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for current model years through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The proposed Project is consistent with these requirements as they apply to all new passenger vehicles and vehicle fuel purchased in California.
- Medium/Heavy-Duty Vehicle Regulations: Medium/heavy-duty vehicle regulations are implemented by the state to reduce emissions from trucks. Since the proposed Project would utilize trucks for construction and some operational purposes, these regulations would aid in reducing GHG emissions from the proposed Project. The proposed Project is consistent with this measure and its implementation as medium and heavy-duty vehicles associated with construction and operation of the Project would be required to comply with the requirements of this regulation.
- Tractor-Trailer Greenhouse Gas Regulation: Tractor-trailers subject to this state regulation are primarily 53-foot or longer box-type trailers, are required to be either use USEPA SmartWay certified tractors and trailers or retrofit their existing fleet with SmartWay verified technologies. The proposed Project would be consistent with this regulation, as it applies to specific trucks that are used throughout the state.
- Energy Efficiency – Title 24/CALGreen: The proposed Project is subject to the CALGreen Code Title 24 building energy efficiency requirements that offer builders better windows, insulation, lighting, ventilation systems, and other features as listed in Section 5.5.2, *Regulatory Setting* that reduce energy consumption. Compliance with the CALGreen standards would be verified by the City during the building permitting process.
- Renewable Portfolio Standard. As a customer of Southern California Edison (SCE), the proposed Project would purchase from an increasing supply of renewable energy sources and more efficient baseload generations, reduce GHG emissions, and be consistent with this requirement.
- Million Solar Roofs Program: The proposed Project is consistent with this scoping plan measure as the proposed Project would be required to comply with existing CALGreen/Title 24 standards, including the installation of solar panels.
- Water Efficiency and Waste Diversion: Development and operation of the proposed Project would be implemented in consistency with water conservation requirements (as included in CALGreen/Title 24) and solid waste recycling and landfill diversion requirements of the State.

Table 5.5-5: Project Consistency with the CARB 2022 Scoping Plan

Action	Consistency
GHG Emissions Reductions Relative to the SB 32 Target	
40 percent below 1990 levels by 2030.	**Consistent.** The proposed Project would comply with the Title 24, Part 6 building energy requirements along with other local and state initiatives that aim to achieve the 40 percent below 1990 levels by 2030 goal. This would be ensured through the City's existing development permitting process. Further, the proposed Project would implement Mitigation Measure GHG-3, which requires the proposed Project to be designed to achieve LEED certification or exceed CA LGreen Tier 2 standards.
Smart Growth/Vehicle Miles Traveled VMT	
VMT per capita reduced 25 percent below 2019 levels by 2030, and 30 percent below 2019 levels by 2045.	**Consistent.** As discussed in Section 5.13, *Transportation*, of this Draft Supplemental EIR, the Project site is located within a TPA and SCAG identified High Quality Transit Area (HQTA) with direct access to transit bicycle and pedestrian facilities; and therefore, would result in less than significant impacts related to VMT. Hence, the proposed Project would be consistent with policies aimed at reducing VMT.
Light-Duty Vehicle (LDV) Zero-Emission Vehicles (ZEVs)	
100 percent of LDV sales are ZEV by 2035.	**Consistent.** The proposed Project would be designed and constructed in accordance with the Title 24 Part 6 and Part 11 requirements, which includes ZEV designated parking spaces and charging stations.
Truck ZEVs	
100 percent of medium-duty (MDV)/HDC sales are ZEV by 2040 (AB 74 University of California Institute of Transportation Studies [ITS] report).	**Consistent.** The proposed Project would be designed and constructed in accordance with the current Title 24 regulations, which includes prewiring for truck ZEV charging stations and/or providing electrical plug-ins at designated commercial loading docks.
Aviation	
20 percent of aviation fuel demand is met by electricity (batteries) or hydrogen (fuel cells) in 2045. Sustainable aviation fuel meets most or the rest of the aviation fuel demand that has not already transitioned to hydrogen or batteries.	**Not Applicable.** The proposed Project would not utilize aviation fuel.
Ocean-going Vessels (OGV)	
2020 OGV At-Berth regulation fully implemented, with most OGVs utilizing shore power by 2027. 25 percent of OGVs utilize hydrogen fuel cell electric technology by 2045.	**Not Applicable.** The proposed Project would not utilize any OGVs.
Port Operations	
100 percent of cargo handling equipment is zero-emission by 2037. 100 percent of drayage trucks are zero emission by 2035.	**Not Applicable.** The proposed Project would not impact any operations at any ports.
Freight and Passenger Rail	
100 percent of passenger and other locomotive sales are ZEV by 2030. 100 percent of line haul locomotive sales are ZEV by 2035. Line haul and passenger rail rely primarily on hydrogen fuel cell technology, and others primarily utilize electricity.	**Not Applicable.** The proposed Project would not involve any rail operations.
Oil and Gas Extraction	
Reduce oil and gas extraction operations in line with petroleum demand by 2045.	**Not Applicable.** The proposed Project would not involve any oil or gas extraction.

Action	Consistency
Petroleum Refining	
CCS on majority of operations by 2030, beginning in 2028. Production reduced in line with petroleum demand.	**Not Applicable.** The proposed Project would not involve any petroleum refining.
Electricity Generation	
Sector GHG target of 38 million metric tons of carbon dioxide equivalent ($MTCO_2e$) in 2030 and 30 $MTCO_2e$ in 2035. Retail sales load coverage134 20 gigawatts (GW) of offshore wind by 2045. Meet increased demand for electrification without new fossil gas-fired resources.	**Consistent.** The proposed Project would comply with the Title 24, Part 6 building requirements, including related to renewable energy generation requirements as well as improved insulation reducing energy consumption. In addition, the proposed Project would implement Mitigation Measure GHG-1, which would require the installation of solar photovoltaic panels onsite.
New Residential and Commercial Buildings	
All electric appliances beginning 2026 (residential) and 2029 (commercial), contributing to 6 million heat pumps installed statewide by 2030.	**Consistent.** The proposed Project would comply with the Title 24, Part 6 building energy requirements and would implement Mitigation Measure GHG-5, which would require all in-unit appliances for residential projects to be all-electric and Energy Star certified.
Existing Residential Buildings	
80 percent of appliance sales are electric by 2030 and 100 percent of appliance sales are electric by 2035. Appliances are replaced at end of life such that by 2030 there are 3 million all-electric and electric-ready homes—and by 2035, 7 million homes—as well as contributing to 6 million heat pumps installed statewide by 2030.	**Not Applicable.** The proposed Project does not involve the operation any existing residential buildings.
Existing Commercial Buildings	
80 percent of appliance sales are electric by 2030, and 100 percent of appliance sales are electric by 2045. Appliances are replaced at end of life, contributing to 6 million heat pumps installed statewide by 2030.	**Not Applicable.** The proposed Project would not involve any continued operations of existing commercial buildings.
Food Products	
7.5 percent of energy demand electrified directly and/or indirectly by 2030; 75 percent by 2045.	**Consistent.** The proposed Project would comply with the Title 24, Part 6 building energy requirements, including renewable energy generation requirements as well as improved insulation reducing energy consumption.
Construction Equipment	
25 percent of energy demand electrified by 2030 and 75 percent electrified by 2045.	**Consistent.** Through City permitting the proposed Project would be required to use construction equipment that are registered by CARB and meet CARB's standards. CARB sets its standards to be in line with the goal of reducing energy demand by 25 percent in 2030 and 75 percent in 2045.
Chemicals and Allied Products; Pulp and Paper	
Electrify 0 percent of boilers by 2030 and 100 percent of boilers by 2045. Hydrogen for 25 percent of process heat by 2035 and 100 percent by 2045. Electrify 100 percent of other energy demand by 2045.	**Not Applicable.** The proposed Project would not be utilized for pulp and/or paper products food products. The proposed Project would comply with the Title 24, Part 6 building energy requirements, including installing electrical wiring for all built in appliances, electric outlets for landscape equipment, solar panels on the maximum roof area available to support the buildings energy demand, and provision of electric charging stations.
Stone, Clay, Glass, and Cement	

Action	Consistency
CCS on 40 percent of operations by 2035 and on all facilities by 2045. Process emissions reduced through alternative materials and CCS.	**Not Applicable**. The proposed Project would not include manufacturing or storage of stone, clay, glass, or cement.
Other Industrial Manufacturing	
0 percent energy demand electrified by 2030 and 50 percent by 2045.	**Not Applicable**. The proposed Project does not include industrial manufacturing, but would comply with the Title 24, Part 6, including increases in renewable energy generation requirements as well as improved insulation reducing energy consumption.
Combined Heat and Power	
Facilities retire by 2040.	**Not Applicable.** The proposed Project does not involve any existing combined heat and power facilities.
Agriculture Energy Use	
25 percent energy demand electrified by 2030 and 75 percent by 2045.	**Not Applicable.** The proposed Project does not involve any agricultural uses.
Low Carbon Fuels for Transportation	
Biomass supply is used to produce conventional and advanced biofuels, as well as hydrogen.	**Not Applicable.** The proposed Project does not involve any production of biofuels.
Low Carbon Fuels for Buildings and Industry	
In 2030s, biomethane135 blended in pipeline Renewable hydrogen blended in fossil gas pipeline at 7 percent energy (~20 percent by volume), ramping up between 2030 and 2040. In 2030s, dedicated hydrogen pipelines constructed to serve certain industrial clusters	**Not Applicable.** The proposed Project does not involve any production of fuels for buildings and industry.
Non-combustion Methane Emissions	
Increase landfill and dairy digester methane capture. Some alternative manure management deployed for smaller dairies. Moderate adoption of enteric strategies by 2030. Divert 75 percent of organic waste from landfills by 2025. Oil and gas fugitive methane emissions reduced 50 percent by 2030 and further reductions as infrastructure components retire in line with reduced fossil gas demand.	**Not Applicable.** The proposed Project does not involve any landfill and/or dairy uses.
High GWP Potential Emissions	
Low GWP refrigerants introduced as building electrification increases, mitigating HFC emissions.	**Consistent.** The proposed Project would comply with the Title 24, Part 6 building energy requirements, including use of low GWP refrigerants, which would be verified through the City's existing development permitting process.

Scoping Plan Appendix D, Local Actions

The 2022 CARB Scoping Plan includes a set of Local Actions set forth in Appendix D to the Scoping Plan, which aim at providing local jurisdictions with tools to reduce GHG emissions in order to assist the state in reaching the reduction targets set forth in the 2022 Scoping Plan. Appendix D to the 2022 Scoping Plan includes a section for evaluating plan-level and project-level alignment with the State's Climate Goals within CEQA GHG analysis. Within this section, CARB identifies multiple recommendations and strategies that should be considered for new development in order to demonstrate consistency with the 2022 Scoping Plan. Specifically, this section is focused on strategies for residential and mixed-use projects. The document is organized into two categories: examples of plan-level GHG reduction actions that could be implemented

by local governments and examples of onsite project design features and mitigation measures that could be applied to individual projects under CEQA.

The proposed Project would include a number of the example project design features and mitigation measures from the 2022 CARB Scoping Plan for construction and operation. For instance, the Scoping Plan's construction measures include enforcing idling time restrictions on construction vehicles, requiring construction vehicles to operate highest tier engines commercially available, diverting and recycling construction waste, minimizing tree removal, and increased use of electric and renewable fuel powered construction equipment and required renewable diesel fuel where commercially available. These measures are consistent with the requirements set forth in Project Mitigation Measure AQ-1, which requires the minimization of idling and the use of clean off-road engines.

Appendix D Notes that residential and mixed-use projects that meet the following three priority areas are clearly consistent with the State's goals and would accommodate growth in a manner which is consistent with the State's GHG reduction and equity prioritization goals.

- Transportation Electrification. Table 3 in Appendix D to the 2022 CARB Scoping Plan notes that to be clearly consistent with the State's goals, projects should provide EV charging infrastructure that, at minimum, meets the most ambitious voluntary standard in the CALGreen code. The proposed Project is consistent with this attribute as Mitigation Measure GHG-2 requires Project EV charging to meet CALGreen Tier 2 standards.

- VMT Reduction. The Scoping Plan notes that to be consistent with the VMT reduction attribute, projects should be located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer); do not result in the loss or conversion of natural and working lands; and consist of transit-supportive densities (minimum of 20 residential dwelling units per acre). The proposed Project is an infill project surrounded by existing urban uses, does not result in the loss of natural and working lands (i.e., it would redevelop and existing shopping center), and has a density of approximately 91 dwelling units per acre (3,750 dwelling units on an approximately 41-acre site) (i.e., far greater than the minimum 20 dwelling units per acre to be considered a transit-supportive density). The proposed Project is also locating high density residential and other uses next to existing and proposed commercial retail services, office, and other uses. The proposed Project would implement the GPU and provide residential housing units consistent with the GPU and Housing Element. Furthermore, Mitigation Measure AQ-4, which requires implementation of a TDM program, would further reduce mobile-source emissions.

- Building Decarbonization. Building decarbonization involves maximizing energy efficiency and eliminating the use of fossil fuel consumption. Mitigation Measure GHG-1 requires the provision of solar panels on the maximum roof area available onsite, Mitigation Measure GHG-2 requires the proposed Project to meet CALGreen Tier 2 energy efficiency standards , including electric charging stations, Mitigation Measure GHG-4 requires the use of electric landscape equipment, and Mitigation Measure GHG-5 requires installation of Energy Star or equivalent energy efficiency rated appliances. In addition, Air Quality Mitigation Measure AQ-4 prohibits fireplaces. Therefore, the proposed Project would be developed in a manner that promotes energy efficiency and minimizes the reliance on fossil fuels.

As the proposed Project would implement key residential and mixed-use project attributes included in Appendix D as mitigation measures (Mitigation Measures GHG-1 through GHG-5), the proposed Project would be consistent with the actions and strategies set forth in Appendix D of the 2022 CARB Scoping Plan and would be consistent with the 2022 CARB Scoping Plan and the State's GHG reduction goals.

City of Santa Ana Climate Action Plan

The City of Santa Ana's CAP includes reduction measures that would help the City achieve its emissions reduction goal, which is consistent with the statewide goals identified. This includes measures related to transportation and land use, community-wide energy, solid waste, water, and wastewater. The CAP describes that many of the commercial and employment corridors throughout the City have limited or no residential development. The proposed Project is consistent with City's CAP strategy of locating new mixed-use development within employment corridors to create a more optimal mix of land uses and reduce vehicle miles traveled.

The proposed Project is an urban mixed-use infill project that would include local retail, housing, office, and hotel uses near transit routes, major freeways, and roadways. The proposed Project includes pedestrian circulation and bicycle circulation infrastructure and facilities. The infill location, mix of uses, and proximity to transit would reduce dependency on cars, reduce time spent in traffic, closely links residents to jobs and services, and reduce VMT. As described in Table 5.5-6, the proposed Project would be consistent with the relevant measures of the City's CAP.

Table 5.5-6: Project Consistency with Santa Ana Climate Action Plan

CAP Goals		Compliance
Transportation and Land Use Measures		
GOAL 1:	Development of Local Retail Service Nodes	**Consistent.** The proposed Project is an urban mixed-use infill project that would include local retail, local services, housing, senior community, and hotel near transit routes, major freeways, and roadways. Because the proposed Project includes local retail and services the proposed Project is consistent with Goal 1.
GOAL 2:	Local Residential Nodes near Retail and Employment	**Consistent.** The proposed Project includes retail, housing, senior community, and hotel uses at an urban infill location near transit, major freeways, and roadways. The inclusion of 3,750 residential dwelling units would provide residential near retail and employment uses and is consistent with Goal 2.
GOAL 3:	Traffic Signal Synchronization Program	**Not Applicable.** This is not a project-specific policy and is related to the City traffic engineering of signals throughout the City. This goal is not applicable to the proposed Project.
GOAL 4:	Local Employment Nodes near Residential and Retail Areas	**Consistent.** As noted above, the proposed Project is an urban infill project mixed-use development that would include retail, services, and hotel uses that would provide local employment. The proposed Project also includes infill residential. Therefore, the proposed Project would provide employment near residential and retail, and would be consistent with Goal 4.
GOAL 5:	End of Trip Facilities in New Projects	**Consistent.** The proposed mix of uses, proximity to transit and employment would encourage and facilitate alternative forms of transportation. The proposed Project includes end of trip facilities, such as sidewalks and bicycle infrastructure. Thus, the proposed project would be consistent with Goal 5.
GOAL 6:	Safe Routes to Schools	**Consistent.** Although this is not a project-specific policy, the proposed Project would maintain and create additional pedestrian circulation and bicycle circulation; and roadway improvements would implement safety features pursuant to existing city and state regulations. Thus, the proposed Project would not result in conflict with Goal 6.

CAP Goals		Compliance
GOAL 7:	Design Guidelines for External Bike/ Pedestrian/ Transit Connectivity	**Consistent.** The Project would include a variety of connectivity points for vehicles, bicycles, transit, and pedestrians. The proposed Project has multiple bus lines that stop at the existing public transit stops along the northern, eastern, and southern boundaries of the Project site. Thus, the proposed Project would be consistent with Goal 7.
GOAL 8:	Design Guidelines for Internal Bike/ Pedestrian/ Transit Connectivity	**Consistent.** The proposed Project has a network of internal walkways to facilitate access throughout the varying land uses on the Project site. The proposed Project includes bicycle parking and locker facilities, and the site provides direct connection to existing transit. Thus, the proposed Project would be consistent with Goal 8.
GOAL 9:	Adjust Parking Ratios	**Consistent.** This goal applies to the parking standards established by the City. The proposed Specific Plan includes specific parking ratios for the site based on the proposed mix of uses and proximity to transit. Thus, the proposed Project would be consistent with Goal 9.
GOAL 10:	Community-wide Bike Sharing Stations	**Consistent.** The proposed Project would include bicycle parking/sharing stations within the parking structures. Thus, the proposed Project would be consistent with Goal 10.
Energy Measures		
GOAL 11:	Property Assessed Clean Energy (PACE) Financing—Commercial	**Consistent.** The proposed Project includes energy efficient infrastructure, such as Title 24 compliant irrigation and plumbing systems, energy efficient appliances, solar-reflective roofing materials, and electric vehicle charging stations. Financial programs such as PACE can provide assistance to the developer to implement these measures. Thus, the proposed Project would be consistent with Goal 11.
GOAL 12:	SCE Small and Medium Business Direct Install	**Consistent.** Programs such as SCE Direct Install can assist the developer with implementing these measures. The proposed Specific Plan would not conflict with Goal 12.
GOAL 13:	Property Assessed Clean Energy (PACE) Financing—Residential	**Consistent.** Financial programs such as PACE could potentially provide assistance to the developer to implement these measures. The proposed Specific Plan would not conflict with Goal 13.
GOAL 14:	Solar Photovoltaic Systems – New Private Installs	**Consistent.** The proposed Project requires the use of solar photovoltaic systems; see MM GHG-1. The solar incentives offered by the City could be used to assist the developer with solar photovoltaic installations. Thus, the proposed Project would be consistent with Goal 14.
GOAL 15:	SCE and SCG Residential Programs	**Consistent.** These goals generally involve the use of retrofit programs and would not directly apply to the new development proposed on site. The proposed Project would comply with the latest CALGreen and Title 24 standards, which would meet these requirements. Thus, the proposed Project would be consistent with Goals 15 through 19.
GOAL 16:	Weatherization*	
GOAL 17:	SCG Commercial Programs**	
GOAL 18:	Streetlight Purchase and Retrofit***	
GOAL 19:	Benchmarking and Retro-commissioning*	
GOAL 20:	Title 24 Energy Efficiency Standards–Commercial*	**Consistent.** The proposed Project would comply with Title 24 energy efficiency standards for commercial uses. Thus, the proposed Project would be consistent with Goal 20.

CAP Goals		Compliance
GOAL 21:	Title 24 Energy Efficiency Standards–Residential*	**Consistent.** The proposed Project would go above the requirements set forth in Title 24 through the implementation of Mitigation Measure GHG-2, which requires the proposed Project to be designed to achieve LEED certification to meet or exceed CALGreen Tier 2 standards. Thus, the proposed Project would be consistent with Goal 21.
GOAL 22:	Solar Hot Water Heating Systems for Laundromats**	**Consistent.** Should a laundromat be proposed, it would be required to comply with Goal 22 through the City's permitting process.
GOAL 23:	Green Business Challenge Program*	**Consistent.** Incentive and financial programs such as the Green Business Challenge Program can assist future tenants to implement energy efficiency measures. The program benefits participating businesses through reduced costs for energy, water, and waste disposal. The proposed Specific Plan would not conflict with Goal 23.
Solid Waste, Water, and Wastewater Measures		
GOAL 24:	AB 341 Commercial and Multifamily Recycling	**Consistent.** The proposed Project would implement a solid waste recycling system in compliance with state and local regulations. In addition, the proposed Project would implement MM GHG-3, which requires developments to divert 75 percent of landfill waste. Thus, the proposed Project would be consistent with Goal 24.
GOAL 25:	Food Waste Digestion	**Consistent.** Beginning in 2022, SB 1383 requires every jurisdiction to provide organic waste collection services to all residents and businesses. SB 1383 required CalRecycle to adopt regulations designed to reduce statewide landfill disposal of organic waste. The proposed Project would comply with the latest regulations regarding food waste collection. Thus, the proposed Project would be consistent with Goal 25.
GOAL 26:	Rainwater Harvesting	**Consistent.** The proposed Project would install storm water detention and biofiltration systems that would collect runoff in vegetated biotreatment systems that have been designed to accommodate stormwater from the site. The systems would filter, treat, and discharge runoff into the existing offsite drain. In addition, runoff would be routed to Project landscaped areas. The proposed Project would not conflict with Goal 26.
GOAL 27:	Turf Removal	**Consistent.** There is very limited turf on the Project site associated with existing landscaping for the shopping center. The proposed Project requires landscaping alternatives to turf. Thus, the proposed Project would be consistent with Goal 27.

*Note that emissions reduction from these measures include natural gas and electricity savings.
**Emissions reduction from these measures is due entirely to natural gas savings.
***Emissions reduction from these measures is due entirely to electricity savings.

The proposed Project is consistent with AB 32 and SB 32 through implementation of municipal code measures that address GHG emissions related to building energy, solid waste management, wastewater, and water conveyance, which would be verified by the City during the Project development review and permitting process.

Overall, the proposed Project would not result in a conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. The proposed Project would be implemented in compliance with state energy standards provided in Title 24. The proposed Project would not interfere with the state's implementation of AB 1279's target of 85 percent below 1990 levels and carbon neutrality by 2045 because it would be consistent with the CARB 2022 Scoping Plan, which is

intended to achieve the reduction targets required by the state. In addition, the proposed Project would be consistent with the relevant City GPU goal and policies and the City's Climate Action Plan. Thus, the proposed Project would not result in a conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs, and impacts would be less than significant.

5.5.7 CUMULATIVE IMPACTS

GHG emissions impacts are assessed in a cumulative context, since no single project can cause a discernible change to climate. Climate change impacts are the result of incremental contributions from natural processes, and past and present human-related activities. Therefore, the area in which a proposed project in combination with other past, present, or future projects, could contribute to a significant cumulative climate change impact would not be defined by a geographical boundary such as a project site or combination of sites, city or air basin. GHG emissions have high atmospheric lifetimes and can travel across the globe over a period of 50 to 100 years or more. Even though the emissions of GHGs cannot be defined by a geographic boundary and are effectively part of the global issue of climate change. However, CEQA only applies to California. Thus, the geographic area for analysis of cumulative GHG emissions impacts is the state of California.

Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006 (Nunez), recognizes that California is the source of substantial amounts of GHG emissions. The statute begins with several legislative findings and declarations of intent, including the following:

> *Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems" (California Health and Safety Code, Section 38501(a)).*

Thus, AB 32 recognizes the significance of the statewide cumulative impact of GHG emissions from sources throughout the state and sets a performance standard for mitigation of that cumulative impact.

The analysis of GHG emission impacts under CEQA contained in this Supplemental EIR effectively constitutes an analysis of a project's contribution to the significant cumulative impact of GHG emissions. State CEQA Guidelines Section 15183.5(b) states that compliance with GHG related plans can support a determination that a project's cumulative effect is not cumulatively considerable. As the proposed Project would be implemented in compliance with applicable plans for the reduction of GHG emissions, detailed previously, the contribution of the proposed Project to significant cumulative GHG impacts would be less than cumulatively considerable. As described previously, the majority of the proposed Project's GHG emissions are generated by mobile emissions. The TDM program required by Mitigation Measure AQ-3 would reduce GHG emissions from commuting. Also, because the Project site is located within a TPA and a High Quality Transit Area with direct access to transit, bicycle, and pedestrian facilities, it would reduce VMT and the related GHG emissions. Further, the Project proposes a specific plan that would be consistent with the buildout assumptions and applicable development standards of the GPU. Therefore, impacts related to generation of GHG emissions from the proposed Project would be less than cumulatively significant with mitigation incorporated.

In addition, because the proposed Project would not result in a conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs, it would not have the

potential to cumulatively combine. Therefore, cumulative impacts related to a conflict with a policy for the purpose of reducing GHG emissions would not occur.

5.5.8 EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS, OR POLICIES

The following requirements would reduce impacts related to GHG emissions.

- California Assembly Bill 1493 (Pavley)
- California Executive Order S-3-05
- Assembly Bill 32 (Global Warming Solutions Act of 2006)
- Senate Bill 375 (Steinberg)
- California Executive Order B-30-15
- Assembly Bill 1279 (Carbon Neutrality)
- California Energy Code
- California Green Building Standards Code
- Santa Ana CAP

5.5.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact GHG-1 and Impact GHG-2 would be **potentially significant**.

5.5.10 MITIGATION MEASURES

GPU FEIR Mitigation Measures

GPU FEIR MM AQ-1: As listed previously in Section 5.1, *Air Quality*.

Proposed Project Applicability: GPU FEIR MM AQ-1 is applicable to the proposed Project and equipment engines meeting CARB Tier 4 Final emissions standards will be required for construction equipment with engines between 50 and 750 horsepower.

Proposed Specific Plan Project Mitigation Measures

Mitigation Measure AQ-3: Vehicle Trip Reduction. As listed previously in Section 5.1, *Air Quality*.

Mitigation Measure AQ-4: Prohibition of Fireplaces. As listed previously in Section 5.1, *Air Quality*.

Mitigation Measure AQ-5: Electric Landscape Equipment. As listed previously in Section 5.1, *Air Quality*.

Mitigation Measure AQ-6: Low VOC Paint (Operations). As listed previously in Section 5.1, *Air Quality*.

Mitigation Measure GHG-1: Solar Panels. The Project shall be required to install solar photovoltaic (PV) panels or other source of renewable electricity generation on-site, based on the maximum roof area available for solar (i.e., solar-ready zone). The solar-ready zone shall comply with Section 110.10 of the 2022 California Energy Code and shall comply with access, pathway, ventilation, and spacing requirements, and exclude skylight area.

The final PV generation facility size requires approval by Southern California Edison (SCE). SCE's Rule 21 governs operating and metering requirements for any facility connected to SCE's distribution system. Should SCE limit the offsite export, the proposed Project may utilize a battery energy storage system (BESS) to lower offsite export while maintaining onsite renewable generation to off-set consumption. The electrical

system and infrastructure must be clearly labeled with noticeable and permanent signage. The schedule of photovoltaic system locations may be updated as needed.

Mitigation Measure GHG-2: LEED, Charging Stations, and Bus Stops. Prior to the issuance of a Phase 1, Phase 2, or Phase 3 building permits, the Project Applicant or successor in interest shall provide documentation to the City of Santa Ana demonstrating the following:

- The Project shall be designed to achieve Leadership in Energy and Environmental Design (LEED) certification to meet or exceed CALGreen Tier 2 standards in effect at the time of building permit application in order to exceed 2022 Title 24 energy efficiency standards.
- The Project shall provide facilities to support electric charging stations per the Tier 2 standards in Section A5.106.5.3 (Nonresidential Voluntary Measures) and Section A5.106.8.2 (Residential Voluntary Measures) of the 2022 CALGreen Code.
- The Applicant shall coordinate with the City of Santa Ana and Orange County Transit Authority to ensure that bus pad and shelter improvements are incorporated, as appropriate.

Mitigation Measure GHG-3: Landfill Waste. The development (Phase 1, Phase 2, and Phase 3) shall divert a minimum of 75 percent of landfill waste. Prior to issuance of certificate of occupancy, a recyclables collection and load area shall be constructed in compliance with the City standards for Recyclable Collection and Loading Areas.

Mitigation Measure GHG-4: Electrical Landscape Equipment. Prior to the issuance of Phase 1, Phase 2, or Phase 3 occupancy permits, the City Planning and Building and Safety Divisions shall confirm that tenant lease agreements include contractual language that all landscaping equipment used on site shall be 100 percent electrically powered. This requirement shall be included in the third-party vendor agreements for landscape services for the building owner and tenants, as applicable.

Mitigation Measure GHG-5: Energy Efficient Appliances. All major applicant provided in-unit residential appliances (e.g., dishwashers, refrigerators, clothes washers and dryers, water heaters, and for space heating) provided/installed shall be electric (i.e., appliances that do not use natural gas, propane, or other fossil fuels) and Energy Star certified or of equivalent energy efficiency where applicable. Prior to the issuance of the certificate of occupancy, the City of Santa Ana shall verify implementation of this requirement. Installation of electric Energy Star–certified or equivalent appliances shall be verified by the Planning and Building Department during plan check.

5.5.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The impacts related to GHG emissions would be mitigated to a less-than-significant level. Also, the Project would not conflict with an applicable plan adopted for the purpose of reducing GHGs with implementation of the mitigation included. Therefore, impacts related to GHG emissions would be less than cumulatively significant with incorporation of mitigation.

REFERENCES

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