SECTION 4.7
Global Climate Change

This section assesses the potential greenhouse gas (GHG) emissions and climate change effects of construction and operation of the proposed projects and identifies potentially feasible mitigation measures where appropriate. The analysis was developed based on project-specific construction and operational features described in Chapter 2, Project Description, on traffic information generated as part of the analysis presented in section 4.10, Transportation and Circulation, and on data provided in the *City of Sacramento 2035 General Plan*,[1] the *City of Sacramento 2035General Plan Master Environmental Impact Report*,[2] the Sacramento Metropolitan Air Quality Management District (SMAQMD) *Guide to Air Quality Assessment*,[3] and the City's *Climate Action Plan Consistency Review Checklist*.[4]

Comments received in response to the NOP included a letter from the SMAQMD requesting a climate change impact analysis, including construction and operational GHG emissions for the proposed projects, as well as identification of mitigation measures to address significant GHG emissions. Several other comments on the NOP pertained to energy efficiency of the proposed projects and GHG emissions. These issues and concerns are addressed in this section and in the energy section of this SEIR (see Section 4.5).

Issues Addressed in the 2007 RSP EIR

Section 4.4.1 of the 2007 RSP Final EIR (4.4 Air Quality) addressed global warming and GHG emissions in Responses to Comments 14-5, 18-14, 25-19, and 26-44. The discussion included an environmental setting, a regulatory setting, thresholds of significance, impacts, and mitigation measures. The significance was based on the consistency of the project's emissions with AB 32 and on mitigation measures such as those that had been recommended by the California Climate Action team. The 2007 RSP EIR analysis concluded that "because the project would represent the type of growth that will help the State achieve consistency with AB 32, and because the project would incorporate all feasible GHG reduction measures, project impacts to GHG emissions would be considered less than significant and the project's contribution to cumulative GHG emissions would be considered less than considerable."

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1 City of Sacramento, 2015. *City of Sacramento 2035 General Plan.* Adopted March 3, 2015.

2 City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Repor*t (SCH No. 2012122006). Certified March 3, 2015.

3 Sacramento Metropolitan Air Quality Management District, 2016. *Guide to Air Quality Assessment*. Adopted December 2009 and last updated March 2016.

4 City of Sacramento, 2015. *Climate Action Plan Consistency Review Checklist*. June 19, 2015.

This analysis evaluates the RSPU, the RSPU Land Use Variant, the KP Medical Center, MLS Stadium, and Stormwater Outfall for consistency with AB 32. However, the approach for the evaluation is different than that included in the 2007 RSP EIR. Since the 2007 RSP was prepared, the City of Sacramento has prepared a Climate Action Plan (CAP) that is designed to be consistent with the requirements of AB 32. In 2015, the CAP was incorporated into the City of Sacramento's 2035 General Plan and the City has developed a consistency review checklist that is used to establish the consistency of a proposed project with relevant policies of the CAP. Projects that meet the requirements of the City's CAP consistency review checklist are considered consistent with the City's CAP and with the emission reduction requirements mandated by AB 32.

4.7.1 Environmental Setting

"Global warming" and "global climate change" are the terms used to describe the increase in the average temperature of the earth's near-surface air and oceans since the mid-20th century and its projected continuation. Warming of the climate system is now considered to be unequivocal.[5]

Natural processes and human actions have been identified as the causes of this warming. The International Panel on Climate Change (IPCC) has concluded that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward. After 1950, however, increasing GHG concentrations resulting from human activity such as fossil fuel burning and deforestation are believed to be responsible for most of the observed temperature increase. Increases in GHG concentrations in the earth's atmosphere are thought to be the main cause of human-induced climate change. Certain gases in the atmosphere naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space. This is sometimes referred to as the "greenhouse effect" and the gases that cause it are called "greenhouse gases." Some GHGs occur naturally and are necessary for keeping the earth's surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have decreased the amount of solar radiation that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.

Carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) are the principal GHGs. When concentrations of these gases exceed natural concentrations in the atmosphere, the greenhouse effect may be intensified. CO_2, CH_4, and N_2O occur naturally, and are also generated through human activity. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing[6] associated with agricultural practices and landfills. Other human-

5 Intergovernmental Panel on Climate Change, 2007. *Climate Change 2007: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Parry, Martin L., Canziani, Osvaldo F., Palutikof, Jean P., van der Linden, Paul J., and Hanson, Clair E. (eds.)]. Cambridge University Press, Cambridge, United Kingdom. 2007. p. 9.

6 Off-gassing is defined as the release of chemicals under normal conditions of temperature and pressure.

generated GHGs include fluorinated gases such as SFCs, PFCs, and SF_6, which have much higher heat-absorption potential than CO_2, and are byproducts of certain industrial processes.

CO_2 is the reference gas for climate change because it is the predominant GHG emitted. The effect that each of the aforementioned gases can have on global warming is a combination of the mass of their emissions and their global warming potential (GWP). GWP indicates, on a pound-for-pound basis, how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO_2. For example, CH_4 and N_2O are substantially more potent GHGs than CO_2, with GWPs of 21 and 310 times that of CO_2, respectively.

In emissions inventories, GHG emissions are typically reported as metric tons of CO_2 equivalents (CO_2e). CO_2e are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH_4 and N_2O have much higher GWPs than CO_2, CO_2 is emitted in such vastly higher quantities that it accounts for the majority of GHG emissions in CO_2e, both from residential developments and human activity in general.

Potential Effects of Human Activity on GHG Emissions

Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO_2 emissions (and thus substantial increases in atmospheric concentrations). In 1994, atmospheric CO_2 concentrations were found to have increased by nearly 30 percent above pre-industrial (c. 1860) concentrations.

There is international scientific consensus that human-caused increases in GHGs have contributed and will continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include the displacement of thousands of coastal businesses and residences (as a result of sea level rise), impacts on agriculture, changes in disease vectors, and changes in habitat and biodiversity. As the California Air Resources Board (CARB) *Climate Change Scoping Plan* noted, the legislature in enacting Assembly Bill (AB) 32 found that global warming would cause detrimental effects to some of the state's largest industries, including agriculture, winemaking, tourism, skiing, commercial and recreational fishing, forestry, and the adequacy of electrical power generation. The *Climate Change Scoping Plan* states as follows:[7] "The impacts of global warming are already being felt in California. The Sierra snowpack, an important source of water supply for the state, has shrunk 10 percent in the last 100 years. It is expected to continue to decrease by as much as 25 percent by 2050. World-wide changes are causing sea levels to rise – about 8 inches of increase has been recorded at the Golden Gate Bridge over the past 100 years – threatening low coastal areas with inundation and serious damage from storms." AB 32 is discussed further below under Regulatory Setting.

[7] California Air Resources Board, 2008. *Climate Change Scoping Plan*. Adopted December 11, 2008, re-approved by the CARB on August 24, 2011. p. 10.

Impacts of Climate Change

Ecosystem and Biodiversity Impacts

Climate change is expected to have effects on diverse types of ecosystems.[8] As temperatures and precipitation change, seasonal shifts in vegetation will occur; this could affect the distribution of associated flora and fauna species. As the range of species shifts, habitat fragmentation could occur, with acute impacts on the distribution of certain sensitive species. The IPCC states that "a large fraction of both terrestrial and freshwater species faces increased extinction risk under projected climate change during and beyond the 21st century, especially as climate change interacts with other stressors, such as habitat modifications, over exploitation, and invasive species."[9] Shifts in existing biomes could make ecosystems vulnerable to encroachment by invasive species. Forest dieback poses risks for carbon storage, biodiversity, wood production, water quality, and economic activity. Wildfires, which are an important control mechanism in many ecosystems, may become more severe and more frequent, making it difficult for native plant species to repeatedly re-germinate. Continued emission of GHGs will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive, and irreversible impacts for people and ecosystems.[10]

Human Health Impacts

Climate change may increase the risk of vector-borne infectious diseases, particularly those found in tropical areas and spread by insects such as malaria, dengue fever, yellow fever, and encephalitis. Cholera, which is associated with algal blooms, could also increase. While these health effects would largely affect tropical areas in other parts of the world, effects would also be felt in California. Warming of the atmosphere would be expected to increase smog and particulate pollution, which could adversely affect individuals with heart and respiratory problems, such as asthma. Extreme heat events would also be expected to occur with more frequency and could adversely affect the elderly, children, and the homeless. Finally, the water supply impacts and seasonal temperature variations expected as a result of climate change could affect the viability of existing agricultural operations, making the food supply more vulnerable.[11]

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8 U.S. Environmental Protection Agency, 2008. *Climate Change – Ecosystems and Biodiversity.* Available: www.epa.gov/climatechange/effects/eco.html. Accessed June 19, 2012.

9 Intergovernmental Panel on Climate Change, 2014. Climate Change 2013: Impacts, Adaptation, and Vulnerability, Summary for Policymakers. Working Group II Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. pp. 14-15.

10 Intergovernmental Panel on Climate Change, 2014. *Climate Change 2014, Synthesis Report Summary for Policymakers, Fifth Assessment Report.*

11 U.S. Environmental Protection Agency, 2008. *Climate Change – Health and Environmental Effects.* Available: www.epa.gov/climatechange/effects/health.html#climate. Accessed June 19, 2012.

Greenhouse Gas Emissions Estimates

Global Emissions

Worldwide emissions of GHGs in 2013 were approximately 35.3 billion metric tons of CO_2e per year.[12] This includes both ongoing emissions from industrial and agricultural sources, but excludes emissions from land use changes.

U.S. Emissions

In 2014, the United States emitted about 69 million metric tons of CO_2e. Of the four major emission sectors — residential, commercial, industrial, and transportation — transportation accounts for the highest fraction of GHG emissions (approximately 33 percent); these emissions are generated from direct fossil fuel combustion.[13]

State of California Emissions

In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. Emissions of CO_2 are byproducts of fossil fuel combustion. Methane, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Nitrous oxide is also largely attributable to agricultural practices and soil management. Carbon dioxide sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution, respectively, two of the most common processes of CO_2 sequestration. California produced approximately 459.3 million metric tons of CO_2e in 2013. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2013, accounting for 37 percent of total GHG emissions in the state. This sector was followed by the industrial sector (23 percent), and the electric power sector (including both in-state and out-of-state sources) (20 percent).[14]

City of Sacramento Emissions

Based on the 2011 GHG inventory for the City of Sacramento, the transportation sector represents the largest source of GHG emissions, accounting for 52.2 percent of the City's annual emissions of 3.85 million metric tons of CO_2e. Electricity and natural gas combustion for the operation, heating, and cooling of commercial, industrial, and residential buildings accounted for another 38.2 percent of annual CO_2e emissions. The other CO_2e emission sectors included in the inventory (with percent contributions reported in parentheses) were waste (8.2 percent), wastewater treatment (0.5 percent), water consumption (0.3 percent) and industrial specific sources (0.5 percent).[15]

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12 PBL Netherlands Environmental Assessment Agency, 2015. Trends in Global CO2 Emissions, 2014 Report.

13 U.S. Environmental Protection Agency, 2016. Draft *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2014;* Executive Summary, Table ES-2. February 2016.

14 California Air Resources Board, 2015. *California Greenhouse Gas Inventory 2015 Edition of the GHG Emission Inventory Release (June 2015).* Available: www.arb.ca.gov/cc/inventory/data/data.htm.

15 City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report*. Adopted March 3, 2015.

4.7.2 Regulatory Setting

Federal

U.S. Environmental Protection Agency "Endangerment" and "Cause or Contribute" Findings

The U.S. Supreme Court has held that the United States Environmental Protection Agency (U.S. EPA) must consider regulation of motor vehicle GHG emissions. In *Massachusetts v. Environmental Protection Agency* et al., twelve states and cities, including California, together with several environmental organizations sued to require the U.S. EPA to regulate GHGs as pollutants under the CAA (127 S. Ct. 1438 (2007)). The Supreme Court ruled that GHGs fit within the CAA's definition of a pollutant and the U.S. EPA had the authority to regulate GHGs.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:[16]

- ***Endangerment Finding:*** The current and projected concentrations of the six key 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 combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

Mandatory Greenhouse Gas Reporting Rule

On September 22, 2009, the U.S. EPA released its final Greenhouse Gas Reporting Rule (Reporting Rule). The Reporting Rule is a response to the fiscal year (FY) 2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110-161), that required the U.S. EPA to develop "…mandatory reporting of GHGs above appropriate thresholds in all sectors of the economy…." The Reporting Rule applies to most entities that emit 25,000 metric tons of CO_2e or more per year. Since 2010, facility owners must submit an annual GHG emissions report with detailed calculations of facility GHG emissions. The Reporting Rule also mandates recordkeeping and administrative requirements in order for the U.S. EPA to verify annual GHG emissions reports.

State

In California, the legal framework for GHG emission reduction has come about through an incremental set of Governors' Executive Orders, legislation, and regulations put in place since 2002. The major components of California's climate change initiative are reviewed below.

[16] U.S. Environmental Protection Agency. 2016. Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act. Available: www3.epa.gov/climatechange/endangerment/.

Assembly Bill 1493

In 2002, then-Governor Gray Davis signed Assembly Bill (AB) 1493. AB1493, also known as the "Pavley" regulations (named for the bill's author, State Senator Fran Pavley), required the CARB to develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks and other vehicles determined by the CARB to be vehicles whose primary use is noncommercial personal transportation in the state."

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

Because the Pavley regulations would impose stricter standards than those under the CAA, California applied to the U.S. EPA for a waiver under the CAA; this waiver was initially denied in 2008. In 2009, however, the U.S. EPA granted the waiver.

Senate Bills 1078 and 107 and Executive Orders S-14-08 and S-21-09

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

In November 2008, then-Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Portfolio Standard to 33 percent renewable power by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the CARB under its AB 32 authority to enact regulations to help the state meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020.

The 33-percent-by-2020 goal was codified in April 2011 with Senate Bill X1-2, which was signed by Governor Edmund G. Brown, Jr. This new Renewable Portfolio Standard (RPS) preempts the CARB 33 percent Renewable Electricity Standard and applies to all electricity retailers in the state, including publicly owned utilities (POUs), investor-owned utilities,

electricity service providers, and community choice aggregators. Consequently, the Sacramento Metropolitan Utility District (SMUD), who would be the electricity provider for the proposed projects, must meet the 33 percent goal by 2020. All of these entities must adopt the new RPS goals of 20 percent of retail sales from renewables by the end of 2013 and 25 percent by the end of 2016, with the 33 percent requirement being met by the end of 2020.

Executive Order S-3-05

In 2005, in recognition of California's vulnerability to the effects of climate change, then-Governor Arnold Schwarzenegger established Executive Order S-3-05, which set forth the following target dates by which statewide GHG emissions would be progressively reduced: 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 32 and the California Climate Change Scoping Plan

Assembly Bill 32 Requirements

In 2006, the California legislature passed Assembly Bill 32 (California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires the CARB to design and implement feasible and cost-effective emissions limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25-percent reduction in emissions). AB 32 anticipates that the GHG reduction goals will be met, in part, through local government actions. The CARB has identified a GHG reduction target of 15 percent from current levels for local governments (municipal and community-wide) and notes that successful implementation of the plan relies on local governments' land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions.

Scoping Plan Provisions

Pursuant to AB 32, the CARB adopted a *Climate Change Scoping Plan* in December 2008 (re-approved by CARB on August 24, 2011[17]) outlining measures to meet the 2020 GHG reduction goals. In order to meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels or about 15 percent from today's levels. The Scoping Plan recommends measures that are worth studying further, and that the State of California may implement, such as new fuel regulations. It estimates that a reduction of 174 million metric tons of CO_2e (about 191 million U.S. tons) from the transportation, energy, agriculture, forestry, and other sources could be achieved should the state implement all of the measures in the Scoping Plan. The Scoping Plan relies on the requirements of Senate Bill (SB) 375 (discussed below) to implement the carbon emission reductions anticipated from land use decisions.

[17] California Air Resources Board, 2008. *Climate Change Scoping Plan.* Adopted December 11, 2008, re-approved by CARB August 24, 2011. pp. ES-1 and 17.

In May 2014, CARB published its First Update to the Scoping Plan.[18] This update builds upon the initial Scoping Plan with new strategies and recommendations. The update defines ARB's climate change priorities over the next five years and sets the groundwork to reach long-term goals set forth in Executive Orders S-3-05 and B-16-2012.

CARB is currently updating its Scoping Plan to reflect the 2030 target required by Executive Order B-30-15 and the 2050 target required by AB 32.

Cap-and-Trade Program

The Scoping Plan identifies cap-and-trade as a key strategy for helping California reduce its GHG emissions.[19] A cap-and-trade program sets the total amount of GHG emissions allowable for facilities under the cap and allows covered sources, including producers and consumers of energy, to determine the least expensive strategies to comply. AB 32 required the CARB to adopt the cap-and-trade regulation by January 1, 2011, and the program itself began in November 2012.

Carbon offset credits are created through the development of projects, such as renewable energy generation or carbon sequestration projects, that achieve the reduction of emissions from activities not otherwise regulated, covered under an emissions cap, or resulting from government incentives. Offsets are verified reductions of emissions whose ownership can be transferred to others. As required by AB 32, any reduction of GHG emissions used for compliance purposes must be real, permanent, quantifiable, verifiable, enforceable, and additional. Offsets used to meet regulatory requirements must be quantified according to the CARB-adopted methodologies, and the CARB must adopt a regulation to verify and enforce the reductions. The criteria developed will ensure that the reductions are quantified accurately and are not double-counted within the system.[20]

Executive Order S-1-07

Executive Order S-1-07, signed by then-Governor Arnold Schwarzenegger in 2007, proclaimed that the transportation sector is the main source of GHG emissions in California, at over 40 percent of statewide emissions. The order established a goal of reducing the carbon intensity of transportation fuels sold in California by a minimum of 10 percent by 2020. It also directed the CARB to determine whether this Low Carbon Fuel Standard could be adopted as a discrete, early-action measure after meeting the mandates in AB 32. The CARB adopted the Low Carbon Fuel Standard on April 23, 2009.

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18 California Air Resources Board, 2012. *First Update to the Climate Change Scoping Plan.* Adopted May 28, 2014.

19 California Air Resources Board, 2008. *Climate Change Scoping Plan*. Adopted December 11, 2008, re-approved by the CARB on August 24, 2011. pp. 18-20.

20 California Air Resources Board, 2008. *Climate Change Scoping Plan.* Adopted December 11, 2008, re-approved by the CARB on August 24, 2011. pp. 36-38.

Senate Bill 1368

SB 1368 is the companion bill of AB 32 and was signed by then-Governor Schwarzenegger in September 2006. SB 1368 requires the California Public Utilities Commission (CPUC) to establish a GHG emission performance standard for baseload generation from investor-owned utilities by February 1, 2007. The California Energy Commission (CEC) was also required to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the GHG emission rate from a baseload combined-cycle natural gas-fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the CPUC and CEC.

Senate Bill 375

In addition to policy directly guided by AB 32, the legislature in 2008 passed SB 375, which provides for regional coordination in land use and transportation planning and funding to help meet the AB 32 GHG reduction goals. SB 375 aligns regional transportation planning efforts, regional GHG emissions reduction targets, and land use and housing allocations. SB 375 requires Regional Transportation Plans (RTPs) developed by the state's 18 metropolitan planning organizations (MPOs) to incorporate a "sustainable communities strategy" (SCS) that will achieve GHG emission reduction targets set by the CARB. SB 375 also includes provisions for streamlined CEQA review for some infill projects, such as transit-oriented development. SB 375 would be implemented over the next several years. The Sacramento Area Council of Government's (SACOG) 2016 *Metropolitan Transportation Plan/Sustainable Communities Strategy* was adopted on February 18, 2016. SACOG's *Strategy* calls for meeting and exceeding the CARB GHG reduction goals from passenger vehicles and light-duty trucks of 7.6% by 2020 and 15.6% by 2035, where 2005 is the baseline year for comparison.[21]

Green Building Standards Code

In January 2010, the State of California adopted the California Green Building Standards Code (CALGreen) that establishes mandatory green building standards for all buildings in California. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality. These standards include a mandatory set of minimum guidelines, as well as more rigorous voluntary measures, for new construction projects to achieve specific green building performance levels. This Code went into effect as part of local jurisdictions' building codes on January 1, 2011 and was most recently updated as the 2013 California Green Building Standards Code (effective January 1, 2014).[22]

Executive Order B-16-12

In 2012, Governor Brown issued Executive Order B-16-12, ordering "that California's state vehicle fleet increase the number of zero-emission vehicles through the normal course of fleet

[21] Sacramento Area Council of Governments, 2016. 2016 *Metropolitan Transportation Plan/Sustainable Communities Strategy*. Adopted February 18, 2016. p. 173.

[22] California Building Standards Commission, 2013. California 2013 Green Building Standards Code, CalGreen California Code of Regulations, Title 24, Part 11. Effective Date: January 1, 2014.

replacement so that at least 10 percent of fleet purchases of light-duty vehicles be zero-emission by 2015 and 25 percent of fleet purchases of light-duty vehicles be zero-emission by 2020. The executive order also requires that California target for 2050 a reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels.

Executive Order B-30-15

In 2015, Governor Brown issued Executive Order B-30-15, establishing a GHG reduction target of 40 percent below 1990 levels by 2030. This goal was set to make it possible to reach the ultimate goal of AB 32 to reduce GHG emissions 80 percent under 1990 levels by 2050.

California Environmental Quality Act (CEQA) and Senate Bill 97

Under CEQA, lead agencies are required to disclose the reasonably foreseeable adverse physical environmental effects of projects they are considering for approval. GHG emissions have the potential to adversely affect the environment because they contribute to global climate change. In turn, global climate change has the potential to raise sea levels, alter rainfall and snowfall, and affect habitat.

Senate Bill 97

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is a prominent environmental issue requiring analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, no later than July 1, 2009. The California Natural Resources Agency was required to certify or adopt those guidelines by January 1, 2010. On December 30, 2009, the Natural Resources Agency adopted amendments to the State CEQA Guidelines, as required by SB 97. These State CEQA Guidelines amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The amendments became effective March 18, 2010.

State CEQA Guidelines

The State CEQA Guidelines are embodied in the California Code of Regulations (CCR), Public Resources Code, Division 13, starting with Section 21000. State CEQA Guidelines section 15064.4 specifically addresses the significance of GHG emissions, requiring a lead agency to make a "good-faith effort" to "describe, calculate or estimate" GHG emissions in CEQA environmental documents. Section 15064.4 further states that the analysis of GHG impacts should include consideration of (1) the extent to which the project may increase or reduce GHG emissions, (2) whether the project emissions would exceed a locally applicable threshold of significance, and (3) the extent to which the project would comply with "regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions." The CEQA Guidelines also state that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including plans or regulations for the reduction of GHG emissions) that provides specific requirements that will

avoid or substantially lessen the cumulative problem within the geographic area in which the project is located (State CEQA Guidelines section 15064(h)(3)). The State CEQA Guidelines do not, however, set a numerical threshold of significance for GHG emissions.

The CEQA Guidelines also include the following direction on measures to mitigate GHG emissions, when such emissions are found to be significant:

> Consistent with Section 15126.4(a), lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions. Measures to mitigate the significant effects of greenhouse gas emissions may include, among others:
>
> (1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision;
>
> (2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures;
>
> (3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions;
>
> (4) Measures that sequester greenhouse gases; and
>
> (5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.[23]

Local

City of Sacramento Climate Action Plan and City of Sacramento 2035 General Plan

The City of Sacramento CAP includes several initiatives to reach its goals of reducing community-wide emissions by 15% below 2005 levels by 2020, 38% below 2005 levels by 2030, and 83% below 2005 levels by 2050. These goals must be achieved with the addition of new residents living in the city and additional people working in the city. As compared to 2005, by 2020 Sacramento expects an additional 116,400 people, 58,500 housing units, and 80,200 employees. On a per capita basis (including new residents), Sacramento will need to reduce its emissions to about 6.2 metric tons of CO2e per person by 2020. This represents a 31 percent reduction from 2005 per capita emission levels (8.9 metric tons CO2e per person).

[23] State CEQA Guidelines section 15126.4(a).

The CAP outlines seven strategies to meet Sacramento's GHG reduction goals.[24] Those strategies include:

- Strategy 1: Sustainable Land Use – This strategy focuses on using land efficiently, while preserving the character of existing neighborhoods, by providing for complete neighborhoods that incorporate natural resources and green infrastructure.
- Strategy 2: Mobility and Connectivity – This strategy involves creating a multi-modal transportation network that increases the use of sustainable modes of transportation (walking, biking, and transit) and reduces dependence on automobiles.
- Strategy 3: Energy Efficiency and Renewable Energy – The third strategy increases the energy efficiency of existing and new buildings and maximizes the use and generation of renewable energy.
- Strategy 4: Water Reduction and Recycling – This strategy reduces the production, consumption, and disposal of waste materials, while encouraging reuse, recycling, and composting.
- Strategy 5: Water Conservation and Wastewater Reduction – This strategy encourages water conservation and management and wastewater treatment practices the reduce energy demand.
- Strategy 6: Climate Change Adaptation – This strategy plans for climate change risks and is designed to create resilient communities, economies, and environments.
- Strategy 7: Community Involvement and Empowerment – This strategy enlists the ideas and energy of residents and businesses to help achieve the City's climate action objectives.

For each of the seven strategies listed above, the CAP includes measures and actions that the City will use to reduce GHG emissions and adapt to climate change. Measures organize the specific programs, policies, and actions that the City will carry out to achieve its climate action strategies. Within each measure are the detailed actions that the City will take to implement the measures.

In 2015, the City adopted its 2035 General Plan. The strategies, measures, and actions that formed the backbone of the City's CAP were incorporated into the 2035 General Plan. Appendix B of the 2035 General Plan identifies the location of each CAP measure within the 2035 General Plan.[25]

[24] City of Sacramento, 2012. *Sacramento Climate Action Plan*. Adopted February 14, 2012. pp. i-xiv.

[25] City of Sacramento, 2015. General Plan Climate Action Plan Policies and Programs, Appendix B pp. 1-78.

To determine a project's consistency with the CAP, the City developed a Climate Action Plan Consistency Checklist.[26] This checklist provides a streamlined review process for proposed development projects subject to environmental review under CEQA.

4.7.3 Analysis, Impacts, and Mitigation

Significance Criteria

GHG emissions relate to an inherently a cumulative impact because no single project makes a significant contribution to global climate change. The State CEQA Guidelines require the analysis of GHGs and potential climate change impacts from new development. Under section 15183.5 of the State CEQA Guidelines:

> [p]ublic agencies may choose to analyze and mitigate significant greenhouse gas emissions in a plan for the reduction of greenhouse gas emissions or similar document. A plan to reduce greenhouse gas emissions may be used in a cumulative impacts analysis as set forth below. Pursuant to sections 15064(h)(3) and 15130(d), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted plan or mitigation program under specified circumstances.

The Sacramento CAP qualifies under section 15183.5 of the State CEQA Guidelines as a plan for the reduction of GHG emissions for use in cumulative impact analysis pertaining to development projects. Thus, for purposes of this EIR, impacts to global climate change may be considered significant if the proposed projects would result in the following:

- Conflict with the City's Climate Action Plan.

Methodology and Assumptions

As discussed above, the City has developed a CAP Consistency Review Checklist. This checklist is designed to streamline the GHG emissions review process for new development projects subject to CEQA.

Table 4.7-1 presents the checklist. The first checklist question focuses on a project's consistency with the general plan and sustainable land use aspects of the CAP. Questions 2, 3, and 4 evaluate a project's consistency with the CAP's mobility requirements, while questions 5 and 6 focus on evaluating whether a project is consistent with the energy efficiency and renewable energy portions of the CAP. Projects that achieve each item on the City's CAP Consistency Review Checklist would be consistent with the City's CAP, and therefore would not result in significant GHG emissions or climate change impacts.

[26] City of Sacramento, 2013. *Climate Action Plan Consistency Review Checklist*. June 19, 2015. pp. 1-20.

TABLE 4.7-1.
CITY OF SACRAMENTO CAP CONSISTENCY REVIEW CHECKLIST

	City of Sacramento Consistency Review Checklist Questions
1.	Is the proposed project substantially consistent with the land use and urban form designation, allowable floor area ratio (FAR) and/or density standards in the City's 2035 General Plan?
2.	Would the project incorporate traffic calming measures ?
3.	Would the project incorporate pedestrian facilities and connections to public transportation consistent with the City's Pedestrian Master Plan?
4.	Would the project incorporate bicycle facilities consistent with the City's Bikeway Master Plan and meet or exceed minimum standards for bicycle facilities in the Zone Code and CALGreen?
5.	Would the project include on-site renewable energy systems (e.g., solar photovoltaic, solar water heating, etc.) that would generate at least 15% of the project's total energy demand?
6.	Would the project comply with minimum CALGreen Tier 1 water efficiency standards?

Source: City of Sacramento, 2015.

Except for the Stormwater Outfall, each of the proposed projects is evaluated for CAP consistency by evaluating the project against each checklist question. The Stormwater Outfall is not a land use development that can be evaluated using the checklist questions. The Outfall represents a piece of critical infrastructure that would allow land use development in the RSP Area and is evaluated in that context.

Impacts and Mitigation Measures

Impact 4.7-1: Implementation of the proposed projects could conflict with the City of Sacramento's Climate Action Plan.

Railyards Specific Plan Update

As shown in Table 4.7-1 above, the City's CAP consistency review checklist includes six criteria against which a project must be evaluated. Projects that are determined consistent with each of the six criteria are considered consistent with Sacramento's CAP and would not have a significant GHG impact. The following discussion evaluates the RSPU's consistency with each of the six checklist questions.

1. *Is the proposed RSPU project substantially consistent with the land use and urban form designation, allowable floor area ratio (FAR) and/or density standards in the City's 2035 General Plan?*

Under the proposed RSPU the majority of the RSP Area would be designated Central Business District, in which residential densities are anticipated to range from 61 to 450 units per acre and non-residential or mixed-use floor to area ratios (FARs) range from 3.0 to15.0. The future KP Medical Center site would be designated Urban Center High, with residential densities ranging from 24 to 250 units per acre and non-residential FARs required to range from 0.5 to 8.0. The eastern end of the RSP Area (east of 10th Street) would be designated Employment Center Low

Rise, with a maximum FAR of 1.0. Other parts of the RSP Area would be designated Parks and Recreation and Public/Quasi-Public.

As proposed, the RSPU would include the following zoning requirements:

C-3 SPD: residential densities from 61 to 450 units per acre, and non-residential development with an FAR between 3.0 and 15.0.

In addition to the residential and non-residential uses to be developed in the C-3 SPD area, and which would be consistent with the residential and non-residential land use and urban form designation, the proposed MLS Stadium would be located in the C-3 SPD land use. It would include 395,700 square feet (sf) of uses on 14.7 acres. It would have a FAR of 0.62, which is below the 2035 General Plan's designated FAR range of 3.0 to 15.0 for the Central Business District designation. However, consistent with 2035 General Plan policy LU 1.1.11, the City may permit development below the minimum FAR where the use "by its nature normally conducts a substantial amount of its operations outdoors." Since a vast majority of the proposed MLS Stadium would accommodate outdoor seating, playing field, and public plazas and other gathering areas, it would be consistent with the land use and urban form designation of the 2035 General Plan.

R-5 SPD: 61-450 units per acre, non-residential on ground floors

The R-5 SPD land use designation is consistent with the density standards and FAR ratio ranges allowed by the proposed Central Business District designation in the 2035 General Plan.

H SPD: 24 to 250 units per acre, minimum FAR of 0.5 up to maximum of 8.0.

The H SPD land use designation is for the proposed KP Medical Center, which would consist of 510,000 sfof medical offices and 718,003 sf of hospital facilities on 18 acres. This would result in a FAR ratio of 1.62, which is consistent with the 0.5 to 8.0 FAR range allowed by the proposed Urban Center High designation in the 2035 General Plan (FAR range of 0.5-8.0). The KP Medical Center is consistent with the City's overall goals for land use and urban form because it would encourage high density development in the downtown area. The high level of density would encourage land uses that enable the City to achieve the goals established in the CAP.

C-1 SPD: up to a FAR of 1.0

The C-1 SPD land use designation would provide for concessions or other small-scale businesses allowed by the under the proposed Parks and Recreation designation in the 2035 General Plan.

C-2 SPD, up to 60 units per acre, up to FAR of 2.0

The C-2 SPD land use designation is within residential density standard (24-250 units per acre) and the FAR range (0.5 to 8.0) allowed by the proposed RSPU's Employment Center Low Rise designation in the 2035 General Plan.

As discussed above, the RSPU would be consistent with the City's 2035 General Plan density and FAR requirements for the Central Business District.

2. Would the RSPU project incorporate traffic calming measures (Applicable CAP Action: 2.1.1)?

The RSPU would be located in the Central Business District, which is not a part of the City where installation of traffic calming measures is encouraged. Consequently, this criterion would not apply to the proposed RSPU and traffic-calming measures are not proposed.

3. Would the RSPU project incorporate pedestrian facilities and connections to public transportation consistent with the City's Pedestrian Master Plan (Applicable CAP Action: 2.2.1)?

The proposed RSPU would include pedestrian access via sidewalks on all surface streets. These would connect to greater downtown Sacramento via pedestrian routes through the RSP Area. Like the 2007 RSP, pedestrian features of the proposed RSPU would include narrow street widths, street trees, and broad sidewalks. Key refinements to the approved pedestrian system would include enhancement of the sidewalks and crosswalks on 7th Street and other streets accessing the proposed MLS Stadium site, as well as elimination of an approximately 300-foot long pedestrian and bike tunnel parallel to 7th Street under the UPRR rail line. These RSPU features would be consistent with the City's Pedestrian Master Plan because they meet that Plan's goals of:

- developing a cohesive pedestrian network of sidewalks and street crossings that make walking a realistic way to get around,
- providing a continuous pedestrian network that connects through blocks and sites, and connects buildings to each other, to the street, and to transit facilities, and
- providing crossings that are convenient and comfortable for pedestrians to use.[27]

The focus of the transit systems described in the 2007 RSP (see RSP DEIR pages 3-33 to 3-43) is the creation of the City's planned expanded Sacramento Valley Station (then referred to as the Sacramento Intermodal Transportation Facility). The 2007 RSP EIR described that the future SVS would include both the existing 57,000 sf historic Depot, as well as a 127,511 sf new intermodal facility. The proposed RSPU would make no changes to the Depot District that would alter the City's plans for such expansion as funds become available.

The 2007 RSP EIR notes that the RSP would provide for a new RT Green Line LRT station to be built at 7th/South Park streets. The current plan is largely unchanged, with the station to be provided on the both sides of 7th Street between Railyards Boulevard and South Park Street.

[27] City of Sacramento, Making Sacramento the Walking Capitol, Pedestrian Master Plan. September 2006.

Pedestrian access to the Green Line LRT would be encouraged by the proposed RSPU's network of streets with wide sidewalks, narrow street widths, and street trees.

For the reasons described above, the RSPU's pedestrian facilities and connections would be consistent with the City's Pedestrian Master Plan.

4. Would the RSPU project incorporate bicycle facilities consistent with the City's Bikeway Master Plan and meet or exceed minimum standards for bicycle facilities in the Zone Code and CALGreen (Applicable CAP Action: 2.3.1)?

The City's Bicycle Master Plan has been in effect for 20 years.[28] A 2016 Bicycle Master Plan is anticipated to include updates to update the Plan to be consistent with Streets and Highways Code standards in order to qualify for grant funding.[29]

The proposed RSPU bicycle network would include a network made up of Class I trails, Class II lanes, Class III routes, and Class IV protected lanes. Key changes from the 2007 RSP include:

- Addition of Class IV protected bike lanes (north and southbound) on 6th Street between Camille Lane and G Street;
- Addition of a Class IV protected bike lane on F Street between 7th and 5th streets;
- Addition of Class I bicycle trail on the west side of 7th Street from North B Street to Camille Lane;
- Elimination of the bike/pedestrian tunnel parallel to 7th Street, which would remove bike travel on 7th Street between F Street and Railyards Blvd.;
- Addition of Class III bike routes on Stanford Street between Camille Lane and Railyards Boulevard., and on Judah Street between Railyards Boulevard and South Park Street;
- Addition of a Class II bike lane on 8th Street between Railyards Boulevard and North B Street;
- Elimination of bicycle traffic from the now exclusive pedestrian tunnel between the historic Depot and the Central Shops (via the Steve Cohn Passageway);
- Addition of a Class I bike trail between Camille Lane and the Central Shops, connecting to the Riverfront District; and
- Addition of a Class I bike trail from the southern end of Bercut Drive connecting to the Class III bike route on 2nd Street in Old Sacramento.

[28] City of Sacramento and Sacramento County, 1995 and 1993. The 2010 Sacramento City/County Bikeway Master Plan. Adopted by Sacramento County on November 23, 1993 and City of Sacramento on April 11, 1995.

[29] City of Sacramento, 2016. Bicycle Master Plan Update. Available: http://www.cityofsacramento.org/Public-Works/Transportation/Programs-and-Services/Bikeway-Program/Bicycle-Master-Plan.

The proposed RSPU would include short-term and long-term bicycle parking as required pursuant to the City of Sacramento Planning and Development Code.

For the reasons described above, the RSPU would include bicycle lanes and bicycle parking that would be consistent with the City's Bicycle Master Plan, and that would meet the standards for bicycle facilities in the Planning and Development Code and CALGreen (Applicable CAP Action: 2.3.1).

5. Would the RSPU project include on-site renewable energy systems (e.g., solar photovoltaic, solar water heating, etc.) that would generate at least 15% of the project's total energy demand (CAP Actions 3.4.1 and 3.4.2)?

The RSPU would not generate 15% of its energy demand on-site. In lieu of installing PV systems that would generate 15% of the project's total energy, the project must exceed the Title 24 standards, such as building to CalGreen Tier 1 energy standards. To do this, residential projects would be required to exceed the 2013 Title 24 energy efficiency by a minimum of 10% and commercial projects would be required to exceed 2013 Title 24 energy efficiency by a minimum of 5%.

Residences built to the 2016 Title 24 standards (that take effect January 1, 2017) would use about 28 percent less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards.[30] California has developed a goal of zero net energy (ZNE) use in all new homes by 2020 and commercial buildings by 2030.[31] The ZNE goal means new buildings must use a combination of improved efficiency and distributed renewable energy generation to meet 100 percent of their annual energy need. Although the 2016 standards would not get the RSPU to ZNE, they would get close to this goal and make important steps toward changing residential building practices in California. The 2019 standards are expected to take the final step to achieve ZNE for newly constructed residential buildings throughout California. Since a portion of the RSPU would be built to the 2016 standards, and the majority of the RSPU would be built to the 2019 standards, the RSPU would easily meet and likely exceed the Sacramento CAP's energy efficiency standards.

6. Would the RSPU project comply with minimum CALGreen Tier 1 water efficiency standards (CAP Action: 5.1.1)?

The proposed RSPU acknowledges the importance of water conservation in both residential and non-residential development and landscaping. It would include a commitment to a series of water conserving landscape requirements that involve the use of drought-resistant landscaping and

[30] California Energy Commission, 2016. 2016 Building Energy Efficiency Standards Frequently Asked Questions. Available: www.energy.ca.gov/title24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf.

[31] California Energy Commission, 2016. 2016 Building Energy Efficiency Standards Frequently Asked Questions. Available: www.energy.ca.gov/title24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf.

water-conserving irrigation methods to reduce water waste. The proposed RSPU would include a commitment to achieve, at a minimum, the CALGreen Tier 1 water efficiency standards. Consequently, the RSPU would be consistent with this CAP energy efficiency and renewable energy requirement.

The RSPU would be consistent with all five applicable CAP consistency questions described above. The consistency criteria regarding traffic calming (Question 2) does not apply to the project. This impact would be considered **less than significant** because the project would be consistent with each of the applicable criteria.

Railyards Specific Plan Update Land Use Variant

1. *Is the RSPU Land Use Variant project substantially consistent with the land use and urban form designation, allowable floor area ratio (FAR) and/or density standards in the City's 2035 General Plan?*

The General Plan designations for the Land Use Variant would be identical to those in the proposed RSPU. Rather than including development of the proposed KP Medical Center and the proposed MLS Stadium, under the Land Use Variant the H SPD Zone and the Block 52 in the C-3 SPD zone would be developed with a mix of residential and non-residential uses consistent with those zones. Because those zones are consistent with the relevant 2035 General Plan designation (Urban Center High and Central Business District, respectively), development under the Land Use Variant would be consistent with the relevant 2035 General Plan land use designation.

Because the Land Use Variant would be consistent with the City's 2035 General Plan density and FAR requirements it would meet the requirements of criterion 1.

2. *Would the RSPU Land Use Variant project incorporate traffic calming measures (Applicable CAP Action: 2.1.1)?*

The Land Use Variant would be located in the Central Business District, which is not a part of the City where installation of traffic calming measures is encouraged. Consequently, this measure would not apply to the Land Use Variant and traffic-calming measures are not proposed.

3. *Would the RSPU Land Use Variant project incorporate pedestrian facilities and connections to public transportation consistent with the City's Pedestrian Master Plan (Applicable CAP Action: 2.2.1)?*

The Land Use Variant would also include the same pedestrian facilities as provided for in the proposed RSPU, with the exception that some of the expanded sidewalks and crosswalks required to accommodate the proposed MLS Stadium pedestrian flows would not be constructed. Nevertheless, sidewalks widths would largely be 16 feet or more except where already constructed or constrained by physical limitations of the location in the RSP Area. These pedestrian access facilities would be consistent with the City's Pedestrian Master Plan.

4. Would the RSPU Land Use Variant project incorporate bicycle facilities consistent with the City's Bikeway Master Plan and meet or exceed minimum standards for bicycle facilities in the Zone Code and CALGreen (Applicable CAP Action: 2.3.1)?

The Land Use Variant would include short-term and long-term bicycle parking as required pursuant to the City of Sacramento Planning and Development Code. Although specific designs have not yet been completed, it is anticipated that secure long-term bicycle parking spaces and lockers would be included in the proposed parking garages. Short-term bicycle racks would be provided proximate to entrances and exits from the commercial and retail buildings.

The proposed RSPU bicycle network would be the same as described above for the proposed RSPU. Consequently, the Land Use Variant would meet the meet the minimum standards for bicycle facilities in the Zone Code and CALGreen (Applicable CAP Action: 2.3.1).

5. Would the RSPU Land Use Variant project include on-site renewable energy systems (e.g., solar photovoltaic, solar water heating, etc.) that would generate at least 15% of the project's total energy demand (CAP Actions 3.4.1 and 3.4.2)?

Like the proposed RSPU, the Land Use Variant would not generate 15% of its energy demand on-site. In lieu of installing PV systems that would generate 15% of the project's total energy, projects must exceed the Title 24 standards, such as building to CalGreen Tier 1 energy standards. To do this, residential projects shall exceed the 2013 Title 24 energy efficiency by a minimum of 10% and commercial projects shall exceed 2013 Title 24 energy efficiency by a minimum of 5%. Residences built to the 2016 standards (that take effect January 1, 2017) will use about 28 percent less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards.[32] California has developed a goal of zero net energy (ZNE) use in all new homes by 2020 and commercial buildings by 2030. The ZNE goal means new buildings must use a combination of improved efficiency and distributed renewable energy generation to meet 100 percent of their annual energy need. Although the 2016 standards would not get the Land Use Variant to ZNE, they do get close to this goal and make important steps toward changing residential building practices in California. The 2019 standards will take the final step to achieve ZNE for newly constructed residential buildings throughout California. Since a portion of the Land Use Variant would be built to the 2016 standards, and the majority of the Land Use Variant would be built to the 2019 standards, the Project would meet the energy efficiency standards of the CAP.

6. Would the RSPU Land Use Variant project comply with minimum CALGreen Tier 1 water efficiency standards (CAP Action: 5.1.1)?

[32] California Energy Commission, 2016. 2016 Building Energy Efficiency Standards Frequently Asked Questions. Available: www.energy.ca.gov/title24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf.

Like the proposed RSPU, the RSPU Land Use Variant would include a commitment to a series of water conserving landscape requirements that involve the use of drought-resistant landscaping and water-conserving irrigation methods to reduce water waste. It would also include a commitment to achieve, at a minimum, the CalGreen Tier 1 water efficiency standards. Consequently, the RSPU Land Use Variant would be consistent with this CAP energy efficiency and renewable energy requirement.

The RSPU Land Use Variant would be consistent with all five applicable CAP consistency questions described above. The consistency criterion regarding traffic calming (Question 2) does not apply to the project. This is a **less-than-significant** impact because the project would be consistent with each of the applicable criteria.

KP Medical Center

1. *Is the KP Medical Center project substantially consistent with the land use and urban form designation, allowable floor area ratio (FAR) and/or density standards in the City's 2035 General Plan?*

The proposed KP Medical Center would be a land use consistent with the Urban Center High designation in the City's 2035 General Plan. The proposed KP Medical Center, which would consist of 510,000 sf of medical office uses and 718,003 sf of hospital facilities on 17.8 acres, would result in an FAR ratio of 1.62, within the 0.5 to 8.0 FAR range allowed by the proposed Urban Center High designation in the 2035 General Plan. The KP Medical Center would be consistent with the City's overall goals for land use and urban form because it would encourage high density development in the downtown area. The high level of density would encourage land uses that enable the City to achieve the goals established in the CAP.

Therefore, the KP Medical Center is consistent with allowable floor area ratios and urban form in the City's 2035 General Plan, and therefore is consistent with the criterion 1 in the CAP Consistency Review Checklist.

2. *Would the KP Medical Center project incorporate traffic calming measures (Applicable CAP Action: 2.1.1)?*

The KP Medical Center would be located in the Central Business District, which is not a part of the City where installation of traffic calming measures is encouraged. Consequently, this measure would not apply to the KP Medical Center and traffic-calming measures are not proposed.

3. *Would the KP Medical Center project incorporate pedestrian facilities and connections to public transportation consistent with the City's Pedestrian Master Plan (Applicable CAP Action: 2.2.1)?*

The KP Medical Center would include pedestrian access via sidewalks on all surface streets. These would connect to greater downtown Sacramento and a new Sacramento RT Green Line light rail station, to be located on 7th Street between Railyards Boulevard and South Park Street,

via pedestrian routes through the RSP Area. These pedestrian access facilities would be consistent with the City's Pedestrian Master Plan.

4. *Would the KP Medical Center project incorporate bicycle facilities consistent with the City's Bikeway Master Plan and meet or exceed minimum standards for bicycle facilities in the Zone Code and CALGreen (Applicable CAP Action: 2.3.1)?*

The proposed KP Medical Center would include short-term and long-term bicycle parking as required pursuant to the City of Sacramento Planning and Development Code. Although specific designs have not yet been completed, it is anticipated that secure long-term bicycle parking spaces and lockers would be included in the proposed parking garages. Short-term bicycle racks would be provided proximate to entrances and exits from the proposed hospital, hospital support building, and medical office buildings. Further, if feasible, based on project design and space utilization, the proposed KP Medical Center may make provisions for a Bikeshare docking station, if such a program is initiated by the City/SMAQMD.

In addition, a Class 1 bike trail and Class 2 bike lanes would facilitate bike access to the KP Medical Center from the east, west, and south.

Consequently, the KP Medical Center would be consistent with the City Bicycle Master Plan, and would meet the meet the minimum standards for bicycle facilities in the Planning and Development Code and CALGreen (Applicable CAP Action: 2.3.1).

5. *Would the KP Medical Center project include on-site renewable energy systems (e.g., solar photovoltaic, solar water heating, etc.) that would generate at least 15% of the project's total energy demand (CAP Actions 3.4.1 and 3.4.2)?*

As part of its commitment to green building and sustainability, the applicant would pursue LEED Gold certification or equivalent for the buildings that it develops on the project site. To attain this goal, Kaiser anticipates implementing many of its current green strategies in the KP Medical Center. For example, some of the strategies that are being considered include:

- PVC-free materials (such as resilient flooring, carpet and roofs),
- Low or VOC-free paints,
- CFC-free refrigerants,
- Innovative construction waste diversion programs to keep harmful materials out of landfills,
- Formaldehyde-free casework,
- Use of recycled building materials,
- High efficiency HVAC systems,
- Cogeneration electricity production and heat recovery,

- Permeable paving to reduce stormwater runoff in parking areas,
- Green roofs to reduce heat gain and reduce storm water runoff,
- Thermal fluid heaters as a high-efficient water heating source,
- Cool roofs for solar reflectivity and building cooling,
- Turf-free and indigenous native planting for low irrigation demand,
- Water conservation efforts to reduce potable and process water use,
- Enhanced commissioning,
- Access to daylight,
- Non-smoking campus, and
- Interior and exterior areas of respite and open space.

Kaiser's potential future green strategies at the KP Medical Center site may include use of:

- Solar power/photovoltaics,
- Electric vehicle charging stations,
- Transportation demand management,
- Fuel-cell technology,
- Displacement ventilation,
- Toxin-free furniture,
- Green cement, and
- Use of green power for construction.

As shown in the above list, the KP Medical Center has stated that they "may" install an on-site PV energy system. However, it is not certain that a PV system would be installed. In addition, it would be unlikely that the PV system would be large enough to meet 15% of the KP Medical Center's energy demand. However, the project will exceed the 2013 Title 24 energy efficiency by a minimum of 15%, which exceeds the 10% minimum. This is typical of LEED Silver buildings. This improvement in energy efficiency would exceed the minimum 10% requirement for commercial buildings that needs to be achieved in lieu of installing a renewable energy system. Thus, the KP Medical Center would meet the meet the minimum standards onsite renewable energy generation (Applicable CAP Actions 3.4.1 and 3.4.2).

6. *Would the KP Medical Center project comply with minimum CALGreen Tier 1 water efficiency standards (CAP Action: 5.1.1)?*

The KP Medical Center's LEED Sustainability Targets include water reduction targets, including compliance with CalGreen Tier 1 Baseline levels. Consequently, the KP Medical Center would be consistent with this CAP energy efficiency and renewable energy requirement.

The KP Medical Center project would be consistent with all five of the applicable CAP consistency criteria described above. The consistency criterion regarding traffic calming (question 2) does not apply to the project. This is a **less than significant** impact because the project would be consistent with each of the applicable criteria.

MLS Stadium

1. *Is the MLS Stadium project substantially consistent with the land use and urban form designation, allowable floor area ratio (FAR) and/or density standards in the City's 2035 General Plan?*

The proposed MLS stadium would be located in the C-3 SPD land use. It would include 395,700 sf of uses on 14.7 acres. It would have an FAR of 0.62, which is below the 2035 General Plan's designated FAR range of 3.0 to 15.0 for the Central Business District designation. However, consistent with 2035 General Plan policy LU 1.1.11, the City may permit development below the minimum FAR where the use "by its nature normally conducts a substantial amount of its operations outdoors." Since a vast majority of the proposed MLS Stadium would accommodate outdoor seating, playing field, and public plazas and other gathering areas, it would be consistent with the land use and urban form designation of the 2035 General Plan.

Pursuant to 2035 General Plan policy LU 1.1.11, the MLS Stadium project would be consistent with the C-3 SPD designation and therefore would be consistent with the criterion 1 in the CAP Consistency Review Checklist.

2. *Would the MLS Stadium project incorporate traffic calming measures (Applicable CAP Action: 2.1.1)?*

The proposed MLS Stadium would be located in the Central Business District, which is not a part of the City where installation of traffic calming measures is encouraged. Consequently, this measure does not apply to the MLS Project and traffic-calming measures are not proposed.

3. *Would the MLS Stadium project incorporate pedestrian facilities and connections to public transportation consistent with the City's Pedestrian Master Plan (Applicable CAP Action: 2.2.1)?*

An integral element of the proposed MLS Stadium would be several open plazas intended to provide seamless flow in and out of the facility, pedestrian circulation around the Stadium, and pedestrian connectivity to 8th Street and 10th Street, and Railyards Boulevard. An Event Transportation Management Plan has been prepared (see Appendix J.2) that articulates a range of transportation control strategies, including provision of an on-site Transportation Management Center (TMC) in the Stadium (could occur in the Stadium Security Office), designation of a

Traffic Control Officer (TCO) supervisor who would staff the TMC and manage event day traffic controls, and the location of TCO's who would direct vehicular, transit and pedestrian traffic under various event scenarios. The transportation control strategies would also address transit boarding at the nearby planned 7th/South Park Street light rail station. The proposed MLS Stadium's pedestrian facilities and connections to public transportation would be consistent with the City's Pedestrian Master Plan.

4. Would the MLS Stadium project incorporate bicycle facilities consistent with the City's Bikeway Master Plan and meet or exceed minimum standards for bicycle facilities in the Zone Code and CALGreen (Applicable CAP Action: 2.3.1)?

The proposed MLS Stadium would comply with the requirements of the Planning and Development Code for the provision of short- and long-term bicycle parking (see PDC Chapter 17.608.040, Section N, and Table 17.608.030C). Approximately 24 long-term employee secured bike parking spaces would be provided within the loading dock area or service yard located at the south end of the stadium. Short-term patron bicycle parking spaces would be provided at the field level entry plaza west, north, and south of the Stadium.

For events with sufficient demand, the project would provide for valet bicycle parking. The provision of valet bicycle parking would be flexible depending on the size of the event and the popularity, over time, of bicycling to events. Bicycle valet parking would be accommodated directly adjacent to site, or an alternate location. It may start with a small valet space at one location. For larger events and depending on weather, likely three bike valet locations would be set up for events serving bike traffic arriving at the site from the southwest, west and northwest.

If feasible, based on project design and space utilization, the proposed Stadium may make provisions for a Bikeshare docking station, if such a program is initiated by the City/SMAQMD. This provision could involve Bikeshare docking stations adjacent to the proposed Stadium near 8th Street and South Park Street, or at another location around the Stadium. A Bikeshare docking station near the proposed Stadium could be coordinated with the anticipated Bikeshare station at the Sacramento Valley Station.

For the reasons described above, the proposed MLS Stadium would meet the meet or exceed minimum standards for bicycle facilities in the Planning and Development Code and CALGreen (Applicable CAP Action: 2.3.1).

5. Would the MLS Stadium project include on-site renewable energy systems (e.g., solar photovoltaic, solar water heating, etc.) that would generate at least 15% of the project's total energy demand (CAP Actions 3.4.1 and 3.4.2)?

The proposed MLS Stadium would not include on-site renewable energy systems. However, in lieu of installing PV systems that would generate 15% of the project's total energy demand, the project would exceed the 2013 Title 24 energy efficiency by a minimum of 15%, which exceeds the 10% minimum. This reduction will be mandated by the 2016 Title 24 energy efficiency

standards, which will take effect on January 1, 2017. The 2016 Title 24 standards will require that buildings be substantially more energy efficient than required by the 2013 Title 24 standards.[33] This improvement in energy efficiency would exceed the minimum 10% requirement that must be achieved in lieu of installing a renewable energy system.

6. Would the MLS Stadium project comply with minimum CALGreen Tier 1 water efficiency standards (CAP Action: 5.1.1)?

The MLS Stadium's Sustainability Targets include water reduction targets that are 25% better than the CALGreen Tier 1 Baseline level. Consequently, the MLS Stadium would exceed the CALGreen Tier 1 water efficiency and conservation standards.

The MLS Stadium would be consistent with five of the six CAP consistency criteria described above. The criterion regarding traffic calming (criterion 2) does not apply to the project. This is a **less-than-significant** impact because the project would be consistent with each of the applicable criteria.

Stormwater Outfall

The City's CAP establishes requirements for projects to reduce a portion of their estimated GHG emissions to assist the City in reducing GHG emissions to comply with AB 32. The City has created a checklist to assist in demonstrating the consistency of proposed land use development projects with the CAP. The Stormwater Outfall is a piece of infrastructure necessary to implement the proposed Stormwater Master Plan and to allow development of the RSP Area, and not a development project per se. The proposed Stormwater Outfall would include seven pumps and one sump pump that would be electrically powered. The pump station also would include an emergency diesel-powered backup generator that would provide electricity in the event of an electrical outage. This backup generator would only operate during outages and no more than two hours per month for testing. An air quality permit would be required for the backup generator and would limit the hours per year of operation.

The CAP Consistency Review Checklist does not apply to the Stormwater Outfall because the Outfall is not a development project. However, the electricity used to supply the pumps would be supplied by SMUD. As an electric utility, SMUD is required to generate a portion of its electricity with renewable sources of energy. By 2020, SMUD must generate 33 percent of its electricity using renewable resources. In 2014, SMUD generated 27 percent of its electricity using renewable energy.[34] Consequently, the proposed Stormwater Outfall's indirect generation of GHGs through its electricity consumption would be based on the percentage of renewable resources included in SMUD's energy portfolio. In addition, the use of diesel fuel would occur

[33] California Energy Commission, 2016. 2016 Building Energy Efficiency Standards Frequently Asked Questions. www.energy.ca.gov/title24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf.

[34] Sacramento Municipal Utility District, 2014. Power Content Label. Available: www.smud.org/assets/documents/pdf/Power-Content-Label-full.pdf. Accessed November 17, 2015.

for only periodic testing and during emergency electrical outages. Finally, the proposed Stormwater Outfall represents a critical piece of infrastructure that would allow development of the RSP Area and would not be inconsistent with the City's CAP. For these reasons, the proposed Stormwater Outfall would have a **less-than-significant** impact on climate change.

Summary

As described above, each of the applicable projects, including the proposed RSPU, RSPU Land Use Variant, KP Medical Center, and MLS Stadium would be consistent with and conform to all of the applicable criteria to establish consistency with the City's CAP. As established in CEQA Guidelines section 15183.5(b), because the City has determined that these projects would be consistent with the City's CAP, the projects' contribution to cumulative GHG emissions and related global climate change is less than considerable, and the impact is considered **less than significant**. As further described above, the proposed Stormwater Outfall is not a project to which the City's CAP Consistency Checklist applies, however because of the limited energy use required for operation of the project, and the fact that the energy would come from SMUD which current produces 27 percent of its energy from renewable sources and will expand that portfolio to 33 percent by 2020, the contribution of the proposed Stormwater Outfall is also considered less-than-considerable, and the impact would be considered **less than significant**.

Mitigation Measure

None required.