City of Sacramento

DOWNTOWN

SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORT

September 2017

Draft

DOWNTOWN SPECIFIC PLAN

Environmental Impact Report

Prepared for
City of Sacramento

September 2017

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SUMMARY

Downtown Specific Plan Environmental Impact Report

Introduction

This Environmental Impact Report (EIR) is an informational document intended to inform the public and decision-makers about the environmental consequences of the proposed Downtown Specific Plan (DSP or proposed plan) for the City of Sacramento. The EIR considers the environmental impacts of the proposed plan as well as the additive effects of growth throughout the Sacramento area and the region. These latter impacts are referred to as cumulative impacts. The EIR has been prepared by the City of Sacramento pursuant to the requirements of the California Environmental Quality Act (CEQA).

The EIR describes the existing environmental conditions in the vicinity of the DSP area, analyzes potential impacts on environmental resources due to the proposed plan, and identifies mitigation measures that could avoid or reduce the magnitude of those significant impacts. The environmental resource topics evaluated in the EIR include land use; population, employment, and housing; aesthetics/light and glare; air quality; biological resources; cultural resources; energy; geology and soils; global climate change; hazards and hazardous materials; hydrology and water quality; noise and vibration; public services; transportation and circulation; and utilities, as well as potential for growth and urban decay effects.

The EIR evaluates a range of alternatives for the proposed plan and different amounts of mixed use development within the plan area.

This EIR is being published as a Draft EIR. The Draft EIR will be subject to review and comment by the public, as well as responsible agencies and other interested jurisdictions, agencies, and organizations for a minimum of forty-five (45) days. The public may comment on the EIR by submitting written comments at any time during the public review period. The City will complete a Final EIR, which will include the written comments received regarding the Draft EIR, responses to substantial environmental issues raised in the comments, and any changes to the Draft EIR that are required by the responses to written comments, or that are initiated by staff.

Upon publication, the environmental documents described above are available online at http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports, and may be viewed in printed form at the City's Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811. Hearings regarding the project will

occur at various times, and the City posts agendas at kiosks at City Hall and on its website at www.cityofsacramento.org.

City staff responsible for the drafting of the environmental document may be contacted with questions:

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The Final EIR will be submitted to the City of Sacramento City Council for their consideration. As part of the project review and consideration, the City Council, prior to approving the project, is required under CEQA to certify that the EIR has been prepared in compliance with CEQA, and would also consider adoption of Findings of Fact pertaining to this EIR, specific mitigation measures, a Statement of Overriding Considerations relating to any identified significant and unavoidable effects, and a Mitigation Monitoring Plan.

Project Description

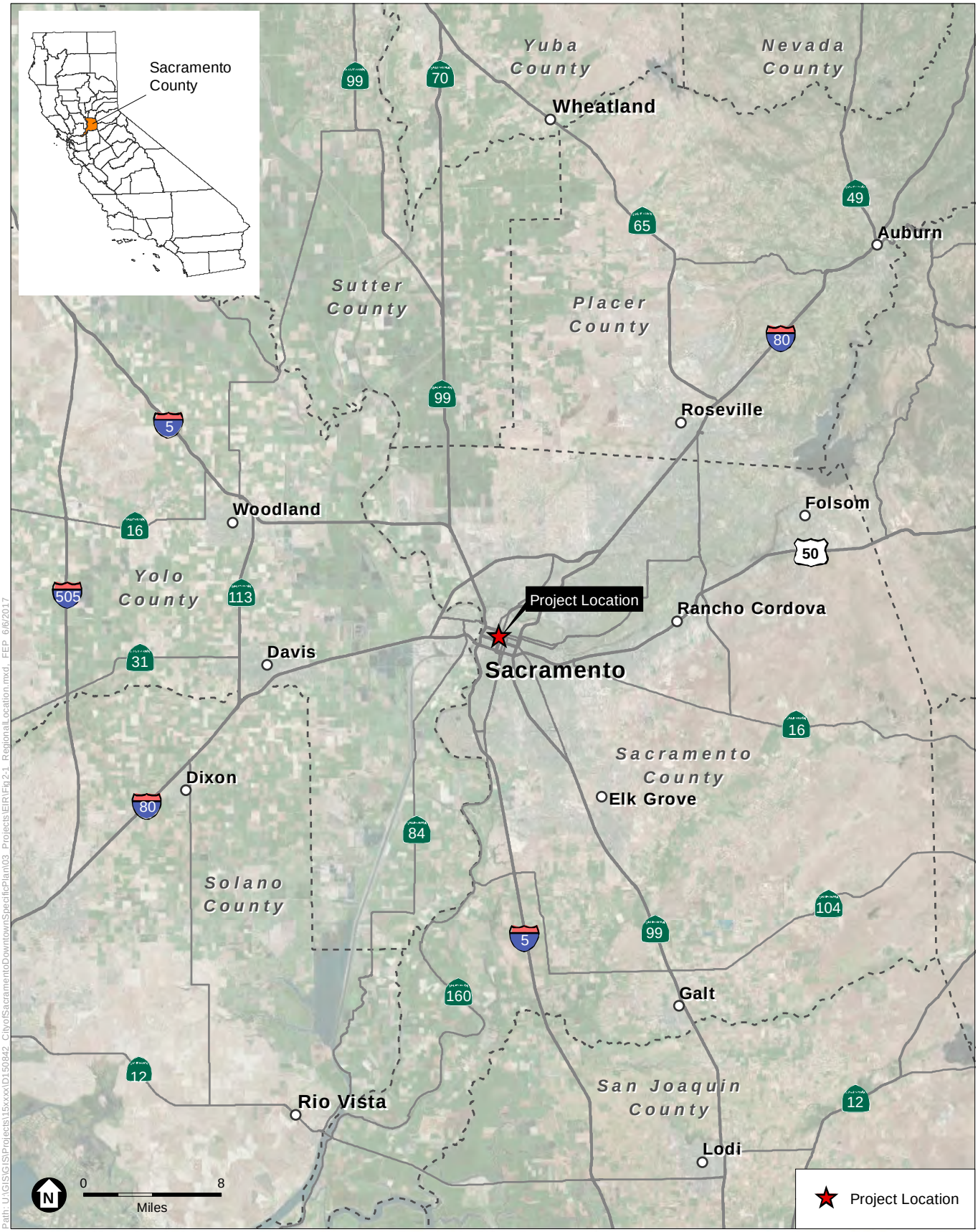
Plan Area

The DSP area is located within the City of Sacramento's Central City community and is in the Central City Community Plan (CCCP) area. The DSP area is bound by the American River, the River District, and Railyards Specific Plan Area (RSP Area) to the north; the Sacramento River to the west; Broadway and parcels fronting the south side of Broadway to the south; and Business 80 to the east. **Figure S-1** and **Figure S-2** show the DSP's regional location, and **Figure S-3** shows the DSP's boundaries.

Downtown Specific Plan

Land Use and Zoning

The Downtown Specific Plan would provide an update to existing City planning documents, including the 2035 General Plan and Central City Community Plan, to facilitate preferred growth in Downtown Sacramento. The intent of the DSP is to incentivize residential and non-residential growth within the DSP area. The DSP anticipates approximately 13,401 residential units and 3,820,294 square feet (sf) of new non-residential uses in the plan area over the next 20 years. The new non-residential square footage would be combined with an additional 3,352,650 sf of backfill non-residential development, which includes new uses that would occur within existing buildings, for a total development potential of 7,173,044 square feet of non-residential uses. It is assumed that most of the new housing units within the DSP area would be multifamily units.

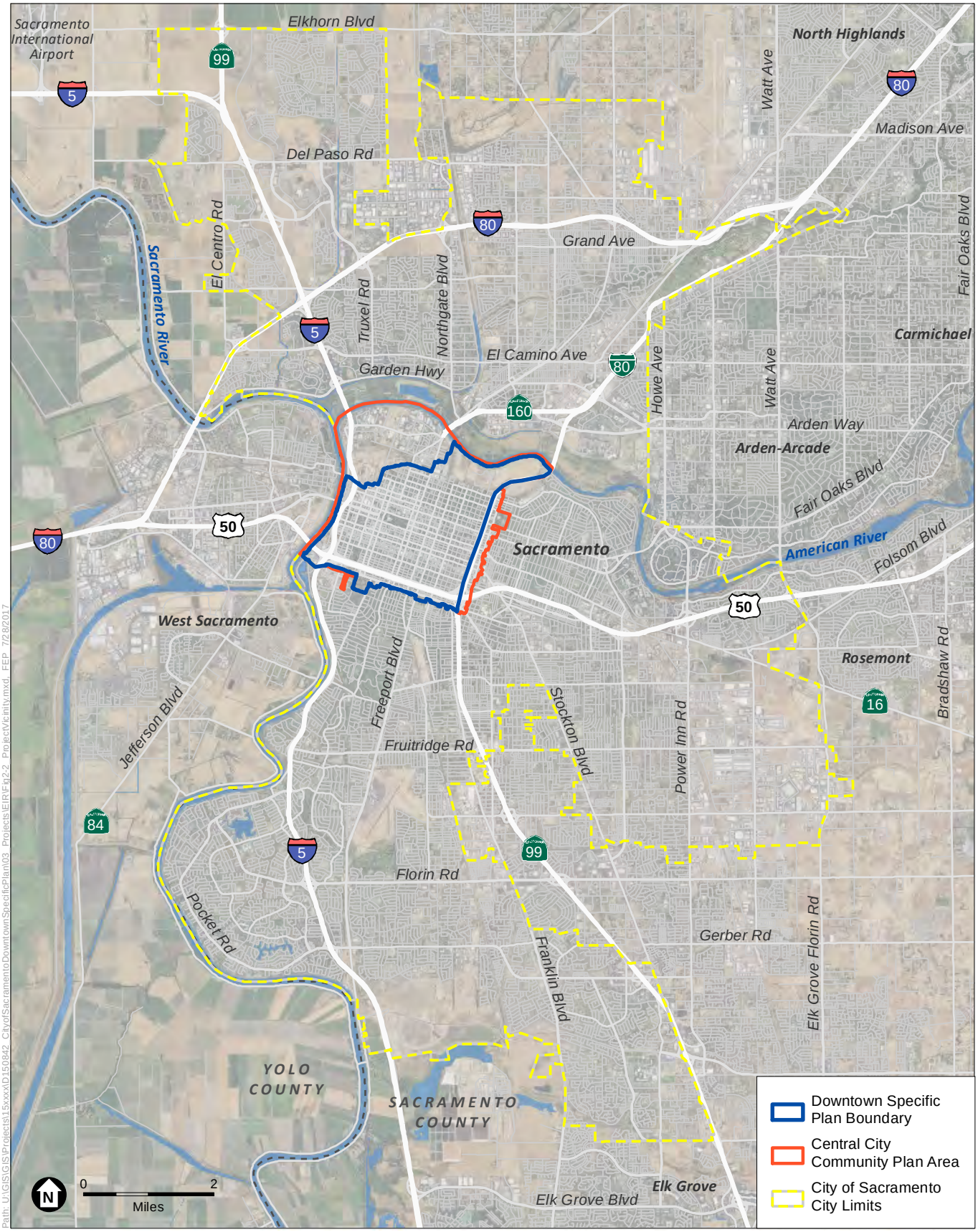


SOURCE: Esri, 2015; City of Sacramento, 2017; ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure S-1
Regional Location

ESA



SOURCE: Esri, 2015; USDA, 2016; City of Sacramento, 2017; ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure S-2
Project Vicinity

ESA

SOURCE: USDA, 2014; City of Sacramento, 2016; ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure S-3
Downtown Specific Plan Area

ESA

The anticipated growth would be facilitated in part by the establishment of the Downtown Special Planning District (SPD) which provides updates to policies to allow for an intensification of development in the Central City by expanding allowable heights and densities in specified zones. The new Downtown SPD would also prohibit automobile oriented uses within a half mile of any light rail or streetcar station and would feature parking maximums for parking districts within the plan area. In addition, the Downtown SPD would provide a different set of open space requirements for key land uses within the plan area, which would differ from existing citywide requirements.

The Downtown SPD will expand opportunities for adaptive reuse of historic properties and ease or eliminate height thresholds for key zoning designations, above which existing regulations require automatic review by the Planning and Design Commission. The Downtown SPD would apply to the entire DSP area except for the existing Entertainment and Sports Center Special Planning District as defined in Sacramento City Code Chapter 17.442.

The proposed DSP would retain the existing land use designations, as identified by the 2035 General Plan, for all parcels within the plan area. The 2035 General Plan would be amended to clarify the policy regarding FAR to allow a project's FAR to be exceeded by 20 percent if the project provides a significant community benefit.

The Central Core and Neighborhood Design Guidelines would be updated to reflect existing development in the core area, including the Golden 1 Center and new housing along J and K streets, as well as planned development such as the planned construction of the Downtown Streetcar linking the Midtown entertainment and retail district to West Sacramento. The design guidelines would also be changed to make provisions for more intense development, including higher FARs and increased height and would include required and recommended design elements for implementation throughout the DSP area.

Infrastructure Improvements

The Downtown Specific Plan Infrastructure Analysis prepared for the proposed DSP identifies potential infrastructure improvements necessary to accommodate the development and intensification anticipated with implementation of the DSP. Existing sanitary sewer, storm drainage, water, electrical power, telecommunications, and natural gas infrastructure capacity would be provided as needed to adequately serve anticipated demands.

The plan for the DSP area would be to upgrade existing water system supply grid to provide the opportunity sites, entitled planning project sites, and commercial/office-only sites with adequate water for both domestic and fire suppression needs. Implementation of the DSP would require replacement of aging sections and strategic upgrades to the existing system to serve future projects in the DSP area. Strategic upgrades would include the extension of new 8-inch and 12-inch water mains to new development and the addition of 48-inch to 78-inch water transmission mains, necessary for the movement of water through the DSP at buildout to other parts of the City's service area.

Within the DSP area, wastewater and stormwater are conveyed through the combined sewer systems (CSS), which is the legacy storm drain and sanitary sewer systems that encompasses 7,500 acres of the Downtown, East Sacramento and Land Park area and covers another 3,700 acres in other parts of the city for sanitary sewer only. The CSS system is oversized for the sanitary sewer component of flows, but inadequate for the City's current storm drainage design standard of 10-year capacity, a measure for rain events. To adequately serve development in the DSP area, proper upsizing and rehabilitation of existing CSS infrastructure must occur. CSS upgrades would be prioritized based on considerations such as immediate localized needs, flood-reduction benefits, cost-effectiveness, ensuring no increase in untreated discharges, sewer condition/age, cost-sharing opportunities, and City/community interests.

Storm drainage is also conveyed by Basins 52, 73, and 114 for portions the DSP area. Implementation of the DSP would require improvements to Basin 52 to accommodate additional stormwater flows generated by development in the DSP area.

Natural gas service is provided to the DSP area by Pacific Gas & Electric (PG&E) through a network of high pressure system pipelines of varying size where pressure is varied by regulators. PG&E would expand the natural gas system to extend service to new development on a case-by-case basis.

Electrical service is provided to the DSP area by Sacramento Municipal Utility District (SMUD). SMUD estimates that the additional electrical load from anticipated development within the DSP area may be 70 to 90 megawatts. A majority of the load would require adding major components in the DSP area. Development within the DSP area would require the development of at least one substation and may require the installation of switches, risers, line reconductors, or line extensions to specific development parcels. Additional major equipment and infrastructure external to the DSP area would be required as electrical demand approaches area electrical capacity. These improvements will be identified in SMUD's five-year system plan as the need arises. Extension of the existing 21 kV distribution system would be required to serve the additional development in the DSP area.

Street Lights

The City of Sacramento Public Works Department maintains approximately 40,000 street lights within the city limits, including light fixtures and elements ranging from the newest street lights installed in North Natomas to the lights in the older parts of the city that were installed over 80 years ago. Within the Downtown Grid area of the DSP area there are approximately 3,400 street lights that are maintained by the City. There are an additional 250 lights that are owned and maintained by the Sacramento Municipal Utility District (SMUD). As part of the DSP, additional street lighting is planned in older predominantly residential areas of the DSP.

Transportation Network

The DSP will implement the transportation system described in Sacramento Grid 3.0, which is the City's plan to integrate planned transportation improvements and programs into the existing

downtown grid. This document provides a transportation framework to support the 2035 General Plan's transportation policies to serve future transportation needs and to "create a well-connected transportation network, support increased densities and a mix of uses in multi-modal districts, help walking become more practical for short trips, support bicycling for both short- and long-distance trips, improve transit to serve highly frequented destinations, conserve energy resources, reduce greenhouse gas emissions and air pollution, and do so while continuing to accommodate auto mobility." The proposed transportation system would also include additional improvements beyond those described in Grid 3.0, including lane reductions to improve multimodal transportation along key roadway corridors and the removal of a multimodal connection consistent with the recently approved Railyards Specific Plan.

The preferred roadway network proposed as part of the DSP primarily involves re-striping existing roadways, adding a few blocks of new roadway, converting one-way streets to two-way streets, and providing lane reductions along specific travel corridors.

The Central City is already a highly walkable area due to its built-in connectivity, extensive sidewalk coverage, pedestrian-friendly traffic signal timings (i.e., short cycle lengths with automatic pedestrian walk signals that don't require pedestrians to push a button to cross the street), and destinations for commercial and residential purposes within a short walking distance of one another. New and enhanced facilities will improve conditions for walking, improve connections between the Central City and surrounding neighborhoods, provide new sidewalks where they do not currently exist, and provide additional sidewalk capacity in areas with high pedestrian volumes. The desired outcome is a network of streets that provide safe pedestrian facilities including wider sidewalks and plazas at major activity locations and intersection crossings, enhanced crosswalk markings, new bicycle facilities as part of a comprehensive network, close integration with transit, and managed on-street parking. Pedestrian gap projects would address barriers to pedestrian travel and activity center enhancement projects would expand existing pedestrian facilities adjacent to major pedestrian activity centers.

The preferred bicycle network proposed as part of the DSP involves re-striping existing roadways to fill gaps in the existing bicycle travel network, providing a more complete system along the Sacramento and American rivers consistent with adopted plans, providing new buffered bike lanes, and establishing a more complete low stress bicycle network. Bike lanes would be added to roadways that are proposed for 3-lane to 2-lane conversions. Buffered bike lanes would be added to roadways where possible to reduce conflict with buses and reduce higher risk turning movements across vehicle lanes. Bicycle facility improvements in the DSP would include separated/protected bicycle lanes and shared bicycle/pedestrian paths, all with the goal of creating a Low Stress Bicycle Network.

Transit service in the DSP area is provided by Sacramento Regional Transit (RT) and a variety of other regional transit service providers. Reconfiguration of the roadway network, described in the DSP, would include provisions for improved transit. Provisions for transit would include

dedicated transit lanes along roadways proposed for 3-lane to 2-lane conversion and enlarged bus stops, which would include design elements intended to improve the transit-riding experience.

Hotels

The proposed DSP allows for the development of two new hotels in the DSP area. A new approximately 350-room hotel at the northwest corner of 13th Street and J Street would replace an existing five-story, concrete parking garage that serves the public and the Sheraton Grand hotel across J Street. Another, approximately 350 room hotel would replace an existing surface parking lot, and may also replace or augment an existing restaurant complex at the northwest corner of 15th Street and L Street. While these two hotels are anticipated under the DSP, formal applications for these hotels have not been submitted, and project-specific details are not known.

Public Art

The proposed DSP would provide guidance for the selection of locations for the placement of public art and types of art displayed. The proposed DSP would provide for a range of public art media which would be dependent on opportunities presented by proposed sites and the space requirements for each category. Types of public artwork described in the proposed DSP include aerial sculpture, ground sculpture, light display and sculpture, landscape, infrastructure, temporary, performance, playground, literary, inhabitable, water, and architecture. The proposed DSP identifies criteria for the identification of points of interest and guidance for the siting of public art. Examples of points of interest accessible to the public could include office plazas, residential forecourts, and public open spaces such as activity centers, pocket parks and plazas. Public art could be sited as part of or adjacent to public infrastructure, such as transportation centers, bus shelters, community centers, utility boxes, landscape medians, or on building facades. Public art could be sited along established sight-lines to create a focal point and attraction for visitors. Permanent structural elements could be constructed to facilitate public art such as plinths, pedestals, or special exhibition areas. Selection of points of interest would favor placement of public art in locations with a high volume of potential viewers.

Public Services

Fire Protection

Buildout of the DSP area would be consistent with the 2035 General Plan policies regarding fire protection services and standards. As with the general plan, it is anticipated that additional calls generated as a result of development pursuant to the proposed DSP would result in the need for additional fire equipment and facilities.

The DSP proposes the siting of a new fire station to the west of the BNSF rail lines, somewhere near the R Street corridor to meet service demands of future projected development in the DSP area. The exact location of the new fire station has not been determined at this time and an exact location is not analyzed in this EIR.

Parks and Recreation

The City of Sacramento Department of Parks and Recreation (Sacramento DPR) maintains a total of approximately 218 acres of existing parklands within the DSP area. The DSP area parks system provides for a range parkland types, including neighborhood parks, community parks, and regional parks. Implementation of the DSP would include the addition of 4.87 acres of planned neighborhood parks, 4.87 acres of planned community parks, and 34.56 acres of planned regional parks.

Areas of Controversy

There are no known areas of controversy for the DSP. The proposed plan is consistent with the growth projections in the 2035 General Plan and the Sacramento Area Council of Governments (SACOG) Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS).

Environmental Effects

The following discussion provides an overview of the key environmental effects of the proposed DSP. This overview does not constitute a complete summary of every effect of the proposed plan described in the EIR, but rather it contains a description of those impacts that the City considers the principal environmental impacts of the proposed plan. At the end of this chapter, Table S-1, Summary Table, includes a complete summary of all impacts and mitigation measures described in Chapter 4 of the EIR.

Aesthetics, Light and Glare

The aesthetics of the DSP area can largely be characterized as a built out urban environment. Implementation of the DSP elements described above, would result in gradual physical changes within the DSP area, including increased building heights above existing conditions and an overall increase and intensification of physical development. These physical changes could result in changes to important scenic resources as seen from visually sensitive locations, including views of the Sacramento and American rivers, the State Capitol, other historic buildings and structures that serve as important scenic resources, and urban open spaces, including parks, trails, pathways, nature centers. In addition, by allowing for more intense development and increased building heights, implementation of the DSP could result in changes to views of the City skyline including an increased concentration of taller buildings than presently viewed from within and outside the DSP area. Although the proposed DSP allows for increased building heights and other physical development, it is anticipated that the actual amount of development that would occur over the next 20 years under the DSP would be generally consistent with what is assumed to occur under the 2035 Sacramento General Plan, which includes policies that are designed to protect scenic resources. The proposed Central City Urban Design Guidelines would guide design of public and private spaces, lighting, and orientation of design features.

In addition, pursuant to Chapter 17.808 of the City Code, with specific and limited exemptions, development in the city is subject to site plan and design review. The intent of this process is to

(1) ensure that the development is consistent with applicable plans and design guidelines; (2) is high quality and compatible with surrounding development; (3) is supported by adequate circulation, utility, and related infrastructure; (4) is water and energy efficient; and (5) avoids environmental effects to the extent feasible. The aspects of design considered in the site plan and design review process include architectural design, site design, adequacy of streets and access ways for all modes of travel, energy consumption, protection of environmentally sensitive features, safety, noise, and other relevant considerations. Site plan and design review is typically conducted by staff, the City Design Director, Preservation Director, Preservation Commission, or the Planning and Design Commission depending on the specific project. Site plan and design review would ensure that development within the DSP area is consistent with applicable plans and design guidelines, is of high quality, and is compatible with surrounding development, thus avoiding adverse impacts to scenic resources. In summary, new physical development that would occur under the DSP would be required to comply with applicable plans, policies, and guidelines that are designed to protect views of important scenic resources from visually sensitive areas, protect the existing visual character and quality of the DSP area, and limit new sources of light and glare. Consequently, the effects of the proposed DSP on scenic resources would be a less-than-significant impact.

Air Quality

The proposed DSP would be consistent with the growth projections included in the City's 2035 General Plan and the SACOG MTP/SCS. Air quality emissions from construction and operation of the proposed DSP could result in significant impacts. Construction emissions would affect local particulate and ozone (ROG and NOx) concentrations, primarily due to fugitive dust sources and diesel exhaust. DSP operations would increase emissions from motor vehicle trips and on-site stationary sources. Other operational sources include fuel combustion associated with landscaping activities, space and water heating in buildings, and the use of consumer products.

The proposed DSP would facilitate substantial growth through the construction of additional residential, restaurant commercial, government, office, retail/service, and medical office uses within the DSP area. The California Emission Estimator Model (CalEEMod version 2016.3.1) was used to calculate construction-related emissions of criteria air pollutants and to determine if such emissions would exceed SMAQMD's applicable regional significance thresholds. Since the proposed DSP would be built-out based on market demand, there is no project-specific information available for construction of the development allowed pursuant to the DSP. Consequently, reasonable assumptions and default CalEEMod settings were used to estimate criteria air pollutant and ozone precursor emissions, which can be found in Appendix C1.

Construction emissions were estimated for the DSP using the methods contained in SMAQMD's Guide to Air Quality Assessment in Sacramento County. According to the SMAQMD guidance, projects that do not implement the District's Best Management Practices (BMPs) must meet a zero peak daily and annual emission threshold for PM10 and PM2.5. With implementation the SMAQMD's BMPs, the SMAQMD's peak daily and annual thresholds increase to 80 ppd/14.6

tons per year (tpy) of PM10, and 82 ppd/15 tpy of PM2.5. Projects that do not implement the District's Best Management Practices (BMPs) must meet a zero peak daily and annual emission threshold for PM10 and PM2.5. All construction projects within the SMAQMD are required to implement Basic Construction Emission Control Practices to control PM10 and PM2.5. Assuming implementation of such required practices, construction of residential and non-residential development pursuant to the proposed DSP would result in emissions of PM10 and PM2.5 that would be below the SMAQMD significance thresholds. Construction of development pursuant to the proposed DSP would generate NOx emissions that would exceed SMAQMD's thresholds through at least 2021. Consequently, implementation of the proposed DSP would result in a short-term significant impact due to NOx emissions.

Operation of the DSP would increase emissions of ozone precursors (ROG and NOx), PM10 and PM2.5 from vehicle trips, area sources (landscape maintenance, consumer products such as hairsprays, deodorants, and cleaning products), and energy sources (e.g., natural gas combustion for space and water heating). CalEEMod was used to estimate vehicle, area and energy use emissions associated with the DSP. For on-road vehicles, emissions were calculated using CalEEMod default trip rates and trip lengths. A separate CalEEMod run was used to adjust CalEEMod's default vehicle miles traveled (VMT) to match the VMT data presented in Section 4.12, Transportation and Circulation. The operational emissions were estimated for 2035, the horizon year assumed in this analysis.

Development in the DSP area could cite residential uses within 500 feet of highways, which could expose residents to toxic air contaminants (TAC) to a cancer risk greater than the SMAQMD's screening criteria for mobile cancer risks of 276 per million. Mitigation is required for residences constructed within the DSP area and within 500 feet of a highway, but future proposed residences could be exposed to mobile source TAC emissions in excess of significance thresholds resulting in a significant and unavoidable impact.

In summary, the proposed DSP would generate unmitigated operational emissions of ROG and NOx that would exceed the SMAQMD's significance thresholds and would be considered operationally significant for CEQA purposes. With the proposed DSP requiring future projects to incorporate emission reduction measures, on an overall basis it would exceed the minimum 15 percent reduction in operational mobile source emissions. Since the proposed DSP would facilitate higher-density, transit-oriented development, much of the reduction would be achieved by project design and location within the Sacramento urban core with access to a variety of transportation options. Thus, the proposed DSP would be consistent with the land use parameters established for the DSP area in the SACOG MTP/SCS and would incorporate provisions that would reduce unmitigated emissions by at least 15 percent; with the impact considered less than significant.

Biological Resources

The potential for the proposed development to adversely change biological resources in or around the DSP area is analyzed in this section with the impact analysis focusing on foreseeable changes

to the baseline condition and comparing those changes to the significance criteria. Potential impacts are analyzed using information on habitats found in and around the DSP area, and potential occurrence of special status and protected species. Portions of the DSP area may support nesting bird species; migratory fish species; and habitat for certain beetle, turtle, and bat species.

Although the DSP area is a largely urbanized area within the downtown of Sacramento, natural and semi-natural habitats can occur within the DSP area that provide suitable habitat for special-status species. Landscape features within the City, such as trees, shrubs, herbaceous plants, and parklands could serve as temporary habitats or foraging grounds. Undeveloped and vacant areas could contain foraging or nesting habitat. The riparian areas of the Sacramento and American rivers and their associated river channels are locations within the DSP area known to contain suitable nesting and foraging habitat, as well as habitat for special-status fish species.

Construction of new development under the proposed DSP in both developed and undeveloped areas could result in the removal of mature trees which may serve as perching or nesting sites for special-status species and migratory birds, including raptors. Vegetation removal could result in the loss of potential nest sites. Additionally, human disturbances and noise from construction activities have the potential to cause nest abandonment and death of young, or loss of reproductive success at active nests located near project activities. There are no expected impacts to special-status birds, raptors and other nesting birds from operations of the development undertaken pursuant to the proposed DSP. In the DSP area, the Sacramento River and American River are known habitat for certain special-status species of fish. In addition, these areas and adjacent riparian habitats within the DSP area, are also designated critical habitat for certain special-status fish species. Both rivers function as a regional migratory corridor for specific fish species, however the sections of the Sacramento and American rivers adjacent to the DSP area do not serve as spawning or juvenile rearing habitat for salmonids or sturgeon. The area lacks spawning habitat and deep holding pools within the sections of the Sacramento and American rivers adjacent to the DSP area, which means adult salmonids, delta smelt, and sturgeon residence time in this reach of the river would be expected to be transient and relatively brief. Compliance with regulatory permitting requirements and implementation of mitigation measures would reduce impacts resulting from habitat loss to a less-than-significant level.

Development under the proposed DSP could result in land-disturbing activities such as grading, excavation, and trenching for utility and infrastructure installation. When portions of the DSP area are excavated or otherwise disturbed by construction activities, the potential for soil erosion and sedimentation to be discharged in runoff from a construction site would substantially increase during a rainstorm. In addition, construction equipment would have the potential to leak polluting materials, including oil and gasoline. Improper use of fuels, oils, and other construction-related hazardous materials such as concrete or pipe sealant may also pose a threat to water quality. Through stormwater runoff, these sediments and contaminants may be transported to the Sacramento and American rivers and their downstream drainages and water bodies. Although activities associated with construction under the proposed DSP would be temporary, on- or offsite soil erosion, siltation, discharges of construction-related hazardous materials could degrade

downstream surface waters. Compliance with existing regulations, including development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) and best management practices (BMPs) would ensure that construction of projects under the proposed DSP would not substantially degrade water quality. In addition, compliance with the CWA and Rivers and Harbors Act permits from the U.S. Army Corps of Engineers (USACE) would be required for proposed improvements within the channels of the Sacramento or American rivers. As part of the CWA permitting, the USACE would be required to consult with the USFWS and/or National Marine Fisheries Service under Section 7 to ensure that permitted actions do not jeopardize listed species or destroy or adversely modify designated critical habitat of the salmonid species in the area of the disturbance. Therefore, the impact on special-status fish species of construction activities pursuant to the proposed DSP would be less than significant.

The increase in impervious surfaces that would result from implementation of the proposed DSP would generate stormwater that would be discharged to the Sacramento and American rivers. Development within the DSP area may increase pollutant concentrations and sediment runoff. Extended periods of localized, high suspended sediment concentrations, and increased pollution concentrations could result in decreased water quality, including high suspended sediment concentrations and turbidity. The aforementioned conditions could cause a reduction of feeding opportunities for sight-feeding fish, increased predation opportunities, reduced growth rates, and may cause direct mortality of fish, or their prey. Given that regulatory compliance would prevent the substantial degradation of water quality and associated habitat conditions in the Sacramento and American rivers, operational impacts to special-status fish species from the proposed DSP would be less than significant.

Cultural Resources

Cultural resources analysis was developed based on archival research and field surveys used to identify cultural resources in the DSP area as well as data provided in the City of Sacramento 2035 General Plan and EIR. Several records searches conducted at the North Central Information Center (NCIC) were compiled to provide full coverage of the DSP area plus a 200-foot buffer for archaeological resources. The NCIC, at California State University, Sacramento, maintains the official California Historical Resources Information System (CHRIS) records of previous cultural resources studies and recorded cultural resources that include the DSP area. This effort is detailed in the CRSIR included as Appendix E. As detailed in that report, such archival research, and field surveys were used to identify cultural resources in the DSP area, and the results from the NCIC indicate that there are 1,225 previously recorded cultural resources in the DSP Area, 26 of which are archaeological resources, 1,197 of which are architectural resources, one of which has both archaeological and architectural components, and one of which is the former location of the China Slough/Sutter's Lake but does not have archaeological or architectural components. With cultural resources present in the plan area, such resources could be affected by potential construction activities, such as excavation and grading that could adversely affect the physical integrity of the archaeological resource.

The DSP is a policy document, and it does not include details on specific future projects. Given the large number of known resources, lack of project specifics, and the varying levels of study that have been done for the known resources, where mitigation measures are identified, they are presented in a tiered approach. Potential mitigation measures designed to avoid or limit potential impacts to cultural resources include: identifying and mapping known archaeologically sensitive areas; accidental discovery procedures in the event that any unanticipated cultural resources are encountered during any potential construction activity; preconstruction training sessions conducted by qualified personnel; and compliance with Federal and State regulations and guidelines regarding the treatment of cultural resources. The level of analysis and mitigation strategy for individual future projects will depend on the amount of existing information available for that area and the characteristics of a particular project site. Implementation of the mitigation measures would lessen potential project impacts to prehistoric and historic-period archaeological resources by increasing the likelihood that previously unidentified archaeological resources and human remains are protected. However, because the presence of potentially significant archaeological resources, including human remains, may not be known until the resource is disturbed during project-related ground-disturbing activities, damage may occur prior to the discovery of such resources; such damage could potentially cause a substantial adverse change in the significance of an archaeological resource, including human remains, and would be considered a significant and unavoidable impact.

Energy Demand and Conservation

The analysis presented in the Energy Demand and Conservation section complies with the requirement in Appendix F of the CEQA Guidelines for an evaluation of a proposed project's potential energy implications and encourages measures to avoid or reduce the inefficient, wasteful, or unnecessary consumption of energy. The analysis estimates construction and operational demand for electricity, natural gas, and transportation fuels.

The analysis concludes that energy consumption, including electricity, natural gas, and fuel, for construction and operation of the proposed DSP would be accomplished without the addition of energy infrastructure that could result in adverse environmental effects. In view of the above, impacts related to energy consumption would be less than significant.

The proposed DSP, would promote development that is designed and operated to minimize the use of electrical, natural gas, and transportation fuel energy to the extent feasible. It is currently unknown if the 2019 Title 24 energy standards for non-residential buildings will exceed the most current 2016 Title 24 energy standards by 15 percent as required under the City's CAP Actions 3.4.1 and 3.4.2. By meeting all sustainability features required under the future 2019 Title 24 energy standards, it is clear that residential development would be energy efficient and consistent with the City's CAP actions. However, proposed mitigation would require that new non-residential buildings exceed the 2016 Title 24 energy standards by 15 percent or more. As a result, the DSP would be consistent with the City's CAP Actions 3.4.1 and 3.4.2, the project would not result in an inefficient use of energy and the impact would be less than significant.

Geology, Soils, and Seismicity

This section evaluates the potential for construction and operation of the proposed DSP to result in adverse impacts associated with geologic and soil constraints, such as settlement and slope instability, seismic hazards, the loss of mineral resources, or expose structures or people to unstable geologic conditions during project activities, using existing site conditions as a baseline for comparison. The analysis is based on project-specific construction and operational features and investigations, geologic and geotechnical maps and reports related to the DSP Area and vicinity, data provided in the City of Sacramento 2035 General Plan and City of Sacramento 2035 General Plan Master Environmental Impact Report (MEIR); and reports published by the United States Department of Agriculture Natural Resources Conservation Service (NRCS), United States Geological Survey (USGS), National Earthquake Hazards Reduction Program, California Geological Survey (CGS), and Association of Bay Area Governments (ABAG).

No Alquist-Priolo Earthquake Fault Zones are present in the city of Sacramento. Therefore, no evidence exists to suggest that there is a reasonable chance of fault rupture within the DSP area. Portions of the city, including the plan area, are underlain by artificial fill and alluvial deposits that, in their present states, could become unstable during seismic ground motion. To reduce the primary and secondary risks associated with seismically induced ground shaking, it is necessary to take the location and type of subsurface materials into consideration when designing foundations and structures. As part of the construction permitting process, the City requires completed reports of soil conditions at the specific construction sites to identify potentially unsuitable soil conditions including potential exposure to potentially damaging seismic vibrations, ground failure, liquefaction, settlement, subsidence, lateral spreading, and collapse. In addition, compliance with the City of Sacramento's Grading Ordinance, Chapter 15.88 of the Sacramento Municipal Code, requires that prior to the commencement of grading an Erosion and Sediment Control Plan be prepared for each project within the City. While the DSP would provide for the introduction of new population into this downtown Sacramento region, for the reasons provided above, development within the DSP would result in a less-than-significant impact related to seismic ground shaking, unstable soil conditions, or substantial soil erosion.

Global Climate Change

The assessment of effects on global climate change focuses on the project's consistency with the City of Sacramento's recently adopted Climate Action Plan (CAP). The evaluation considers development under the DSP in comparison to the City's CAP Consistency Checklist.

The proposed DSP, would promote development that is designed and operated to minimize the use of electrical, natural gas, and transportation fuel energy to the extent feasible. It is currently unknown if the 2019 Title 24 energy standards for non-residential buildings will exceed the most current 2016 Title 24 energy standards by 15 percent as required under the City's CAP Actions 3.4.1 and 3.4.2. By meeting all sustainability features required under the future 2019 Title 24 energy standards, it is clear that residential development would be energy efficient and consistent with the City's CAP actions. However, proposed mitigation would require that new non-

residential buildings exceed the 2016 Title 24 energy standards by 15 percent or more. As a result, the DSP would be consistent with the City's CAP Actions 3.4.1 and 3.4.2, the project would not result in an inefficient use of energy and the impact would be less than significant.

Hazards and Hazardous Materials

This section evaluates the potential for the proposed project to result in adverse impacts associated with hazards or hazardous materials. A hazardous material is defined as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment (State Health and Safety Code Chapter 6.95, Section 25501(o)). The term "hazardous materials" refers to both hazardous substances and hazardous wastes.

Existing land uses, the Phase I ESA overview study, and publicly available environmental database resources were reviewed to identify known contaminated soil and/or groundwater sites in the DSP area. This information was used to determine if construction activities in the DSP area could encounter known subsurface contamination. The DSP area was developed beginning in the 1800s and has evolved over the years to include, at various times, a wide range of commercial, industrial, and residential uses, including manufacturing, fueling stations and vehicle repair, dry cleaning, and landfills. The DSP area and the immediately surrounding area were originally lowlands adjacent to the Sacramento and American rivers. The DSP area has a long history of mixed commercial, industrial, and residential use that has continued to the present. Various past and current land uses have included with the use, generation, or disposal of hazardous materials.

Potential exposure to contaminated soil materials (both soil vapor and soil) would only occur during construction. Once a particular project has been constructed, there would be no further exposure during operations. Potential exposure to asbestos-containing materials (ACMs), lead-based paint (LBP), or other hazardous materials in structures would only occur during demolition or renovation of existing structures during construction activities. Once the structures on a property under redevelopment have been removed or renovated, there would be no further exposure during operations. Compliance with all applicable laws and regulations at the federal, State, and local levels would prevent the exposure of individuals and the environment to the hazards by ensuring that all abatement regulations are carried out prior to and during demolition. Therefore, exposure to asbestos containing materials, lead-based paint and/or other hazardous building materials would be less than significant. Exposure to contaminated groundwater (the liquid groundwater or vapors volatilizing from the groundwater) could occur during dewatering excavations during construction activities and dewatering of subsurface building levels deep enough to encounter groundwater during operations. Compliance with all applicable laws and regulations at the federal, State, and local levels would prevent the exposure of individuals and the environment to hazards associated with contaminated groundwater by ensuring that contaminated groundwater is routed to the Regional San treatment system and that dewatering

activities do not interfere with ongoing groundwater cleanup in the DSP area, if any. Therefore, exposure to contaminated groundwater would be less than significant.

Hydrology and Water Quality

Potential effects to hydrologic resources in the DSP area that are addressed in this EIR include water quality, groundwater resources, flooding, and drainage. Site characteristics such as regional and local drainage, flooding conditions, and water quality are described. The potential of the proposed plan to degrade water quality, adversely affect groundwater resources and/or expose people and structures to flooding is evaluated. Potential effects to flooding and water quality from potential projects within the DSP area would be avoided through required compliance with a complex set of permits, codes, and other regulatory plans overseen by the City, Sacramento County, the Sacramento County Regional Sanitation District, and the Central Valley Regional Water Quality Control Board. Projects would be required to comply with a number of regulations designed to reduce or eliminate construction-related water quality effects. Approvals would need to be provided for coverage under the NPDES Construction General Permit and the erosion and sediment control plan, at which time construction projects would commence, and include all BMPs outlined in the erosion and sediment control plan and SWPPP. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater and other non-point source runoff. The City would complete inspections to verify that the erosion and sediment control plan and SWPPP are implemented correctly. The City would also require erosion and sediment control plans to include BMPs to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. Implementation of these measures would comply with state and federal water quality regulations. These regulatory instruments are designed to ensure that construction projects result in water quality discharges that are not in violation of State Water Resources Control Board (SWRCB) objectives or City ordinances.

Construction in the DSP area would result in land-disturbing activities such as grading, excavation, and trenching for utility and infrastructure installation. When portions of the plan area are excavated or otherwise disturbed by construction activities, the potential for soil erosion and sedimentation in runoff could substantially increase during a rainstorm. Although earth-disturbing activities associated with construction of the DSP area would be temporary, on- or offsite soil erosion, siltation, discharges of construction-related hazardous materials could degrade downstream surface waters. As discussed in detail above, compliance with existing regulations would ensure that these activities would not substantially degrade water quality. These regulatory instruments are designed to ensure that construction projects result in water quality discharges that are not in violation of the State Water Board's objectives. For the above reasons, adherence to applicable regulations and standards would reduce water quality impacts to a less-than-significant level.

During operation, runoff from the DSP area would contain pollutants common in urban runoff including metals, oils and grease, pesticides, herbicides, nutrients, pet waste, and trash. Without

BMPs to remove these pollutants, stormwater leaving the DSP area could degrade the quality of receiving waters. Permanent onsite water quality treatment meeting the requirements specified in the Stormwater Quality Design Manual for the Sacramento Region will be required for any applicable project with surface drainage in the DSP area. Specific BMPs are approved for use in the City for treatment control, such as stormwater planters, vegetated swales, and media filters in catch basins. Other potential BMPs for use on private parcels have not been identified because plan design is in an early phase and the kinds of BMPs used on each site would differ based on design-level details and site conditions. Compliance with existing regulations would ensure that the proposed plan would result in a less-than-significant.

Noise and Vibration

The current ambient noise environment throughout the DSP area is primarily the result of vehicular traffic along Interstate-5 (I-5), Business 80, Highway 50 and arterial roadways within the specific plan area such as Q Street, J Street and N Street. The proposed DSP includes land that is currently occupied by urban residential, transient lodging, institutional and hospital land uses. Historic age buildings, eligible historic structures, listed historic structures may be sensitive receptors to vibration impacts.

Construction noise impacts are assessed relative to the increase in noise levels that could result from the operation of specified construction equipment compared to existing noise level conditions. Analysis of the proposed DSP temporary construction noise effects is based on construction equipment typically used in residential and urban development projects. Analysis of temporary construction noise effects of specific development scenarios are based on typical construction phases and equipment noise levels. In all cases, the analyses accounted for attenuation of those noise levels due to distances between the construction activity and the sensitive land uses in the site vicinity. Noise levels from construction activity at nearby sensitive receptors would fluctuate depending on the nature of the construction project and the particular type, number, and duration of use of various pieces of construction equipment. Construction-related material haul trips would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. In addition, certain types of construction equipment generate impulsive noises (such as impact pile driving), which can be disruptive. The proposed DSP would require the use of construction equipment and could require the use of impact pile drivers during the construction of high-rise buildings. Although construction activities are reasonably assumed to occur within the City of Sacramento's construction exempt hours, depending on location relative to sensitive receptors construction noise levels generated during building construction and potential impact pile driving, could expose nearby sensitive land uses to noise levels that would be considered a substantial temporary increase over the existing ambient noise levels, resulting in a potentially significant impact. Mitigation measures to reduce noise levels from heavy construction equipment and pile driving would be effective, but the impact would remain significant and unavoidable.

Future traffic increases associated with the development of the proposed DSP would result in noise increases along roadway segments within the DSP area that would expose existing sensitive receptors to substantial noise increases over existing conditions, resulting in significant and unavoidable impacts.

The proposed commercial, retail, and office buildings proposed under the DSP could be located near existing and proposed sensitive land uses. These sensitive receptors could be exposed to loading dock and HVAC noise that could exceed the City's nighttime noise standard. Therefore, operation of the proposed DSP could result in a substantial permanent increase in ambient exterior noise levels in the DSP area that could result in a significant impact. Mitigation measures to shield HVAC units and other stationary noise sources would reduce the impact to a less-than-significant level.

Public Services

Analysis of existing public services available in the vicinity of the DSP area covers the effects of implementing the proposed DSP on those services. The services evaluated in this section include police protection, fire protection, public schools, and parks and open space facilities. A fire station is proposed for development in the DSP area, and the potential physical environmental impacts associated with facility construction or operation is analyzed. Demand for police and fire protection services would increase, but would be in line with the growth projections anticipated in the 2035 General Plan, and the impact would be less than significant.

The majority of the DSP area, including all anticipated residential and non-residential development areas, is within Sacramento City Unified School District (SCUSD). Some of the plan area, to the northeast, is located within the boundaries of the Twin Rivers Unified School District (TRUSD). However, additional students are anticipated to be generated in the SCUSD, potentially resulting in student generation that would exceed schools' capacities. Pursuant to SB 50, all development within the DSP area would be required to pay applicable school fees, which are deemed full and complete mitigation for impacts on schools, reducing the impact to a less-than-significant level. The City is committed to working with the SCUSD to provide adequate, high quality schools to serve the DSP area, and would work collaboratively with the SCUSD to regularly monitor existing student generation rates to accurately determine school facility needs in the future.

The analysis looks at existing parks, open space, and recreational facilities in the vicinity of the DSP area and examines the potential need to expand or enhance existing facilities or to construct new facilities. The evaluation addresses potential effects of implementation of the proposed DSP on parks and open space resources within the vicinity of the DSP area, primarily the Central City, and also analyzes the proposed DSP's relationship to applicable goals and policies of local park-related plans. The proposed DSP would facilitate development of additional housing units, increased resident populations, and increase the number of employees. This increase in resident population and employees would create an additional demand for parks and recreational facilities within the DSP area. Although new residential development in the DSP area would add residents

in the DSP area and result in increased demand and use of existing parks and recreational facilities, there are enough parks within and immediately adjacent to the DSP area to serve residents. As a result, development in the DSP area would not cause or accelerate physical deterioration of the park facilities, and the impact would be less than significant.

Transportation

The analysis of transportation and circulation effects of the proposed DSP involves an assessment of potential effects on roadways, freeways, transit facilities, and bicycle and pedestrian facilities. The transportation elements of the DSP are based on the goals, objectives and transportation improvements developed for Sacramento "Grid 3.0," which is the City's plan to integrate planned transportation improvements and programs into the existing downtown street grid. The DSP includes a high level of investment in pedestrian facilities plus various "conversions" of some one-way streets that will allow for installation of new bike lanes and exclusive transit lanes. General Plan Mobility Element policy set forth the definitions for what is considered an acceptable Level of Service (LOS). The analysis also forecasts vehicle miles traveled (VMT) and considers the demographics of residents in households or jobs by type at a parcel level and the land uses and transportation system that are in close proximity to each parcel.

The primary tool used for travel demand forecasting was SACSIM, an activity-based travel demand model that SACOG has adopted for use to prepare its MTP/SCS and its air quality conformity analysis. This model bases trips on activities and accounts for travel throughout the day in trip "tours." While the analysis of the DSP is focused on a study area that covers the Central City, SACSIM is a regional model covering the six county SACOG region. It simulates the "activities" and travel behavior for each individual resident in the region on "typical" weekday. Thus the model predicts how the DSP interacts with land uses region-wide and the entire regional transportation system.

The transportation analysis determined that the DSP would have an average VMT per capita with the DSP is 66 percent of the regional average, and the average VMT per employee with the DSP is 81 percent of the regional average and 78 percent of the countywide average. Both of these measurements are below the 85 percent threshold used to identify significant VMT impacts.

Implementation of the DSP would result in most intersections continuing to operate acceptably at LOS C or better during both peak hours, with other intersections operating acceptably at LOS D or LOS E during one or both peak hours. General Plan Policy M 1.2.2 was adopted to allow decreased levels of service (e.g., LOS F) in the urbanized Core Area of the City that supports more transportation alternatives and places residents proximate to employment, entertainment, retail and neighborhood centers and thus reduces overall vehicle miles traveled and results in environmental benefits (e.g., improved air quality and reduced GHG emissions). Based on this evaluation, the City determined that LOS F is considered acceptable during peak hours within the Core Area, therefore, LOS impacts would be less than significant.

The DSP would add traffic to the local highway system. all study freeway segments operate acceptably except for US 50, which operates unacceptably at LOS F under existing conditions and would continue to do with implementation of the DSP. Payment of fees consistent with the Interstate 5 Freeway Subregional Corridor Mitigation Program (SCMP) would mitigate freeway impacts to a less-than-significant level.

The proposed plan does not include any components that will adversely affect existing pedestrian facilities. The proposed plan will only widen existing sidewalks, fill in gaps in existing sidewalks, and enhance the pedestrian environment with streetscape treatments such as pedestrian-scale lighting, landscaping, street furniture, etc. Bus stop enhancements would provide for wider pedestrian spaces at high activity bus stops. Roadway network projects would either reduce general purpose travel lanes to create dedicated transit lanes or on-street bikeways or would convert one-way roadways to two-way operation; none of these projects will result in wider roadways for pedestrians to cross. Additionally, reducing the number of travel lanes and converting one-way streets to two-way streets is likely to reduce travel speeds and therefore improve pedestrian safety.

The proposed plan includes a variety of roadway network and transit network projects that are intended to reduce transit vehicle delay resulting from traffic signals and slow-moving traffic. Specifically, the proposed plan includes several transit investments that could include transit signal priority or three-lane to two-lane conversions for dedicated transit lanes. Dedicated transit lanes will significantly reduce transit vehicle delay resulting from slow-moving traffic. Additionally, because dedicated transit lanes would allow transit vehicles to bypass traffic stopped at signalized intersections, traffic delay to transit vehicles caused by traffic signals at locations with dedicated transit lanes would be reduced as well.

The proposed plan does not include any projects that will adversely affect existing bicycle facilities. The proposed plan will only enhance existing bicycle facilities by filling in gaps in those facilities or increasing the separation of bicyclists within these facilities from adjacent travel lanes. Additionally, the proposed plan's bicycle facilities are consistent with those planned in the City's *Bicycle Master Plan*.

The Transportation and Circulation section also analyzed a Streetcar Conversion Option that differs from the DSP transportation network in two ways: 1) Removal of the two-way conversion on H Street between 5th Street and 8th Street (maintain one-way eastbound travel on this segment); and 2) Removal of the two-way conversion on 3rd Street between L Street and Capitol Mall (maintain one-way southbound travel on this segment). The Streetcar Conversion Option does not include any changes to the proposed bicycle, pedestrian, or transit networks described under the DSP.

Utilities

Analysis of impacts to utility resources includes existing utilities and service systems that serve the DSP area and vicinity. These systems include water supply, stormwater conveyance,

wastewater conveyance and treatment, and solid waste collection and disposal. The analysis included in this section was developed based on plan-level construction and operational information, data provided by the City with respect to existing water use, and additional data and information gathered from the City of Sacramento 2035 General Plan, City of Sacramento 2035 General Plan Master Environmental Impact Report, the City of Sacramento 2015 Urban Water Management Plan (UWMP), the Downtown Specific Plan Utility Infrastructure Analysis prepared by NV5, and other published technical reports, as indicated in the analysis.

Excavation and pile driving during construction could encounter groundwater, which would require temporary dewatering. Groundwater extracted during construction would be discharged into either the combined sewer system (CSS) or into the separate drainage system that conveys stormwater flows to Storm Basin 52 before discharge to the Sacramento River. During dry periods and minor storm events, these systems would have sufficient capacity to convey dewatering flows. However, in the event that construction period dewatering occurs during a major storm event, sufficient storm drain capacity in either the CSS or Storm Basin 52 system might not be available to support dewatering discharges and existing capacity could be exceeded. This is considered a potentially significant impact. Under dry weather conditions and small storm events, there is adequate capacity in the City's sewer and drainage systems to accommodate plan-related increases in wastewater and stormwater discharges. Additionally, reductions in operation period dewatering would reduce operation flows of dewatered groundwater to the CSS. However, during large storm events, the combined stormwater and wastewater could exceed system capacity. This is considered a potentially significant impact. Through mitigation specified mitigation measures, it would be required that the implementation of measures to manage wastewater, drainage and dewatered groundwater flows in a manner that would not exceed existing capacity of the CSS and Basin 52 systems. Therefore, impacts to infrastructure capacity after mitigation would be less than significant.

The proposed plan would increase the amount of developed land uses and population in the City and result in the generation and discharge of additional wastewater and stormwater runoff requiring treatment at the Sacramento Regional Wastewater Treatment Plant (SRWWTP). This amount of wastewater would not exceed the current excess capacity of approximately 75 million gallons per day (mgd) at the SRWWTP and the increase of wastewater flows would not exceed the dry or wet weather treatment capacity at the SRWWTP. Thus, no additional wastewater treatment facilities would need to be constructed to accommodate the growth and development anticipated under the proposed DSP, and this impact would be less than significant.

The analysis for water supply centers on a comparison of existing uses and demand to future water demand with implementation of the proposed DSP. Net water demand was compared to water supplies available to the City, in accordance with City procedures, and a determination made regarding sufficiency of supply for the proposed DSP using the City's Water Supply Assessment and Certification Form (WSA). The proposed DSP would result in an average demand for water of 2,771 acre feet per year (AFY). The existing demand for water in the DSP area is 5,198 AFY. If the increased demand from the DSP is added to the existing demand for

water, the total demand in the DSP area would be 7,968.35 AFY, which is still less than the maximum diversion amount specified in the U.S. Bureau of Reclamation (USBR) contract under existing conditions. Therefore, the DSP would not exceed available water supply in the City, and this is considered a less-than-significant impact.

The solid waste analysis focuses on wastes generated by the development anticipated under the proposed DSP and potential impacts to solid waste handling and disposal facilities located outside of the DSP area. Construction in the DSP area would result in the generation of various construction waste including scrap lumber, scrap finishing materials, various scrap metals, and other recyclable and non-recyclable construction related wastes. The development and infrastructure improvements undertaken pursuant to the proposed DSP would comply with City requirements to divert a minimum of 50 percent of construction wastes to a certified recycling processor. The DSP proposes a requirement that future development recycle up to 75 percent of these materials. Adhering to these requirements would minimize the total volume of demolition and construction waste that would be landfilled, but would not avoid disposal of all construction waste in local landfills. Construction waste would be delivered to one or more of the following facilities: Lockwood Landfill, Kiefer Landfill, L and D Landfill, Yolo County Central Landfill, or Forward Landfill. In consideration of the large volume of landfill capacity available to serve the project, sufficient landfill capacity would be available to serve projects constructed pursuant to the proposed DSP. With no new or expanded solid waste management or disposal facilities required to accommodate DSP-related construction, no adverse physical environmental effects would result and, as a result, potential operation period impacts on landfills would be less than significant.

Operation of development pursuant to the proposed DSP would result in the generation of municipal wastes in accordance with the proposed increase in use intensity on site. Waste from operations would include household, commercial, residential, and office wastes. Waste generated by the DSP would be collected and transported to local landfills by the City and/or private haulers, and either recycled in accordance with City programs and requirements, or landfilled at Kiefer Landfill or transported and landfilled at the Lockwood Landfill in Sparks, Nevada. Sufficient landfill capacity would be available to serve the project and the proposed plan would not require new or expanded solid waste management or disposal facilities. With no need to expand or create new landfill or solid waste management facilities, there would be no related physical environmental effects. Therefore, the impact would be less than significant.

Significant and Unavoidable Environmental Effects

Throughout this EIR, many significant environmental impacts are identified, and mitigation measures are described that would eliminate the impacts or decrease them to a less-than-significant level. Similarly, many impacts are identified that would be less-than-significant without the need for additional mitigation measures. There are, however, a number of impacts that are identified that cannot be eliminated or cannot be decreased to a level of insignificance

even with the implementation of feasible mitigation measures. The key project-specific unavoidable significant environmental impacts include those listed below.

Impact 4.2-3: The proposed DSP would result in long-term (operational) emissions of NO_X, ROG, PM_{10}, and $PM_{2.5}$.

Impact 4.2-5: Implementation of the proposed DSP could result in short-term and long-term exposure to Toxic Air Contaminants.

Impact 4.4-1: New construction in the proposed DSP area could cause a substantial adverse change in the significance of an archaeological resource, including human remains.

Impact 4.4-2: New construction in the DSP area could cause a substantial adverse change in the significance of a tribal cultural resource.

Impact 4.10-1: Construction of development allowed under the proposed DSP could generate noise that would conflict with City standards or result in substantial temporary or periodic increase in ambient noise levels.

Impact 4.10-2: Operations of development allowed under the proposed DSP could result in a substantial permanent increase in ambient exterior noise levels.

Cumulative Effects

Impact 4.2-8: The proposed DSP could contribute to cumulative increases in long-term (operational) emissions of NO_X, ROG, PM_{10} and $PM_{2.5}$.

Impact 4.2-10: Implementation of the proposed DSP could contribute to cumulative increases in short- and long-term exposures to Toxic Air Contaminants.

Impact 4.4-4: New construction in the proposed DSP area, in combination with other cumulative development, could contribute to the cumulative loss or alteration of archaeological resources, including human remains.

Impact 4.10-5: Implementation of the proposed DSP would result in exposure of people to cumulative increases in construction noise levels.

Impact 4.10-6: Operations of development allowed under the proposed DSP would contribute to cumulative increases in ambient exterior noise levels.

Impact 4.10-8: Construction of buildings pursuant to the proposed DSP would contribute to cumulative construction that could expose existing and/or planned buildings, and persons within, to significant vibration.

Impact 4.13-7: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in demand for water supply.

Alternatives to the Proposed Project

Pursuant to State CEQA Guidelines, this EIR must present a discussion of a reasonable range of alternatives to the proposed DSP. The alternatives should be designed to feasibly accomplish most of the basic objectives of the proposed project while looking to avoid or substantially lessen one or more of the significant effects. The feasibility of an alternative is determined by the lead agency based on a variety of factors including, but not limited to, site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and site accessibility and control.

The alternatives evaluated in the EIR are described below. Of the alternatives considered for the proposed DSP, there were a number of alternatives found to be overtly infeasible or worthy of dismissal prior to further consideration that are also analyzed in Chapter 6 of this EIR. In identifying alternatives to the proposed plan, primary consideration was given to alternatives that could reduce significant unavoidable impacts resulting from the proposed plan while still obtaining the plan's objectives. Certain impacts that are identified as being significant and unavoidable under the proposed plan (e.g., increase in air pollutants from project construction and operation) are due primarily to developing an area that is currently undeveloped or intensifying development activity beyond current levels. These impacts would not be possible to eliminate, but could be reduced, for example, by limiting the scope of the proposed plan, reconfiguring uses, or implementing mitigation measures. The alternatives considered in this section include:

- Alternative 1: No Project/Existing General Plan
- Alternative 2: Reduced Height Alternative
- Alternative 3: Transportation Network Option C Alternative

No Project/Existing General Plan Alternative

The CEQA Guidelines require the evaluation of the comparative impacts of the "No Project" alternative. The No Project/Existing General Plan Alternative describes an alternative in which the DSP area would be subject to infill and redevelopment consistent with the land use designations and allowable uses identified in the existing 2035 General Plan and Central City Community Plan, developed consistent with the guidance of the existing Central City Urban Design Guidelines, and physically located consistent with the assumptions made in the 2035 General Plan Master EIR and the SACOG 2016 MTP/SCS.

Reduced Heights Alternative

The purpose of the Reduced Heights Alternative (Alternative 2) is to reduce those impacts associated with the height of development that would occur within the commercial corridors in the DSP area. By reducing the number of residential units and the square footage for retail,

commercial and other uses in the commercial corridors, the resident, employee and visitor population within those portions of the DSP area would drop, resulting in a greater concentration of development in the C-3 zone and potentially in residential zones in the DSP area. Development under Alternative 2 would be consistent with the growth assumptions of the DSP and the 2035 General Plan, with similar residential units and non-residential square footage, overall. As such, taller development that would be incentivized by the increased allowable heights within the C-2, RMX, and OB zones and other incentives under the DSP, would be less concentrated along those commercial corridors. Instead, that development would be anticipated to occur in other zones throughout the plan area.

Transportation Network Option C Alternative

The Transportation Network Option C Alternative (Alternative 3) includes all elements of the proposed DSP including updated land use and zoning, infrastructure improvements, street light improvements, proposed hotels, and public art. However, Alternative 3 would have an alternative transportation network that includes changes to the roadway, bicycle, and transit networks included as part of the proposed DSP. The pedestrian infrastructure investments evaluated as part of Network Option C are consistent with the investments included in the proposed DSP.

Environmentally Superior Alternative

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. Section 15126.6 (e)(2) of the State CEQA Guidelines requires that an environmentally superior alternative be designated and states that if the environmentally superior alternative is the No Project alternative, the EIR also is required to identify an environmentally superior alternative among the other alternatives.

From the alternatives evaluated in this EIR, the environmentally superior alternative would be the proposed DSP. The proposed DSP would encourage future growth in the City inward which would best minimize impacts associated with the dedication of previously undeveloped land to urban uses around the urban edges of the Sacramento region. Implementation of the proposed transportation network (the Grid 3.0 improvements) under the proposed DSP would best incentivize the use of alternative transportation while better integrating transit. The resulting effects would be best minimize potential air, noise, and traffic impacts on a region-wide level, among the available alternatives.

Summary Table

Table S-1 (Summary of Impacts and Mitigation Measures), has been organized to correspond with the environmental issues discussed in Chapter 4. The summary table is arranged in four columns:

1. Environmental impacts (“Impact”).

2. Level of significance without mitigation (“Significance Before Mitigation”).

3. Mitigation measures ("Mitigation Measure").

4. The level of significance after implementation of mitigation measures ("Significance After Mitigation").

If an impact is determined to be significant or potentially significant, mitigation measures are identified, where appropriate. More than one mitigation measure may be required to reduce the impact to a less-than-significant level. This EIR assumes that all applicable plans, policies, and regulations would be implemented, including, but not necessarily limited to, City General Plan policies, laws, and requirements or recommendations of the City of Sacramento. Applicable plans, policies, and regulations are identified and described in the Regulatory Setting of each issue area and within the relevant impact analysis. A description of the organization of the environmental analysis, as well as key foundational assumptions regarding the approach to the analysis, is provided in Section 4.0, Introduction to the Analysis.

TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.1 Aesthetics Light and Glare			
4.1-1: The proposed DSP could have a substantial adverse effect on an existing scenic resource or degrade the view of an important, existing scenic resource, as seen from a visually sensitive public location.	LS	None Required.	NA
4.1-2: The proposed DSP could substantially degrade the existing visual character or quality of the DSP area and its surroundings.	LS	None Required.	NA
4.1-3: The proposed DSP could create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.	LS	None Required.	NA
4.1-4: Implementation of the proposed DSP, in combination with other cumulative development, could contribute to cumulative impacts on scenic resources or degrade the views of an important, existing scenic resource, as seen from visually sensitive public locations.	LS	None Required.	NA
4.1-5: Implementation of the proposed DSP, in combination with other cumulative development, could contribute substantial cumulative degradation of the existing visual character or quality in the vicinity.	LS	None Required.	NA
4.1-6: Implementation of the proposed DSP could contribute to cumulative sources of substantial light or glare which would adversely affect daytime or nighttime views in the area.	LS	None Required.	NA

LTS = less than significant; NA = Not applicable; NI = no impact; PS = potentially significant; S = significant; SU = significant and unavoidable.

TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.2 Air Quality			
4.2-1: Implementation of the proposed DSP could conflict with or obstruct implementation of an applicable air quality plan.	LS	None Required.	NA
4.2-2: Construction of development under the proposed DSP could result in short-term emissions of NOx, PM10 and PM2.5.	PS	**Mitigation Measure 4.2-2(a)** For any development project within the DSP area that would involve excavation, grading, or site preparation that would expose soil, the applicant shall comply with all applicable Rules of the Sacramento Air Quality Management District (SMAQMD) and shall include the required SMAQMD Basic Construction Emission Control Practices on all grading or improvement plans.	LS
		Mitigation Measure 4.2-2(b) Prior to the issuance of a demolition or building permit for major development projects in the DSP area, each project shall be screened for construction emissions based on the then-current screening criteria established by the SMAQMD. If the project emissions fall within the limit of the screening criteria no further action is required. If the project exceeds the screening criteria the applicant shall model emissions for the project. If the emissions fall below the thresholds of significance for construction air emissions no further action is required. If the air emissions model reflects emissions above the thresholds for construction emissions, the applicant shall mitigate such emissions consistent with applicable rules and procedures of the SMAQMD and City of Sacramento. This includes the following: The applicant shall include on all grading or improvement plans the following SMAQMD Enhanced Exhaust Control Practices: • Provide a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the proposed project to the City and the SMAQMD. The inventory shall include the horsepower rating, engine model year, and projected hours of use for each piece of equipment. The construction contractor shall provide the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman. This information shall be submitted at least four business days prior to the use of subject heavy-duty off-road equipment. The inventory shall be updated and submitted monthly throughout the duration of the proposed DSP, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. • Provide a plan in conjunction with the equipment inventory, approved by the SMAQMD, demonstrating that the heavy-duty (50 horsepower or more) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		• Emissions from all off-road diesel powered equipment used on the project site shall not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately, and the City and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this measure shall supersede other SMAQMD or state rules or regulations. • If at the time of granting of each building permit, the SMAQMD has adopted a regulation applicable to construction emissions, compliance with the regulation may completely or partially replace this mitigation. Consultation with the SMAQMD prior to construction will be necessary to make this determination. The applicant shall include the following SMAQMD Fugitive Dust Control Practices on all grading or improvement plans: • Water exposed soil with adequate frequency for continued moist soil. • Suspend excavation, grading, and/or demolition activity when wind speeds exceed 20 mph. • Install wind breaks (e.g., plant trees, solid fencing) on windward side(s) of construction areas. • Plant vegetative ground cover (fast-germinating native grass seed) in disturbed areas as soon as possible. Water appropriately until vegetation is established. • Install wheel washers for all exiting trucks, or wash off all trucks and equipment leaving the site. • Treat site accesses to a distance of 100 feet from the paved road with a 6- to 12-inch layer of wood chips, mulch, or gravel to reduce generation of road dust and road dust carryout onto public roads. • Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The phone number of the District shall also be visible to ensure compliance.	
		The applicant shall estimate and quantify the construction emissions of NOx. The applicant shall pay into the SMAQMD's construction mitigation fund to offset construction-generated emissions of NOx that exceed SMAQMD's daily emission threshold of 85 ppd. The applicants shall keep track of actual equipment use and their NOx emissions so that mitigation fees can be adjusted accordingly for payment to the SMAQMD.	
4.2-3: Development under the proposed DSP could result in long-term (operational) emissions of NOx, ROG, PM10, and PM2.5.	PS	None Feasible.	SU
4.2-4: Implementation of the proposed DSP could result in a significant increase in CO concentrations.	LS	None Required.	NA

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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.2-5: Implementation of the proposed DSP could result in short-term and long-term exposure to Toxic Air Contaminants.	LS	**Mitigation Measure 4.2-5** The City shall require implementation of the following mitigation measures as part of approval of any residences in the DSP area within 500 feet of Business 80, Highway 50 or I-5: • Locate sensitive receptors as far as possible from Business 80, Highway 50 or I-5. • Provide vegetative barriers between the source and receptors. Guidance from the US EPA's July 2016 Recommendations for Constructing Roadside Vegetation Barriers to Improve Near-Road Air Quality or Sacramento Metropolitan Air Quality Management District Landscaping Guidance for Improving Air Quality near Roadways may be incorporated. • Install HVAC systems capable of at least MERV 13 in each proposed building. • The ventilation systems installed should be properly maintained, following standard practices, and as specified by the manufacturer. • A fixed notice should be placed on the filter compartment door of each ventilation unit advising that MERV 13 (or greater) filters shall be used.	SU
4.2-6: Implementation of the proposed DSP could create objectionable odors.	LS	None Required.	NA
4.2-7: Implementation of the proposed DSP could contribute to cumulative increases in short-term (construction) emissions.	PS	**Mitigation Measure 4.2-7** Implement Mitigation Measure 4.2-2(a) and (b).	LS
4.2-8: The proposed DSP could contribute to cumulative increases in long-term (operational) emissions of NOx, ROG, PM10, and PM2.5.	PS	None Feasible.	SU
4.2-9: The proposed DSP could contribute to cumulative increases in CO concentrations.	LS	None Required.	NA
4.2-10: Implementation of the proposed DSP could contribute to cumulative increases in short- and long-term exposures to Toxic Air Contaminants.	PS	**Mitigation Measure 4.2-10** Implement Mitigation Measure 4.2-5.	SU
4.3 Biological Resources			
4.3-1: Development pursuant to the proposed DSP could result in the loss of potential foraging habitat for Swainson's hawk.	LS	None Required.	NA

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SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.3-2: Development under the proposed DSP could result in the loss of potential nesting habitat for special-status bird species and other sensitive and/or protected bird species.	PS	**Mitigation Measure 4.3-2(a)** For projects proposed to be constructed in the DSP area that have trees onsite or trees immediately adjacent to the project site (including within a planter strip), the applicant shall conduct a nesting bird survey to determine whether there are nesting special-status birds present. Surveys shall be conducted by a qualified biologist prior to and within 14 days of construction activities. If nesting birds are present during the survey, then the applicant shall notify the City's Planning Director and proceed as follows: 1) The applicant shall conduct any tree removal activities required for project construction outside of the migratory bird breeding season (February 1 through August 31) where feasible. 2) All trees slated for removal during the nesting season shall be surveyed by a qualified biologist no more than 48-hours before removal to ensure that no nesting birds are occupying the tree. 3) Depending on conditions specific to each nest, and the relative location and rate of construction activities, it may be feasible for construction to occur as planned without impacting the breeding season. In this case (to be determined on an individual basis), the nest(s) shall be monitored by a qualified biologist during excavation and other outdoor construction that involves the use of heavy equipment. If, in the professional opinion of the monitor, the construction activities associated with that part of construction activities would impact the nest, the monitor shall immediately inform the construction manager and the applicant shall notify the City's Planning Director. The construction manager shall stop construction activities that have the potential to adversely affect the nest until the nest is no longer active. Completion of the nesting cycle shall be determined by a qualified biologist. If construction begins outside of the migratory bird breeding season (February 1 through August 31), then the applicant is permitted to continue construction activities through the breeding season. 4) The applicant shall maintain a 100-ft buffer around each active purple martin nest. No construction activities are permitted within this buffer. 5) For other migratory birds, a no-work buffer zone shall be established around the active nest in consultation with the California Department of Fish and Wildlife. The no-work buffer may vary depending on species and site-specific conditions as determined in consultation with the California Department of Fish and Wildlife. **Mitigation Measure 4.3-2(b)** For projects proposed to be constructed in the DSP area that would include the use of off-road vehicles during project construction, the applicant shall conduct a survey for Swainson's hawk nests, the survey shall be of all trees within 500 feet of the project site which has a 24-inch minimum diameter at breast height. The survey distance may be decreased based on type of construction and whether heavy construction equipment would be used. The applicant may ask the California Department of Fish and Wildlife for a reduced survey distance and/or reduced buffer area. Surveys shall be conducted in accordance with the Swainson's Hawk Technical Advisory Committee's Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (2000). If active Swainson's hawk nests or other raptors' nests are found during the survey performed under Mitigation Measure 4.3-2(a), construction activities shall not be permitted on those portions of the project site within 500 feet of the active nest during the Swainson's hawk breeding season (March 1 – September 15).	LS

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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		Mitigation Measure 4.3-2(c) For projects proposed within suitable habitat for burrowing owl (in particular for projects proposed in annual grassland habitat occurring in the northeast part of the DSP area as shown in Figure 4.3-1 in the EIR, and areas adjacent to Sutter's Landing Park that have not been developed), the applicant shall conduct preconstruction surveys for burrowing owls in accordance with guidance from the California Department of Fish and Wildlife.	
4.3-3: Projects developed under the DSP could result in impacts to special-status fish species and degradation of designated critical habitat.	LS	None Required.	NA
4.3-4: Projects proposed under the DSP could result in removal of habitat for the valley elderberry longhorn beetle.	PS	**Mitigation Measure 4.3-4 (a)** For projects proposed within or adjacent to habitat for VELB (suitable habitat for the VELB occurs in close proximity to the Sacramento and American rivers in association with undeveloped valley foothill riparian habitat and at undeveloped areas of Sutter's Landing Park; see Figure 4.3-1 in the EIR), the applicant shall conduct surveys prior to construction for the presence of the valley elderberry longhorn beetle and its elderberry host plant by a qualified biologist in accordance with U.S. Fish and Wildlife Service protocols. If elderberry plants with stems measuring 1.0 inch or greater are not identified, no further mitigation is required.	LS
		Mitigation Measures 4.3-4 (b) If elderberry plants with one or more stems measuring 1.0 inch or greater in diameter at ground level occur on or adjacent to and within 100 feet of ground disturbing activities (shrub's dripline is within 100 feet of construction activities or site), or are otherwise located where they may be directly or indirectly affected by the project, minimization and compensation measures, which include transplanting existing shrubs and planting replacement habitat (conservation plantings) are required (see below). Surveys are valid for a period of two years. Elderberry plants with no stems measuring 1.0 inch or greater in diameter at ground level are unlikely to be habitat for the beetle because of their small size and/or immaturity. Therefore, no minimization measures are required for removal of elderberry plants with all stems measuring 1.0 inch or less in diameter at ground level.	
		Mitigation Measures 4.3-4 (c) For shrubs with stems measuring 1.0 inch or greater, the applicant shall ensure that elderberry shrubs within 100 feet of ground disturbing activities be protected and/or compensated for (if affected by construction activities) in accordance with the "U.S. Fish and Wildlife Services' (USFWS) Conservation Guidelines for the Valley Elderberry Longhorn Beetle and the Programmatic Formal Consultation Permitting Projects with Relatively Small Effects on the Valley Elderberry Longhorn Beetle Within the Jurisdiction of the Sacramento Field Office."	
4.3-5: Projects developed under the proposed DSP could remove habitat for the western pond turtle.	NI	None Required.	NA

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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.3-6: Projects developed under the proposed DSP could result in impacts to special-status bat species.	PS	**Mitigation Measure 4.3-6** If a project would result in the removal of large, mature trees within the riparian areas along the Sacramento or American rivers as shown on Figure 4.3-1 of the EIR or the removal of an unsealed, open to the elements, vacant building, and construction activities commence on the project site during the breeding season of special-status bat species (May 1 to August 31), then a field survey shall be conducted by a qualified biologist to determine whether active roosts are present on site or within 100 feet of the project boundaries prior to the commencement of construction activities. Field surveys shall be conducted early in the breeding season before any construction activities begin, when bats are establishing maternity roosts but before pregnant females give birth (April through early May). If no roosting bats are found, then no further mitigation is required. If roosting bats are found, then disturbance of the maternity roosts shall be avoided by halting construction until the end of the breeding season. Alternatively, a qualified bat biologist may exclude the roosting bats in consultation with the California Department of Fish and Wildlife, thereby allowing construction to continue after successful exclusion activities. If the biologist determines that bats could potentially inhabit a building planned for demolition or alteration, and a nighttime survey is necessary, then the biologist may return for an emergence survey.	LS
4.3-7: Projects constructed under the proposed DSP could result in impacts to special-status plant species.	NI	None Required.	NA
4.3-8: Projects developed pursuant to the DSP could result in net reduction of sensitive habitats including protected wetland habitat as defined in Section 404 of the Clean Water Act, riparian vegetation, and state jurisdictional waters/wetlands.	PS	**Mitigation Measure 4.3-8 (a)** For projects proposed in areas that contain aquatic habitat which may support wetlands and other waters of the U.S., riparian vegetation, and state jurisdictional waters/wetlands (i.e., riparian or riverine areas associated with the Sacramento and American rivers as shown on Figure 4.3-1 in the EIR), the applicant shall conduct a formal aquatic resources delineation within those project sites. The aquatic resources delineation shall be submitted to the U.S. Army Corps of Engineers for verification. If jurisdictional wetlands and other waters of the U.S., riparian vegetation, and state jurisdictional waters/wetlands are not present, no further action is required.	LS
		Mitigation Measure 4.3-8 (b) If jurisdictional wetlands and other waters of the U.S., riparian vegetation, and state jurisdictional waters/wetlands are present, the applicant shall avoid them if feasible. The applicant shall minimize disturbances and construction footprints near avoided wetlands and other waters of the U.S., riparian vegetation, and state jurisdictional waters/wetlands to the extent feasible.	
		Mitigation Measure 4.3-8 (c) If avoidance of wetlands and other waters of the U.S., riparian vegetation, and state jurisdictional waters/wetlands are not feasible, then the applicant shall demonstrate that there is no net loss of wetlands and other waters of the U.S., riparian vegetation, and state jurisdictional waters/wetlands through compliance with the Clean Water Act Section 404 requirements.	

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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.3-9: Implementation of the proposed DSP could result in interruption of contiguous habitat which would interfere substantially with the movement of resident or migratory fish or wildlife species, migratory corridors, or impede the use of native wildlife nursery sites.	LS	None Required.	NA
4.3-10: Implementation of the proposed DSP could result in removal of protected street trees and conflict with local policies protecting trees.	PS	**Mitigation Measure 4.3-10** For any project within the DSP area that would remove protected trees as defined by City Code 12.56, the applicant shall submit a tree removal permit application for the removal of protected trees and comply with all conditions of any issued permit.	LS
4.3-11: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to the cumulative harm to, or loss of nesting habitat, for nesting habitat for special-status bird species and other sensitive and/or protected bird species.	PS	**Mitigation Measure 4.3-11** Implement Mitigation Measure 4.3-2(a), 4.3-2(b), and 4.3-2(c).	LS
4.3-12: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative impacts to special-status fish species and degradation of designated critical habitat.	LS	None Required.	NA
4.3-13: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to the cumulative loss of habitat for the Valley Elderberry Longhorn Beetle.	PS	**Mitigation Measure 4.3-13** Implement Mitigation Measure 4.3-4(a), 4.3-4(b), and 4.3-4(c).	LS
4.3-14: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to the cumulative loss of habitat, or impacts to bat species.	PS	**Mitigation Measure 4.3-14** Implement Mitigation Measure 4.3-6.	LS

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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.3-15: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to the cumulative loss of sensitive habitats including protected wetland habitat as defined in Section 404 of the Clean Water Act, riparian vegetation, and state jurisdictional waters/wetlands.	PS	**Mitigation Measure 4.3-15** Implement Mitigation Measure 4.3-8(a), 4.3-8(b), and 4.3-8(c).	LS
4.3-16: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to the cumulative loss of locally protected trees.	LS	None Required.	NA
4.4 Cultural Resources			
4.4-1: New construction in the proposed DSP area could cause a substantial adverse change in the significance of an archaeological resource, including human remains.	PS	**Mitigation Measure 4.4-1(a)** **Unanticipated Discovery Protocol for Archaeological Resources and Human Remains** If prehistoric or historic-period archaeological resources are encountered during any stage of construction for any project in the DSP area, all ground disturbing activities shall halt within the project property up to 100 feet from the location of the discovery and the City shall be notified. Prehistoric archaeological materials include, for example, obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (midden) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Any tribal cultural resources discovered during project work shall be immediately disclosed to the City and treated in consultation with the Native American monitor on site, if applicable, or with Native American representatives, with the goal of preserving in place with proper treatment. Historic-period materials may include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. A qualified archaeologist, defined as one meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology, shall inspect the findings within 24 hours of discovery. If the City determines that an archaeological resource qualifies as a historical resource, unique archaeological resource, or tribal cultural resource (as defined pursuant to CEQA Guidelines) and that the project has potential to damage or destroy the resource, the following shall be implemented: 1) If the resource has an association with Native Americans, the City shall consult with appropriate Native American Tribal Representatives and a qualified archaeologist to determine the appropriate mitigation. If preservation in place is feasible, this may be accomplished through one of the following means: (1) modifying the construction plan to avoid the resource; (2) incorporating the resource within open space; (3) capping and covering the resource before building appropriate facilities on the resource site; or (4) deeding resource site into a permanent conservation easement. Consultation between the City, Native American Tribal Representatives, and a qualified archaeologist may result in alternative means of preservation for archaeological resources and/or tribal cultural resources associated with Native Americans.	SU

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		2) If the resource does not have an association with Native Americans, mitigation shall be implemented in accordance with PRC Section 21083.2 and CEQA Guidelines Section 15126.4. Consistent with CEQA Guidelines Section 15126.4(b)(3), mitigation shall be accomplished through either preservation in place or, if preservation in place is not feasible, data recovery through excavation. If preservation in place is feasible, this may be accomplished through one of the following means: (1) modifying the construction plan to avoid the resource; (2) incorporating the resource within open space; (3) capping and covering the resource before building appropriate facilities on the resource site; or (4) deeding resource site into a permanent conservation easement. If avoidance or preservation in place is not feasible, a qualified archaeologist shall prepare and implement a detailed treatment plan to recover the scientifically consequential information from and about the resource, which shall be reviewed and approved by the City prior to any excavation at the resource site. Treatment of unique archaeological resources shall follow the applicable requirements of PRC Section 21083.2. Treatment for most resources would consist of (but would not be not limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the Project. The treatment plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and state repositories, libraries, and interested professionals. 3) In the event of discovery or recognition of any human remains during project implementation, project construction activities within 100 feet of the find shall cease until the Sacramento County Coroner has been contacted to determine that no investigation of the cause of death is required. The City shall comply with requirements identified by the NAHC for the appropriate means of treating the human remains and any associated funerary objects (CEQA Guidelines Section 15064.5[d]).	
		Mitigation Measure 4.4-1(b) **Identification of Sensitive Areas** The City, based on input from Native American consultation, shall prepare a map of the DSP area identifying previously recorded archaeological resources and potential locations of tribal cultural resources—these areas to be collectively known as “sensitive areas”—for use by the City, applicant, archaeologist and Native American monitor. The map shall be subject to California law regarding confidentiality of such materials.	
		Mitigation Measure 4.4-1(c) **Worker Training and Archaeological Monitoring of Project Ground-Disturbing Activities in Sensitive Areas** The provisions of this mitigation measure shall not be required for projects in sensitive areas that consist of: 1) replacement of existing facilities (road signs, sidewalks, pipes, etc.) where ground disturbance would occur principally in previously disturbed sediment, or 2) minor levels of ground disturbance (e.g., to no more than 18 inches below surface). For all other projects in the DSP area that are within sensitive areas: 1. Construction worker cultural resources awareness training shall be conducted for construction personnel involved with excavation activities where ground disturbance would be greater than 18 inches below the ground surface. The training shall consist of a preconstruction training session conducted by or under the supervision of a qualified archaeologist, defined as one meeting the Secretary of the Interior’s Professional Qualifications Standards for Archeology, and shall be held for all construction personnel and staff involved with excavation activities. The training may be delivered to applicable construction personnel via an electronic format (DVD or video file, for example).	

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		Training content will cover procedures to be followed and appropriate conduct to be adhered to if archaeological materials, including tribal cultural resources, are encountered during the project work. Training will include: a) Purpose of archaeological monitoring; b) Identifying archaeological resources; and c) Maintaining proper discovery protocols during construction. 2. Excavation work within the areas identified as sensitive areas shall be undertaken in a manner that is responsive to the potential for discovery of resources. The applicant, archaeologist, and tribal monitor shall coordinate in implementing construction techniques. In the event of dispute, the City's Director of Community Development shall be consulted and shall determine the appropriate procedures at the site. 3. An archaeologist meeting, or supervised by an archaeologist meeting, the Secretary of the Interior's Professional Qualification Standards for Archeology, shall monitor all project ground-disturbing activities within the sensitive areas agreed upon by the City and Native American Tribal Representatives. Information regarding the location of ground disturbing activities and any resource finds shall be kept on file at the City. Such monitoring and reporting shall be conducted at the applicant's expense. 4. A Native American monitor shall be employed at the applicant's expense to conduct monitoring of project construction activities for sensitive areas. The conduct and work of any Native American monitor shall be consistent with the California Native American Heritage Commission (NAHC) Guidelines for Native American Monitors/ Consultants. 5. Potential tribal cultural resources discovered during project work shall be treated in consultation with the Native American monitor on site. 6. If discovery is made of items of potential archaeological resources, including tribal cultural resources, the procedures set forth in Mitigation Measure 4.4-1(a) shall be followed.	
4.4-2: New construction in the DSP area could cause a substantial adverse change in the significance of a tribal cultural resource.	PS	**Mitigation Measure 4.4-2** Implement Mitigation Measure 4.4-1(a) through (c).	SU
4.4-3: The proposed DSP could cause a substantial adverse change in the significance of historical resource as defined in CEQA Guidelines section 15064.5.	PS	None Required.	LS
4.4-4: New construction in the proposed DSP area, in combination with other cumulative development, could contribute to the cumulative loss or alteration of archaeological resources, including human remains.	PS	**Mitigation Measure 4.4-4** Implement Mitigation Measure 4.4-1(a) through (c).	SU

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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.4-5: New construction in proposed DSP area, in combination with other cumulative development within Sacramento County and the City downtown core, could contribute to the cumulative loss or alteration of historic built resources.	LS	None Required.	NA
4.5 Energy Demand and Conservation			
4.5-1: The proposed DSP would increase demand for energy, specifically electricity and natural gas, the construction of which could cause significant environmental effects.	LS	None Required.	NA
4.5-2: The proposed DSP could result in the wasteful, inefficient, or unnecessary use of energy.	PS	**Mitigation Measure 4.5-1** Implement Mitigation Measure 4.7-1.	LS
4.5-3: The proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in demand for energy.	LS	None Required.	NA
4.6 Geology, Soils, and Seismicity			
4.6-1: The proposed DSP could introduce either geologic or seismic hazards by allowing the construction of the project on a site without protection against those hazards.	LS	None Required.	NA
4.6-2: The proposed DSP could expose people to risk associated with unstable soil conditions, including expansive soils and subsidence.	LS	None Required.	NA
4.6-3: The proposed DSP would allow development that could result in substantial soil erosion.	LS	None Required.	NA

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4.6-4: The proposed DSP could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	LS	None Required.	NA
4.6-5: Implementation of the proposed DSP, in combination with other cumulative development, could contribute to cumulative increases in the number of people exposed to seismic and geologic risks.	LS	None Required.	NA
4.6-6: Implementation of the proposed DSP, in combination with other cumulative development, could contribute to cumulative increases in erosion within the Sacramento watershed.	LS	None Required.	NA
4.7 Global Climate Change			
4.7-1: Implementation of the proposed DSP could conflict with the City of Sacramento's Climate Action Plan.	PS	**Mitigation Measure 4.7-1** Prior to issuance of building permits for new non-residential buildings, the applicant shall submit to the City of Sacramento Building Department building design plans demonstrating that the buildings would exceed the 2016 Title 24 energy standards by 15 percent or more.	LS
4.8 Hazards and Hazardous Materials			
4.8-1: Development pursuant to the proposed DSP could expose people to contaminated soil during construction activities.	PS	**Mitigation Measure 4.8-1** If a development site is listed in the Phase I ESA Overview Study as being of moderate or high potential to have a Recognized Environmental Condition (REC), the applicant shall conduct a site specific Phase I Environmental Site Assessment during the entitlement process in general accordance with the current version of ASTM 1527 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process prior to construction and comply with the recommendations in the report. This requirement does not apply to projects in which excavation would extend no deeper than 18 inches, including projects that are limited to installation of a fence, deck, single-family residence, garage or addition to an existing residence (e.g., room addition), shallow landscaping with or without irrigation lines, or other minor site improvements, or replacement of existing facilities (road signs, sidewalks, pipes, etc.) where ground disturbance would occur principally in previously disturbed sediment.	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.8-2: Development pursuant to the proposed DSP could expose people to asbestos-containing materials, lead-containing paint, PCBs, or other hazardous building materials or situations during demolition or renovation activities.	LS	None Required.	NA
4.8-3: Development pursuant to the proposed DSP could expose people to contaminated groundwater during construction or dewatering activities.	LS	None Required.	NA
4.8-4: The proposed DSP could increase the risk of exposure of site occupants to inadvertent or accidental releases of hazardous substances transported on adjacent roadways or rail lines near the site.	LS	None Required.	NA
4.8-5: Development pursuant to the proposed DSP could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	LS	None Required.	NA
4.8-6: Development pursuant to the proposed DSP could interfere with an adopted emergency response plan or emergency evacuation plan.	LS	None Required.	NA
4.8-7: Implementation of the proposed DSP, in combination with other cumulative development, could contribute to cumulative impacts by exposing people to contaminated soil during construction activities.	PS	**Mitigation Measure 4.8-7** Implement Mitigation Measure 4.8-1.	LS

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TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.8-8: Implementation of the proposed DSP, in combination with other cumulative development, could contribute to cumulative impacts by exposing people to asbestos-containing materials, lead-containing paint, PCBs, or other hazardous materials or situations during demolition or renovation activities.	LS	None Required.	NA
4.8-9: Implementation of the proposed DSP, in combination with other cumulative development, could expose people to contaminated groundwater during construction or dewatering activities.	LS	None Required.	NA
4.8-10: Implementation of the proposed DSP, in combination with other cumulative development, could increase the risk of exposure of site occupants to inadvertent or accidental releases of hazardous substances transported on adjacent roadways or rail lines near the site.	LS	None Required.	NA
4.8-11: Implementation of the proposed DSP, in combination with other cumulative development, could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	LS	None Required.	NA
4.8-12: Implementation of the proposed DSP, in combination with other cumulative development, could interfere with an adopted emergency response plan or emergency evacuation plan.	LS	None Required.	NA
4.9 Hydrology and Water Quality			
4.9-1: The proposed DSP could degrade water quality during construction.	LS	None Required.	NA

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TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.9-2: Operation of the proposed DSP could generate new sources of polluted runoff.	LS	None Required.	NA
4.9-3: The proposed DSP could expose people or property to an increased risk of flood hazards.	LS	None Required.	NA
4.9-4: The proposed DSP could adversely affect groundwater supplies, groundwater quality, and/or interfere with groundwater recharge.	LS	None Required.	NA
4.9-5: The proposed DSP could contribute to the cumulative degradation of water quality.	LS	None Required.	NA
4.9-6: The proposed DSP could contribute to cumulative increases in the risk of flooding.	LS	None Required.	NA
4.9-7: The proposed DSP could contribute to cumulative impact on groundwater supplies, quality, and recharge.	LS	None Required.	NA
4.10 Noise and Vibration			
4.10-1: Construction of development allowed under the proposed DSP could generate noise that would conflict with City standards or result in substantial temporary or periodic increase in ambient noise levels.	PS	**Mitigation Measure 4.10-1** For all projects in the DSP area that require a building permit, the City shall require that the contractor implement the following measures during all phases of construction: a) All heavy construction equipment and all stationary noise sources (such as diesel generators) shall have manufacturer-installed mufflers. b) Auger displacement shall be used for installation of foundation piles, if feasible. If impact pile driving is required, sonic pile drivers shall be used, unless engineering studies are submitted to the City that show this is not feasible, based on geotechnical considerations.	SU
4.10-2: Operations of development allowed under the proposed DSP could result in a substantial permanent increase in ambient exterior noise levels.	PS	**Mitigation Measure 4.10-2** For development of new commercial or mixed-use buildings within the DSP area, the applicant shall demonstrate that noise levels from HVAC and/or loading docks would not exceed the stationary noise standards established in the City's Code. To demonstrate that a proposed development will meet the City's stationary noise standards, the developer must implement the following measures: a) Prior to the issuance of building permits, the applicant shall submit engineering and acoustical specification for project mechanical HVAC equipment and the proposed locations of onsite loading docks to the Planning Director	SU

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TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		demonstrating that the HVAC equipment and loading dock design (types, location, enclosure, specification) will control noise from the equipment to at least 10 dB below existing ambient levels at nearby residential and other noise-sensitive land uses. b) Noise-generating stationary equipment associated with proposed commercial and/or office uses, including portable generators, compressors, and compactors shall be enclosed or acoustically shielded to reduce noise-related impacts to noise-sensitive residential uses.	
4.10-3: The operation of development allowed under the proposed DSP could result in residential interior noise levels of 45 dBA Ldn or greater.	LS	None Required.	NA
4.10-4: Construction of buildings pursuant to the proposed DSP could expose existing and/or planned buildings, and persons within, to vibration that could disturb people or damage buildings.	PS	**Mitigation Measure 4.10-4(a)** Implement Mitigation Measure 4.10-1.	LS
		Mitigation Measure 4.10-4(b) For all projects in the DSP area that require the use of graders or impact pile drivers: Prior to the issuance of any demolition, grading, or building permit, the applicant shall develop and submit a Vibration Reduction Plan to the City Chief Building Official for approval. The Plan shall include measures that will reduce vibration at surrounding buildings to less than 80 VdB and 83 VdB where people sleep and work, respectively, and less than 0.25 PPV for historic buildings. Measures and controls shall be identified based on project-specific final design plans, and may include, but are not limited to, some or all of the following: 1) Inclusion of buffers and selection of equipment to minimize vibration impacts during construction at nearby receptors in order to meet the specified standards. 2) Implementation of a vibration, crack, and line and grade monitoring program at existing Nationally registered, State listed, and locally recognized historic buildings located within 47 feet of construction activities. The following elements shall be included in this program: i. Prior to start of construction: 1. The applicant or construction contractor shall install crack gauges on proximate historic structures. ii. During building construction: 1. The construction contractor shall regularly inspect and photograph crack gauges, maintaining records of these inspections to be included in post-construction reporting. Gauges shall be inspected every two weeks, or more frequently during periods of active project actions in close proximity to crack gauges. 2. The construction contractor shall collect vibration data from receptors and report vibration levels to the City Chief Building Official on a monthly basis. The reports shall include annotations regarding project activities as necessary to explain changes in vibration levels, along with proposed corrective actions to avoid vibration levels approaching or exceeding the established threshold.	

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TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		3. If vibration levels exceed the threshold and monitoring or inspection indicates that the project is damaging the historic structure, additional protection or stabilization shall be implemented. If necessary and with approval by the City Chief Building Official, the construction contractor shall install temporary shoring or stabilization to help avoid permanent impacts. Stabilization may involve structural reinforcement or corrections for deterioration that would minimize or avoid potential structural failures or avoid accelerating damage to the historic structure. Stabilization shall be conducted following the Secretary of Interior Standards Treatment of Preservation. This treatment shall ensure retention of the historical resource's character-defining features. Stabilization may temporarily impair the historic integrity of the building's design, material, or setting, and as such, the stabilization must be conducted in a manner that will not permanently impair a building's ability to convey its significance. Measures to shore or stabilize the building shall be installed in a manner that avoids damage to the historic integrity of the building, including integrity of material.	
		iii. Post-construction:	
		1. At the conclusion of vibration generating construction activities, the applicant shall submit a crack and vibration monitoring report to the City Chief Building Official. The report shall include: a narrative summary of the monitoring activities and their findings; photographs illustrating the post-construction state of cracks and material conditions that were presented in the pre-construction assessment report; annotated analysis of vibration data related to project activities; a summary of measures undertaken to avoid vibration impacts; a post-construction line and grade survey; and photographs of other relevant conditions showing the impact, or lack of impact, of project activities. The photographs shall be of sufficient detail to illustrate damage, if any, caused by the project and/or show how the project did not cause physical damage to the historic and non-historic buildings.	
		2. The applicant shall be responsible for repairs from damage to historic and non-historic buildings if damage is caused by vibration or movement during the demolition and/or construction activities. Repairs may be necessary to address, for example, cracks that expanded as a result of the project, physical damage visible in post-construction assessment, or holes or connection points that were needed for shoring or stabilization. Repairs shall be limited to project impacts and do not apply to general rehabilitation or restoration activities of the buildings. If necessary for historic structures, repairs shall be conducted in compliance with the Secretary of Interior Standards Treatment of Preservation. The applicant shall provide a work plan for the repairs and a completion report to ensure compliance with the SOI Standards to the City Chief Building Official and City Preservation Director for review and comment.	
4.10-5: Implementation of the proposed DSP would result in exposure of people to cumulative increases in construction noise levels.	PS	**Mitigation Measure 4.10-5** Implement Mitigation Measure 4.10-1.	SU
4.10-6: Operations of development allowed under the proposed DSP would contribute to cumulative increases in ambient exterior noise levels.	PS	**Mitigation Measure 4.10-6** Implement Mitigation Measure 4.10-2.	SU

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TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.10-7: Implementation of the proposed DSP would contribute to cumulative increases in residential interior noise levels of 45 dBA Ldn or greater.	LS	None Required.	NA
4.10-8: Construction of buildings pursuant to the proposed DSP would contribute to cumulative construction that could expose existing and/or planned buildings, and persons within, to significant vibration.	PS	**Mitigation Measure 4.10-8** Implement Mitigation Measure 4.10-4(a) and (b).	SU
4.11 Public Services			
Police Protection			
4.11-1: The proposed DSP would increase demand for police protection services within the City of Sacramento.	LS	None Required.	NA
4.11-2: Implementation of the proposed DSP, in combination with other cumulative development in the City of Sacramento, would contribute to cumulative increase in the demand for police protection services.	LS	None Required.	NA
Fire Protection			
4.11-3: The proposed projects would increase the demand for fire protection services.	LS	None Required.	NA
4.11-4: Implementation of the proposed DSP, in combination with other cumulative development within the boundaries of the City of Sacramento, would contribute to cumulative increases in demand for fire protection services.	LS	None Required.	NA

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TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
Public Schools			
4.11-5: The proposed DSP would generate additional students in Sacramento City Unified School District.	LS	None Required.	NA
4.11-6: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in student enrollment in Sacramento City Unified School District.	LS	None Required.	NA
Parks and Open Space			
4.11-7: The proposed DSP could cause existing parks within the DSP area to physically deteriorate, requiring additional parks to be constructed.	LS	None Required.	NA
4.11-8: The proposed DSP could result in substantial adverse physical impacts associated with the provision of new or physically altered parks or recreation facilities or the need for new or physically altered parks or recreation facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives for parks and recreation services.	PS	**Mitigation Measure 4.11-8** Projects within the DSP area shall comply with the City's Quimby and Park Impact Fees (PIF) ordinances.	LS
4.11-9: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in the physical deterioration of existing DSP area parks, requiring additional parks to be provided.	PS	**Mitigation Measure 4.11-9** Implement Mitigation Measure 4.11-8.	LS

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TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.11-10: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in the substantial adverse physical impacts associated with the provision of new or physically altered parks or recreation facilities or the need for new or physically altered parks or recreation facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives for parks and recreation services.	PS	**Mitigation Measure 4.11-10** Implement Mitigation Measure 4.11-8.	LS
4.12 Transportation and Circulation			
4.12-1: The proposed DSP could increase Vehicle Miles Traveled (VMT).	LS	None Required.	NA
4.12-2: The proposed DSP could worsen intersection operations.	LS	None Required.	NA
4.12-3: The proposed DSP could worsen freeway operations.	PS	**Mitigation Measure 4.12-3. Freeway Subregional Corridor Mitigation Program (SCMP).** Each project developed pursuant to the DSP that generates more than 100 vehicular peak hour trips that are directed toward the highway system shall: • Remit monetary payment to the I-5 Freeway Subregional Corridor Mitigation Program (SCMP). This remittance shall be completed prior to the issuance of building permits. OR • Negotiate a mutually acceptable agreement with Caltrans and the City.	LS
4.12-4: The proposed DSP could worsen freeway off-ramp queueing.	LS	None Required.	NA
4.12-5: The proposed DSP could impact pedestrian facilities.	LS	None Required.	NA
4.12-6: The proposed DSP could impact transit facilities.	LS	None Required.	NA
4.12-7: The proposed DSP could impact bicycle facilities.	LS	None Required.	NA

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SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.12-8: Implementation of the proposed DSP, in combination with other cumulative development, could contribute to increased vehicle miles traveled (VMT).	LS	None Required.	NA
4.12-9: Implementation of the proposed DSP, in combination with other cumulative development, could contribute to cumulative impacts to intersection operations.	LS	None Required.	NA
4.12-10: Implementation of the proposed DSP, in combination with other cumulative development, could contribute to cumulative impacts to freeway operations.	PS	**Mitigation Measure 4.12-10. Freeway Subregional Corridor Mitigation Program (SCMP).** Implement Mitigation Measure 4.12-3.	LS
4.12-11: Implementation of the proposed DSP, in combination with other cumulative development, could contribute to cumulative impacts to freeway off-ramp queueing.	LS	None Required.	NA
4.12-12: The proposed DSP, in combination with other cumulative development, could impact pedestrian facilities.	LS	None Required.	NA
4.12-13: The proposed DSP, in combination with other cumulative development, could impact transit facilities.	LS	None Required.	NA
4.12-14: The proposed DSP, in combination with other cumulative development, could impact bicycle facilities.	LS	None Required.	NA

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TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.13 Utilities			
Wastewater and Drainage			
4.13-1: The proposed DSP would discharge additional flows to the City's sewer and drainage systems, which could exceed existing infrastructure capacity.	PS	**Mitigation Measure 4.13-1** The City shall manage wastewater from the DSP such that it shall not exceed existing CSS capacity by implementing the following methods: a) Project applicants within the DSP area shall pay the established CSS mitigation fee. b) For projects within the DSP area that require localized upsizing of existing CSS infrastructure for service, applicants shall pay their fair share for improvements to upsize or upgrade the CSS infrastructure. A separate cost sharing agreement may be executed between applicants and the City for this option.	LS
4.13-2: The proposed DSP would increase demand for wastewater treatment.	LS	None Required.	NA
4.13-3: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in demand for wastewater and stormwater facilities.	PS	**Mitigation Measure 4.13-3** Implement Mitigation Measure 4.13-1.	LS
4.13-4: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in demand for wastewater treatment capacity at the SRWWTP.	LS	None Required.	NA
Water Supply			
4.13-5: The proposed DSP would increase demand for potable water.	LS	None Required.	NA
4.13-6: The proposed DSP could require additional water conveyance and treatment.	LS	None Required.	NA

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SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.13-7: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in demand for water supply.	PS	**Mitigation Measure 4.13-7** To ensure that sufficient capacity would be available to meet cumulative demands, the City shall implement, to the extent needed in order to secure sufficient supply, one or a combination of the following: a) Maximize Water Conservation b) Implement New Water Diversion and/or Treatment Infrastructure c) Implement Additional Groundwater Pumping	SU
4.11-8: Implementation of the proposed DSP would contribute to cumulative increases in demand for water conveyance in the vicinity of the DSP areas.	LS	None Required.	NA
Solid Waste			
4.13-9: The collection or disposal of additional solid waste generated under the proposed DSP would result in adverse physical environmental effects.	LS	None Required.	NA
4.13-10: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in solid waste.	LS	None Required.	NA

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CHAPTER 1
Introduction

This Draft Environmental Impact Report (Draft EIR) has been prepared pursuant to the California Environmental Quality Act (CEQA) of 1970 (as amended) by the City of Sacramento in order to disclose the potential environmental consequences of implementing the proposed Downtown Specific Plan (DSP or proposed plan). This Draft EIR (SCH# 2017022048) has been prepared in conformance with CEQA (Public Resources Code [PRC] Section 21000, et seq.) and the State CEQA Guidelines (California Code of Regulations (CCR), Title 14, Chapter 3, Section 15000, et seq.) to disclose the environmental impacts associated with the proposed plan.

The City of Sacramento, Community Development Department as lead agency responsible for administering the environmental review for the project has determined that under CEQA, an environmental impact report (EIR) is required for the proposed DSP.

1.1 Background

Sacramento has a long-standing vision to create a vibrant city offering world-class amenities and places for people to live, work and play. Increasing economic and political momentum have propelled Sacramento on its way to be the diverse and exciting core envisioned by the City, and the proposed DSP will provide the strategies and actions to encourage continued progress.

Downtown Sacramento continues to be the prime work destination in the region. The City's efforts to provide urban amenities include approvals for the Golden 1 Center, Kimpton Sawyer Hotel and downtown entertainment district, the burgeoning R Street corridor, and the well-established Second Saturday and Concerts in the Park events, representing some of the types of development and activities that encourage people to stay and play. Essential to establishing Downtown as a central place to locate and invest is the development of quality housing that allows residents to live near jobs, services and amenities, bringing needed vitality to Downtown, supporting a strong retail core, providing living options to attract and retain workers, supporting walking and transit oriented development, and increasing the tax base.

In order to promote the development of housing in Downtown and achieving then-Mayor Kevin Johnson's Downtown Housing Initiative to provide 10,000 new places to live over the next 10 years, the City is undertaking the development of the DSP. The DSP is intended to: facilitate the types of housing products that will support the demands of residents with diverse economic backgrounds and lifestyle preferences; allow for market rate, moderate and lower income workforce housing, adaptive re-use, and rapid re-housing; consider the historic building stock and

past environmental contamination in Downtown that can complicate and increase the expense of development; identify capacity limitations and improvements of the City's infrastructure to accommodate increased density and the ability to fund needed improvements; balance the provision of parking with the investment in transit, such as the Downtown-Riverfront Streetcar; consider the proximity of residences to amenities including quality schools, grocery stores and retail options; and reduce the length of time to complete planning entitlement and environmental review processes. The DSP addresses the various challenges and implement the City's Downtown Housing Initiative; facilitates neighborhood livability, pedestrian environments and transit oriented development; reduces barriers and increase certainty for investment; and streamlines CEQA and planning entitlements to encourage new housing development.

1.2 Purpose and Use of this EIR

CEQA requires that before a decision can be made to approve a plan that would pose potential adverse physical effects, an EIR must be prepared that fully describes the environmental effects of the plan. The EIR is a public information document that identifies and evaluates potential environmental impacts of a proposed plan, recommends mitigation measures to lessen or eliminate significant adverse impacts, and examines feasible alternatives to the plan. The information contained in the EIR must be reviewed and considered by the City and by any responsible agencies (as defined in CEQA) prior to a decision to approve, disapprove, or modify the proposed plan.

1.3 CEQA Environmental Review

The State CEQA Guidelines define the role and standards of adequacy of an EIR as follows:

- **Informational Document.** An EIR is an informational document that will inform public agency decision-makers and the public of the significant environmental effect(s) of a proposed project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information that may be presented to the agency (State CEQA Guidelines section 15121[a]).

- **Standards for Adequacy of an EIR.** An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information that enables them to make an informed decision that takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure (State CEQA Guidelines section 15151).

State CEQA Guidelines section 15382 defines a significant effect on the environment as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project…" Therefore, in identifying the significant impacts of the proposed

plan, this EIR describes the potential for the plan to result in substantial physical effects within the area affected by the plan (DSP area or plan area) and identifies mitigation measures that would avoid, reduce, or otherwise alleviate those effects, if necessary. See Chapter 4, section 4.0, Introduction to the Analysis, for further description of the approach to analyzing environmental impacts and identifying mitigation measures presented in this EIR.

1.4 Environmental Review

1.4.1 Preliminary Project Evaluation

Having determined an EIR would be required to evaluate changes in the environment that would result from buildout of the proposed DSP, the City elected not to prepare an Initial Study Checklist, as permitted by section 15060(d) of the State CEQA Guidelines. The EIR will cover all technical issue areas.

1.4.2 EIR Scoping

On February 15, 2017, the City issued a Notice of Preparation (NOP) of the EIR to governmental agencies and organizations and persons interested in the proposed plan (the NOP is included in Appendix A). The NOP public review and comment period was February 15, 2017 through March 17, 2017. The City sent the NOP to agencies with statutory responsibilities in connection with the proposed plan with the request for those agencies' input on the scope and content of the environmental information that should be addressed in the EIR. The City Community Development Department held a scoping meeting on March 2, 2017 to solicit comments regarding the scope of the EIR in response to the NOP.

The City received fifteen (15) written comment letters regarding the NOP (see Appendix B). Although specific comments were mentioned in the NOP comment letters and are reflected in the specific technical sections in Chapter 4, the comments generally tended toward larger themes such as:

- The City should take into consideration the need for transit-oriented development to respond to coming enhancements to greenhouse gas reduction targets.
- The City should consider conducting a full central city survey for potentially eligible historic districts and resources, to replace outdated data for the plan area and address the impacts of infill development. This effort should continue upon previous efforts to evaluate potential historic districts.
- The analysis of hazardous materials in the DSP EIR should be consistent with the analysis contained in the City's 2035 General Plan.
- The EIR should include tree retention and planting needs as mitigation for gradual decline and thinning of the urban forest within the plan area. Mitigation should encourage the use of building setbacks, a renewed effort toward conservation of existing trees, removal of cement

in parkway strips, enlarging existing tree wells, and requiring that large canopy species be planted.

- The EIR should include mitigation measures for the increased use of impervious surfaces that include removal of cement from parkway strips and allow for more garden space as well as the use of permeable sidewalk and paving materials.
- The City should explore all possible incentives for adaptive re-use.
- The EIR should consider the effectiveness of Grid 3.0 to address bike and pedestrian safety.
- The City should continue consultation with utility providers to ensure that the EIR addresses impacts related to the utility and infrastructure network and provision of service to the plan area.

The scope of this EIR includes environmental issues that have the potential to be significant impacts, as determined through preparation of the NOP; responses to the NOP; scoping meeting feedback; public open houses conducted for the DSP; and discussions among the public, consulting staff, other agencies, and the City of Sacramento. This process identified potentially significant impacts associated with implementation of the DSP in the following technical areas:

- Aesthetics, Light and Glare;
- Air Quality;
- Biological Resources;
- Cultural Resources;
- Geology Seismicity and Soils;
- Global Climate Change;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Noise and Vibration;
- Public Services (Police, Fire, Schools, Parks, and Libraries);
- Transportation Circulation; and
- Utilities and Service Systems (Water Supply, Wastewater, Storm Drainage, Energy Demand and Conservation, and Solid Waste).

This EIR evaluates the direct, indirect, and cumulative impacts that could result from build out of the proposed plan in these issue areas in accordance with CEQA.

1.4.3 Public Review

The Draft EIR is available for public review and comment as set forth in the Notice of Availability circulated by the City. During the review and comment period written comments (including email) regarding the Draft EIR may be submitted to the City at the address below.

Scott Johnson, Associate Planner
City of Sacramento, Community Development Department
Environmental Planning Services
300 Richards Boulevard, Third Floor
Sacramento, CA 95811
Email: srjohnson@cityofsacramento.org

The Draft EIR, Notice of Availability and other supporting documents, such as technical reports prepared by the City as part of the EIR process, are available for public review at the offices of the Community Development Department at 300 Richards Boulevard, Third Floor, Sacramento, California 95811, and on the City's web site at http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports.

1.4.4 Final EIR and EIR Certification

Following the public review and comment period for the Draft EIR, the City will prepare responses that address all substantive written and oral comments on the Draft EIR's environmental analyses received within the specified review period. The responses and any other revisions to the Draft EIR initiated by City staff will be prepared as a Final EIR document. The Draft EIR and its Appendices, together with the Final EIR, will constitute the EIR for the proposed plan.

1.4.5 Mitigation Monitoring Plan

Throughout this EIR, mitigation measures are clearly identified, where applicable, and presented in language that will facilitate establishment of a mitigation monitoring plan (MMP). As required under CEQA, a MMP will be prepared and presented to the City Council at the time of certification of the Final EIR for the proposed plan and will identify the specific timing and roles and responsibilities for implementation of adopted mitigation measures.

1.5 Subsequent Project Approvals

This EIR discloses the environmental effects of implementation of the proposed plan pursuant to the requirements of the State CEQA Guidelines. As described in Chapter 2, Project Description, the proposed plan includes several approval actions that must be taken by the City and other responsible agencies, as necessary. Subsequent development activities within the DSP area must be consistent with the requirements of these approvals, as well as the adopted MMP, as applicable. Subsequent actions related to the proposed DSP will include Site Plan and Design Review for specific development and infrastructure projects consistent with the DSP, Downtown Special Planning District (SPD), Central City Urban Design Guidelines, and other applicable regulations and requirements.

Use of this EIR to cover later project activities is addressed in PRC Section 21166 and State CEQA Guidelines section 15162(a). Under those sections, if the proposed future activities are consistent with the proposed plan as analyzed in this EIR, and would not create new significant or

substantially more severe significant impacts that were not examined in this EIR, the later activities are considered to be within the scope of the EIR and no further review under CEQA is required. More specifically, State CEQA Guidelines section 15162(a) states:

When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

1. *Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;*

2. *Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or*

3. *New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:*

    a. *The project will have one or more significant effects not discussed in the previous EIR or negative declaration;*

    b. *Significant effects previously examined will be substantially more severe than shown in the previous EIR;*

    c. *Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or*

    d. *Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.*

State CEQA Guidelines section 15182 generally provides that any residential project undertaken that is consistent with a specific plan considered in an EIR, and that conforms to the provisions of the specific plan, is exempt from preparation of a later EIR, Mitigated Negative Declaration, or Negative Declaration, unless one of the conditions identified in Guidelines section 15162(a), described above, is present.

Thus, to the extent appropriate and consistent with the requirements of CEQA and the State CEQA Guidelines, the City would rely on this EIR in conjunction with its consideration of subsequent projects undertaken pursuant to the DSP.

1.6 Document Organization

This Draft EIR document is organized as follows:

Summary – This section summarizes the proposed plan and the conclusions of the Draft EIR. A summary table is included and organized to allow the reader to easily identify potentially significant effects, proposed mitigation measures, and any residual environmental impacts after implementation of mitigation measures. A summary of the plan alternatives and the environmentally superior alternative is also provided. The Executive Summary also identifies areas of controversy regarding the proposed plan that are known to the City at the time of circulation of this Draft EIR.

Chapter 1, Introduction – This chapter describes the purpose and organization of the Draft EIR.

Chapter 2, Project Description – This chapter describes the proposed plan. The description includes, with text and graphics, the location and boundaries of the plan area, statements of objectives, a description of the proposed plan, components and characteristics, and a list of plan approvals and entitlements that would be required to implement the proposed plan.

Chapter 3, Land Use, Population, and Housing – This chapter provides an overview of the land use and planning issues that could arise in connection with implementation of the proposed plan. In addition, it describes population and housing conditions and trends in the City of Sacramento, and the population, employment, and housing characteristics of the proposed plan.

Chapter 4, Environmental Setting, Impacts, and Mitigation Measures – For each environmental issue evaluated in the Draft EIR, this chapter discusses the environmental and regulatory setting, the methodology used, the detailed analysis of potential impacts (including direct, indirect, and cumulative impacts), and, if necessary, a discussion of potentially feasible mitigation measures.

Chapter 5, Other CEQA Considerations – This chapter discusses several issues required to be included in the Draft EIR, including effects found not to be significant, significant and unavoidable impacts, significant irreversible environmental changes, cumulative impacts, the potential for the proposed plan to cause urban decay, and the potential for the proposed plan to induce urban growth and development.

Chapter 6, Project Alternatives – This chapter describes potentially feasible alternatives to the proposed plan that could avoid or substantially reduce one or more significant impacts while attaining most of the basic objectives of the plan, and evaluates the comparative environmental effects of the alternatives.

Chapter 7, List of Preparers and Persons Consulted – This chapter identifies the agency staff and consultants who prepared the Draft EIR, and agencies or individuals consulted during preparation of the Draft EIR.

Chapter 8, Acronyms and Abbreviations – This chapter lists the acronyms used in this Draft EIR in alphabetical order.

Chapter 9, References – This chapter lists all citations used throughout the Draft EIR.

Appendices – The appendices include environmental scoping information and technical reports and data used in the preparation of the Draft EIR. These documents are included on CD at the back of the Draft EIR.

CHAPTER 2
Project Description

2.1 Introduction

This chapter presents a description of the proposed Downtown Specific Plan (DSP), including its various components and characteristics and the discretionary approvals required to implement it.

The DSP builds on the Downtown Housing Initiative that was launched in 2015 to bring 10,000 new places to live to Downtown Sacramento within 10 years, an initial push that is a key element to achieving the City's general plan housing goal of adding nearly 23,000 total units within the Central City by 2035. The Initiative seeks to provide mixed-income and multi-modal-friendly residences to meet a varied range of housing needs. Fortifying the housing base is intended to help generate needed vitality and activity in Downtown, support a strong retail and entertainment core, provide housing for a larger portion of the local workforce, stimulate walking and transit-oriented development, improve mobility and the effectiveness of non-auto modes of transportation, boost livability and inclusiveness, and enhance the economy of Downtown and the City's revenue base.

The DSP seeks to implement the vision articulated in the Sacramento 2035 General Plan, including the Central City Community Plan (CCCP), customizing the planning process and land use regulations to the unique characteristics of Downtown. All subsequent development projects, zoning regulations, public improvements, and related activities within the DSP area would be required to be consistent with the DSP.

This project description identifies the boundaries of the DSP area, the proposed policies of the DSP, proposed changes to the 2035 General Plan and the City's Planning and Development Code, proposed changes to the Central City Urban Design Guidelines, specific improvements or programs proposed as part of the DSP, on- and off-site infrastructure that would be required to implement the DSP, other components of project implementation that are covered by this EIR (e.g., design guidelines), and discretionary approvals that are required to implement the DSP.

2.2 Project Location

The project site, referred to as the Downtown Specific Plan area (DSP area) in this EIR, is located in Sacramento, California, approximately 80 miles east of San Francisco and 85 miles west of Lake Tahoe. Sacramento is a major transportation hub, the point of intersection of transportation routes that connect Sacramento to the San Francisco Bay area to the west, the Sierra Nevada

mountain range and Nevada to the east, Los Angeles to the south, and Oregon and the Pacific Northwest to the north. The city is bisected by a number of major freeways, including Interstate 5 (I-5), which traverses the state from north to south; Interstate 80 (I-80), which provides an east-west connection between San Francisco and Reno; and U.S. Highway 50 which provides an east-west connection between Sacramento and South Lake Tahoe. The Union Pacific Railroad (UPRR) and BNSF Railway (BNSF) also transect Sacramento. Daily Amtrak service is provided from the Sacramento Valley Station at 4th and I streets (on the UPRR line) and links Sacramento to the Bay Area; the Central Valley south to Bakersfield and beyond to Southern California; Roseville, Auburn, and points east to the Sierra; Redding and points north to Seattle, Washington; Amtrak regional bus connections throughout northern California; and points east to Chicago, Illinois. **Figure 2-1** shows the location of the project site in the Sacramento region.

The DSP area is located within the City of Sacramento's Central City community, the area subject to the CCCP (see **Figure 2-2**). The DSP area is bounded by the American River, the River District Specific Plan Area, and Railyards Specific Plan Area to the north; the Sacramento River to the west; the southern portions of parcels fronting the south side of Broadway to the south; and the Capital City Freeway (Business 80) to the east, as depicted in **Figure 2-3**.

2.3 Project Objectives

CEQA Guidelines §15124(b) requires that an EIR project description include a statement of the objectives intended to be achieved by the project. The objectives describe the purpose of the project and are intended to assist the lead agency in developing a reasonable range of alternatives for consideration in the EIR, as well as assisting the decision makers in assessing the feasibility of mitigation measures and alternatives.

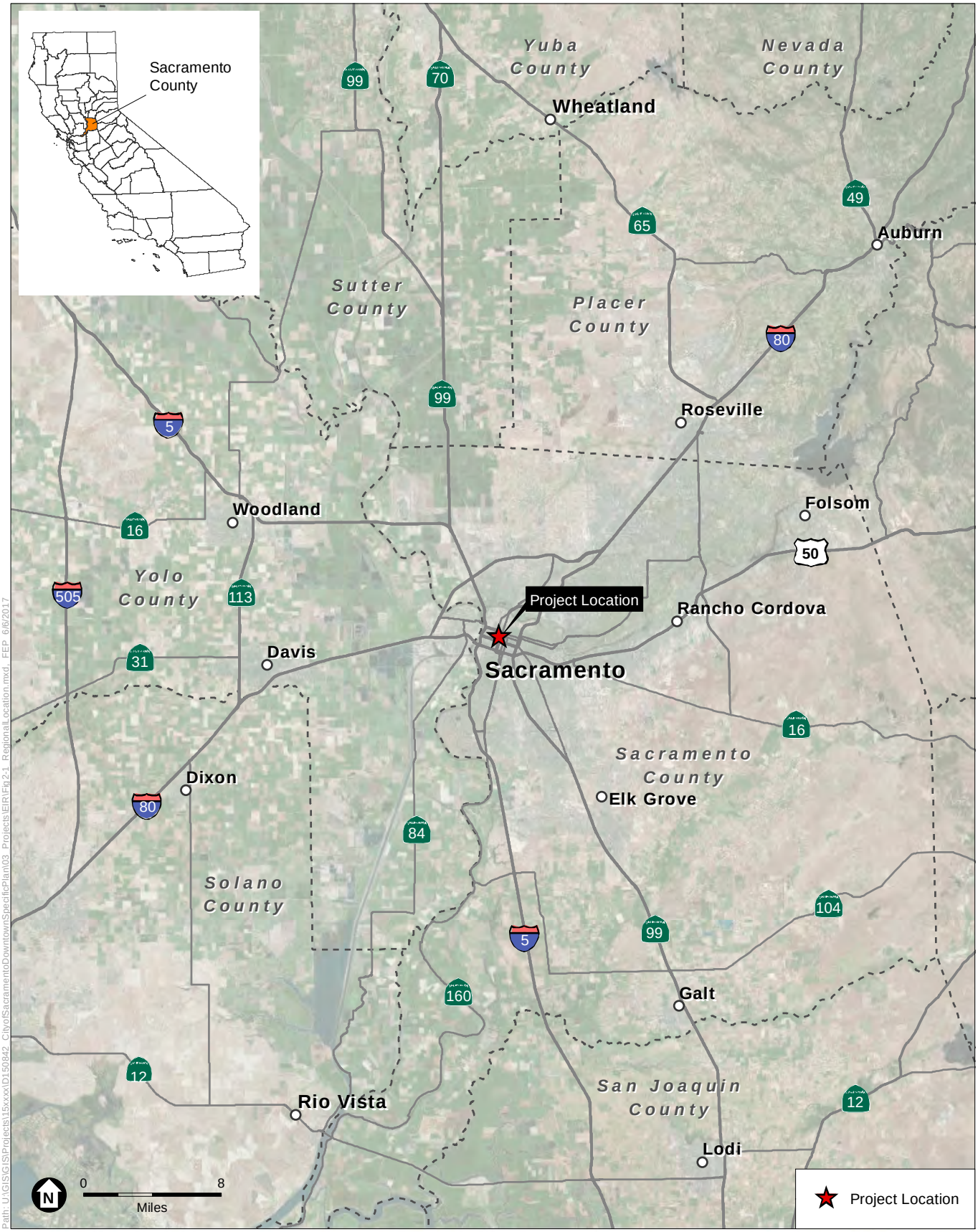
The overall goal of the DSP is the orderly and systematic development and integration of housing within the DSP area that is compatible with site characteristics and consistent with the City's goals and policies. More specifically, the objectives of the proposed DSP are to:

1. Encourage future growth in the city inward into existing urbanized areas and the central business district to foster infill development, as well as encourage density of development and integration of housing with commercial, office, and entertainment uses that fosters increased walking and reduced automobile use.

2. Accommodate growth that protects important environmental resources as well as ensures long-term economic sustainability and health, and equity or social wellbeing for the entire community.

3. Facilitate creation of new places to live in Downtown consistent with the City's Downtown Housing Initiative and general plan.

4. Develop varied and unique housing options that appeal to a wide range of residents and reflect the diversity of Sacramento.

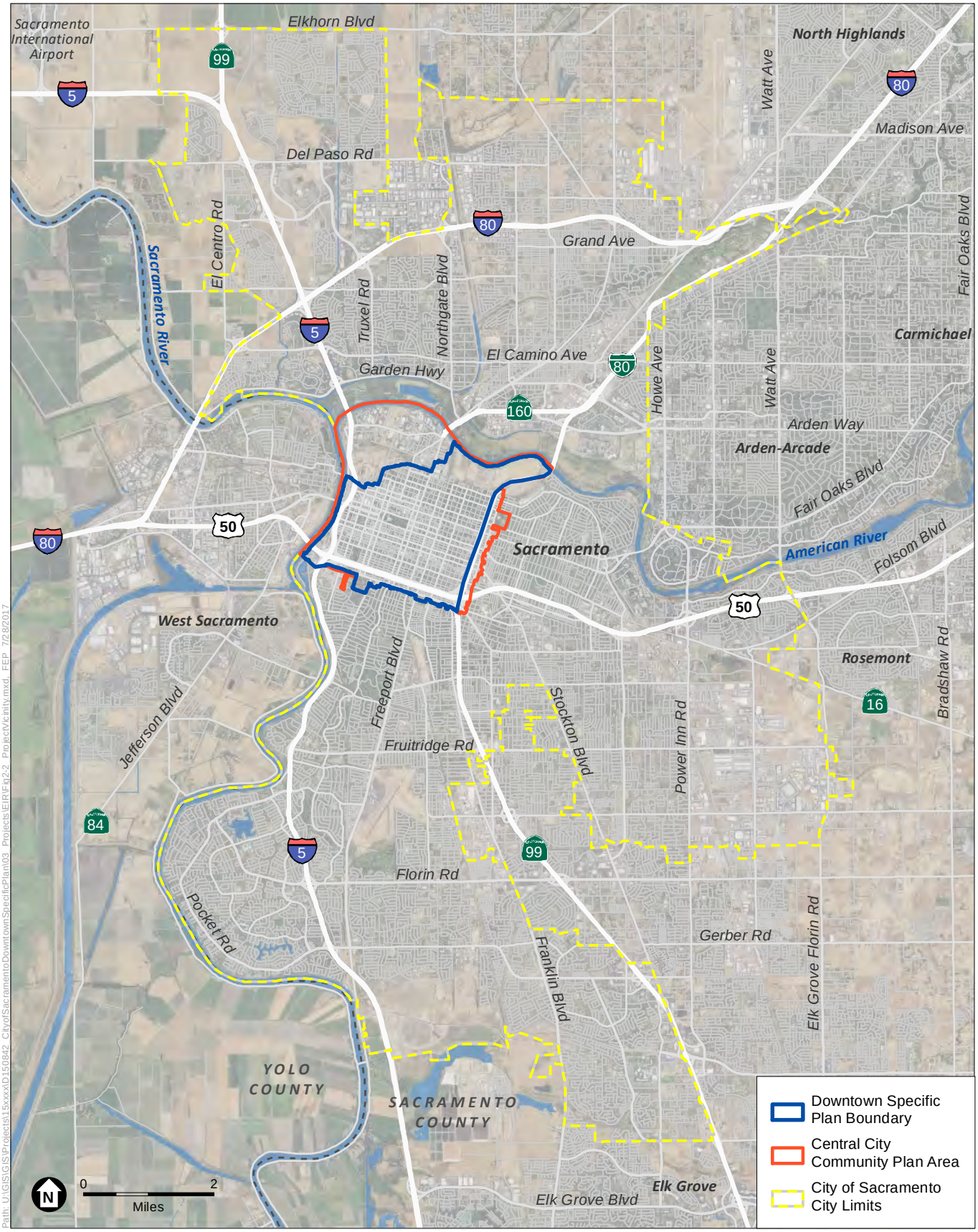


SOURCE: Esri, 2015; City of Sacramento, 2017; ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-1
Regional Location

ESA



SOURCE: Esri, 2015; USDA, 2016; City of Sacramento, 2017; ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-1
Project Vicinity

ESA

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SOURCE: USDA, 2014; City of Sacramento, 2016; ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-3
Downtown Specific Plan Area

ESA

5. Maximize livability and quality of life by expanding community amenities to meet the everyday needs of those who live and work in Downtown.

6. Solidify Downtown's status as the regional destination for the arts, culture and entertainment.

7. Diversify employment opportunities by increasing Downtown's attractiveness to new, emerging and innovative businesses and industries.

8. Preserve and enhance Downtown's unique character, buildings and streetscapes by requiring new development to contribute high standards of urban design and incorporate environmental best practices.

9. Celebrate Downtown's rich historic, cultural, recreational, open space and riverfront assets.

10. Create a connected, layered transportation network that serves all modes of travel and supports transit oriented development including along the Downtown / Riverfront Streetcar line.

11. Achieve the goals of the Grid 3.0 planning process to create: (1) defined mode priority on key street segments; (2) a sustained regional network access for downtown gateways; (3) new opportunities for economic development; (4) a complete bicycle network in downtown; (5) an enhanced pedestrian network, especially where multiple modes interconnect; (6) expanded transit network with improved operational efficiency; (7) improved transportation system reliability; and (8) a system of managing travel and parking demand of the anticipated high growth within the DSP area;

12. Focus public and private investments to bring equitable levels of public services and enhanced utility infrastructure to meet the needs of existing a new development.

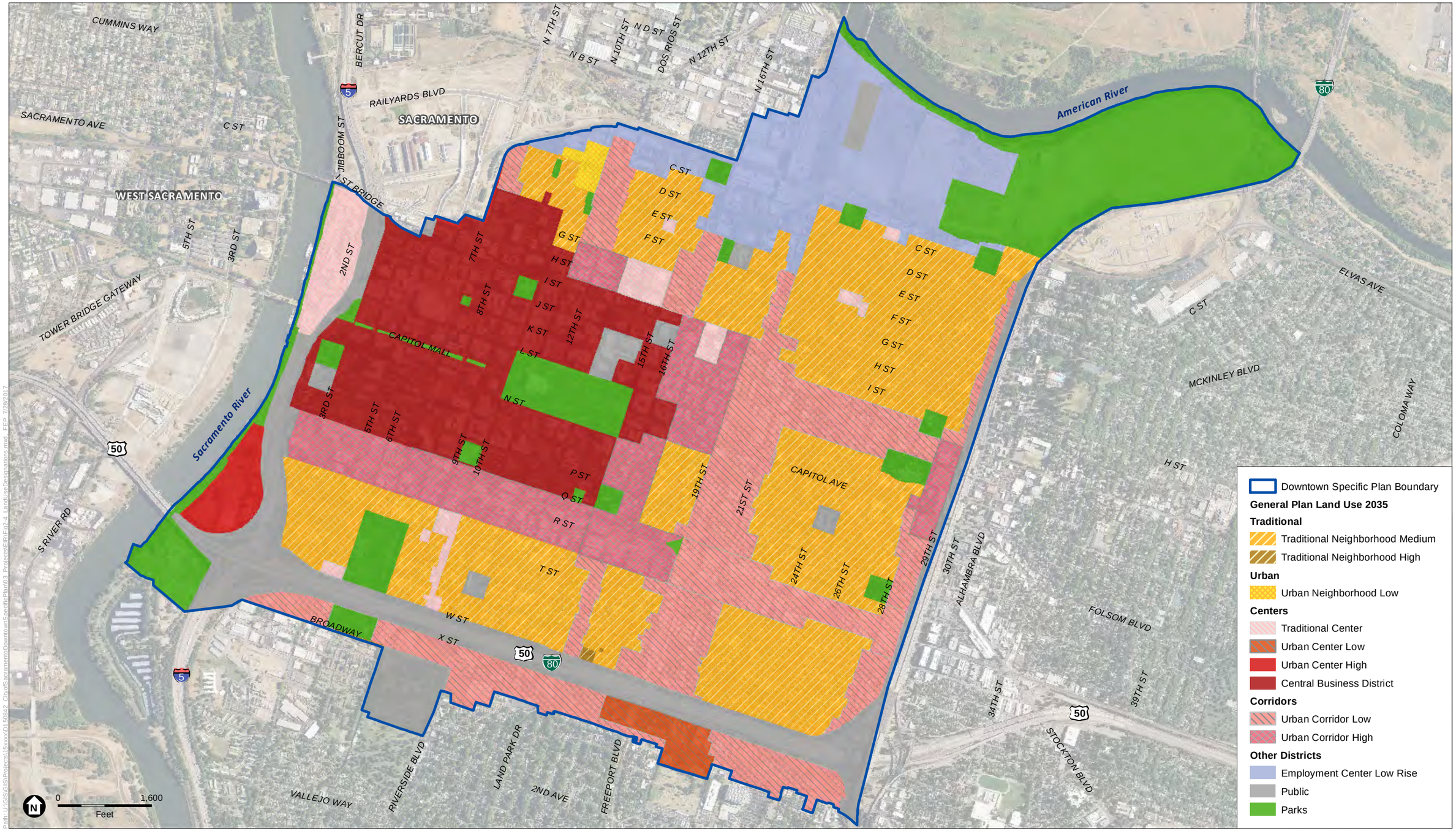
13. Remove barriers to new housing and increase certainty for investment by streamlining the development and environmental review processes.

2.4 Existing Conditions

General Plan, Zoning, and Special Planning Districts

The DSP area encompasses several general plan land use designations, as shown on **Figure 2-4**. Properties within the DSP area are currently designated as Traditional Neighborhood Low, Traditional Neighborhood Medium, Traditional Neighborhood High, Urban Neighborhood Low, Urban Neighborhood Medium, Urban Neighborhood High, Traditional Center, Urban Center Low, Urban Center High, Central Business District, Urban Corridor Low, Urban Corridor High, Employment Center Low Rise, Public, and Parks.

As shown on **Figure 2-5**, the DSP area includes several zoning designations, including Standard Single Family (R-1), Single or Two Family (R-1B), Multi-Family (R-2B), Multi-Family (R-3A), Multi-Family (R-4), Multi-Family (R-4A), Multi-Family (R-5), Residential-Office (RO),



SOURCE: USDA, 2016; City of Sacramento, 2017; ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-4
Land Use Designations

ESA

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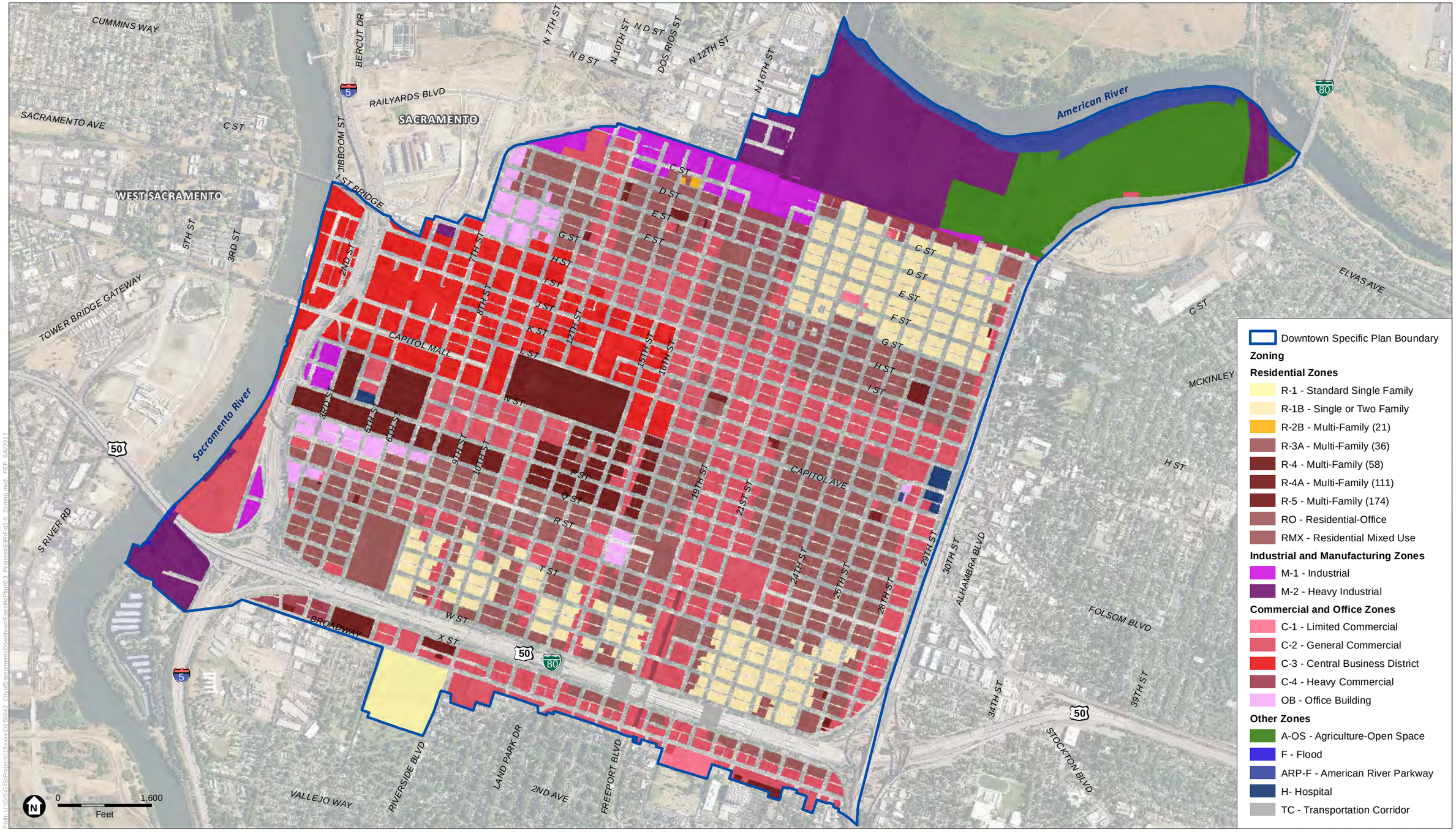

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SOURCE: USDA, 2016; City of Sacramento, 2017; ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-5
Zoning

ESA

Residential Mixed Use (RMX), Industrial (M-1), Heavy Industrial (M-2), Limited Commercial (C-1), General Commercial (C-2), Central Business District (C-3), Heavy Commercial (C-4), Office Building (OB), Agriculture-Open Space (A-OS), Flood (F), American River Parkway (ARP-F), Hospital (H), and Transportation Corridor (TC). Additional detail on zoning is provided in Chapter 3.0, Land Use, Population, and Housing.

There are four existing Special Planning Districts (SPDs) within the DSP area. The Entertainment and Sports Center SPD provides specific development guidelines for areas around the Golden 1 Center and Downtown Commons. The Central Business District (CBD) SPD provides development and urban form development guidance for areas within the CBD, generally located between F Street, Q Street, 3rd Street, and 16th Street. The R Street SPD sets development standards for the R Street Corridor bounded by 2nd Street, 29th Street, Q Street, and S Street. The Alhambra Corridor SPD lies mostly outside of the DSP area, although a portion is within the plan area. The Alhambra Corridor SPD is bounded by B Street, US 50, 29th Street, and 34th Street.

Existing and Adjacent Uses

The DSP area is the core of the city of Sacramento and the Sacramento region and includes State government buildings, corporate offices and businesses, high-rise condominiums, historic neighborhoods, parks and recreational areas, after-hours entertainment venues, restaurants and shops, schools, and industrial and manufacturing complexes all within a tree-lined street grid. The DSP area includes several distinct neighborhoods, including Alkali Flat, Mansion Flats, New Era Park, Old Sacramento, CBD, Boulevard Park, Marshall School, Midtown/Winn Park/Capitol Avenue, Southside Park, Richmond Grove, Poverty Ridge, and Newton Booth.

Employment in the Central City is generated primarily by office uses, to a lesser extent by retail and customer-oriented establishments throughout the DSP area, and by the limited numbers of industrial uses that remain in the DSP area. Office uses are concentrated in the CBD, which includes major concentrations of local, State, and federal government employees, particularly in the Capitol area, Civic Center, and Capitol Mall portions of the CBD. Office buildings range from high rises in the CBD to low-rise mixed-use buildings in Midtown and along the Broadway corridor. Commercial, retail, and food-and-drink-serving uses are distributed throughout the city grid with, a concentration of local, small-scale, pedestrian-oriented retail and commercial uses on J and K streets, as well as in Old Sacramento.

Residential uses in the DSP area are a mix of single-family residences, duplexes, and multi-family complexes. Compared to the DSP area as a whole, there is a lower concentration of residential uses in the CBD area of the city, although there are apartments and other multi-family residences in this area.

The DSP area is surrounded by active uses on many sides:

- The Sacramento River lies immediately to the west of the DSP area, with the City of West Sacramento on the west side of the river. Uses in West Sacramento along the Sacramento River include the Broderick neighborhood; the California State Teachers' Retirement System

(CalSTRS) building, the Ziggeraut building, and other office development; the Bridge District residential neighborhood, which includes the Raley Field baseball stadium and the Ironworks and Park Moderns residential developments; the Barn entertainment venue and the River Walk Bike Trail; and Pioneer Bluff, south of the Pioneer Bridge, which consists of a mixture of primarily industrial uses. Vehicle and pedestrian access to West Sacramento is via the I Street and Tower bridges.

- The Railyards Specific Plan and the River District Specific Plan areas lie to the north of the DSP area. The Railyards Specific Plan Area consists of the UPRR tracks; historic Central Shops buildings; and planned Kaiser Permanente Medical Center, Major League Soccer stadium, multi-family residential neighborhoods, office and retail uses, and parkland. The River District Specific Plan Area is an area with a history of industrial uses undergoing a transition to a mixture of industrial, office, and residential uses. Further to the north are the American River and the American River Parkway.

- Business 80 and the East Sacramento neighborhood are to the east of the DSP area. A major north-south roadway, Alhambra Boulevard, runs parallel to Business 80, while McKinley Boulevard, H Street, J Street, Folsom Boulevard, and Stockton Boulevard provide connectivity to and through the East Sacramento neighborhood. Alhambra Boulevard is home to a variety of retail, restaurant, and office uses. East of Alhambra Boulevard, the neighborhood becomes primarily residential with the exception of retail pockets along Folsom Boulevard and J Street. McKinley Park is a major public open space and recreation resource located immediately east of Alhambra Boulevard between E Street/McKinley Boulevard and H Street.

- South of the DSP area are some of Sacramento's most established and historic neighborhoods. The closest neighborhoods south of the DSP area are Land Park and Curtis Park. The Land Park neighborhood is located immediately south of the DSP area, between Riverside Boulevard and Freeport Boulevard. Curtis Park, an established neighborhood and an adjacent new development of Curtis Park Village, is located between Freeport Boulevard and Highway 99.

Access

Regional access to and from the DSP area is provided by I-5, Business 80 (SR-51), Highway 160, and Highway 99. Highway onramps take traffic directly from local streets onto northbound, southbound, eastbound, and westbound freeways, and vice versa for traffic exiting regional freeways.

The street network through the DSP area is laid out in a grid pattern with numbered streets running north/south and lettered streets running east/west. Major streets that connect the DSP area with outlying areas include one-way streets 15th Street and 19th Street running south; one-way streets 16th Street and 21st Street running north (to C Street); one-way streets J Street and Q Street running east; one-way streets I Street and P Street running west; and two-way streets Capitol Avenue and Broadway running east/west. In addition to these major streets, the I Street Bridge and Tower Bridge connect Sacramento with the City of West Sacramento. Numerous other two-way or localized one-way streets serve the local neighborhoods.

The DSP area is also served by the convergence of the Blue, Green, and Gold Light Rail Transit lines that connect Downtown with northeastern, eastern, and southern Sacramento. Numerous bus routes served by Regional Transit (RT), Yolobus, e-Tran, El Dorado County Transit, Yuba-Sutter Transit, and others provide transit service within the DSP area or to/from areas outside the DSP area.

2.5 Downtown Specific Plan

The proposed DSP has been designed to facilitate future development within the City of Sacramento's central core to create a vibrant downtown where people can live, work, and play. The proposed DSP was developed in accordance with the Downtown Housing Initiative, which is intended to facilitate development of at least 10,000 new places to live in Downtown Sacramento over the next ten years. For the purposes of the Downtown Housing Initiative, Downtown includes the Railyards and River District Specific Plan areas. Although the proposed DSP allows for increased opportunities for development, it is anticipated that the actual amount of development that would occur over the next 20 years would be generally consistent with what has been assumed to occur over that timeframe under the Sacramento 2035 General Plan. It is anticipated up to 13,401 new housing units, approximately 3.8 million square feet (sf) of new non-residential uses, and 750 hotel rooms would be built in the DSP area. There would also be an additional 3.3 million sf of backfill non-residential development, which includes new uses that would occur within existing buildings and, in turn, allow for a total development potential of 7.1 million sf of non-residential uses when combined with the new growth. It is assumed that most of the new housing units projected in the DSP area would be multifamily units.

2.5.1 Growth Potential

The proposed DSP anticipates construction and operation of new development (new buildings and new uses) combined with intensification of existing buildings and occupancy of currently vacant parcels or buildings. The proposed DSP is expected to result in 13,401 dwelling units and 7,173,044 sf of non-residential uses, as shown in **Table 2-1**.

TABLE 2-1
DEVELOPMENT POTENTIAL FOR THE DSP

Land Use Designation	Implementing Zoning Designations[2]	Acreage (ac)	Allowed Density/ Intensity	Backfill Development Potential[3]	New Growth Development Potential[4]	TOTAL Development Potential[5]
Central Business District (CBD)	C-2, C-3, H, M-1, MIXED, OB, R-4, R-5, RO	263.1	61-450 du/ac	--	5,353 du	5,353 du
			3.0-15.0 FAR	2,596,865 sf	2,535,042 sf	5,131,907 sf
Employment Center Low Rise (ECLR)	C-2, C-4, M-1, M-2, MIXED, R-3A, R-4	218.1	n/a	--	269 du	269 du
			0.15-1.0 FAR	19,250 sf	35,729 sf	54,980 sf
MIXED[1]	C-2, C-3, MIXED	26.3	n/a	--	340 du	340 du
			n/a	0 sf	0 sf	0 sf

TABLE 2-1
DEVELOPMENT POTENTIAL FOR THE DSP

Land Use Designation	Implementing Zoning Designations[2]	Acreage (ac)	Allowed Density/ Intensity	Backfill Development Potential[3]	New Growth Development Potential[4]	TOTAL Development Potential[5]
Parks and Recreation (PRK)	A-OS, ARP-F, C-2, C-3, F, M-1, M-2, MIXED, R-1B, R-3A, R-4, R-5, RMX	331.5	n/a	--	0 du	0 du
			n/a	2,096 sf	1,744 sf	3,840 sf
Public/Quasi-Public (PUB)	C-3, M-1, M-2, R-1, R-1B, R-3A, TC	72.4	n/a	--	0 du	0 du
			n/a	16,163 sf	16,700 sf	32,863 sf
Traditional Center (TCNT))	C-1, C-2, C-3, MIXED, R-1B, RMX	35.8	15-36 du/ac	--	14 du	14 du
			0.3-2.0 FAR	23,637 sf	37,730 sf	61,367 sf
Traditional Neighborhood High Density (TNHD)	R-1B, R-3A	0.9	18-36 du/ac	--	0 du	0 du
			0.5-1.5 FAR	0 sf	0 sf	0 sf
Traditional Neighborhood Medium Density (TNMD)	C-1, C-2, C-4, H, MIXED, OB, R-1B, R-2B, R-3A, R-4, R-4A, R-5, RMX, RO	479.1	8-36 du/ac	--	143 du	143 du
			n/a	65,291 sf	81,126 sf	146,417 sf
Urban Center High (UCNTHIGH)	C-2, M-1, M-2	27.6	24-250 du/ac	--	759 du	759 du
			0.5-8.0 FAR	24,202 sf	81,126 sf	105,328 sf
Urban Center Low (UCNTLOW)	C-1, C-2, C-4, RO	18.8	20-150 du/ac	--	1,043 du	1,043 du
			0.4-4.0 FAR	31,614 sf	87,473 sf	119,087 sf
Urban Corridor High (UCORHIGH)	C-2, MIXED, OB, R-3A, R-4, R-5, RMX	141.6	33-150 du/ac	--	2,624 du	2,624 du
			0.3-6.0 FAR	380,614 sf	503,264 sf	883,878 sf
Urban Corridor Low (UCORLOW)	C-1, C-2, C-4, MIXED, OB, R-1B, R-3A, R-4, R-5, RMX, RO	280.5	20-110 du/ac	--	2,856 du	2,856 du
			0.3-3.0 FAR	192,918 sf	440,459 sf	633,377 sf
Urban Neighborhood Low Density (UNLD)	C-2, M-1, R-3A	6.3	12-36 du/ac	--	0 du	0 du
			0.5-1.5 FAR	0 sf	0 sf	0 sf
TOTAL		**1,902.0**		**0 du**	**13,401 du**	**13,401 du**
				3,352,650 sf	**3,820,394 sf**	**7,173,044 sf**

NOTES:
Dwelling unit (du) totals account for entitled projects as well as future new growth.

1 The Mixed land use designation indicates parcels that contain more than one land use designation on-site.

2 The Mixed implementing zoning designation indicates parcels that contain more than one implementing zoning designation on-site.

3 Backfill Development Potential refers to growth in existing vacant or underutilized buildings. Rates for backfill development were determined by breaking down sf by employment category as a percentage of total development (backfill and new growth combined) and then creating a sum for total sf by land use designation. The rates and employment categories are as follows:

Office: 61 percent backfill, 39 percent new growth.
Government: 61 percent backfill, 39 percent new growth.
Medical: 51 percent backfill, 49 percent new growth.
Service: 38 percent backfill, 62 percent new growth.
Retail: 12 percent backfill, 88 percent new growth.
Food: 12 percent backfill, 88 percent new growth.

4 New Growth refers to new buildings and uses that are being developed. Please see Note 3 for methodology applied. Dwelling unit totals account for entitled projects as well as future new growth.

5 Development Potential is based on parcel data derived from the Sacramento Area Council of Governments' SACSIM (Sacramento Activity-Based Travel Simulation Model) data, which assume a combination of backfill and new growth. This total includes total sf for each land use designation, and includes a combination of backfill and new growth.

SOURCE: ESA, 2017; DKS, 2017; SACOG SACSIM data, 2012.

Development of the non-residential uses in the DSP area would create an estimated 22,750 jobs in a variety of employment sectors including medical office, retail/commercial, office, government, and services such as restaurants.

Some parcels within the DSP area are more likely than others to result in development under the proposed DSP. Parcels that are currently vacant or are developed with uses less than the maximum density/intensity permitted by the 2035 General Plan are likely to be developed or redeveloped with new or intensified uses.

Development anticipated under the proposed DSP would be consistent with the growth projections anticipated in the City's 2035 General Plan. The 2035 General Plan's buildout assumptions and population projections, as well as the transportation assumptions, are based largely on information provided by the Sacramento Area Council of Governments (SACOG) for the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS).

2.5.2 Policy Changes

Planning and Development Code

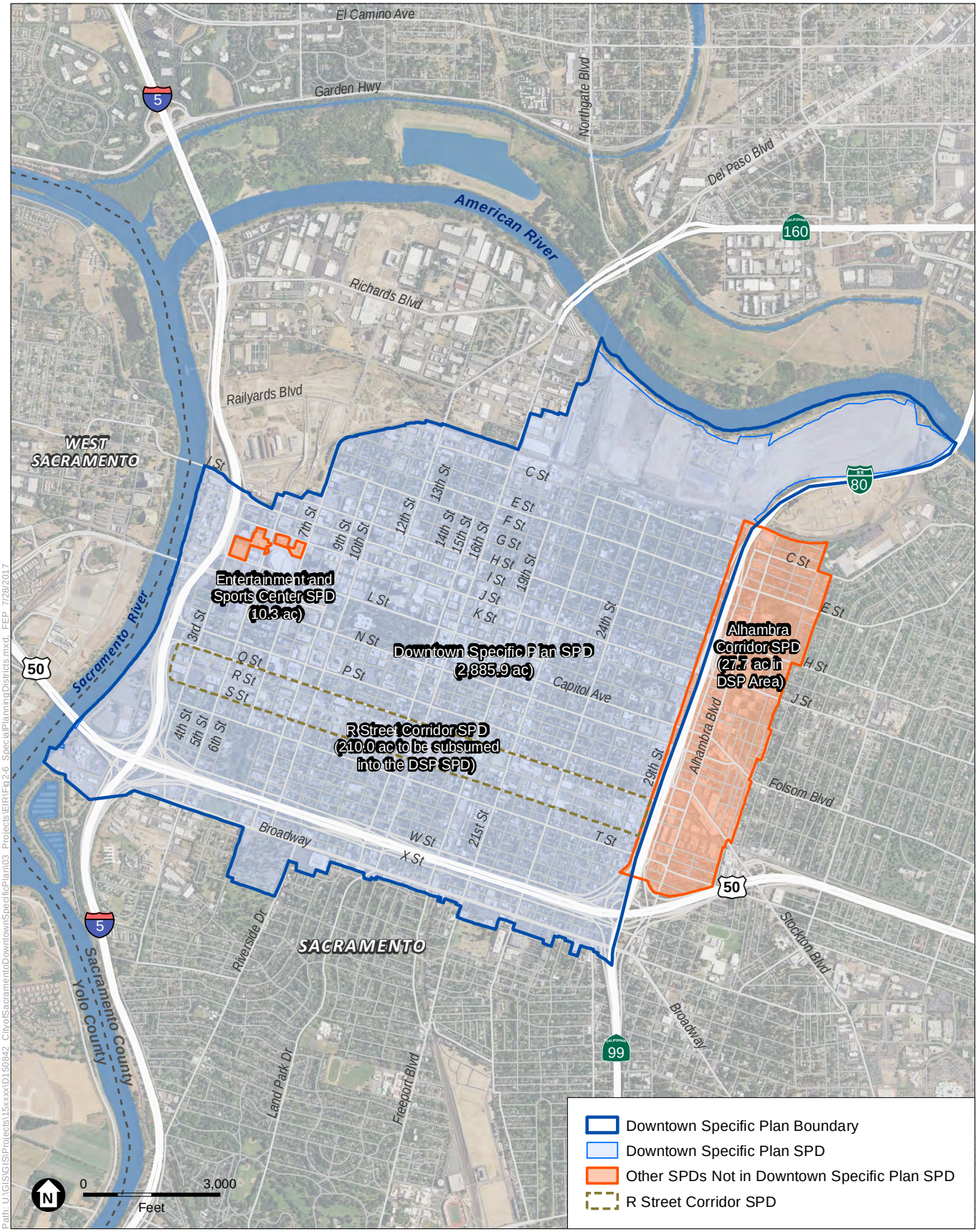
Downtown Special Planning District

The proposed DSP would create a new SPD that would apply to the majority of the DSP area in order to facilitate housing and non-residential growth, as shown on **Figure 2-6**. Currently, there are four existing SPDs within the DSP area: Central Business District SPD (City Code Chapter 17.408), R Street Corridor SPD (City Code Chapter 17.444), Entertainment and Sports Center SPD (City Code Chapter 17.442), and a portion of the Alhambra Corridor SPD (City Code Chapter 17.420). The Central Business District SPD would be removed, portions of the R Street Corridor SPD would be incorporated into the Downtown SPD, and the Entertainment and Sports Center (ESC) SPD and Alhambra Corridor SPD[1] would remain unchanged. The Downtown SPD would cover the entire DSP area outside of the ESC SPD and the Alhambra Corridor SPD; therefore, the Downtown SPD and its subsequent regulations do not apply to parcels located within these two existing SPDs. The following existing requirements found in the current R Street Corridor SPD[2] would be incorporated into the Downtown SPD:

- Limiting heights within the R Street Corridor based on the Maximum Height Map currently provided in the R Street Corridor SPD;
- Allowing office uses for parcels within the R Street Corridor designated as OB with a planning and design commission conditional use permit (CUP); and
- Within the current R Street Corridor SPD boundaries, prohibiting uses in the C-4 zone, as currently indicated in the R Street Corridor SPD.

[1] The Alhambra Corridor SPD, per Section 17.420.010 of the Sacramento City Code, includes properties located between 29th and 34th streets from the Union Pacific railroad mainline levee to the W/X Freeway (US 50).

[2] The R Street Corridor SPD, per Section 17.444.020 of the Sacramento City Code, encompasses 54 blocks and is bounded by Q Street on the north, S Street on the south, 2nd Street on the west, and 29th Street on the east.



SOURCE: USDA, 2014; City of Sacramento, 2016; ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-6
Special Planning Districts

ESA

The R Street Corridor SPD now requires new development located adjacent to a listed historic resource to not exceed the resource's highest point within 20 feet of its nearest wall. Building stepback requirements from listed historic resources would be changed from 20 feet to allow for a wider range of heights for parcels located within the R Street Corridor, based on the specific context. The City acknowledges that no single solution would be appropriate for all occurrences. Therefore, through the Central City Urban Design Guidelines, the City aims to allow for new infill development to be responsive to context, ensuring that the scale, form and materials used relate positively to adjacent historic buildings and characteristics of the district.

Maximum Heights

The proposed DSP would alter maximum building heights in several specific zoning districts located in the DSP area, as described further below. Collectively, these allowances in height across the General Commercial (C-2), Office Business Low-Rise Mixed-use (OB), and Residential Mixed Use (RMX) zones would encourage and enhance development opportunities along these corridors. However, the residential densities and non-residential intensities within these zones would remain the same, and it is anticipated that the total amount of development in the DSP area would not exceed the projections assumed in the 2035 General Plan. See **Figure 2-7** for the location of these three zoning designations within the proposed Downtown SPD.

C-2 Zone

There are approximately 400 acres within the proposed Downtown SPD that are designated as C-2, and the maximum height requirement in this zone would increase from 65 feet to 85 feet. Within the proposed Downtown SPD, the C-2 zone is generally concentrated along several commercial corridors, including portions of H, I, J, K, and O streets and portions of 16th, 19th, 20th, 21st, and 29th streets.

The provisions for existing transitional height tiering that can be applied to portions of buildings located in the C-2 zone within specific distances of the R-1, R-1B, and R-2 zones would be modified to accommodate the new maximum height requirement. When located 0–39 feet from the R-1, R-1B, and R-2 zone, the maximum height limit would remain 45 feet. From 40–79 feet from the R-1, R-1B, and R-2 zone, the maximum height limit would remain 55 feet. However, for locations 80 feet or greater from the R-1, R-1B, and R-2 zone, the maximum height limit would be increased from 65 feet to 85 feet.

OB Zone

There are approximately 35.6 acres within the proposed Downtown SPD that are designated as OB where the maximum height limit would increase from 35 feet to 65 feet. Within the Downtown SPD, the OB zone is generally concentrated along portions of G Street and 7th Street near the Alkali Flat neighborhood, between Q Street and R Street west of 8th Street, and at the intersection of R Street and 16th Street. The OB zone would allow the maximum height limit to be tiered between 45 feet and 65 feet when located in proximity to the R-1, R-1B, and R-2 zones. From 0–39 feet from the R-1, R-1B, and R-2 zone, the maximum height limit would be 45 feet. From 40–79 feet from the R-1, R-1B, and R-2 zone, the maximum height limit would be 55 feet.

From 80 feet or greater from the R-1, R-1B, and R-2 zone, the maximum height limit would be 65 feet.

RMX Zone

There are 80.4 acres within the proposed Downtown SPD that are designated as RMX, and the maximum height limit in this zone would increase from 45 feet to 65 feet. This increase in allowable height from 45 feet to 65 feet applies only to parcels not located within the existing R Street Corridor SPD Maximum Height Map, as discussed earlier. Within the Downtown SPD, the RMX zone is generally concentrated along the entire length of R Street and near the intersection of L Street and 18th Street. The RMX zone would allow the maximum height limit to be tiered between 45 feet and 65 feet when located in proximity to the R-1, R-1B, and R-2 zones. When located 0–39 feet from the R-1, R-1B, and R-2 zone, the maximum height limit would be 45 feet. When located 40–79 feet from the R-1, R-1B, and R-2 zone, the maximum height limit would be 55 feet. When located 80 feet or greater from the R-1, R-1B, and R-2 zone, the maximum height limit would be 65 feet.

Maximum Densities

Maximum densities in the OB zone would increase from 36 dwelling units an acre to 65 dwelling units an acre. As described above, within the proposed Downtown SPD, the OB zone applies to properties comprising 35.6 acres generally concentrated along portions of G Street and 7th Street near the Alkali Flat neighborhood, between Q Street and R Street west of 8th Street, and at the intersection of R Street and 16th Street. Additionally, for parcels zoned RMX, within the R Street Corridor and within a ¼ mile from a light rail station, the maximum density is 100 dwelling units an acre. This is consistent with the current R Street SPD.

Permitted and Prohibited Uses

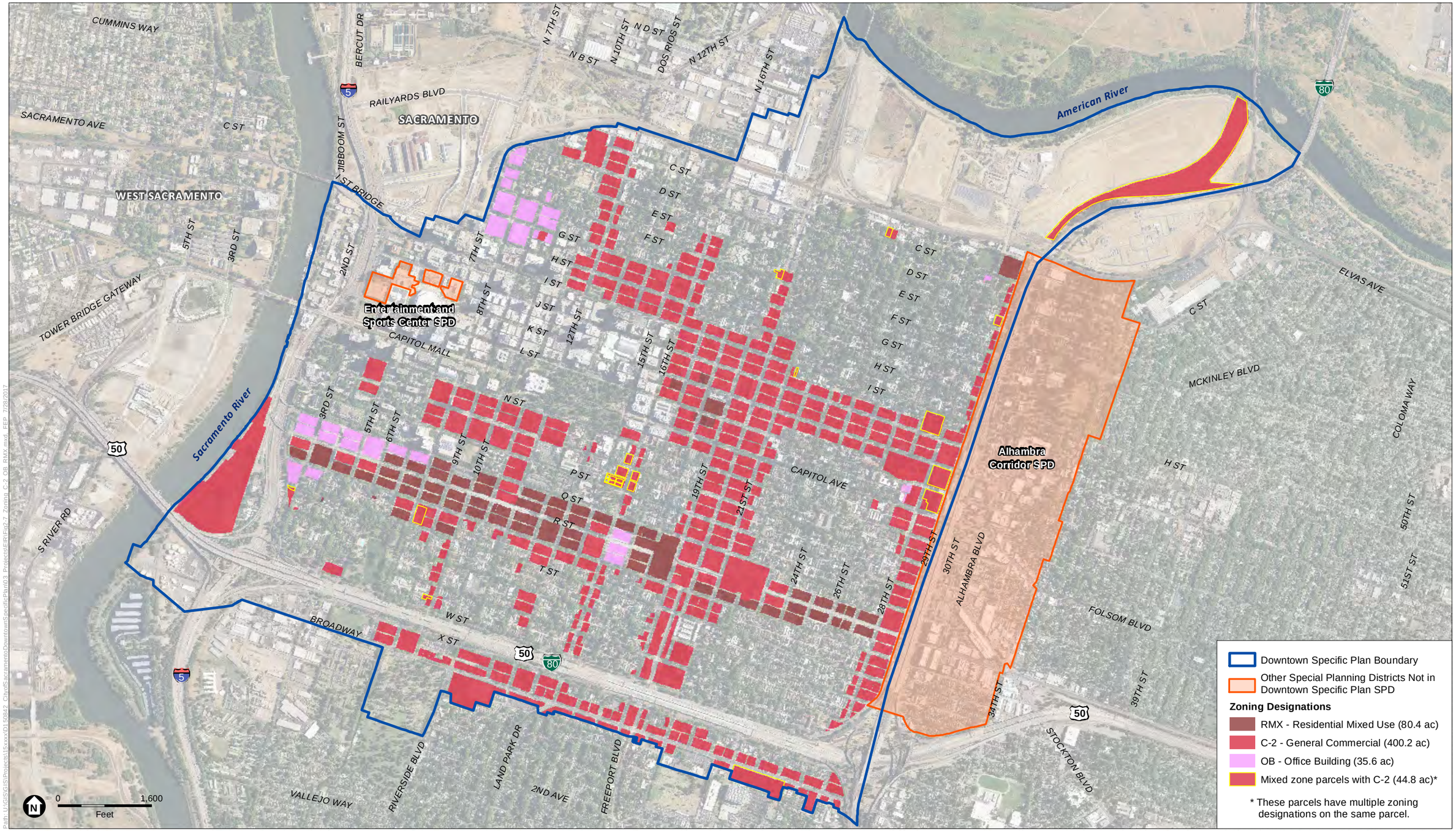
Permitted Uses

All zoning districts within the proposed Downtown SPD would allow residential uses to be permitted in the C-4, M-1 and M-2 zones. Currently residential uses need a conditional use permit. for residential uses.[3] It is anticipated that this change would help achieve, and would be consistent with, the number of additional housing units projected to be built in the DSP area assumed in the 2035 General Plan and 2035 General Plan MEIR.

Prohibited Uses

Within a half mile of any light rail or streetcar station in the DSP area, the proposed Downtown SPD would prohibit the following land uses: stand-alone parking facilities, drive-through restaurants, equipment rental and sales yards, gas stations, mini storage, towing services, vehicle storage yards, and accessory drive-through facilities. The proposed prohibition on certain uses would affect specific zoning districts in the DSP area, as described below.

[3] New residential projects will still require Site Plan and Design Review, as established in Chapters 17.808 and 17.812 of the City's Planning and Development Code.



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SOURCE: USDA, 2016; City of Sacramento, 2017; ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-7
C-2, OB, and RMX Zones in the Downtown Specific Plan Area

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- Gas stations, mini storage, and towing services are currently permitted uses within the C-4, M-1, and M-2 zones and would be prohibited in the DSP area under the proposed DSP;
- Equipment rental and sales yards are currently permitted uses in the C-4 and M-2 zones and would be prohibited in the DSP area under the proposed DSP;
- Stand-alone parking facilities are currently allowed as a conditional use in the C-1, C-2, C-3, C-4, H, M-1, M-2, OB, R-1, R-1B, R-2B, R-3A, R-4, R-4A, R-5, RMX, RO, and TC zones and would be prohibited in the DSP area under the proposed DSP;
- Drive-through restaurants are allowed as a conditional use in the C-2, C-4, M-1, and M-2 zones and would be prohibited in the DSP area under the proposed DSP;
- Equipment rental and sales yards are allowed as a conditional use in the C-2 and M-1 zones and would be prohibited in the DSP area under the proposed DSP;
- Gas stations are allowed as a conditional use in the C-2, C-3, and C-4 zones and would be prohibited in the DSP area under the proposed DSP;
- Mini storage, towing services, and vehicle storage yards are allowed as a conditional use in the C-2 zone and would be prohibited in the DSP area under the proposed DSP;
- Accessory drive-through facilities are currently permitted when accessory to a permitted or conditional use in the C-2, C-4, H, M-1, M-2, OB, R-4, R-4A, R-5, and TC zones and would be prohibited in the DSP area under the proposed DSP; and
- Fuel-storage yards are currently permitted in the M-2 zone and would be prohibited in the DSP area under the proposed DSP.

These changes would create new restrictions across large portions of the DSP area, but the non-residential intensities within these zones would remain the same, and it is anticipated that the total amount of development under the DSP would not exceed the projections assumed in the 2035 General Plan and the 2035 General Plan MEIR.

Parking Maximums

The proposed Downtown SPD would include revisions to some of the parking standards for commercial and industrial uses subject to the Downtown SPD. For all commercial[4] and industrial[5] uses within the proposed Downtown SPD, the following maximum allowable parking standards would be established for the parking districts:

- Central Business and Arts & Entertainment District: one space per 500 gross square feet (gsf);
- Urban District: one space per 250 gsf;

[4] Per Table 17.608.030B, under Section 17.608.030(B), Commercial Uses consist of the following uses: auto sales lot; bed and breakfast inn; Commercial services (except from others specifically included in the table); hotel; motel; office, medical clinic or office; restaurant, bar, brew pub, or wine bar; retail store; and warehouse retail.

[5] Per Table 17.608.030B, under Section 17.608.030(B), Industrial Uses consist of the following uses: wholesale warehousing and manufacturing; towing service, vehicle storage yard; and mini storage; locker building.

- Traditional District: one space per 250 gsf; and
- Suburban District: one space per 250 gsf.

Open Space Requirements

The Downtown SPD would provide for multi-family private and common open space requirements that differ from those that are currently provided in the citywide open space standards (Chapter 17.600.135 of City Code). Multi-unit dwellings would be exempt from the requirement that open space on site must be open to the sky. The Downtown SPD would also modify the existing standard for open space provision in multi-unit dwellings, which is currently 100 sf per dwelling unit (beyond the required front, side, and rear yard setbacks). For multi-unit dwellings in the Downtown SPD, parcels located in the Open Space Districts of the Central Business and Arts & Entertainment District would eliminate the requirement for open space for multi-unit dwellings; parcels located in the Urban Open Space District would change to 25 sf per dwelling unit; and parcels located in the Traditional Open Space District would change to 50 sf per dwelling unit. Parcels located in the Suburban Open Space District would remain at 100 sf per dwelling unit. Additionally, in order to encourage adaptive reuse, conversion of nonresidential buildings to a multi-unit dwelling will not create a requirement for new open space.

Historic Preservation

PDC section 17.604.740(c) currently establishes a maximum density for adaptive reuse of one dwelling unit per 750 square feet of original building space. Under the proposed Downtown SPD, the maximum density would be increased to allow up to one dwelling unit per 350 sf of gross floor area within the original building envelope. This change is intended to encourage residential uses as part of adaptive reuse of historic resources in the DSP area.

Design Review

PDC section 17.808.130, requires site plan and design review by the City Planning and Design Commission for projects that exceed 60 feet. In the C-3 Zone (the Central Business District), the Downtown SPD would provide that height would not be a triggering factor for automatic review by the Planning and Design Commission.

General Plan

Under the proposed DSP, the DSP area would retain the existing land use designations as described in the 2035 General Plan and depicted on Figure 2-4, General Plan Land Use Designations. Those land use categories include: Traditional Neighborhood Medium, Traditional Neighborhood High, Urban Neighborhood Low, Traditional Center, Urban Center Low, Urban Center High, Central Business District, Urban Corridor Low, Urban Corridor High, Employment Center Low Rise, Public, and Parks.

The 2035 General Plan would be amended to include additional language that clarifies the way in which open space can be factored into calculation of the floor-to-area ratio (FAR), as noted below.

- Policy LU 1.1.10 would be modified to allow new development to exceed the required FAR by up to 20 percent if it is determined that the project provides a significant community benefit.
- Following the development of Public Art Plan for the proposed DSP, Section LU 2.4 of the 2035 General Plan would be revised to include additional policies and goals focusing on public art.
- The Urban Form Guidelines for the Urban Center Low designation, Guideline 5 would be revised to allow for up to 100 percent lot coverage, an increase from the current 80 percent limit.

Central City Urban Design Guidelines

The Central City Urban Design Guidelines (CCUDG) – which consist of two parts: the Central Core Design Guidelines and Central City Neighborhood Design Guidelines – set forth a long-term vision for the physical form and character of Sacramento's downtown and a comprehensive set of design guidelines for development in downtown Sacramento. The objective of the CCUDG is to encourage future growth that builds upon the existing context, including the Central City's market strengths, cultural and social amenities, historical assets, and plan direction, while also acknowledging area's potential for growth and maturation as an urban center.

The CCUDG include required and recommended design elements for implementation throughout the DSP area. The CCUDG address physical development aspects of the Central City, including a description of the physical form and character of the Central Core and surrounding neighborhoods; specifying the design of key components such as streets, sidewalks, and parks that comprise the public realm; and addressing the design of key components that comprise the private realm, including the placement of buildings, the design of buildings, and the treatment of off-street parking. The CCUDG also address Crime Prevention through Environmental Design (CPTED) features, as applicable, which focus on deterring crime through strategic placement and types of structures in the public realm and landscaping and encouraging visibility of the public realm ("eyes on the street").

The CCUDG are being updated concurrent with the preparation of the DSP to address the following objectives:

1. Remove outdated and conflicting guidelines with respect to the policies in the existing 2035 General Plan and the proposed Downtown Specific Plan;
2. Add guidelines that accommodate the Downtown / Riverfront Streetcar project and facilitate surrounding transit-oriented development; and
3. Refine guidelines that guide how development interfaces with the urban tree canopy, and create a pleasant and walkable environment.

The revised CCUDG are envisioned to facilitate flexibility in new development design and interpretation while being easier to navigate, with a focus on promoting livable multimodal (i.e.,

transit-, pedestrian-, and bike-oriented) Downtown neighborhoods with distinguished design aesthetics and neighborhood amenities. New design guidelines that pertain to six existing Historic Districts located along the Downtown / Riverfront Streetcar corridor and R Street will also be included in the revised CCUDG. These historic design guidelines will ensure new development will be compatible with the historic context of these six districts and allow for adaptive reuse of structures within the districts. Lastly, the design guidelines will be used to help mitigate and minimize direct and indirect impacts to historical resources through appropriate design guidance regarding massing, scale, and architectural design for new development and adaptively reused buildings within and adjacent to the Downtown/Riverfront Streetcar corridor and R Street.

2.5.3 Infrastructure Improvements

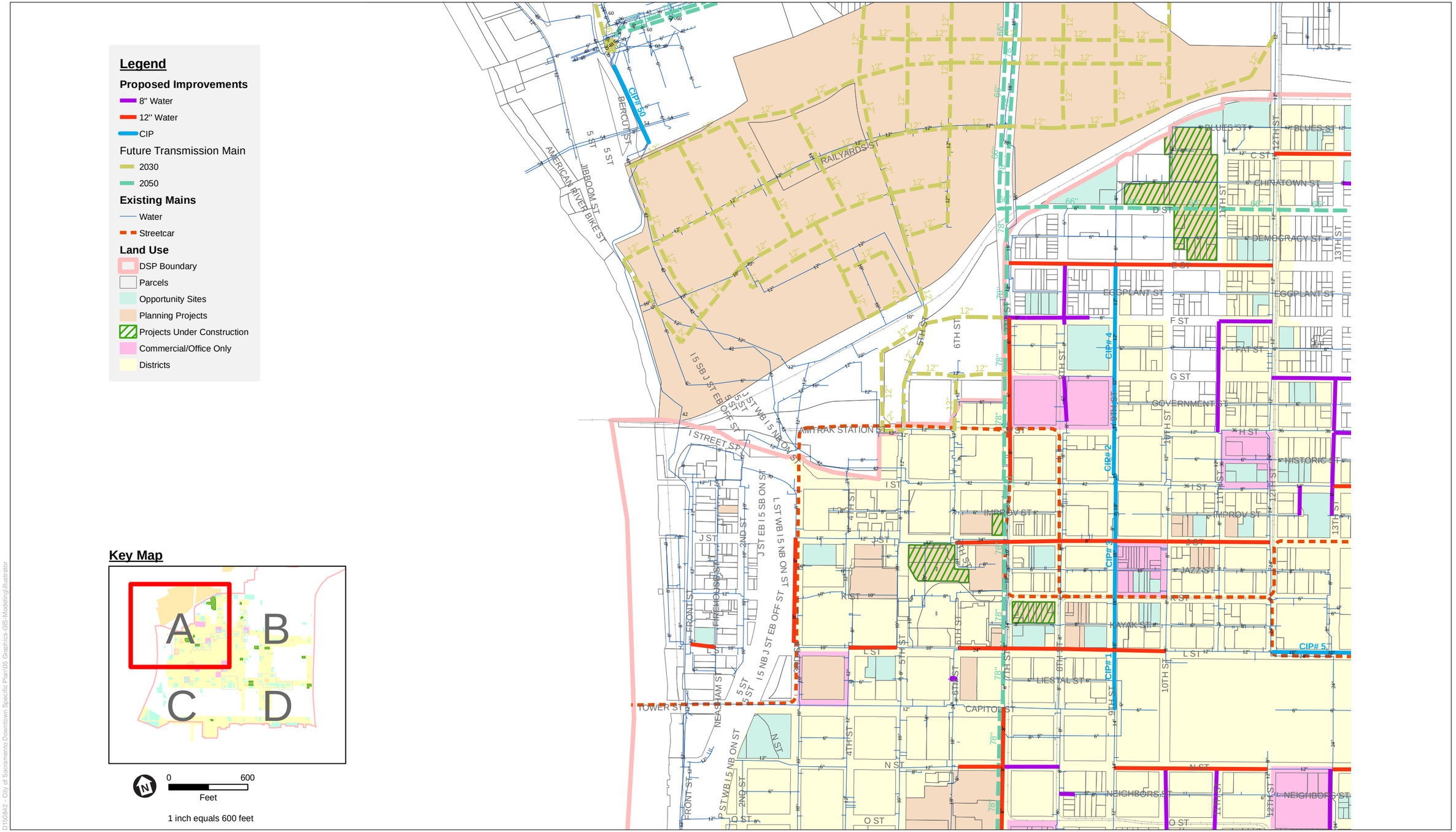
The Downtown Specific Plan Infrastructure Analysis, prepared as part of the development of the proposed DSP, identifies potential infrastructure improvements necessary to accommodate the development and intensification anticipated with implementation of the proposed DSP. The Infrastructure Analysis identifies sanitary sewer, storm drainage, water, electrical power, telecommunications, and natural gas infrastructure capacity that would need to be provided in order to adequately serve new future demands in the DSP area. These proposed improvements are described further below.

Water

The proposed DSP would require upgrades to the existing water system supply grid to provide adequate water for both domestic and fire suppression needs at development sites in the DSP area, as shown in **Figures 2-8** through **2-11**.

The City has identified several sections of older mains that likely need to be replaced due to age within the next 30 years. Improvement to these mains would be the responsibility of the City through the ongoing Capital Improvement Program (CIP). In addition to such replacements, extensions of the existing distribution main system would be required to provide adequate service to the future development within the DSP area. The proposed extensions of the existing service main system would be accomplished using a combination of new 8-inch and 12-inch water mains. If alley improvements/activation projects occur, older pipelines within the alleys, if they exist, would be replaced concurrent with other surface improvements.

The City also anticipates the need to add water transmission mains through the DSP area. These large diameter transmission mains are expected to range in size between 48-inch to 78-inch diameters. The size and locations for these transmission mains at this time have not been designed and no detailed alignment/routing studies have been performed. These mains are needed to move water through the DSP area to other parts of the City's service area to service future water needs.



SOURCE: NV5, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-8
Water Mains – NW Portion of DSP Area

ESA

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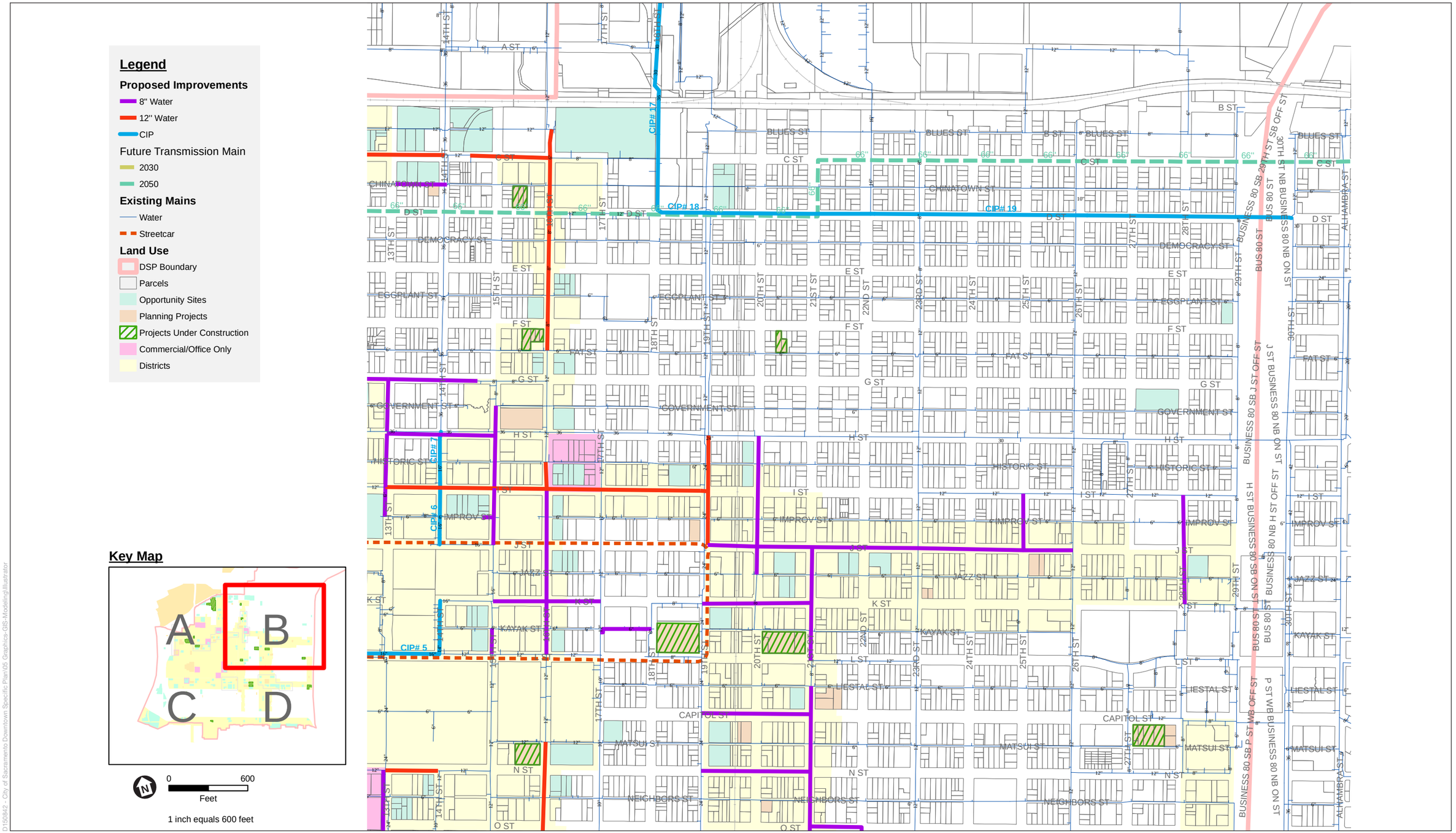


SOURCE: NV5, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-9
Water Mains – NE Portion of DSP Area

ESA

Legend

Proposed Improvements

- 8" Water
- 12" Water
- CIP

Future Transmission Main

- 2030
- 2050

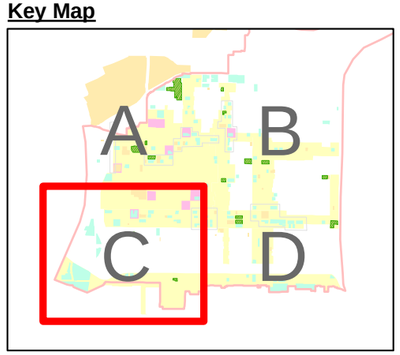
Existing Mains

- Water
- Streetcar

Land Use

- DSP Boundary
- Parcels
- Opportunity Sites
- Planning Projects
- Projects Under Construction
- Commercial/Office Only
- Districts

Key Map



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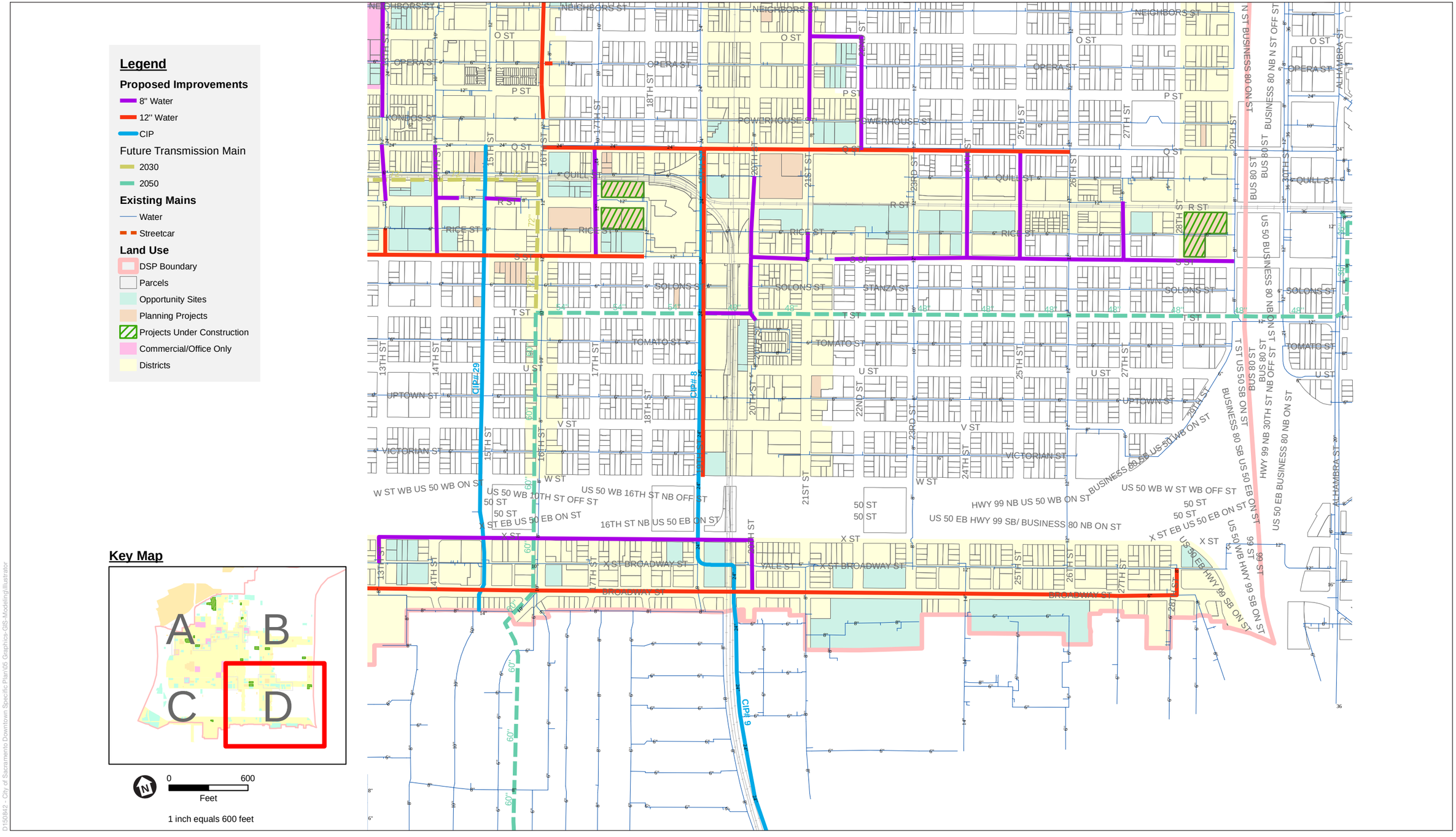
SOURCE: NV5, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-10
Water Mains – SW Portion of DSP Area

ESA



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SOURCE: NV5, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-11
Water Mains – SE Portion of DSP Area

ESA

Combined Sewer System

To adequately serve future development in the DSP area under the proposed DSP, proper upsizing and rehabilitation of existing Combined Sewer System (CSS) infrastructure would need to occur, as shown in **Figures 2-12** through **2-15**. CSS upgrades would be prioritized based on considerations such as immediate localized needs, flood-reduction benefits, cost-effectiveness, ensuring no increase in untreated discharges, sewer condition/age, cost-sharing opportunities, and City/community interests.

Storm Drainage/Basin 52

Basin 52 serves the storm drainage needs of approximately 320 acres, bounded generally by the railroad tracks north of I Street, the Sacramento River, S Street, and 7th Street, and 10th Street. There are two additional smaller storm drainage basins, Basins 73 and 114 that are pumped into the Basin 52 system and are generally considered part of the larger Basin 52 system for planning purposes.

Basin 114 serves the area bounded by 3rd to 5th streets and I to J Street. The sump for Basin 114 is located near at the intersection of 4th and J streets. Basin 73 serves the depressed section of 5th Street from J Street to L Street. The sump for Basin 73 is located just west of 5th Street in Downtown Plaza. These combined basins discharge stormwater through the levee into the Sacramento River at Sump 52, located at the Crocker Museum site at 3rd and P streets.

Under the proposed DSP, improvements to Basin 52 would be necessary to accommodate additional stormwater flows generated by development in the DSP area. Improvements identified in the Basin 52 Master Plan would be implemented on an as-needed basis to serve the increased development.

Natural Gas

The Pacific Gas & Electric Company (PG&E) supplies natural gas to the Sacramento area, including the DSP area. PG&E would provide service to the new developments and infrastructure as they are constructed and require service. Upgrades to the existing system would be addressed on a case-by-case basis as additional information is received on proposed development and maximum and minimum gas loads required for specific uses.

Electricity

The Sacramento Municipal Utility District (SMUD) provides electrical service to customers located within the DSP area. Power is transmitted to the DSP area by a looped underground 115 kilovolt (kV) transmission system that feeds several substations that step down the voltage to 12 kV and 21 kV distribution systems. The 115 kV loop connects SMUD Station A located at 6th and H streets, Station B located at 19th and O streets, and Station D located at 8th and R streets. This loop is also connected to the North City (north of 20th and C streets) and Mid City (35th and R streets) substations.

Station D, Mid City and the North City substations steps down the 115 kV to 21 kV and Station A and Station B steps down 115 kV to 12 kV to serve the overall downtown area. The 12 kV system serves a secondary network system. The 21 kV system serves the balance of the downtown area and will likely be used to serve new development within the DSP area.

SMUD estimates that the additional electrical load from anticipated development within the DSP area may be 70 to 90 megawatts. A majority of the load would require adding major components in the DSP area. SMUD is currently working to replace the North City substation with Station E, a 60MVA facility. This will allow for additional express feeders mainly to serve the Railyards Specific Plan area (adjacent to but outside of the DSP area), and to offload and back up downtown feeders to serve future development within the DSP area. An existing North City substation feeder is being extended to the DSP area in 2017 and the first express feeder is planned by 2019 when the new Station E is completed.

Anticipated development in the DSP area will require an additional 40 MVA substation along the 7th Street corridor in the Railyards Specific Plan Area or River District, likely between North B Street and Richards Boulevard; this could be located anywhere between 7th Street and 10th Street, North B Street and Richards Boulevard. The substation is more expensive to construct west of 7th Street and less expensive further east since overhead facilities would need to be extended from Station E. Although this substation is likely to be located outside of the DSP area, it is needed to help supply adequate electricity to uses within the DSP area.

Depending on the specific use and intensity of development within the DSP area the installation of switches, risers, line reconductors,[6] or line extensions to specific development parcels may be required. Additional major equipment and infrastructure external to the DSP area would be required as electrical demand approaches area electrical capacity. This would require additional duct banks and splice vaults along 5th and 6th streets. A feeder tie on 7th Street or 12th Street may need to be extended from the north but this may be external to the DSP area. These improvements would be identified in SMUD's five year system plan as the need arises. Extension of the existing 21 kV distribution system would be required to serve the additional development in the DSP area.

In the near term, SMUD anticipates extending the existing 21kV system from the intersection of 7th and L streets, north on 7th Street to the K/L Alleyway, then east in the K/L Alleyway to 10th Street. This extension of the system is proposed for construction in the 2017 to 2019 timeframe. It is anticipated that an extension of the 21 kV line would be required along 3rd Street from I Street to N Street and connecting with a location west of 2nd Street (just west of the Crocker Museum). The section on 3rd Street from J Street to I Street (Alternative 1) or on J Street across from 3rd Street to 5th Street (Alternative 2) would be required to loop the system. Future extensions of the 21 kV are anticipated mainly along J Street from 3rd Street to 15th Street, and 15th Street from J Street to the K/L Alley. The proposed system extensions are depicted in **Figures 2-16** through **2-19**.

6 Reconductoring is replacement of the cable or wire on an electric circuit, typically a high-voltage transmission line, usually to afford a greater electric-current-carrying capability.

Legend

- Storage
- Flap Valve/Gate
- Pumps
- Weirs

Proposed Improvements

- CIP
- CSSIP Sewer Pipes
- 3rd Street CSS
- CSS Development Specific
- Basin 52-Alternative 2

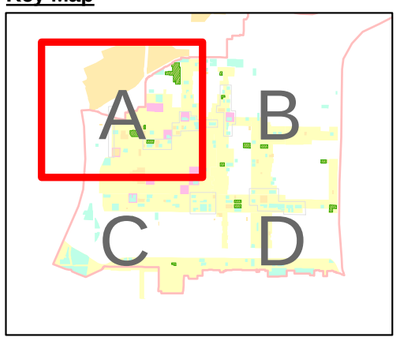
Existing Mains

- Drainage
- Sewer
- Combined Sewer
- Completed CSS Upsizing

Land Use

- DSP Boundary
- Parcels
- Opportunity Sites
- Projects Under Construction
- Planning Projects
- Commercial/Office Only
- Districts
- Basin 52
- Streetcar

Key Map



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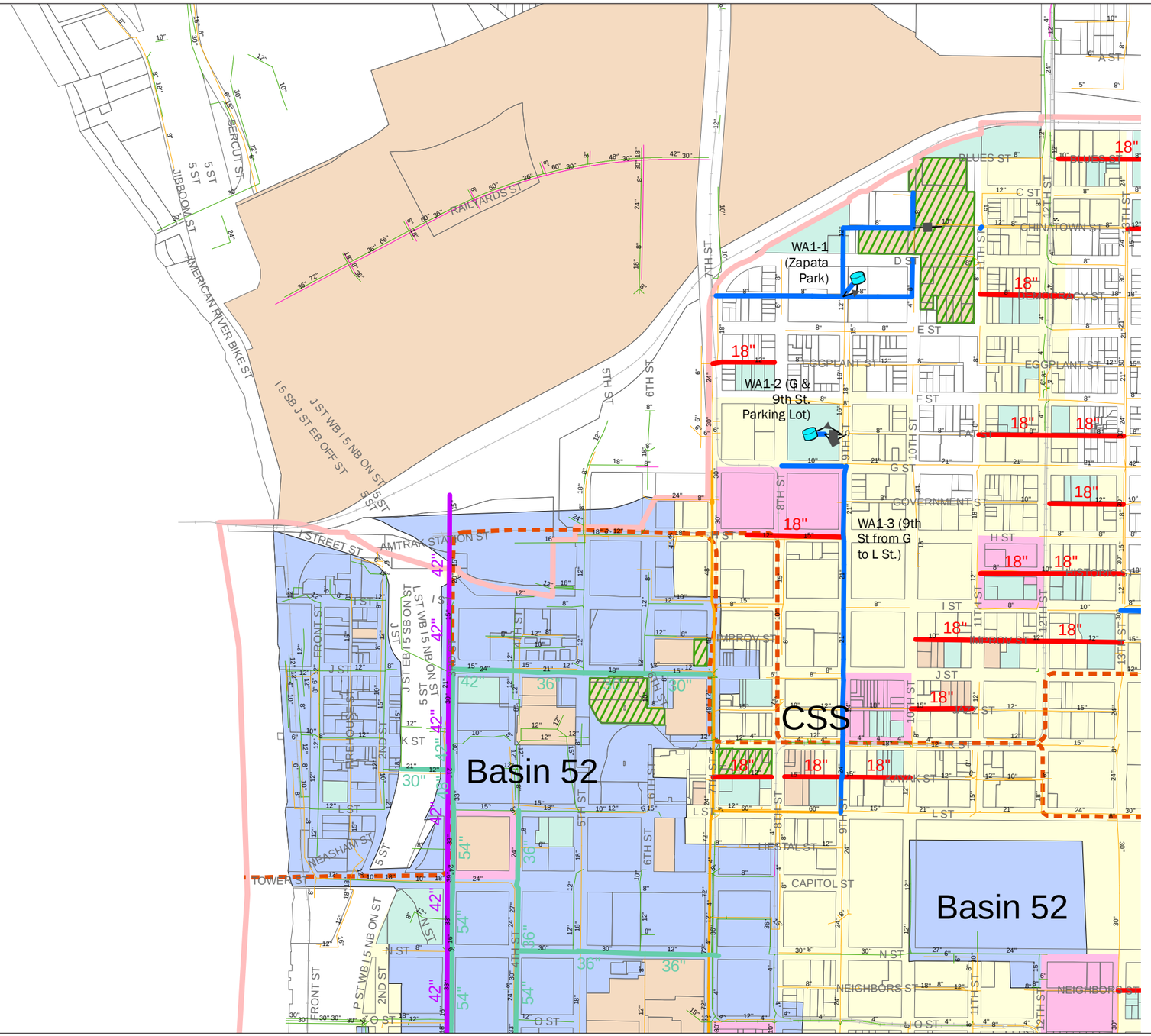

SOURCE: NV5, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-12
Wastewater and Storm Drainage – NW Portion of DSP Area

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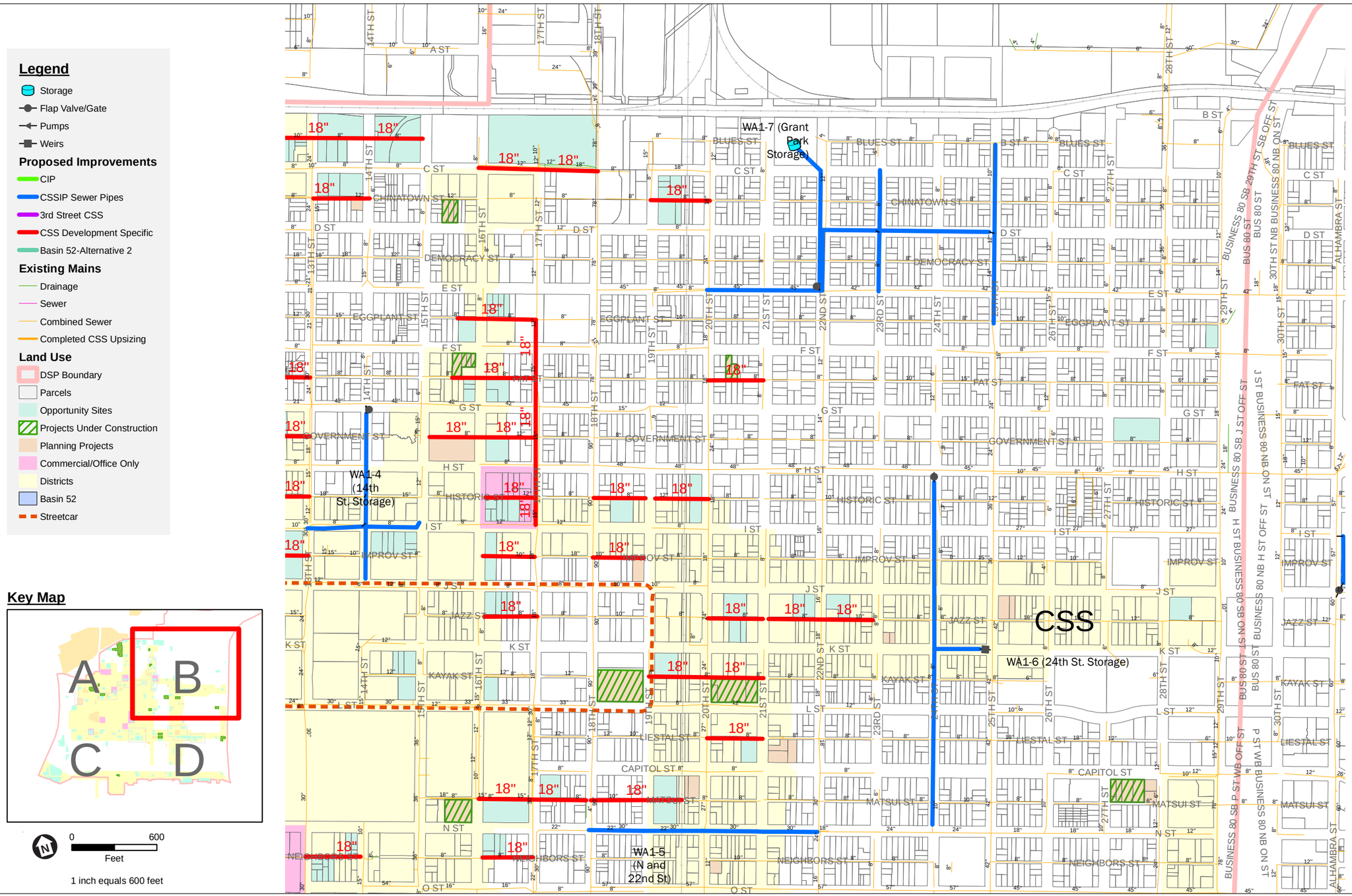
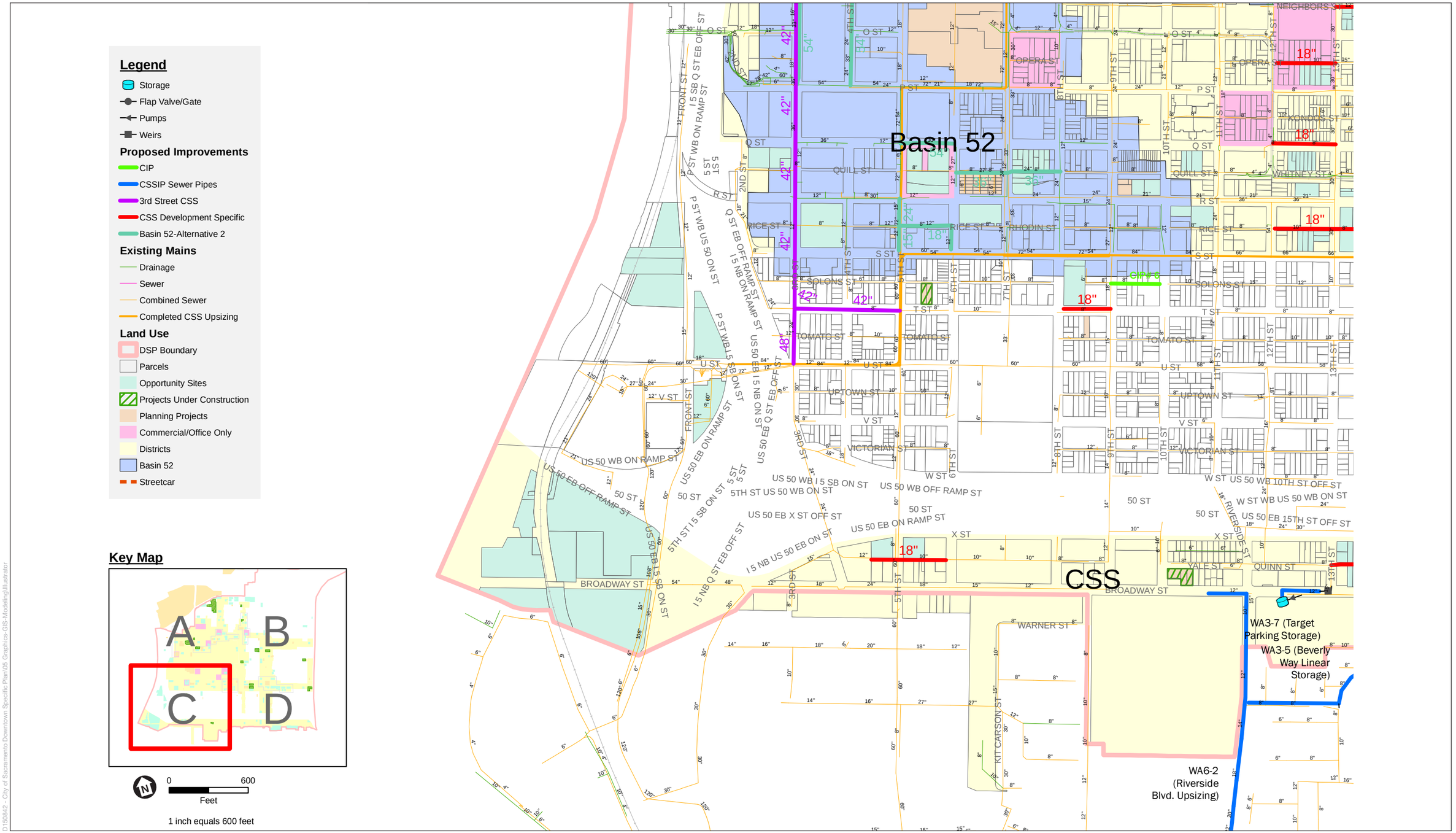


SOURCE: NV5, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-13
Wastewater and Storm Drainage – NE Portion of DSP Area

ESA



SOURCE: NV5, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-14
Wastewater and Storm Drainage – SW Portion of DSP Area

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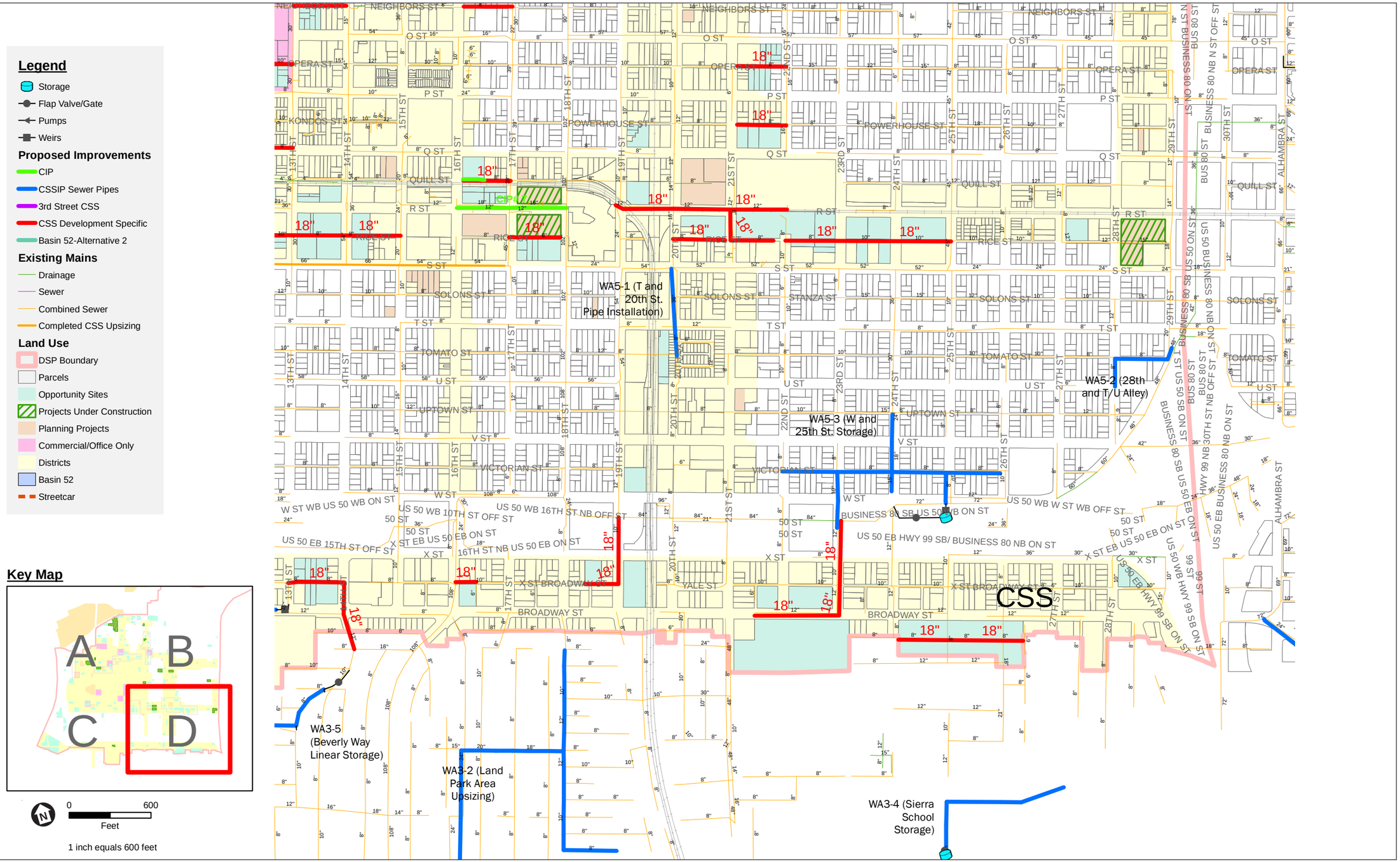

SOURCE: NV5, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-15
Wastewater and Storm Drainage – SE Portion of DSP Area

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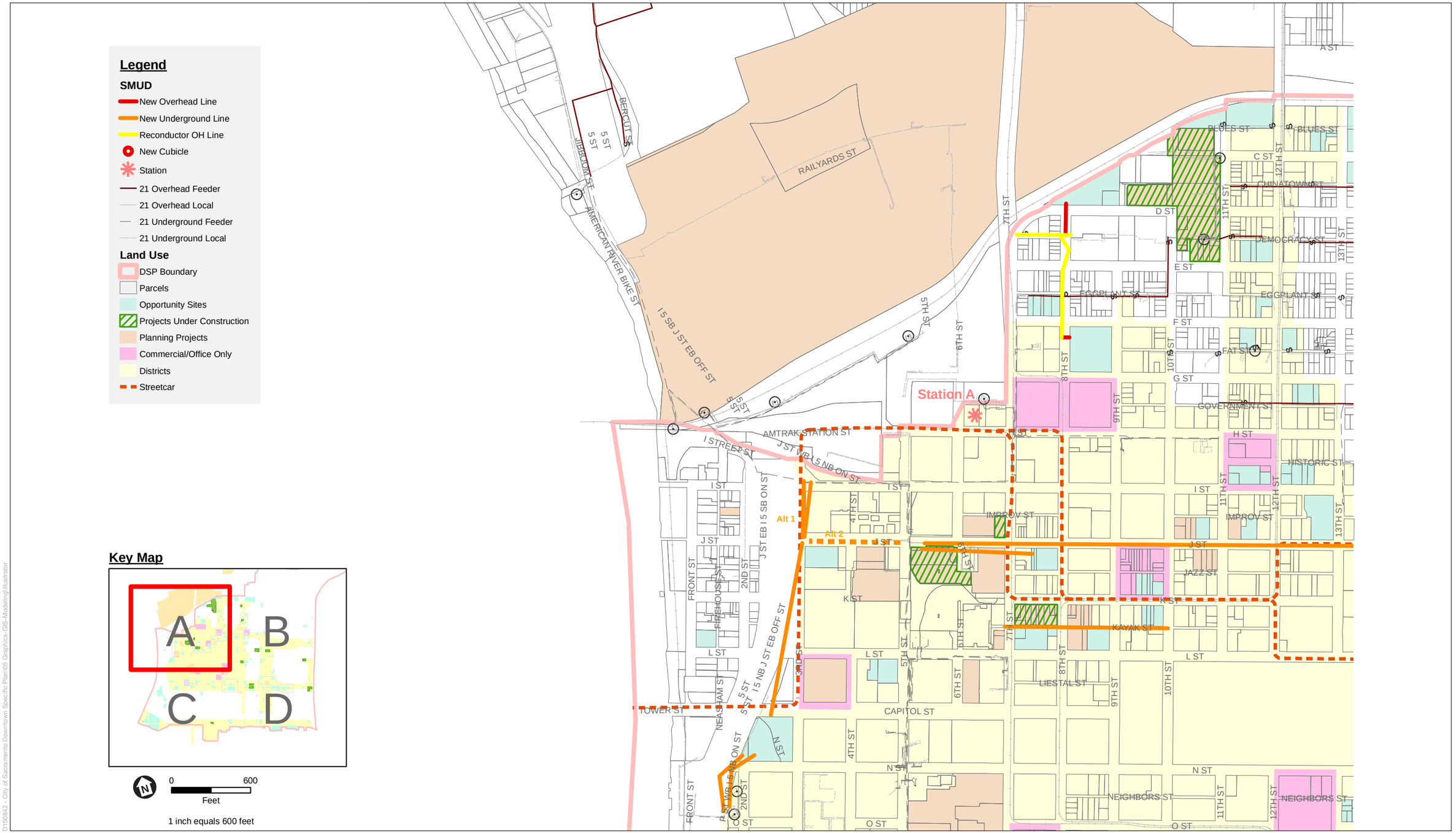

SOURCE: NV5, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-16
Electrical Infrastructure – NW Portion of DSP Area

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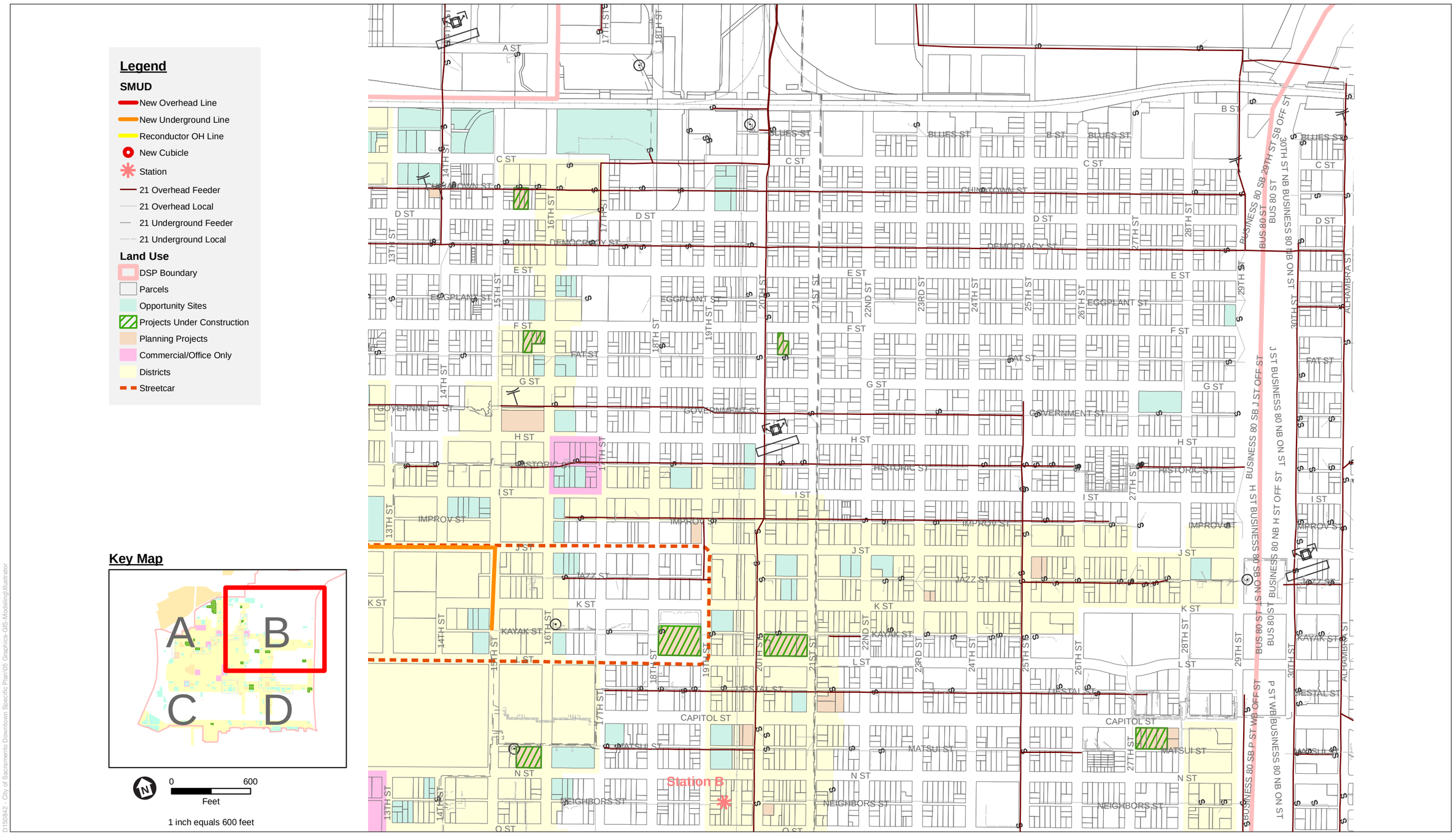

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SOURCE: NV5, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-17
Electrical Infrastructure – NE Portion of DSP Area

ESA

Legend

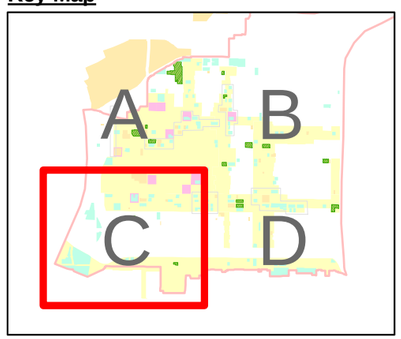
SMUD

- New Overhead Line
- New Underground Line
- Reconductor OH Line
- New Cubicle
- Station
- 21 Overhead Feeder
- 21 Overhead Local
- 21 Underground Feeder
- 21 Underground Local

Land Use

- DSP Boundary
- Parcels
- Opportunity Sites
- Projects Under Construction
- Planning Projects
- Commercial/Office Only
- Districts
- Streetcar

Key Map



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Station D

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SOURCE: NV5, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-18
Electrical Infrastructure – SW Portion of DSP Area

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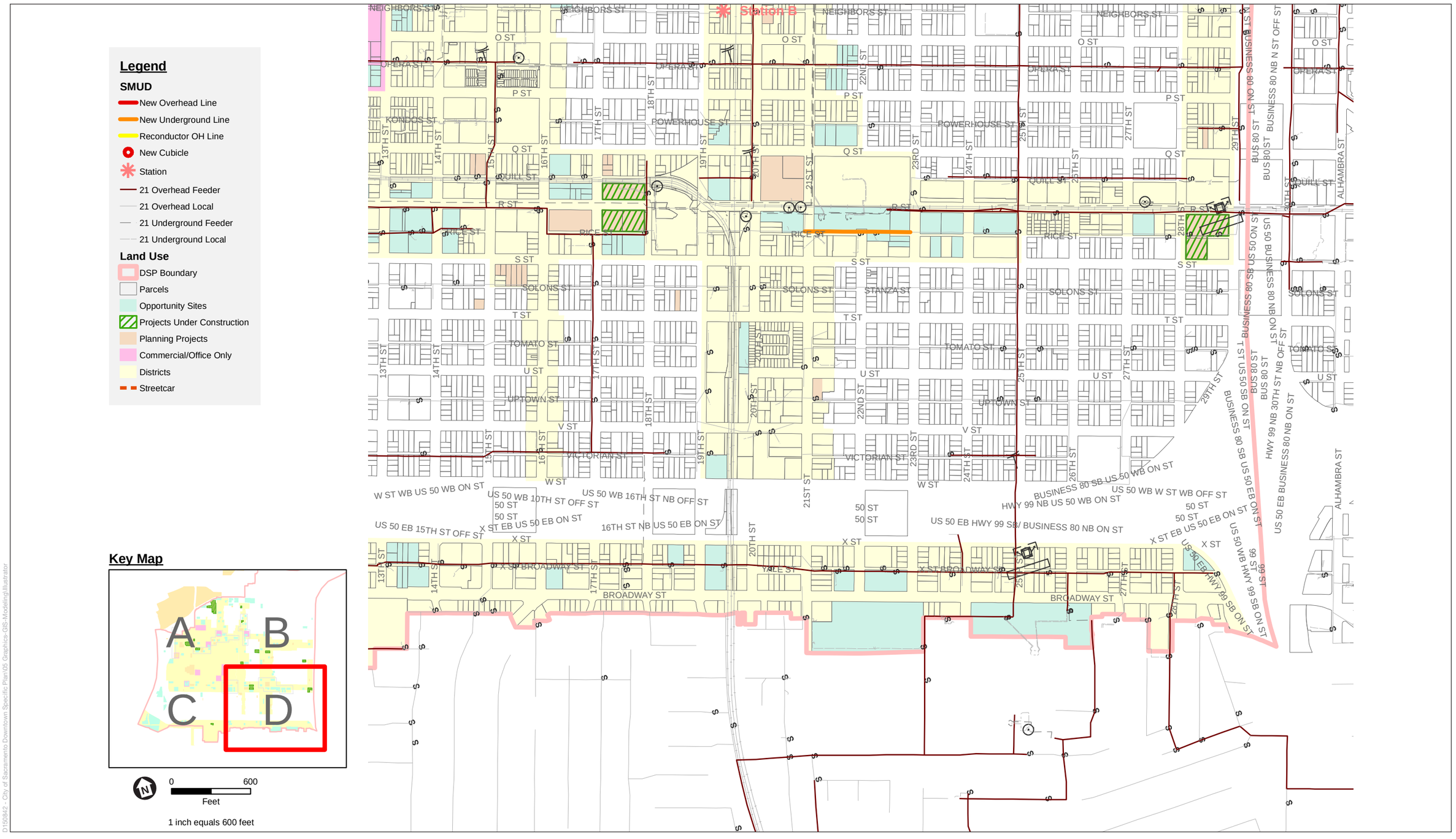

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SOURCE: NV5, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-19
Electrical Infrastructure – SE Portion of DSP Area

ESA

In addition, SMUD is replacing the existing Station A site (will become Station G) to a parcel directly north and across Government Alley from the current site to meet current safety regulations, to serve the RSP area, and to continue to provide reliable electrical service to the DSP area. SMUD is reserving the existing Station A site for future 21 kV system improvements and a substation.

Another 21 kV line extension would be required on 7th Street from R Street to the S/T Alleyway, then heading west to 6th Street and a section along Rice Alley from 21st Street to 23rd Street. SMUD would reconductor the overhead line on 6th Street from S Street to T Street. Reconductoring would also be required along 8th Street from a location near the F/G Alleyway to Democracy Alley, then west to 7th Street. An extension of an overhead line would be required from Democracy Alley to just north of D Street.

Street Lights

The City of Sacramento Public Works Department maintains approximately 40,000 street lights within the City limits. This includes light varieties from the newest street lights installed in North Natomas (outside of the DSP area) to the lights in the older parts of the City, which encompasses the majority of the DSP area, installed over 80 years ago. The majority of lights in the City are High Pressure Sodium (HPS), which produce an orange light. Older lights in some portions of the City include Mercury Vapor lamps, which produce white light, while some newer lights use energy efficient light-emitting diodes (LED), which produce a white light that is even brighter than the comparable HPS.

Within the DSP area there are approximately 3,400 street lights that are maintained by the City. There are an additional 250 lights that are owned and maintained by the SMUD. The majority of the street lights in the DSP area are the City's post-top ornamental style lights. There are also mast arm (cobra-head) style lights on some major streets. The ornamental style lights are considered more aesthetically pleasing than the stark style of the mast arm style. However, the luminaires (light bulbs) in the ornamental lights are lower wattage than the mast arm style and therefore may require more lights at a tighter spacing to provide a particular level of lighting.

The City is currently replacing the existing HPS cobra-head style luminaires with new energy-efficient LED luminaires. As noted above, the LED lights provide a brighter light than the comparable HPS lights. The LED luminaires are also slightly less expensive than the HPS and last longer. The HPS lights only have a life span of approximately two years, while the LEDs are estimated to have a life span of up to 25 years. Luminaires are replaced as they burn out. The City does not have the funds to replace all of the luminaires at once. The City is working on a LED replacement luminaire for the ornamental style lights.

The City has dedicated funding from Lighting Landscaping and Maintenance Districts (LLMDs) for the maintenance of existing street lights, but new lights or improvements to the existing lights are typically from grant funds, private funds, public-private partnerships or assessment districts.

The City has identified needed street lighting in two older predominantly residential areas of the DSP. These two areas are depicted as the Northeast DSP Street Light Area and the Southeast DSP Street Light Area on **Figures 2-20** through **2-23** and include portions of Alkali Flat, Mansion Flats, New Era Park, Boulevard Park, Marshall School, Midtown, Southside Park, Richmond Grove, Poverty Ridge, and Newton Booth. The proposed lighting in these areas is ornamental style street lights.

2.5.4 Transportation Network

The DSP would implement the transportation system generally as described in Sacramento Grid 3.0, the City's plan to integrate a number of planned transportation improvements and programs and to further enhance and facilitate increased mobility options on the downtown grid. This document, adopted by the City Council on August 16, 2016, provides a transportation framework to support the 2035 General Plan's transportation policies to serve future transportation needs and to create a well-connected transportation network, support increased densities and a mix of uses in multi-modal districts, help walking become more practical for short trips, support bicycling for both short- and long-distance trips, improve transit to serve highly frequented destinations, conserve energy resources, reduce greenhouse gas emissions and air pollution, and do so while continuing to accommodate auto mobility. The DSP transportation improvements would focus on the roadway, pedestrian, bicycle, and transit networks, and would include specific policies targeted toward alley activation and wayfinding.

Roadway

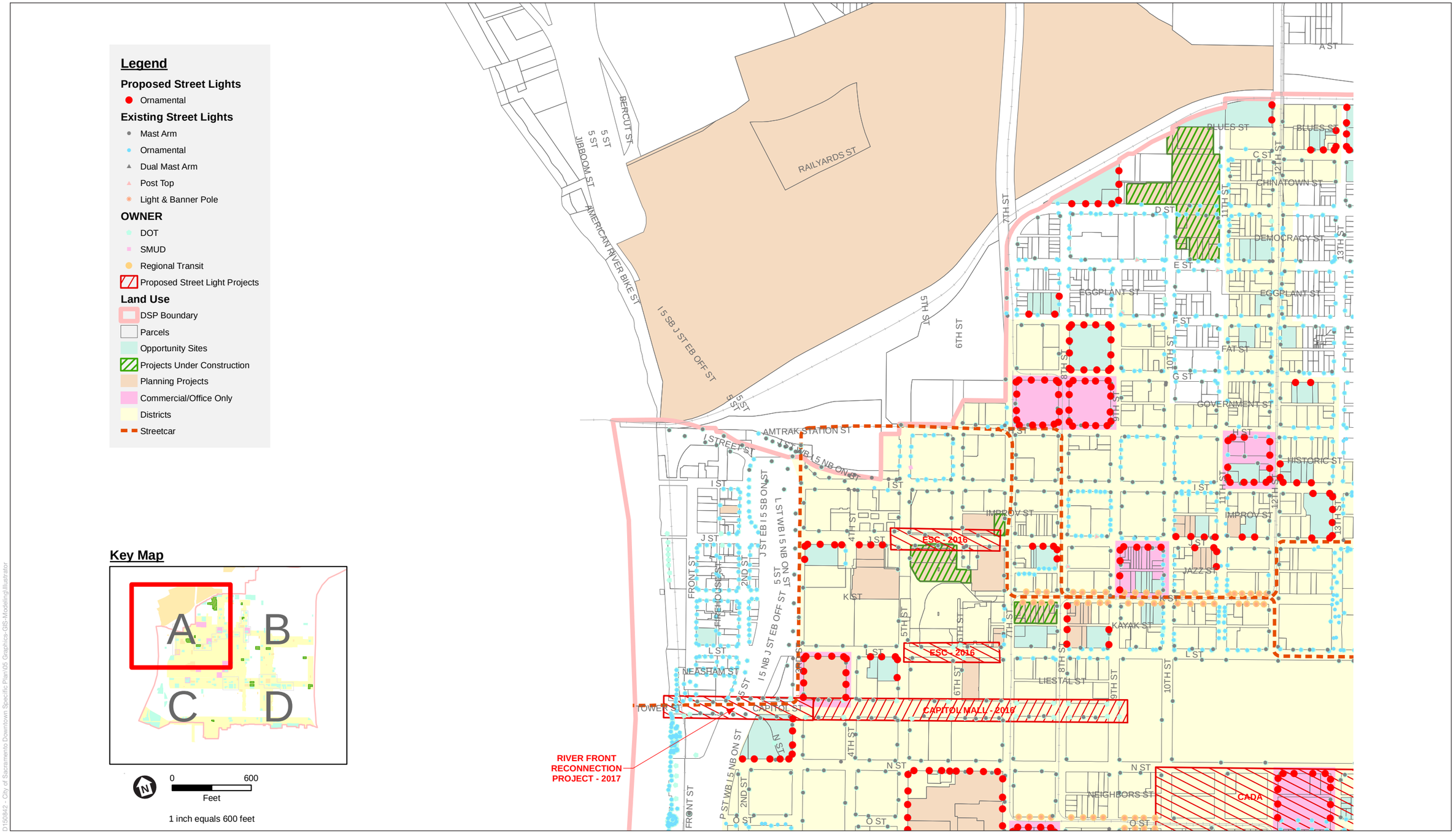
The roadway network improvements proposed as part of the DSP primarily involve re-striping existing roadways, adding a few blocks of new roadway, converting one-way streets to two-way streets, and providing lane reductions along specific travel corridors. The proposed roadway network is shown on **Figure 2-24**.

While Figure 2-25 shows all of the proposed roadway network improvements, specific improvements described below would bring some of the most substantial changes to the roadway network in the DSP area.

- 16th Street: 3-lane to 2-lane conversion between N Street and X Street to allow for the installation of on-street bicycle lanes. Removing one vehicle travel lane on 16th Street would allow for on-street bicycle facilities that improve the safety and comfort of bicyclists, and fewer vehicle lanes shortens the crossing distance for pedestrians at intersections.

- J Street: 3-lane to 2-lane conversion between 16th Street and 30th Street to allow for the installation of on-street bicycle lanes. Removing one vehicle travel lane on J Street would allow for on-street bicycle facilities that improve the safety and comfort of bicyclists, and fewer vehicle lanes shortens the crossing distance for pedestrians at intersections.

- J Street: New transit-only lane between 16th Street and 19th Street would allow for the future Downtown/Riverfront Streetcar.



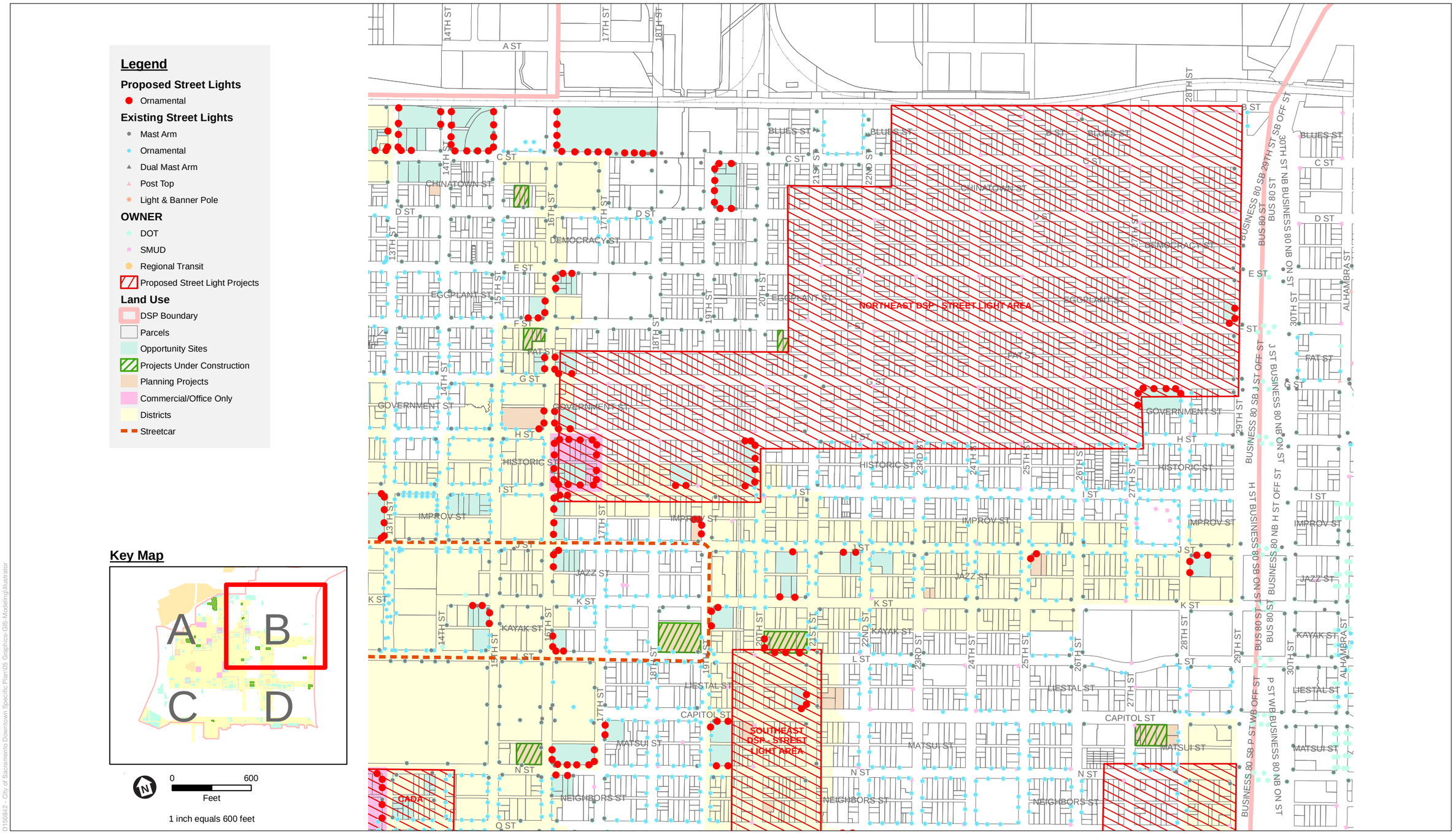
D150842 - City of Sacramento Downtown Specific Plan\05 Graphics-GIS-Modeling\Illustrator

SOURCE: NV5, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-20
Street Lights – NW Portion of DSP Area

ESA



SOURCE: NV5, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-21
Street Lights – NE Portion of DSP Area

ESA

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Legend

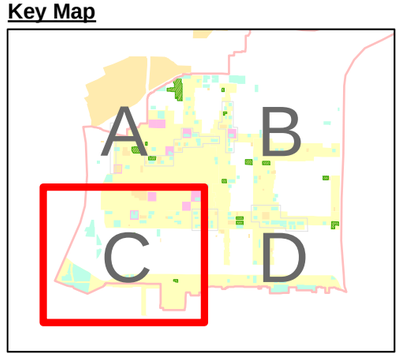
Proposed Street Lights
- Ornamental

Existing Street Lights
- Mast Arm
- Ornamental
- Dual Mast Arm
- Post Top
- Light & Banner Pole

OWNER
- DOT
- SMUD
- Regional Transit
- Proposed Street Light Projects

Land Use
- DSP Boundary
- Parcels
- Opportunity Sites
- Projects Under Construction
- Planning Projects
- Commercial/Office Only
- Districts
- Streetcar

Key Map



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Feet

1 inch equals 600 feet

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SOURCE: NV5, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-22
Street Lights – SW Portion of DSP Area

ESA

Legend

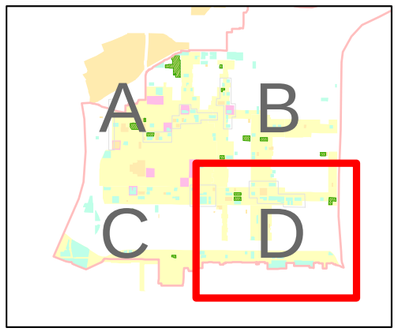
Proposed Street Lights
- Ornamental

Existing Street Lights
- Mast Arm
- Ornamental
- Dual Mast Arm
- Post Top
- Light & Banner Pole

OWNER
- DOT
- SMUD
- Regional Transit
- Proposed Street Light Projects

Land Use
- DSP Boundary
- Parcels
- Opportunity Sites
- Projects Under Construction
- Planning Projects
- Commercial/Office Only
- Districts
- Streetcar

Key Map



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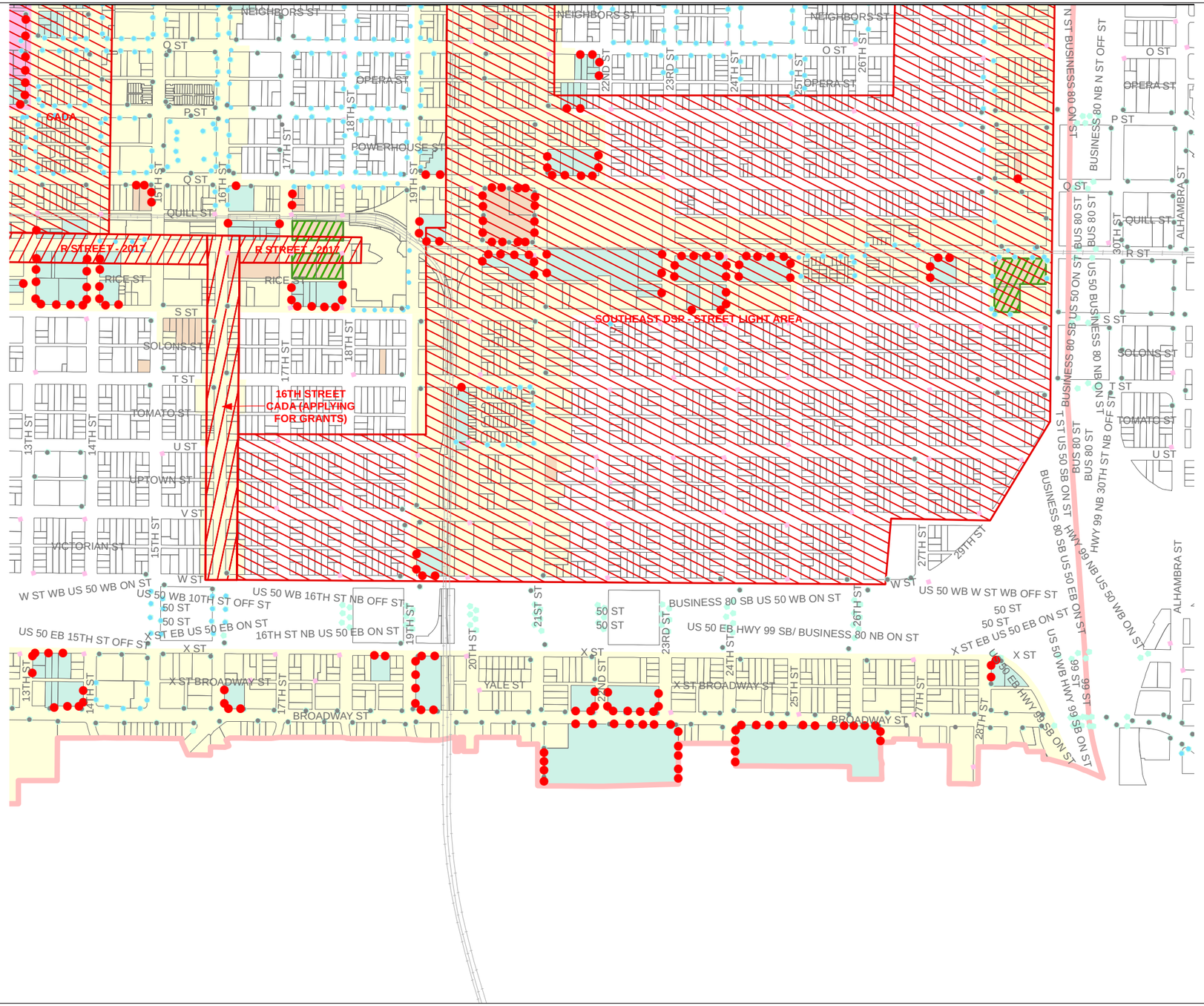


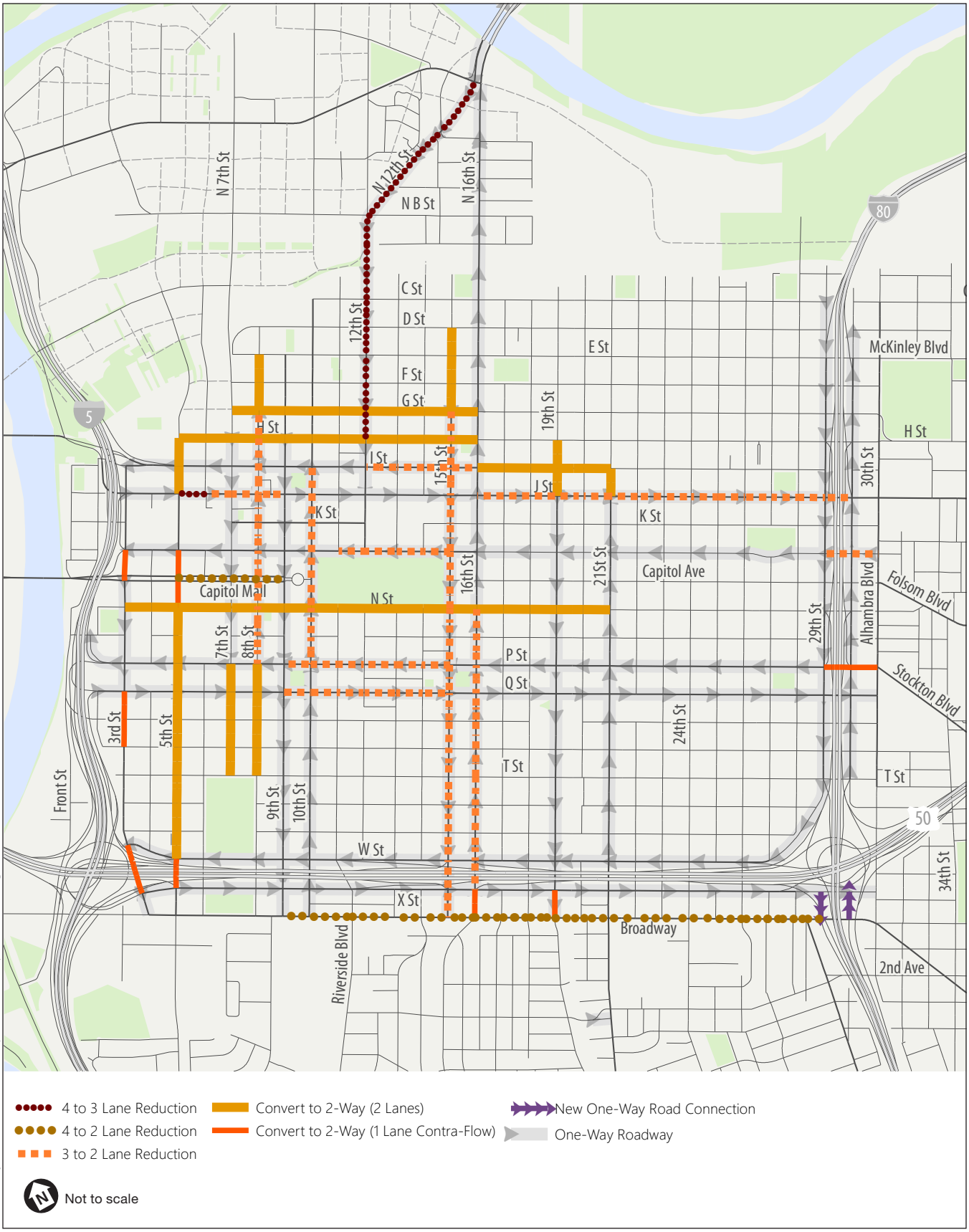
D150842 - City of Sacramento Downtown Specific Plan\05 Graphics-GIS-Modeling\Illustrator

SOURCE: NV5, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-23
Street Lights – SE Portion of DSP Area

ESA



SOURCE: Fehr & Peers, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-24
Preferred Roadway Network

ESA

- 5th Street: Two-way conversion between H Street and J Street, as well as between L Street and X Street, to provide a continuous two-way street extending from the Railyards to Land Park. This would improve both vehicular and bicycle access in the western portion of the Central City, and allow for the creation of a continuous bi-directional bicycle and vehicular corridor that would improve access to the core of the Central Business District, Golden 1 Center, and the Railyards.

- 10th Street: 3-lane to 2-lane conversion between I Street and P Street to maintain consistency with new Downtown On-Street Bike Lane project.

- Capitol Mall: 4-lane to 2-lane conversion between 5th Street and 9th Street.

- North 12th Street: Modification of 4-lane to 3-lane conversion to maintain consistency with current proposed North 12th Complete Streets Project.

- New roadways: A one-block section of a new one-way street couplet, located between Broadway and X Street, will provide access to and from the existing half interchange at Highway 99/Broadway. This would provide vehicles traveling to and from the south via Highway 99 the option of using X Street rather than traveling along Broadway. This would shift through-commute traffic, traveling to destinations in South Sacramento and beyond, away from Broadway to X Street, which would be critical if the proposed Broadway Complete Streets Project is implemented and reduces travel lanes from four to two.

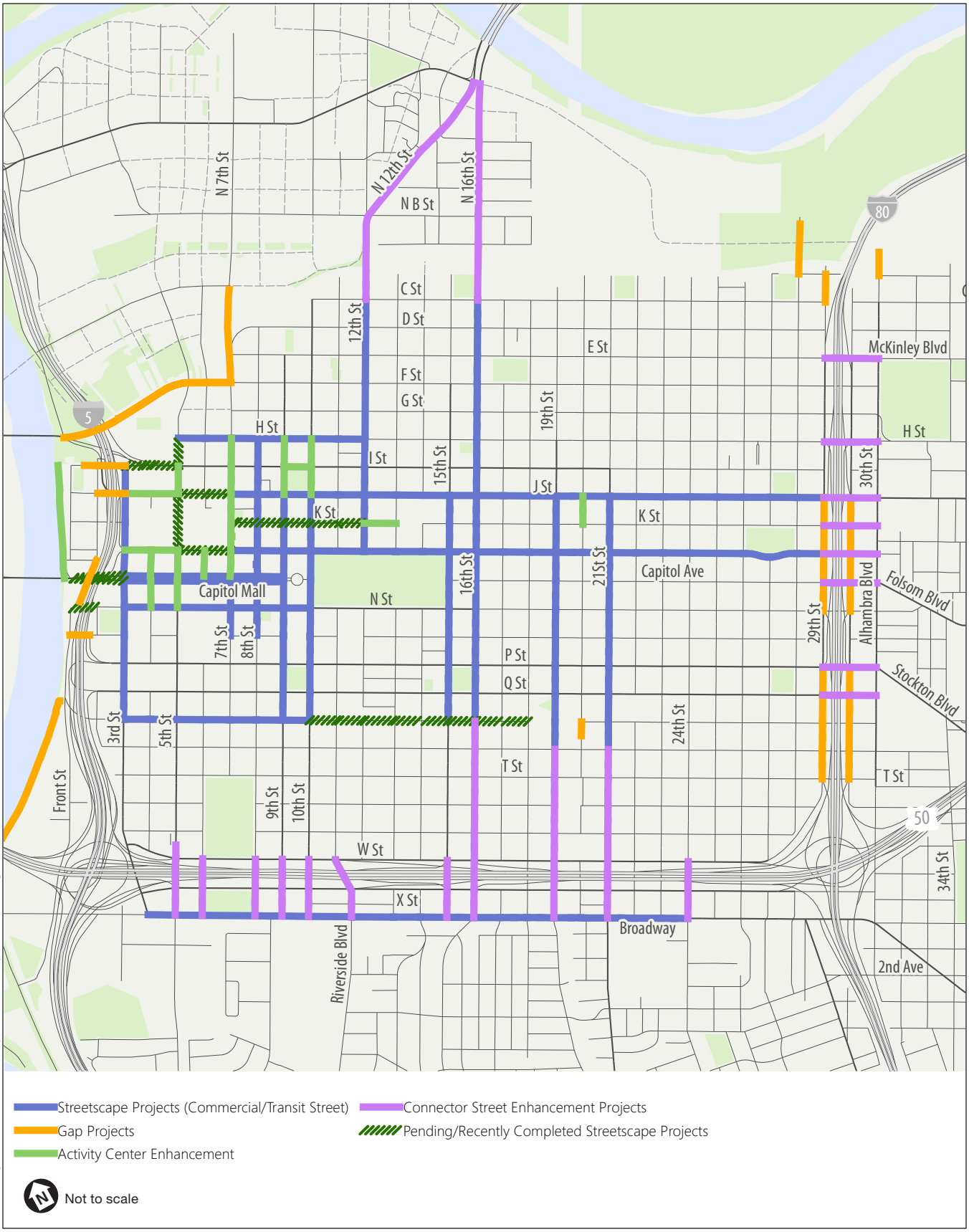
- Broadway: 4-lane to 2-lane conversion between 5th Street and 29th Street.

Streetcar Conversion Option

As an option to the roadway network discussed above, under an optional roadway configuration H Street between 5th Street and 8th Street, and 3rd Street between L Street and Capitol Mall would remain one-way streets. This configuration on these four blocks would be consistent with a roadway alignment currently being evaluated as part of the design of the Downtown/Riverfront Streetcar Project.

Pedestrian

The DSP area is already a highly walkable area due to built-in connectivity of its grid street network, extensive sidewalk coverage, pedestrian-friendly traffic signal timings (i.e., short cycle lengths with automatic pedestrian walk signals that don't require pedestrians to push a button to cross the street), and employment, residential, commercial, and cultural destinations within a short walking distance of one another. New and enhanced facilities would improve conditions for walking, improve connections between the DSP area and surrounding neighborhoods, provide new sidewalks where they do not currently exist, and provide additional sidewalk capacity in areas with high pedestrian volumes. **Figure 2-25** shows the proposed pedestrian network for the DSP area.



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SOURCE: Fehr & Peers, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-25
Preferred Pedestrian Network

ESA

Streetscape Projects

Streetscape projects would be developed in the context of the individual street purpose and neighborhood setting. In general terms, the goal is to create streets that are dynamic public spaces that serve the needs and priorities of the community. The desired outcome is a network of streets that provide safe pedestrian facilities including wider sidewalks and plazas at major activity locations and intersection crossings, enhanced crosswalk markings, new bicycle facilities as part of a comprehensive network, close integration with transit, and managed on-street parking. The streets would be designed to improve pedestrian safety and comfort by encouraging appropriate vehicle travel speeds. Environmentally sustainable design practices such as integrating low-impact development (LID) stormwater filtration into the streetscape and using native, drought-tolerant plants in landscaping areas would be followed.

Connector Street Enhancement Projects

Connector street enhancement projects would provide new sidewalks and intersection crossing treatments to mitigate the barrier that freeways surrounding the DSP area present to pedestrian travel. The desired outcome is safe, comfortable, well-signed pedestrian routes that better connect the DSP area with surrounding neighborhoods, commercial districts, and riverfront uses along the Sacramento River. All of the connector street enhancement projects would be on streets that cross under the W-X freeway (Highway 50) or Business 80.

Pedestrian Gap Projects

Pedestrian gap projects fulfill a similar purpose as connector street enhancement projects, as they address barriers to pedestrian travel created primarily by freeways and railroads. The proposed pedestrian gap projects would include new connections across and adjacent to I-5, new pedestrian/bicycle only facilities along and connecting to the Sacramento River, new grade-separated pedestrian/bicycle facilities connecting across the Union Pacific Railroad (consistent with the adopted Railyards Specific Plan), and pedestrian enhancements along the 29th/30th Street couplet that serves as a frontage road for Business 80.

Activity Center Enhancement Projects

Activity center enhancement projects would expand existing pedestrian facilities adjacent to major pedestrian activity centers such as Golden 1 Center, Old Sacramento, and the City Hall/ Cesar Chavez Plaza Park area.

Bicycles

The bicycle network proposed as part of the DSP would involve re-striping existing roadways to fill gaps in the existing bicycle travel network and provide a more complete system along the Sacramento and American Rivers consistent with adopted plans, providing new buffered bike lanes or separated bikeways, and establishing a more complete low-stress bicycle network.

Bicycle facility improvements in the DSP area would support the City's goal of creating a Low Stress Bicycle Network. Low stress bicycle networks are characterized as networks that provide

connectivity between destinations; provide sufficient safety elements such as dedicated bike lanes, physical barriers between bicyclists and vehicles; adequate traffic control devices such as traffic signals or all-way stops; lower roadway speed limits; or proper directional signage. Low stress routes allow residents and visitors of all ages and abilities to complete many types of trips by bicycling, including trips to school, to work, errands, or for recreation.

Figure 2-26 shows the proposed bicycle network for the DSP area. Providing additional or expanded facilities for bicycles may implemented through a variety of physical improvements.

Center Turn Lane Conversions

Center turn lane conversions for bike lanes typically occur on a low-volume, two-way street with a continuous center turn lane. This type of conversion project would eliminate the center turn lane that is not needed for capacity purposes, and provide on-street bike lanes.

3-Lane to 2-Lane Conversions

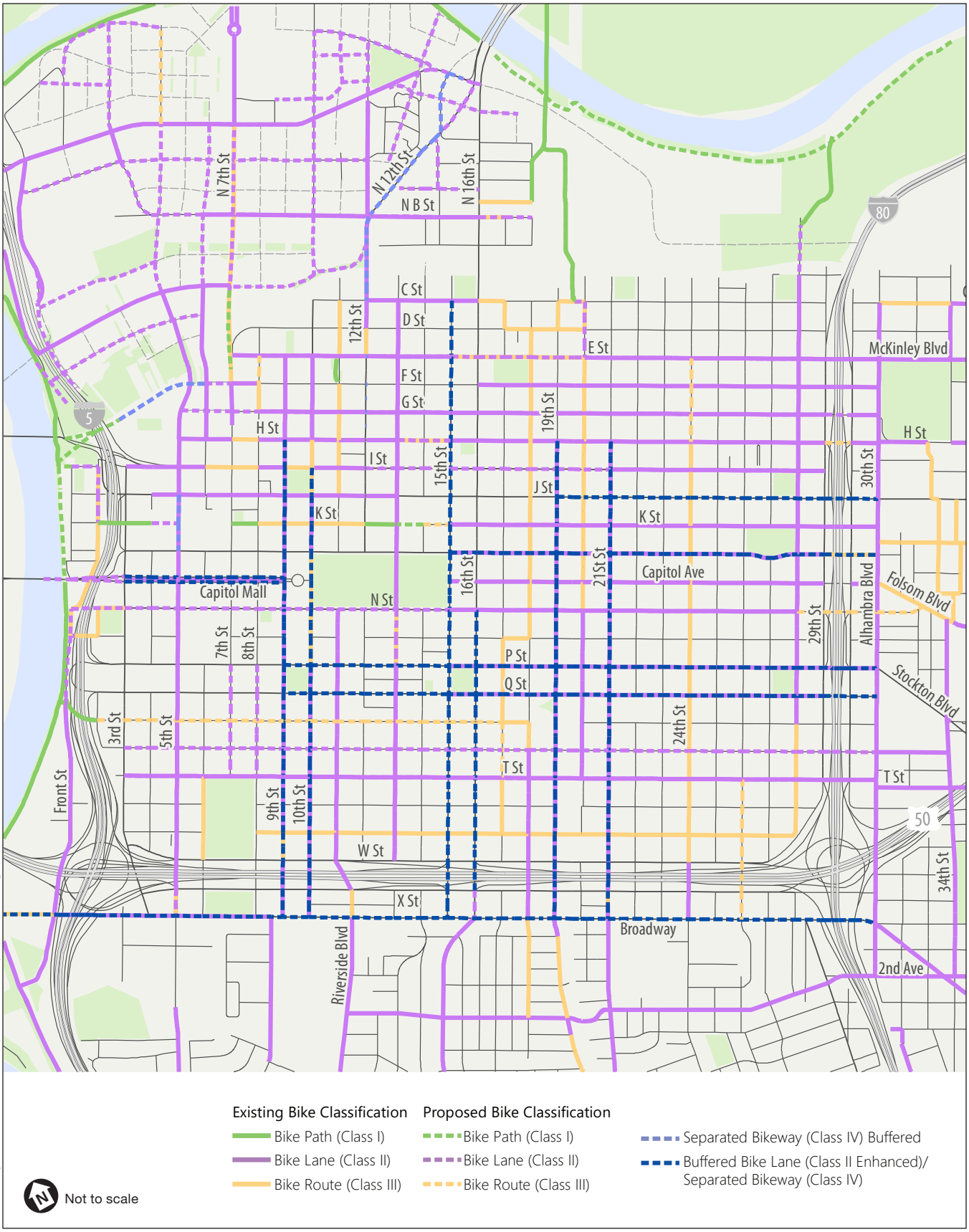
Bike lanes can be added on roadways that are proposed for 3-lane to 2-lane conversions, typically on one-way roads. The reduction in travel lanes allows for the provision of on-street bike lanes on streets that currently have no bike facilities. These conversions are less costly than the two-way conversions, as they typically only require new pavement striping and signing. New buffered bike lanes would generally be provided along the left side of one-way streets. Most one-way streets in the DSP area serve as bus routes, with stops located on right right-hand side of the roadway. Placing buffered bicycle lanes on the left side of the street reduces potential conflicts between bicycles and buses. Buffering on both sides of the bike lane would be provided when sufficient right of way is available. Separated bikeways may be provided in place of buffered bike lanes, where appropriate.

Bike Lane Retrofit Projects

Bike lane retrofit projects involve providing buffered bike lanes by restriping one-way streets that were previously reduced from three to two travel lanes. Streets likely to see this type of improvement have two on-street bike lanes, one on the left side and one on the right side. These bike lanes are not buffered from either parked cars or vehicle traffic. The retrofit projects would eliminate one of the two bike lanes to allow for the provision of a single buffered bike lane on the left side of the street. New buffered bike lanes would generally be provided along the left side of one-way streets. Most one-way streets on the Grid serve as bus routes, with stops located on right right-hand side of the roadway. Placing buffered bicycle lanes on the left side of the street reduces potential conflicts between bicycles and buses.

Separated/Protected Bikeway Projects

Separated/protected bikeway projects are similar to the previously discussed buffered lanes, but provide an added element of a vertical device to physically separate bicycles from automobile traffic. This vertical device may take the form of a curb, raised median, or bollards. Separated/ protected bikeways include “cycle tracks,” which offer two-way travel along one side of the street, as well as single-direction lanes with physical separation.



SOURCE: Fehr & Peers, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-26
Preferred Bicycle Network

ESA

Shared Use Paths

Shared use paths provide facilities that are intended to be shared by bicycles and pedestrians. These types of paths will provide a complete system along the Sacramento and American Rivers that form the western and northern boundary of the Central City. It should be noted that recommendations for shared use paths come from the Bicycle Master Plan.

Transit

Transit service in the DSP area is provided by Sacramento RT and a variety of other regional transit service providers. The projects proposed in the DSP are intended to enhance the operation of existing and future transit service in an effort to improve overall mobility in the DSP area. All of the proposed new transit facilities would be created through a reduction in auto travel lanes, as acquisition of new right-of-way on streets in the DSP area is considered not feasible. As such, there is a direct relationship between the proposed transit network and the proposed roadway network, described above. **Figure 2-27** shows the proposed transit network for the DSP area.

Dedicated Transit Lanes

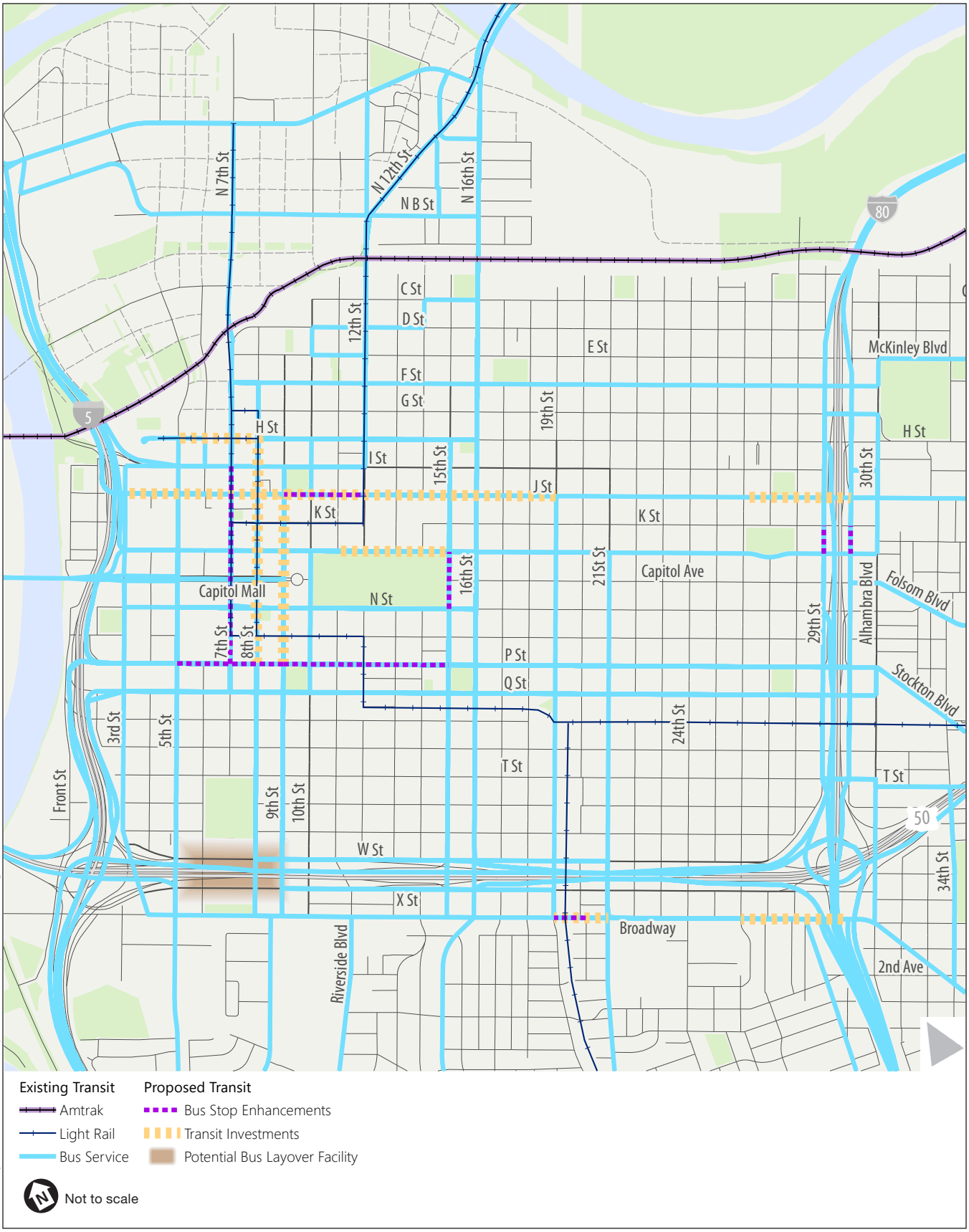
Dedicated transit lanes can be provided on roadways that are proposed for 3-lane to 2-lane conversion, which is anticipated for portions of L Street, 8th Street, and 9th Street. The reduction in automobile travel lanes would allow for the provision of dedicated transit lanes on streets where the number of transit vehicles is projected to exceed 70 during the peak hour. The dedicated transit priority lanes would all be "right side" travel lanes and are proposed to be striped in red. Non-transit vehicles would be prohibited from using these dedicated transit lanes unless they are turning right at an upcoming intersection or accessing a parking facility on the right side of the street. The restrictions for the dedicated transit priority lanes may be limited to peak hours during initial implementation periods.

Enlarged Bus Stops

Enlarged bus stops at high demand locations can create opportunities for enhanced transit service and improved rider experiences. Enlarged bus stop improvements may include a longer stop area to provide additional room for buses and waiting passengers, bus bulb-outs, enhanced sidewalks, and lighting. The screening process used to identify these stops focused on stops with the highest number of boardings, and evaluated these locations to determine if lengthening is necessary based upon national standards for transit stop design. Enhanced bus stop locations are shown on Figure 2-27.

Alley Activation

The DSP area already benefits from an extensive system of east-west alleys that are part of the urban fabric of Sacramento and provide the DSP area with a unique advantage that many places do not have. Most of the DSP area's 38 miles of alleys currently fulfill a utilitarian role, providing space for overhead and underground utilities, trash collection containers and services, and access to garages and loading docks. The presence of these alleys allows these activities to occur without disruption to travel on streets and sidewalks. However, the City desires to activate alleys with human activity and make them a more desirable place to travel or spend time.



SOURCE: Fehr & Peers, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-27
Preferred Transit Network

ESA

2.5.5 Hotels

The proposed DSP allows for the development of two new hotels in the DSP area.

A new hotel at the northwest corner of 13th Street and J Street would replace an existing five-story, concrete parking garage that serves the public and the Sheraton Grand hotel across J Street. The existing parking garage structure also includes ground-floor retail uses along J Street. A new hotel on this site would be a full-service hotel with approximately 350 rooms.

A new hotel at the southwest corner of 15th Street and K Street would replace an existing surface parking lot. This hotel would be a full-service hotel with approximately 350 rooms and approximately 70,000 sf meeting/conference space. The building could be up to 24 stories, or 325 feet. Up to 200 onsite parking spaces would be provided on two subterranean floors. A pedestrian bridge or skyway may connect the hotel to the Sacramento Convention Center to the north of the parcel.

While these two hotels are anticipated under the DSP, formal applications for these hotels have not been submitted, and project-specific details are not known.

2.5.6 Public Art

The proposed DSP would provide guidance for the selection of locations for the placement of public art and types of art displayed. Public art exists in a variety of forms and locations throughout the DSP area. The proposed DSP would require that all public art be located in areas that are accessible to the public, respect the local and regional context, and ensure artistic quality. Examples of existing public art within the DSP area include installations outside of the Golden 1 Center, on building sites along Capitol Mall, around the Crocker Art Museum, and in front of the Safeway on 19th Street.

Adequate funding is critical to select, install, and maintain a public art program. Currently, there is a 2 percent for art requirement applicable to publicly funded projects of the City of Sacramento and the County of Sacramento. The Capital Improvement Program (CIP) budget includes all applicable appropriations for public art related to this 2 percent requirement, including costs for administration as well as for selection, installation, and maintenance of the art. Excluded from the 2 percent requirement are historic restoration project and projects located in the Old Sacramento redevelopment area. There are a number of strategic approaches that can be considered as possible sources for financial support for public art including public/private sector endeavors, percent- and non-percent-for-art programs, developer participation, and local funding sources.

Public Art

The proposed DSP would provide for a range of public art media which would be dependent on opportunities presented by proposed sites and the space requirements for each category. Types of public artwork described in the proposed DSP include the following:

- **Aerial Sculpture.** Aerial sculptures could be suspended above public spaces including roadways or courtyards, and would be lightweight but could be large in size, occupying large open spaces.

- **Ground Sculpture.** Ground sculptures could range in size from very large to small, and placement and selection would rely on space availability at ground level.

- **Light Display and Sculpture.** Light display or light sculptures could be cast onto existing structures or developed as an independent installation. Light displays could be part of a ground-based sculpture or based on other existing structures. DSP Context Guideline 4 calls for the incorporation of sustainable design in the art installation when possible, such as LED lighting.

- **Landscape.** Landscape public art could take the form of plantings or shaping of plants to form sculptures, images or interactive areas.

- **Infrastructure.** Infrastructure public art could be installations that provide an infrastructure function. Examples of which could include sculptures that function as bicycle racks or park benches.

- **Temporary.** Temporary public art could occupy space for a limited period of time. The temporary nature of the public art would allow for installations to occupy a more diverse range of spaces than permanent art installations. Temporary art could be in the form of any of the other media on this list.

- **Performance.** Public performance art is another type of temporary art, which could include the participation of human actors and the potential use of props or staged structures as part of the installation. Performance art may require street closings or supporting infrastructure such as transit, bathrooms, ambient noise, or other such elements.

- **Playground.** Public playground art could be constructed in parks and open spaces. Installations would be three-dimensional structures that function as visual and interactive art and allow for children and adults to play on or inside the structures.

- **Literary.** Literary public art could be two-dimensional visual art that would be mounted as signs, banners or murals. Literary art could be suspended or mounted on various types of structures.

- **Inhabitable.** Inhabitable public art could be large-scale installations that would allow for the public to interact with installations by walking within them and experiencing them from within. This medium could require sizable spaces and could be of a more permanent nature.

- **Water.** Public water art could be fountains or pools of various sizes that could be installed in public spaces for viewing and interaction. Water art could be incorporated with other art media. Proposed DSP Context Guideline 4 encourages the use of water efficient fountains when installed as public art.

- **Architecture.** Architecture as a public art form is the aesthetic effect of buildings or structures as viewed by the public. Architecture art could be installed on existing or planned structures.

Location

Point of Interest

The proposed DSP identifies criteria for the identification of points of interest and guidance for the siting of public art. Points of interest include pedestrian and vehicular gateways, places of civic engagement, and significant investments in public infrastructure. Examples of points of interest accessible to the public could include office plazas, residential forecourts, and public open spaces such as activity centers, pocket parks, and plazas. Public art could be sited as part of or adjacent to public infrastructure, such as transportation centers, bus shelters, community centers, utility boxes, landscape medians, or on building facades. Public art could be sited along established sight-lines to create a focal point and attraction for visitors. Permanent structural elements could be constructed to facilitate public art such as plinths, pedestals, or special exhibition areas. Selection of points of interest would favor placement of public art in locations with a high volume of potential viewers.

Figure 2-28 identifies the locations of points of interest described in the proposed DSP, which include the following:

1. Tower Bridge

Tower Bridge is an iconic structure in the Sacramento city-scape. It serves as the gateway from West Sacramento to downtown Sacramento. The proposed DSP suggests public art in the form of a light display at this location to illuminate walkways and the bridge structure.

2. O Street Overpass/Sacramento River Bike Trail

The DSP proposes the placement of a public art piece to connect the two pedestrian and bicycle corridors.

3. Crocker Art Museum

The Crocker Art Museum, located at 3rd and O streets, is an arts and cultural hub in the city. Crocker Park, directly across O Street to the north of the museum, is a public open space that would allow for the placement of public art that is an extension of the art displayed within the museum.

4. 3rd Street/ Capitol Avenue

The parking lot north of Crocker Park (City Lot X) is visible from the Sacramento River, West Side Freeway, and surrounding areas. The proposed DSP identifies this point of interest as a gateway, welcoming motorists to the downtown Sacramento, and recommends the placement of a light display or sculpture.

5. Front Street/K Street

The Front Street/K Street intersection is a historic point of interest for its association with the initiation of the first transcontinental railroad. The location is within Old Sacramento, a tourism and cultural hub for the City. The proposed DSP notes that public art at this location may include an homage to the use of steam as an energy source, particularly as it relates to the steam locomotive or steam clocks.

6. 2nd Street/K Street

The pedestrian tunnel at 2nd Street and K Street is a gateway to Old Sacramento and is identified in the proposed DSP as a point of interest for the placement of public art that acknowledges entry into Old Sacramento.

7. Sacramento Valley Station

Sacramento Valley Station is a transportation hub for visitors and residents entering the City by rail or bus. The proposed DSP recommends the placement of public transportation-themed public art at this point of interest.

8. Sacramento Downtown Commons

The developing Sacramento Downtown Commons is an area of large pedestrian activity. The site hosts sporting and cultural events, will include extensive retail and food and drinking establishments, and receives a high volume of visitors from outside the City. This point of interest includes several existing high-profile public art installations and provides a number of opportunities for the placement of additional public art in many media.

9. West Terminus of Capitol Mall

The 3rd Street/Capitol Mall intersection is the western terminus of the Capitol Mall. The intersection provides a straight-on view of the Capitol Building and Tower Bridge.

10. 9th Street/Capitol Mall

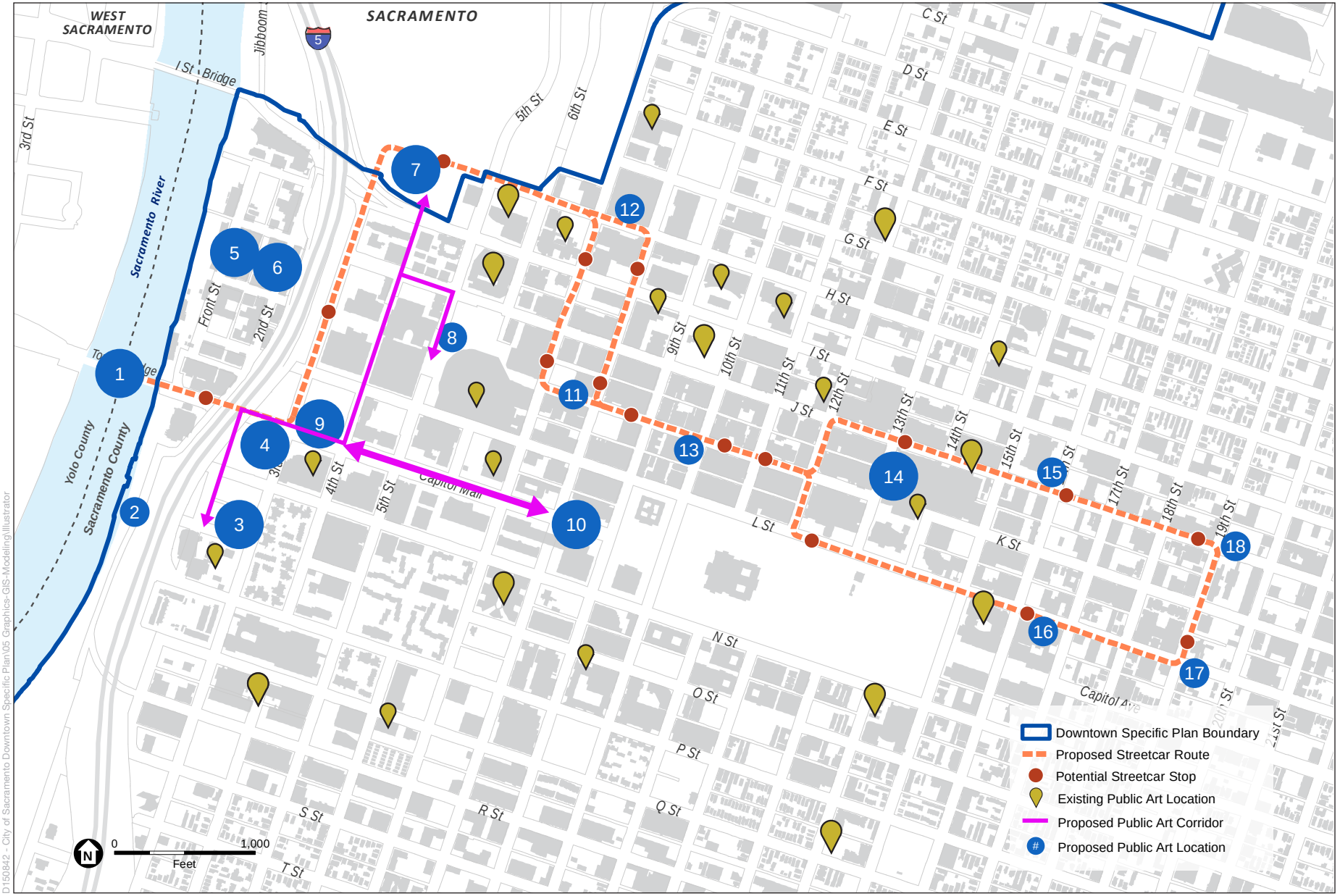
The 9th Street/Capitol Mall intersection is on the eastern end of the Capitol Mall and sits adjacent to the historic California Court of Appeals (3rd District) and the Jesse M. Unruh State Office Buildings. Public events oriented toward the west steps of the State Capitol are commonly located in this area and the space is identified in the proposed DSP as ideal for performance and temporary art. This property is owned by the State of California, and installation of public art in this location would require approval by the State.

11. St. Rose of Lima Park

Located across the street from the Downtown Commons, the St. Rose of Lima Plaza is a public space that features the Downtown Sacramento Ice Rink during the winter. The proposed DSP identifies this space as ideal for a variety of performances and public art pieces.

12. 7th Street and 8th Street/H Street

The 7th Street and 8th Street intersections with H Street are proposed stops for the Downtown/Riverfront Streetcar route. These intersections are identified as places of interest because the placement of public art at these locations would connect the areas of the DSP area that have existing public art.



D150842 - City of Sacramento Downtown Specific Plan\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Torti Gallas + Partners, 2017; ESA, 2017; City of Sacramento, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 2-28
Public Art Location Recommendation Map

ESA

13. 10th Street/K Street

The intersection of 10th Street and K Street is on the proposed Downtown/Riverfront Streetcar route, and is identified in the proposed DSP as ideal for infrastructure art that might take the form of bike racks. Both streets have designated bike lanes making the intersection an ideal location for the placement of such installations.

14. Sacramento Civic Center

There is public art located in various areas around the Sacramento Convention Center. The proposed DSP recommends placement of new public art along 13th Street, between J Street and L Street. This area is identified as a point of interest due to slower vehicle traffic, high pedestrian traffic, and proximity to events that occur at the Convention Center as well as at the Community Center Theater.

15. 16th Street/J Street

The 16th Street/J Street intersection, adjacent to Memorial Auditorium and the historic Elliot Building, is the midway point along the stretch of the Downtown/Riverfront Streetcar route that would run easterly on J Street from 12th Street to 19th Street. There is currently no public art on display in this area. The location is also considered a point of interest as the intersection of Downtown, Midtown, Boulevard Park, and Mansion Flats neighborhoods.

16. 17th Street/L Street

The 17th Street/L Street intersection is the midway point along the stretch of the Downtown/Riverfront Streetcar route that runs down L Street. The St John's Lutheran Church is located on the northeast corner and there is a planned streetcar station. The proposed DSP recommends the placement of public art at this location to heighten interest in this section of the L Street corridor.

17. 19th Street/L Street

The 19th Street/L Street intersection is the site of a proposed Downtown/Riverfront Streetcar station near recently completed mixed-use developments. This location is identified as a point of interest because it is an area of high pedestrian and vehicular traffic.

18. 19th Street/J Street

The 19th Street/J Street intersection is the site of a planned Downtown/Riverfront Streetcar station and the recently approved 19/J residential mixed-use project. The intersection is a point of interest for the placement of public art due to high vehicular and pedestrian traffic and the absence of existing public art in this area.

Public Art Corridors

The proposed DSP also identifies strategies for the placement of public art along corridors, which allow for the placement of continuous art or a series of related art pieces along a linear pathway, between two points. Corridors can be pedestrian, vehicular, or bicycle pathways that connect points of interest or comprise entryways to downtown Sacramento. The proposed DSP identifies

key corridors, including the route of the proposed Downtown/Riverfront Streetcar, Capitol Mall, and the Crocker Art Museum, which are described below.

Downtown/Riverfront Streetcar Route

The DSP provides guidance for the placement and selection of public art along the route of the proposed Downtown/Riverfront Streetcar. The route would carry riders between West Sacramento and high-traffic public areas within the DSP area, such as the Sacramento Convention Center, Golden 1 Center, and Sacramento Valley Station. The streetcar route enters the DSP area from Tower Bridge, an identified City gateway in the 2035 General Plan. The streetcar route is identified as a corridor for public art because it is an opportunity to establish light art, infrastructure art and other public art types at each streetcar station as well as at intermittent locations along the streetcar route.

Capitol Mall

The Capitol Mall corridor between 3rd Street and 9th Street has an approximately 50-feet wide landscaped central median and straight on views of the State Capitol building and Tower Bridge. The corridor would be a likely site for public art as a gateway to the state capitol and high traffic public area. An example of corridor utilization would be the placement of multiple related pieces of art, within the roadway median at a consistent interval from 3rd Street to 9th Street.

Crocker Art Museum

The Crocker Art Museum corridor would generally be delineated as the segment of 3rd Street between the Capitol Mall and O Street. The corridor is developed along the east side of 3rd Street with a high rise office building and multi-story high-density housing. Along the west side of 3rd Street is Crocker Park. The west side of the corridor provides open space that would allow for the placement of continuous or related art pieces relevant to ongoing or rotating exhibits at the Crocker Art Museum. The corridor would also be available for public art as an extension of Crocker Art Museum programming.

2.5.7 Public Services

Fire Protection

The Sacramento Fire Department (SFD) provides fire protection services within the DSP area. The DSP area is currently served by multiple stations within or near Downtown Sacramento: Station 1, located at 624 Q Street; Station 2, located at 1229 I Street; Station 5, located at 731 Broadway. Just beyond the DSP area boundaries there are two additional stations that also provide fire protection services: Station 4, located at 3145 Granada Way, and Station 14, located at 1341 North C Street.

Buildout of the DSP area would be consistent with the 2035 General Plan policies regarding fire protection services and standards. As with the general plan, it is anticipated that additional calls generated as a result of development pursuant to the proposed DSP would result in the need for additional fire equipment and facilities.

Conversations with SFD indicate that in order to meet service demands of future projected development in the DSP area there would be a need to build a new fire station to the west of the BNSF tracks. The exact location of the new fire station has not been determined at this time.

Parks and Recreation

The City of Sacramento Department of Parks and Recreation (Sacramento DPR) maintains a total of approximately 218 acres of existing parklands within the DSP area. The DSP area parks system provides for a range parkland types, including neighborhood parks, community parks, and regional parks. Implementation of the DSP would include the addition of 4.87 acres of planned neighborhood parks, 4.87 acres of planned community parks, and 34.56 acres of planned regional parks.

Buildout of the DSP area would be consistent with the 2035 General Plan policies regarding parks and recreation services and standards. Future parks and parkland improvements would be funded through a share of property tax revenue generated by the project and, if necessary, special in-lieu fees could be applied to generate additional necessary funds to build the needed acreage.

Project Approvals and Entitlements

City of Sacramento

Adoption of the proposed DSP is anticipated to require, but may not be limited to, the following City actions:

- Certification of the EIR to determine that the EIR was completed in compliance with the requirements of CEQA, that the decision-making body has reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the City of Sacramento;
- Adoption of a Mitigation Monitoring Plan (MMP), which specifies the methods for monitoring mitigation measures required to eliminate or reduce the project's significant effects on the environment;
- Adoption of Findings of Fact, and for any impacts determined to be significant and unavoidable, a Statement of Overriding Considerations;
- Approval of a Water Supply Assessment;
- Approval of one or more amendments to the 2035 General Plan;
- Approval of a rezone;
- Approval of the Downtown Specific Plan;
- Approval of the Downtown Special Planning District;
- Approval of amendments to the Central City Urban Design Guidelines;
- Approval of one or more amendments to the Planning and Development Code;

- Approval of removing Chapter 17.308 of the Planning and Development Code relating to the Building Conservation (BC) Overlay Zone;
- Approval of removing Chapter 17.324 of the Planning and Development Code relating to the Midtown Commercial (MC) Overlay Zone;
- Approval of removing Chapter 17.328 of the Planning and Development Code relating to the Neighborhood Corridor (NC) Overlay Zone;
- Approval of removing Chapter 17.344 of the Planning and Development Code relating to the Urban Neighborhood (UN) Overlay Zone;
- Approval of removing Chapter 17.444 of the Planning and Development Code relating to the R Street Corridor Special Planning District; and
- Approval of removing Chapter 17.408 of the Planning and Development Code relating to the Central Business District Special Planning District.

Other Local, Regional, State or Federal Agencies

Subsequent individual projects implemented under the proposed DSP would be anticipated to include, but may not be limited to, the following actions by entities other than the City:

- Approval of a construction activity stormwater permit, including a Stormwater Pollution Prevention Plan, from the Central Valley Regional Water Quality Control Board (CVRWQCB);
- Approval of a pre-treatment permit from the Sacramento Regional County Sanitation District to allow discharges associated with construction dewatering to the CSS;
- Approval of a stationary source permit from the Sacramento Metropolitan Air Quality Management District (SMAQMD); and
- Approval of a water quality certification under Section 401 of the Clean Water Act by CVRWQCB.

2.6 Responsible and Trustee Agencies

This EIR is intended to be used by responsible and trustee agencies (as defined by sections 15381 and 15386 of the State CEQA Guidelines) that may have review or discretionary authority over subsequent individual projects implemented under the proposed DSP. Agencies in addition to the Lead Agency that also may use this EIR in their review of subsequent individual projects implemented under the proposed DSP or that may have responsibility over approval of certain project elements may include, but are not limited to, the following:

- United States Army Corps of Engineers (USACE),
- United States Fish and Wildlife Service (USFWS),
- California Department of Transportation (Caltrans),
- California Department of Toxic Substances Control (DTSC),

- California Department of Fish and Wildlife (CDFW),
- California Department of Health Services (DHS),
- California Office of Statewide Health Planning and Development (OSHPD),
- California State Lands Commission (CSLC),
- Central Valley Flood Protection Board (CVFPB),
- Central Valley Regional Water Quality Control Board (CVRWQCB),
- Capitol Area Development Authority (CADA),
- Sacramento Housing and Redevelopment Authority (SHRA),
- Sacramento Metropolitan Air Quality Management District (SMAQMD),
- Sacramento Municipal Utility District (SMUD),
- Sacramento Regional County Sanitation District (SRCSD), and
- Sacramento Regional Transit (RT).

CHAPTER 3
Land Use, Population, and Housing

3.1 Introduction

This chapter provides an overview of the land use and planning issues that may arise in connection with implementation of the proposed Downtown Specific Plan (DSP). This chapter describes existing and planned land uses in and adjacent to the DSP area, including current land uses, land use designations, and zoning. Section 15125 of the State CEQA Guidelines states that an "EIR shall discuss any inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans." Potential inconsistencies between the proposed projects and the Sacramento 2035 General Plan, the Central City Community Plan (CCCP), and the City's Planning and Development Code (PDC) are discussed in this chapter. Notwithstanding the conclusions reflected in this document, the final determination of project consistency with the City's 2035 General Plan, including the CCCP, is within the authority of the City Council. The information provided in this chapter is intended to inform that determination. A general discussion on plan consistency is included below.

The City does not consider inconsistency with plan policies or codes to necessarily be indicative of significant environmental impacts. To the extent that significant environmental impacts would occur as a result of policy inconsistencies, they are disclosed in the environmental impact sections of Chapter 4 of this EIR. Thus, the reader is referred to the various environmental resource evaluations presented in Chapter 4 for a discussion of potential physical/environmental effects and potential incompatibilities that may be considered in the determination of physical environmental impacts. For example, land uses that produce excessive noise, light, dust, odors, traffic, or hazardous emissions may be undesirable when they intrude on places used for residential activities (e.g., residences, parks). Thus, certain industrial or commercial uses (which can produce noise and odors) may not be considered compatible with residential, educational, or healthcare uses, unless buffers, landscaping, or screening could protect residents from health hazards or nuisances. Such potential land use incompatibilities would be addressed in the applicable environmental resource sections in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures.

This chapter also describes existing levels of and trends in population and housing in the City of Sacramento. It identifies the development assumptions upon which the proposed DSP is based, and analyzes projected population and housing growth in relation to City projections.

While an EIR may provide information regarding land use, socio-economic, population, employment, or housing issues, CEQA does not recognize these issues as direct physical effects on the environment.[1] Therefore, this chapter does not identify environmental impacts and mitigation measures. Adverse physical effects on the environment that could result from implementation of the project, including the changes to land use addressed in this chapter, are evaluated and disclosed in the appropriate technical sections of this EIR.

3.2 Land Use

The evaluation included in this section was developed based on information provided in the City of Sacramento 2035 General Plan, City of Sacramento 2035 General Plan Master Environmental Impact Report (MEIR), the Sacramento Area Council of Governments (SACOG) Preferred Blueprint Scenario and Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS), and the DSP.

3.2.1 Notice of Preparation Comments

A Notice of Preparation (NOP) for this EIR was circulated for public review from February 15, 2017 to March 17, 2017. During the public comment period, three letters were received which commented on land use issues related to the proposed DSP. The comments addressed the following issues:

- Encouragement of infill development.
- Provision of a diversity of housing types, including low-income housing.
- Encouragement of appropriate building massing and scale.

3.2.2 Environmental Setting

Regional Context

The City of Sacramento is located approximately 80 miles east of San Francisco and 85 miles west of Lake Tahoe in the northern portion of the great Central Valley, at the northern end of the Sacramento/San Joaquin river delta and at the confluence of the Sacramento and American Rivers. Sacramento is the seat of government for the State of California and also serves as the county seat of Sacramento County (see Figure 2-1). The City of Sacramento is the largest incorporated city in Sacramento County.

Sacramento is a major transportation hub, the point of intersection of major transportation routes that connect Sacramento to the San Francisco Bay area to the west, the Sierra Nevada mountains and Nevada to the east, the City of Los Angeles to the south, and Oregon to the north. The City is bisected by a number of major freeways, including Interstate 5 (I-5), which traverses the state from north to south; Interstate 80 (I-80) and the Capital City Freeway (Business 80), which provide an east-west connection between San Francisco and Reno; and Highway 50, which

[1] State CEQA Guidelines section 15064(d)(1).

provides an east-west connection between Sacramento and South Lake Tahoe. In addition, the Union Pacific Railroad (UPRR) and BNSF Railway transect the City and pass through the DSP area.

DSP Area

The DSP area is located within the City of Sacramento's Central City community and is located in the CCCP area, as depicted in Figure 2-2. The DSP area is bound by the River District and Railyards specific plan areas to the north, the Sacramento River to the west, Broadway and parcels fronting the south side of Broadway to the south, and Business 80 to the east, as depicted in Figure 2-3. Other communities surrounding the DSP area include East Sacramento to the east, Land Park to the south, and the City of West Sacramento to the west, west of the Sacramento River.

The DSP area includes several distinct neighborhoods, including Alkali Flat, Mansion Flats, New Era Park, Old Sacramento, the Central Business District (CBD), Boulevard Park, Marshall School, Midtown/Winn Park/Capitol Avenue, Southside Park, Richmond Grove, Poverty Ridge, and Newton Booth. Each of these neighborhoods is discussed below.

Alkali Flat

The Alkali Flat neighborhood is generally bounded by the UPRR railroad tracks and embankment to the north, 7th Street to the west, G Street to the south; and 12th Street to the east. One of the first residential neighborhoods in Sacramento, Alkali Flat includes numerous historic buildings, including brick and wood homes constructed in the mid-nineteenth century, Victorian homes, and historic commercial buildings. Numerous newer residential buildings are present in Alkali Flat, including The Creamery with 3-story residences in a modern brownstone style. Operating historically as a grain and flour mill, the Globe Mills Building in northeast portion of the Alkali Flat neighborhood has been adaptively repurposed as an apartment complex called the Lofts at Globe Mills.

Mansion Flats

Mansion Flats is a neighborhood generally bounded by 12th Street on the west, J Street on the south, 16th Street on the east, and the UPRR railroad tracks on the north. Primarily a residential neighborhood, Mansion Flats is characterized visually by brick or wood homes constructed in the mid-nineteenth century arranged on a grid street pattern and shaded by mature trees. Notable buildings in the southern portion of Mansion Flats, along H, I, and J streets, include the three-story Victorian historic Governor's Mansion as 1526 H Street, which is listed on the National Register of Historic Places; the Wells Fargo Pavilion at 1419 H Street; and the Sacramento Memorial Auditorium at 1515 J Street.

New Era Park

New Era Park is primarily a residential neighborhood bordered by E Street to the south, the UPRR tracks to the north, 29th Street to the east, and 16th Street to the west. Key features of New

Era Park include the B Street Theatre at 2711 B Street and the New Era Community Garden located near the corner of 26th and C streets.

Old Sacramento

Old Sacramento is an historic commercial district and State Park within the DSP area bounded generally by the Sacramento River to the west, I-5 to the east, I Street to the north, and Capitol Avenue to the south. Old Sacramento largely retains the look and feel of the mid-nineteenth century gold rush town from which it originated. The 28-acre National Historic Landmark District and State Historic Park is located along the Sacramento riverfront and is home to shopping, dining, entertainment, historical attractions, and museums set within the time of the California Gold Rush and the Transcontinental Railroad.

Central Business District

The CBD is generally bounded by I Street to the north, I-5 to the west, P Street to the south, and 16th Street to the east. According to the 2035 General Plan, "[t]he Central Business District is Sacramento's most intensely developed area. The CBD includes a mixture of retail, office, governmental, entertainment and visitor-serving uses built on a formal framework of streets and park spaces laid out for the original Sutter Land Grant in the 1840s. The vision for the CBD is a vibrant downtown core that will continue to serve as the business, governmental, retail, and entertainment center for the city and the region. A significant element in the future CBD includes new residential uses. Increasing the residential population will add vitality to the CBD by extending the hours of activity and the built-in market for retail, services, and entertainment."

Boulevard Park

The Boulevard Park neighborhood is immediately south of the New Era Park neighborhood, and is bounded by E Street to the north, J Street to the south, 16th Street to the west, and 24th Street to the east. It is also recognized as the Boulevard Park Historic District, listed on the National Register of Historic Places. Boulevard Park is primarily a residential neighborhood situated in the familiar grid street pattern and shaded by various species of mature trees. Boulevard Park is noted for its exceptionally preserved late Victorian and Cube type structures. The southern extent of Boulevard Park, along J Street between 16th and 24th streets, is characterized visually by low-rise and mid-rise commercial, retail, restaurant, and office buildings.

Marshall School

The Marshall School neighborhood is bounded by D Street to the north, J Street to the south, an elevated section of Business 80 to the east, and 25th Street to the west. Marshall School is primarily a residential neighborhood. Residential architecture in the Marshall School neighborhood includes Victorian, Craftsman, and Prairie Style. Marshall School is named for the original K-12 school of the same name at 2718 G Street, a green mansion-like building that is currently vacant.

Midtown/Winn Park/Capitol Avenue

Sacramento's Midtown neighborhood is bordered by R Street on the south, J Street on the north, 16th Street on the west and 30th Street on the east. Midtown is characterized by tree-lined streets flanked by residences of a multitude of ages, heights, colors, materials, and architectural styles. Interspersed among the traditional residential neighborhoods are commercial corridors and other distinct pockets of more typically urban uses, including recently constructed residential loft and mixed-use buildings, cafes, shops, boutiques, galleries, supermarkets, office buildings, and auto repair shops.

Southside Park

The Southside Park neighborhood is bounded by R Street to the north, the W/X freeway to the south, I-5 to the west, and 12th Street to the east. Southside Park is primarily a residential neighborhood situated on a grid street pattern and shaded by various species of mature. Southside Park, for which the neighborhood is named, is an approximately 20-acre park bounded by T Street to the north, W Street to the south, 6th Street to the west, and 8th Street to the east. Prominent features in Southside Park include the natural pond that forms its centerpiece, the multi-colored mural that serves as a backdrop to the park's amphitheater, the colorful and textured pathways of the park's "Universal Universe" playground.

Richmond Grove

The Richmond Grove neighborhood is bounded by R Street to the north, the W/X freeway to the south, 12th Street to the west, and 19th Street to the east. Richmond Grove is primarily a residential neighborhood and includes numerous well-preserved historic homes in a wide variety of architectural styles, including Victorian, Tudor, Colonial Revival, and Spanish Colonial.

Located on three half-blocks bounded by 16th Street, 18th Street, R Street, and Rice Alley, the Ice Blocks project is being developed and includes a 6-story residential apartment building and commercial-retail and office buildings. At the corner of 19th and S streets, immediately east of the Ice Blocks project, is a one-to-two story, red brick commercial shopping center.

The R Street corridor, west of the Ice Blocks project, on the northern boundary of Richmond Grove includes a mixture of low-rise and mid-rise industrial buildings, warehouse buildings, mid-century office buildings. Some of the buildings have been adaptively repurposed as residential, restaurant, and retail properties as part of ongoing redevelopment efforts that are gradually changing the visual character of portions of the R Street corridor from strictly office/industrial setting to a lively urban commercial district.

South of the R Street corridor and east and west of the BNSF Railway tracks that extend through the DSP area between 19th and 20th streets, the burgeoning S Street commercial corridor includes a mix of modern commercial and retail buildings and former industrial buildings that have been converted to commercial and retail uses, situated among recently constructed and long-established multi-family attached and single-family detached dwelling units.

Poverty Ridge

The Poverty Ridge neighborhood is bounded by R Street to the north, the W/X freeway to the south, 19th Street to the west, and 25th Street to the east. Situated on a slight rise within the largely flat DSP area, Poverty Ridge is primarily a residential neighborhood situated on a grid street pattern and shaded by various species of mature trees. The residential portion of the neighborhood contains an eclectic blend of architectural styles, including Colonial Revival, Craftsman, Italianate, Tudor Revival, and Prairie Style.

Newton Booth

The Newton Booth neighborhood is bounded by R Street to the north, the W/X freeway to the south, 25th Street to the west, and 29th Street to the east. Newton Booth is primarily a residential neighborhood. Residential architecture in the Newton Booth neighborhood includes Craftsman, Four-Squares, Victorians, and Tudors amongst other architectural styles. The neighborhood was named for the former Californian governor and the two-story, red-brick with tile roof Newton Booth Assembly School (now the Merryhill Elementary and Middle School) at 2600 V Street.

Surrounding Land Uses

Railyards Specific Plan Area

The Railyards Specific Plan regulated development in an area north of the DSP area, between the CBD and the River District, near the confluence of the American and Sacramento Rivers. The approximately 244-acre Railyards Specific Plan area is immediately north of the CBD; north and west of the Alkali Flat neighborhood; north and northeast of Old Sacramento; east of the Sacramento River and I-5; south of the Sacramento River Water Treatment Plant, Water Street, North B Street and its adjacent commercial and industrial uses.

In November 2016, the City approved the Railyards Specific Plan Update and certified a Subsequent EIR. The Railyards Specific Plan Update provides for the development of millions of square feet of new housing and employment generating uses and related infrastructure, including a new Kaiser Permanente Medical Center, a multi-purpose sports and entertainment stadium that would serve as the home of a Major League Soccer team, and a new Stormwater Outfall to the Sacramento River.

The Railyards Specific Plan Update provides for medium- and high-rise single use and mixed use residential, retail, office, and hotel structures as well as a hospital, medical office uses, and a sports and entertainment stadium. The Railyards Specific Plan Update also provides cultural/ recreational facilities, including but not limited to the refurbished Central Shops buildings, as well as numerous public parks and walkways. The Railyards Specific Plan Update provides a network of public streets with vehicular, bicycle, and pedestrian access, parking facilities, and water, wastewater, and drainage infrastructure and facilities. The Railyards Specific Plan Update also includes approximately 32 acres designated for the development of the Sacramento

Intermodal Transit Facility, which would provide multiple modes of public transit service including bus, rail, light rail, and passenger auto.[2]

The only existing uses within the Railyards Specific Plan Update area are the Sacramento Valley Station, which includes the historic depot building and the associated rail platforms, the Steve Cohn Passageway, Sacramento Regional Transit light rail station, and associated walkways, and parking lots; office and retail uses in the adjacent Railway Express Agency building; and parking lots that front on 7th Street between F and H streets. The historic Central Shops do not currently house any active uses other than ongoing use of the Erecting Shop and Boiler Shop buildings by the California State Railroad Museum. There are several portable buildings placed on the site for the use of workers involved in the ongoing hazardous materials remediation activities. Several streets that were called for in the 2007 Railyards Specific Plan Update have been constructed and are in operation, including 5th and 6th streets between H Street and Railyards Boulevard, as well as Railyards Boulevard from 7th Street to Bercut Drive.

River District

The River District is located north of the DSP area and east of the Railyards Specific Plan Area. The River District consists of approximately 748 acres of mostly developed land that includes a mix of residential, industrial, retail/wholesale, and office uses. A number of community and social service facilities are located in the River District including Loaves and Fishes, the Salvation Army, Union Gospel Mission, and the Volunteers of America Bannon Street Shelter.

Beginning in 1990, the City targeted the River District as a redevelopment area. The River District, which has historically served primarily as a warehousing, distribution, and commercial area, has been re-envisioned as a mixed-use infill community connected to the surrounding area by a network of local streets, light rail transit, and bicycle and pedestrian pathways.

The River District Specific Plan (RDSP) was adopted in 2011 and established planning and design standards for the redevelopment of approximately 773 acres of land. The RDSP provides for development of a transit-oriented mixed-use urban environment that would include 8,144 dwelling units, 3.9 million square feet (sf) of office, 854,000 sf of retail/wholesale, 1.5 million sf of light industrial, and 3,044 hotel units. The vision for the River District is that of an eclectic mix of uses that will transition from a primarily light-industrial, low-intensity commercial district to that of a series of distinctive walkable neighborhoods within a district that is contiguous to the American River and serves as the northern gateway into the Central City of Sacramento.

West Sacramento

The City of West Sacramento is located across the Sacramento River from the DSP area. Uses in West Sacramento across the river from the DSP area include paved and unpaved trails along the river, office, residential, and industrial development.

[2] City of Sacramento, 2016. *Railyards Specific Plan Update, KP Medical Center, MLS Stadium, & Stormwater Outfall, Draft Subsequent Environmental Impact Report*. SCH No. 2006032058. p. 2-11.

The Washington Specific Plan area is across the river from the DSP area and comprises 194 acres that extends from A Street south to West Capitol Avenue. Uses within the Washington Specific Plan area include residential, industrial, commercial, and public uses. While some new development has occurred within this area since adoption of the Washington Specific Plan in 1996, including the notable Ziggurat building and CalSTRS Headquarters high-rise, there is a substantial amount of development capacity within the Washington Specific Plan area. At buildout, the Washington Specific Plan area is planned to accommodate approximately 2,100 residential units, 250,000 sf of retail space, 2.6 million sf of office space, and over 400 hotel rooms.[3]

The Bridge District (Triangle) Specific Plan (BDSP) is located within West Sacramento, south of the Washington Specific Plan area and is also across the river from the DSP area. Originally adopted in 1993, the BDSP was amended in 2009 to provide a framework for land development that would be responsive to market conditions. The BDSP area includes the Raley Field baseball stadium and the Ironworks and Park Moderns residential developments. While some building has occurred within the BDSP area, there is still a substantial amount of undeveloped land within the BDSP area. Ultimate development capacity of the BDSP includes approximately 4,000 residential units, five million sf of commercial space and 500,000 sf of retail space.[4]

Land Park

The Land Park Community Plan area encompasses 6.7 square miles or 4,327 acres immediately south of the DSP area. It is bounded on the north by Broadway, on the south by 35th Avenue, on the east by Highway 99, and on the west by the Sacramento River. Land Park falls entirely within the city limits of Sacramento. The Land Park Community Plan Area is characterized by traditional neighborhoods, tree-lined streets, parks, and local shops. Nine neighborhoods make up the Land Park Community Plan Area, including Upper Land Park, Land Park, Curtis Park, Sacramento City College, North City Farms, Carleton Tract, Little Pocket, Hollywood Park, and Mangan Park. Neighborhoods in Land Park are predominantly traditional in form with suburban developments located south of Sutterville Road and west of Freeport Boulevard. The traditional neighborhoods have pre–World War II development patterns that include small neighborhood-serving commercial centers.

Several commercial corridors (Broadway, Franklin Boulevard, Freeport Boulevard, and Sutterville Road) provide local shopping and commercial services in the Land Park Community Plan Area. Sacramento City Community College provides education and employment opportunities to local and regional residents.

A significant portion of the Land Park Community Plan Area is also used for parks, open space, and recreation, including regional William Land Park (166.50 acres), Bahnfleth Park (6.24),

[3] City of West Sacramento, 1996. *Washington Specific Plan*, Table 1, May 15, 1996.
[4] City of West Sacramento, 2009. *Bridge District Specific Plan*, Volume 1, Vision, Plan and Procedures, November 18, 2009. Table 1, p. 44.

Brockway Park (1.52 acres), Chicory Bend (10.80 acres), Charlie Jensen Park (2.00 acres), Cooledge Park (14.80 acres), Curtis Park (18.57 acres), Fredrick Miller Park (56.99 acres), Plaza Cervante (0.66 acre), Sacramento River Parkway (25.73 acres), and Sierra 2 Park (3.00 acres).[5]

East Sacramento

The East Sacramento Community Plan area is located east of the DSP area and encompasses approximately 7.1 square miles or 4,525 acres. The East Sacramento Community Plan area is bounded on the north by the American River, on the south by the Gold Line Light Rail line and Jackson Highway, on the east by Watt Avenue, and on the west by Alhambra Boulevard.

The East Sacramento Community Plan area encompasses a diverse collection of traditional neighborhoods, centers, and transportation routes. Four neighborhoods make up the East Sacramento Community Plan Area, including East Sacramento, College/Glen, the Sacramento State campus and environs, and River Park. The majority of residential development in East Sacramento is made up of single-family homes in traditional neighborhoods.

Retail and commercial centers are distributed throughout East Sacramento and serve neighborhood service needs. Employment within East Sacramento is primarily medical and medical office and retail. Major employment centers are in East Sacramento include Mercy Medical Center the SMUD Headquarters campus, the Cannery, and other office and medical uses in the Alhambra Corridor.[6] California State University, Sacramento, is located to the east of East Sacramento and is a major employment and activity center.

3.2.3 Regulatory Setting

Federal

There are no federal regulations that specifically regulate land use or land use compatibility on non-federal lands that would be applicable to the proposed project.

State

The State of California reserves for local jurisdictions the authority to plan and regulate land use.

Local

Sacramento Area Council of Governments Blueprint and Metropolitan Transportation Plan/Sustainable Communities Strategy

SACOG is an association of local governments in the six-county Sacramento Region. Its members include the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba, as well as 22 cities, including the City of Sacramento. SACOG provides transportation planning and funding for the region, and serves as a forum for the study and resolution of regional issues. In addition to preparing the region's long-range transportation plan, SACOG approves the

5 City of Sacramento. 2015. *Land Park Community Plan.* Pages 3-LP-3 – 3-LP-5.
6 City of Sacramento. 2015. *East Sacramento Community Plan.* Pages 3-ES-4 – 3-ES-4.

distribution of affordable housing in the region and assists in planning for transit, bicycle networks, clean air, and airport land uses.

SACOG, in partnership with the non-profit organization Valley Vision, undertook the Blueprint Project to build a consensus around a single, coherent, long-term vision for the development of the Sacramento region. The project was not intended to advocate any particular development pattern; instead, SACOG assumed that if it provided accurate information and forecasting tools to a wide variety of interest groups, a consensus would naturally emerge on what the region as a whole wanted for its future.

Through discussions at a series of workshops held throughout the greater Sacramento region, a consensus emerged that the low-density, segregated land use developments of the recent past would likely cause deterioration in the regional quality of life if continued into the future. The regional consensus supported the notion that future development should follow the principles of "smart growth," incorporating density of both residential and commercial development, diversity of land uses within a neighborhood, design of the neighborhood, and access to regional destinations.

The Blueprint, adopted by the SACOG Board of Directors in December 2004, is a voluntary framework for guiding future growth in the region. The Blueprint is not a policy document and does not regulate land use or approve or prohibit growth in the region. The Blueprint is a transportation and land use analysis suggesting how cities and counties should grow based on the key principles listed below. A key issue for the Blueprint Project is that compliance with the adopted plan relies entirely on SACOG's ability to persuade jurisdictions to voluntarily follow the SACOG model. The Blueprint is intended by SACOG to be advisory and to guide the region's transportation planning and funding decisions.

The approved Blueprint is based on seven interlocking principles:

- Compact Development that requires less conversion of rural land, shortens travel distances, and reduces the per-unit cost of infrastructure and services.

- Housing Choices, in particular small lot single-family dwellings and attached products that suit the needs of seniors, empty-nesters, young couples, single-person households, single-parent households and other types of small households that currently make up 4-out-of-5 American households. The smaller products fit well with the theme of compact development.

- Mixed-Use Developments that allow people to work and shop near their home.

- Use of Existing Assets, in particular the development of sites that are already within the urban footprint and urban services coverage. This includes both infill development of vacant lots as well as re-development of under-utilized sites such as low-density strip retail areas.

- Transportation Choices, in particular the ability to use non-auto modes (transit, bike, walk) for at least some trips. Non-auto modes are most practical in compact, mixed-use communities.

- Quality Design in terms of aesthetic buildings but also in terms of providing attractive, walkable public spaces that create a sense of community.

- Conservation of Natural Resources through less conversion of land to urban use, slower growth of demand for water, and reduction in the amount of per-capita auto travel.

Based on the principles of the Blueprint, SACOG's 2016 MTP/SCS is a plan for improving regional transportation. The 2016 MTP/SCS pro-actively links land use, air quality, and transportation needs. Goals include shortening commute times, reducing traffic congestion, lessening dependence on automobiles, improving air quality, reducing greenhouse gas emissions, reducing distances traveled between jobs and housing, and providing for housing choices more aligned with the changing demographic. While the MTP/SCS is not a land use plan, it does include assumptions for land use and development trends. The DSP area is included in the Center and Corridor Community Type in the 2016 MTP/SCS, which describes land uses that are typically higher density and more mixed than surrounding land uses. They typically have more compact development patterns, a greater mix of uses, and a wider variety of transportation infrastructure compared to the communities surrounding them.

In the Center and Corridor Community type, the MTP/SCS forecasts 23,007 new housing units and 45,308 new employees; however, it should be noted that the downtown Center and Corridor Community type in the MTP/SCS encompasses the DSP area, but is a larger geography than the DSP. In 2018, SACOG anticipates beginning its quadrennial update of the MTP/SCS (scheduled for adoption in 2020) and will be working with the City to determine if there is a need to update the projections for the downtown Center and Corridor Community type for the next MTP/SCS. In addition, the MTP/SCS includes significant transportation infrastructure in the downtown Center and Corridor Community type, including the Downtown-Riverfront Streetcar project.[7]

City of Sacramento 2035 General Plan

State law requires each city and county to prepare and adopt a comprehensive and long-range general plan for its physical development (California Government Code Section 65300). A comprehensive general plan provides a jurisdiction with a consistent framework for land use decision-making. The general plan has been referred to as the "constitution" for land use development to emphasize its importance to land use decisions. The general plan and its maps, diagrams, and development policies form the basis for the City's zoning, subdivision, and public works actions. Under California law, no specific plan, area plan, community plan, zoning, subdivision map, nor public works project may be approved unless the City finds that it is consistent with the adopted general plan. The Sacramento 2035 General Plan was adopted on March 3, 2015.

[7] Sacramento Area Council of Governments, 2017. Letter to Tom Buford, Senior Planner, City of Sacramento Community Development Department, Response to Notice of Preparation of a Draft Environmental Impact Report for the Downtown Specific Plan. February 27.

The 2035 General Plan, like its predecessors, is a long-term policy guide for the physical, economic, and environmental growth within the City. The 2035 General Plan's goals, policies, and implementation programs define a roadmap to achieving Sacramento's vision to be the most livable city in America. Underlying the vision and connecting it to the roadmap are six themes that thread throughout the General Plan:

- Making Great Places,
- Growing Smarter,
- Maintaining a Vibrant Economy,
- Creating a Healthy City,
- Living Lightly-Reducing Our "Carbon Footprint," and
- Developing a Sustainable Future.

In implementing these themes, the 2035 General Plan includes a land use diagram that establishes land use designations for the entire City, as well as goals, policies, and implementation programs that provide a framework for future decisions intended to reflect the General Plan themes.

Existing General Plan Land Use Designations

The DSP area encompasses several general plan land use designations. Properties within the DSP area are currently designated as Traditional Neighborhood Low, Traditional Neighborhood Medium, Traditional Neighborhood High, Urban Neighborhood Low, Urban Neighborhood Medium, Urban Neighborhood High, Traditional Center, Urban Center Low, Urban Center High, Central Business District, Urban Corridor Low, Urban Corridor High, Employment Center Low Rise, Public/Quasi-Public, and Parks and Recreation (see Figure 2-4).[8]

The Traditional Neighborhood Low designation provides for moderate-intensity housing and neighborhood-support uses, including single-family detached dwellings, single-family attached dwellings (e.g., duplexes, triplexes, townhomes), accessory second units, limited neighborhood-serving commercial on lots two acres or less, and compatible public, quasi-public, and special uses. Development standards within Traditional Neighborhood Low are as follows:

- Minimum Density: 3.0 Units/Net Acre,
- Maximum Density: 8.0 Units/Net Acre, and
- Maximum FAR: 1.50 FAR.

The Traditional Neighborhood Medium designation provides for higher-intensity medium-density housing and neighborhood-support uses, including small-lot single-family dwellings, small-lot single-family attached dwellings (e.g., duplexes, triplexes, townhomes), accessory second units, multifamily dwellings (e.g., apartments and condominiums), limited neighborhood-serving

8 City of Sacramento, 2014. Sacramento 2035 General Plan Land Use and Urban Form Diagram. June 26, 2014.

commercial on lots two acres or less, and compatible public, quasi-public, and special uses. Development standards within Traditional Neighborhood Medium are as follows:

- Minimum Density: 8.0 Units/ Net Acre,
- Maximum Density: 36.0 Units/ Net Acre, and
- Maximum FAR: 1.50 FAR.

The Traditional Neighborhood High designation provides for single-use multifamily housing and predominantly residential mixed-use development in areas served by major transportation routes and facilities and near shopping areas, including small-lot single-family dwellings, small-lot single-family attached dwellings (e.g., duplexes, triplexes, townhomes), accessory second units, multifamily dwellings (e.g., apartments and condominiums), mixed-use neighborhood-serving commercial uses, and compatible public, quasi-public, and special uses. Development standards within Traditional Neighborhood High are as follows:

- Minimum Density: 18.0 Units/Net Acre,
- Maximum Density: 36.0 Units/Net Acre,
- Minimum FAR: 0.50 FAR, and
- Maximum FAR: 1.50 FAR.

The Urban Neighborhood Low designation provides for moderate-intensity urban housing and neighborhood-support uses, including small-lot single-family dwellings, small-lot single-family attached dwellings (e.g., duplexes, triplexes, townhomes), accessory second units, mixed-use neighborhood-serving commercial, and compatible public, quasi-public, and special uses. Development standards within Urban Neighborhood Low are as follows:

- Minimum Density: 12.0 Units/Net Acre,
- Maximum Density: 36.0 Units/Net Acre,
- Minimum FAR: 0.50 FAR, and
- Maximum FAR: 1.50 FAR.

The Urban Neighborhood Medium designation provides for moderate-to higher-intensity urban housing and neighborhood-support uses, including small-lot single-family dwellings, small-lot single-family attached dwellings (e.g., duplexes, triplexes, townhomes), multifamily dwellings (e.g., apartments and condominiums), mixed-use neighborhood-serving commercial, and compatible public, quasi-public, and special uses. Development standards within Urban Neighborhood Medium are as follows:

- Minimum Density: 33.0 Units/Net Acre,
- Maximum Density: 110.0 Units/Net Acre,
- Minimum FAR: 1.50 FAR, and
- Maximum FAR: 4.00 FAR.

The Urban Neighborhood High designation provides for single-use urban multifamily housing and predominantly residential urban mixed-use development in areas served by major transportation routes and facilities and near major shopping areas, including small-lot single-family attached dwellings (e.g., duplexes, triplexes, townhomes) multifamily dwellings (e.g., apartments and condominiums), mixed-use neighborhood-serving commercial, and compatible public, quasi-public, and special uses. Development standards within Urban Neighborhood High are as follows:

- Minimum Density: 61.0 Units/Net Acre,
- Maximum Density: 250.0 Units/Net Acre,
- Minimum FAR: 2.0 FAR, and
- Maximum FAR: 8.0 FAR.

The Traditional Center designation provides for residential and nonresidential, moderate-intensity, single-use development or horizontal and vertical mixed-use development, including residential uses; retail, service, and office uses; central public gathering places; and compatible public, quasi-public, and special uses. Development standards within Traditional Center are as follows:

- Minimum Density: 15.0 Units/Net Acre,
- Maximum Density: 36.0 Units/Net Acre,
- Minimum FAR: 0.30 FAR, and
- Maximum FAR: 2.00 FAR.

The Urban Center Low designation provides for a balanced mix of high-density/ intensity single-use commercial or residential development or horizontal and vertical mixed-use development, including retail, service, office, and/or residential uses; gathering places such as plazas, courtyards, or parks; and compatible public, quasi-public, and special uses. Development standards within Urban Center Low are as follows:

- Minimum Density: 20.0 Units/Net Acre,
- Maximum Density: 150.0 Units/Net Acre,
- Minimum FAR: 0.40 FAR, and
- Maximum FAR: 4.00 FAR.

The Urban Center High designation provides for a balanced mix of high-density/intensity single-use commercial or residential development or horizontal and vertical mixed-use development, including retail, service, office, and residential uses; gathering places such as plazas, courtyards, or parks; and compatible public, quasi-public, and special uses. Development standards within Urban Center High are as follows:

- Minimum Density: 24.0 Units/Net Acre,
- Maximum Density: 250.0 Units/Net Acre,

- Minimum FAR: 0.50 FAR, and
- Maximum FAR: 8.00 FAR.

The CBD is Sacramento's most intensely developed area. The CBD includes a mixture of retail, office, governmental, entertainment, and visitor-serving uses built on a formal framework of streets and park spaces laid out for the original Sutter Land Grant in the 1840s. The vision for the CBD is a vibrant downtown core that will continue to serve as the business, governmental, retail, and entertainment center for the city and the region. A significant element in the future CBD includes new residential uses. Increasing the residential population will add vitality to the CBD by extending the hours of activity and the built-in market for retail, services, and entertainment.

The CBD designation provides for mixed-use high-rise development and single-use or mixed-use development within easy access to transit (i.e., ground floor office/retail beneath residential apartments and condominiums), including office, retail, and service uses; multifamily dwellings (e.g., apartments and condominiums); gathering places such as plazas, courtyards, or parks; and compatible public, quasi-public, and special uses. Development standards within the CBD are as follows:

- Minimum Density: 61.0 Units/Net Acre,
- Maximum Density: 450.0 Units/Net Acre,
- Minimum FAR: 3.00 FAR, and
- Maximum FAR: 15.00 FAR.

Urban Corridor Low includes street corridors that have multistory structures and more-intense uses at major intersections, lower-intensity uses adjacent to neighborhoods, and access to transit service throughout. At major intersections, nodes of intense mixed-use development are bordered by lower-intensity single-use residential, retail, service, and office uses. Street-level frontage of mixed-use projects is developed with pedestrian-oriented uses. The streetscape is appointed with landscaping, lighting, public art, and other pedestrian amenities.

The Urban Corridor Low designation provides for a mix of horizontal and vertical mixed-use development and single-use commercial and residential development, including retail, service, office, and residential uses; gathering places such as plazas, courtyards, or parks; and compatible public, quasi-public, and special uses. Large-scale development should include a mix of nonresidential and residential uses with more intense development near major intersections. Development standards within Urban Corridor Low are as follows:

- Minimum Density: 20.0 Units/ Net Acre,
- Maximum Density: 110.0 Units/Net Acre,
- Minimum FAR: 0.30 FAR, and
- Maximum FAR: 3.00 FAR.

Urban Corridor High includes multi-story structures and highly developed transit service. New development along the corridor contributes to a more compact and consistent pattern that relocates parking primarily to structures and to the rear of buildings. Street level frontages are lined with retail and other pedestrian-oriented-uses. The streetscape is appointed with pedestrian amenities that support and enhance pedestrian activity.

The Urban Corridor High designation provides a mix of horizontal and vertical mixed-use development and single-use commercial and residential development, including retail, service, office, and/or residential uses; gathering places such as plazas, courtyards, or parks; and compatible public, quasi-public, and special uses. Development should include a mix of nonresidential and residential with more intense development near major intersections. Development standards within Urban Corridor High are as follows:

- Minimum Density: 33.0 Units/Net Acre,
- Maximum Density: 150.0 Units/Net Acre,
- Minimum FAR: 0.30 FAR, and
- Maximum FAR: 6.00 FAR.

The Employment Center Low Rise designation provides for employment generating uses that generally do not produce loud noise or noxious odor, including industrial or manufacturing that occurs entirely within an enclosed building or an enclosed outdoor area with appropriately landscaped setbacks; office flex-space (i.e., industrial structures converting to office or research and design uses; residential and commercial flex-space (i.e., industrial structures converting to residential or commercial uses) in areas expected to transition to urban development; office uses; retail and service uses that provide support to employees; and compatible public, quasi-public, and special uses. Development standards within Employment Center Low Rise are as follows:

- Minimum FAR: 0.15 FAR, and
- Maximum FAR: 1.00 FAR.

The Public/Quasi-Public designation allows for governmental services, educational, cultural, and recreational facilities. Many of the Public/Quasi-Public uses are also allowed and located in other land uses and urban form designations.

The Parks and Recreation designation includes greenways, large developed parks, and other areas used primarily for recreation. Typically, these areas are characterized by a high degree of open area and few structures.

Proposed General Plan Land Use Designations

Under the proposed DSP, the DSP area would retain the existing land use designations as described above and in the 2035 General Plan.

Central City Community Plan

The CCCP is part of the City's 2035 General Plan, and provides a refinement of the goals and objectives of the General Plan to serve as a guideline for development specifically within the CCCP area. The CCCP serves as a development guide for the public and private sector when planning physical improvements in the Central City area. The CCCP includes the area bounded by the Sacramento River to the west, the American River to the north, Sutter's Landing Park and Alhambra Boulevard to the east, and Broadway to the south. The primary goal of the CCCP is to continue revitalization of the Central City to provide a viable living, working, shopping, and cultural environment with a full range of day and night activities for residents, employees, and visitors. The CCCP was first adopted by the City in May 1980, but was updated as part of the 2035 General Plan. The CCCP land use designations for the DSP area are Traditional Neighborhood Low, Traditional Neighborhood Medium, Traditional Neighborhood High, Urban Neighborhood Low, Urban Neighborhood Medium, Urban Neighborhood High, Traditional Center, Urban Center Low, Urban Center High, Central Business District, Urban Corridor Low, Urban Corridor High, Employment Center Low Rise, Public, and Parks.[9]

Under the proposed DSP, the DSP area would retain the existing CCCP land use designations as described above and in the CCCP.

Existing Zoning

The DSP area includes several zoning designations (see Figure 2-5), including Standard Single Family (R-1), Single or Two Family (R-1B), Multi-Family (R-2B), Multi-Family (R-3A), Multi-Family (R-4), Multi-Family (R-4A), Multi-Family (R-5), Residential-Office (RO), Residential Mixed Use (RMX), Industrial (M-1), Heavy Industrial (M-2), Limited Commercial (C-1), General Commercial (C-2), Central Business District (C-3), Heavy Commercial (C-4), Office Building (OB), Agriculture-Open Space (A-OS), Flood (F), American River Parkway (ARP-F), Hospital (H), and Transportation Corridor (TC).

Residential Zones

Standard Single Family (R-1)

The purpose of the R-1 zone is to accommodate low-density residential uses composed of single-unit detached residences and duplex dwellings on corner lots. This zone may also include recreational, religious, and educational facilities as the basic elements of a balanced neighborhood. These areas should be clearly defined and without encroachment by uses not performing a neighborhood function. The maximum height is 35 feet. The minimum lot size is 5,200 sf for interior lots and 6,200 sf for corner lots. The minimum area of a lot or lots containing two duplex units (one duplex dwelling) is 6,400 sf. The minimum lot width is 52 feet for interior lots and 62 feet for corner lots. The minimum width of a lot or lots containing two duplex units (one duplex dwelling) is 62 feet. The minimum lot depth is 100 feet. The maximum lot depth is 160 feet.

9 City of Sacramento. 2015. *Central City Community Plan*. Figure CC-2, p. 3-CC-7.

Single or Two Family (R-1B)

The purpose of the R-1B zone is to permit single-unit and duplex dwellings on lots generally located in the central city and in North Natomas. The maximum height is 35 feet. A maximum of 2 dwelling units is allowed per lot. The maximum lot coverage is 60 percent. The minimum lot size is 3,200 sf. The minimum lot width is 40 feet. The minimum lot depth is 80 feet. The maximum lot depth is 160 feet.

Multi-Family (R-2B)

The purpose of the R-2B Zone is to accommodate broader density flexibility as a transition from the garden-apartment setting to a more traditional apartment setting. The maximum is 35 feet. The maximum density is 21 dwelling units per net acre. The maximum lot coverage is 50 percent. The minimum lot size is 2,000 sf.

Multi-Family (R-3A)

The purpose of the R-3A zone is to accommodate higher density development in the central city, along major commercial corridors, and in areas near major institutions and public transit facilities. The maximum height is 35 feet. The maximum density is 36 dwelling units per net acre. The maximum lot coverage is 60 percent. The minimum lot size is 2,000 sf.

Multi-Family (R-4)

The purpose of the R-4 zone is to accommodate higher-density development in the central city, along major commercial corridors, and in areas near major institutions and public transit facilities. It permits dwellings, institutions, and limited commercial goods and services serving the surrounding neighborhood. The maximum height is 45 feet. The maximum density is 60 dwelling units per net acre. The maximum lot coverage is 60 percent. The minimum lot size is 2,000 sf.

Multi-Family (R-4A)

The purpose of the R-4A zone is to accommodate higher-density development in the central city, along major commercial corridors, and in areas near major institutions and public transit facilities. It permits dwellings, institutions, and limited commercial goods and services serving the surrounding neighborhood. The maximum height is 75 feet. The maximum density is 110 dwelling units per net acre. The maximum lot coverage is 70 percent. The minimum lot size is 3,200 sf. The maximum lot size is 80,000 sf. The minimum lot depth is 80 feet. The maximum lot depth is 160 feet.

Multi-Family (R-5)

The purpose of the R-5 zone is to permit dwellings, institutions, and limited commercial goods and services serving the surrounding neighborhood. The maximum height is 240 feet. The maximum density is 175 dwelling units per net acre. The maximum lot coverage is 80 percent. The minimum lot size is 3,200 sf. The maximum lot size is 80,000 sf. The minimum lot width is 40 feet. The minimum lot depth is 80 feet. The maximum lot depth is 160 feet.

Residential-Office (RO)

The purpose of the RO zone is to provide a medium-density multiple-family zone, generally located inside the central city and in certain adjacent areas. The zone permits development of office and other commercial uses that are compatible with adjacent residential uses. The maximum height is 35 feet. The maximum density is 36 dwelling units per net acre. Outside the central city, the maximum lot coverage for dwellings in the RO zone is 60 percent. Office uses in the RO zone have no maximum lot coverage.

Residential Mixed Use (RMX)

The purpose of the RMX zone is to allow a mix of residential and commercial uses as a matter of right, and to preserve the residential character of neighborhoods while encouraging the development of neighborhood-oriented ground-floor retail and service uses On lots less than or equal to three acres, commercial or office use may be up to 100 percent of the building square footage with a zoning administrator-approved conditional use permit; and. On lots greater than three acres, commercial or office use may be up to 100 percent of the building square footage with a planning and design commission-approved conditional use permit. The maximum height is 45 feet. The maximum density is 60 dwelling units per net acre.

Industrial and Manufacturing Zones

Industrial (M-1)

The purpose of the M-1 zone is to permit the manufacture or treatment of goods. The maximum height is 70 feet. There is no maximum density.

Heavy Industrial (M-2)

The purpose of the M-2 zone is to permit the manufacture or treatment of goods. The maximum height is 70 feet. There is no maximum density.

Commercial and Office Zones

Limited Commercial (C-1)

The purpose of the C-1 zone is to provide for certain offices, retail stores, and commercial service establishments that are compatible with residential developments. This zone is intended to be applied to small lots that are surrounded by a residential neighborhood. The maximum height is 35 feet. The maximum density is 30 dwelling units per net acre.

General Commercial (C-2)

The purpose of the C-2 zone is to provide for the sale of goods; the performance of services, including repair facilities; office uses; dwellings; small wholesale stores or distributors; and limited processing and packaging.

Central Business District (C-3)

The purpose of the C-3 zone, also known and referred to as the CBD, is to provide for the most intense residential, retail, commercial, and office developments in the city. The maximum density is 450 dwelling units per net acre. There is no lot coverage requirement.

Heavy Commercial (C-4)
The purpose of the C-4 zone is to provide for warehousing, distribution activities, and commercial uses that have minimal undesirable impact upon nearby residential areas. Minimal light manufacturing and processing are permitted. The maximum height is 75 feet. The maximum density is 60 dwelling units per net acre.

Office Building (OB)
The purpose of the OB zone is to provide for a low-rise mixed-use employment zone that is intended to permit business, office, institutional, or professional buildings; the sale of goods and services; and lodging and dwellings. The maximum height is 35 feet. The maximum density is 36 dwelling units per net acre.

Other Zones

Agriculture-Open Space (A-OS)
The purpose of the A-OS zone is to ensure the long-term preservation of agricultural and open space land. This zone is intended to prevent the premature development of land to urban uses. The maximum height is 50 feet.

Flood Zone (F)
The purpose of the F zone is to conditionally permit specified uses along the Sacramento and American Rivers and their tributaries, and other areas subject to inundation. This is considered an open space zone.

American River Parkway—Floodplain (ARP-F)
The purpose of the ARP-F zone is to prevent the loss of life and property by prohibiting the erection of improvements or structures in a designated floodway; to protect the natural features of the American River floodplain; to prevent erosion and siltation; and to preserve valuable open space.

Hospital Zone (H)
The purpose of the H zone is to provide primarily for medical-type uses, such as hospitals and convalescent homes, and for group care facilities for physically- and mentally-challenged persons. Offices, laboratories, and pharmacies are also permitted.

Transportation Corridor (TC)
The purpose of the TC zone is to regulate land uses within, above, and below public agency transportation corridors to ensure that development is consistent with the general plan, and to provide uniform standards for the development of ground rights and air rights within the corridor.

Proposed Zoning

Under the proposed DSP, the DSP area would retain the existing zoning designations as described above. However, the proposed DSP would include selected modifications to allowable maximum heights, maximum densities, and other uses within certain zoning designations in order to facilitate housing and non-residential growth within the DSP area. These modifications are described in detail below.

3.2.4 Downtown Specific Plan

The proposed DSP has been designed to facilitate future development within the City of Sacramento's central core to create a vibrant downtown where people can live, work, and play. The proposed DSP was developed in accordance with the Downtown Housing Initiative, which is intended to facilitate development of at least 10,000 new places to live in Downtown Sacramento over the next ten years. For the purposes of the Downtown Housing Initiative, Downtown includes the Railyards and RDSP areas. Although the proposed DSP allows for increased opportunities for development, it is anticipated that the actual amount of development that would occur over the next 20 years would be generally consistent with what has been assumed to occur over that timeframe under the 2035 Sacramento General Plan. It is anticipated up to 13,401 new housing units, approximately 3.8 million sf of new non-residential uses, and 750 hotel rooms would be built in the DSP area. There would also be an additional 3.3 million sf of backfill non-residential development, which includes new uses that would occur within existing buildings and, in turn, allow for a total development potential of 7.1 million sf of non-residential uses when combined with the new growth. It is assumed that most of the new housing units projected in the DSP area would be multifamily units.

Growth Potential

The proposed DSP anticipates construction and operation of new development (new buildings and new uses) combined with intensification of existing buildings and occupancy of currently vacant parcels or buildings. The proposed DSP is expected to result in 13,401 dwelling units and 7,173,044 sf of non-residential uses, as shown in **Table 3-1**.

TABLE 3-1
DEVELOPMENT POTENTIAL FOR THE DSP

Land Use Designation	Implementing Zoning Designations[2]	Acreage (ac)	Allowed Density/ Intensity	Backfill Development Potential[3]	New Growth Development Potential[4]	TOTAL Development Potential[5]
Central Business District (CBD)	C-2, C-3, H, M-1, MIXED, OB, R-4, R-5, RO	263.1	61-450 du/ac	--	5,353 du	5,353 du
			3.0-15.0 FAR	2,596,865 sf	2,535,042 sf	5,131,907 sf
Employment Center Low Rise (ECLR)	C-2, C-4, M-1, M-2, MIXED, R-3A, R-4	218.1	n/a	--	269 du	269 du
			0.15-1.0 FAR	19,250 sf	35,729 sf	54,980 sf
MIXED[1]	C-2, C-3, MIXED	26.3	n/a	--	340 du	340 du
			n/a	0 sf	0 sf	0 sf
Parks and Recreation (PRK)	A-OS, ARP-F, C-2, C-3, F, M-1, M-2, MIXED, R-1B, R-3A, R-4, R-5, RMX	331.5	n/a	--	0 du	0 du
			n/a	2,096 sf	1,744 sf	3,840 sf
Public/Quasi-Public (PUB)	C-3, M-1, M-2, R-1, R-1B, R-3A, TC	72.4	n/a	--	0 du	0 du
			n/a	16,163 sf	16,700 sf	32,863 sf
Traditional Center (TCNT)	C-1, C-2, C-3, MIXED, R-1B, RMX	35.8	15-36 du/ac	--	14 du	14 du
			0.3-2.0 FAR	23,637 sf	37,730 sf	61,367 sf

TABLE 3-1
DEVELOPMENT POTENTIAL FOR THE DSP

Land Use Designation	Implementing Zoning Designations[2]	Acreage (ac)	Allowed Density/ Intensity	Backfill Development Potential[3]	New Growth Development Potential[4]	TOTAL Development Potential[5]
Traditional Neighborhood High Density (TNHD)	R-1B, R-3A	0.9	18-36 du/ac	--	0 du	0 du
			0.5-1.5 FAR	0 sf	0 sf	0 sf
Traditional Neighborhood Medium Density (TNMD)	C-1, C-2, C-4, H, MIXED, OB, R-1B, R-2B, R-3A, R-4, R-4A, R-5, RMX, RO	479.1	8-36 du/ac	--	143 du	143 du
			n/a	65,291 sf	81,126 sf	146,417 sf
Urban Center High (UCNTHIGH)	C-2, M-1, M-2	27.6	24-250 du/ac	--	759 du	759 du
			0.5-8.0 FAR	24,202 sf	81,126 sf	105,328 sf
Urban Center Low (UCNTLOW)	C-1, C-2, C-4, RO	18.8	20-150 du/ac	--	1,043 du	1,043 du
			0.4-4.0 FAR	31,614 sf	87,473 sf	119,087 sf
Urban Corridor High (UCORHIGH)	C-2, MIXED, OB, R-3A, R-4, R-5, RMX	141.6	33-150 du/ac	--	2,624 du	2,624 du
			0.3-6.0 FAR	380,614 sf	503,264 sf	883,878 sf
Urban Corridor Low (UCORLOW)	C-1, C-2, C-4, MIXED, OB, R-1B, R-3A, R-4, R-5, RMX, RO	280.5	20-110 du/ac	--	2,856 du	2,856 du
			0.3-3.0 FAR	192,918 sf	440,459 sf	633,377 sf
Urban Neighborhood Low Density (UNLD)	C-2, M-1, R-3A	6.3	12-36 du/ac	--	0 du	0 du
			0.5-1.5 FAR	0 sf	0 sf	0 sf
TOTAL		**1,902.0**		**0 du**	**13,401 du**	**13,401 du**
				3,352,650 sf	**3,820,394 sf**	**7,173,044 sf**

NOTES:
Dwelling unit (du) totals account for entitled projects as well as future new growth.
1 The Mixed land use designation indicates parcels that contain more than one land use designation on-site.
2 The Mixed implementing zoning designation indicates parcels that contain more than one implementing zoning designation on-site.
3 Backfill Development Potential refers to growth in existing vacant or underutilized buildings. Rates for backfill development were determined by breaking down sf by employment category as a percentage of total development (backfill and new growth combined) and then creating a sum for total sf by land use designation. The rates and employment categories are as follows:
Office: 61 percent backfill, 39 percent new growth.
Government: 61 percent backfill, 39 percent new growth.
Medical: 51 percent backfill, 49 percent new growth.
Service: 38 percent backfill, 62 percent new growth.
Retail: 12 percent backfill, 88 percent new growth.
Food: 12 percent backfill, 88 percent new growth.
4 New Growth refers to new buildings and uses that are being developed. Please see Note 3 for methodology applied. Dwelling unit totals account for entitled projects as well as future new growth.
5 Development Potential is based on parcel data derived from the Sacramento Area Council of Governments (SACOG) SACSIM (Sacramento Activity-Based Travel Simulation Model) data, which assume a combination of backfill and new growth. This total includes total sf for each land use designation, and includes a combination of backfill and new growth.

SOURCE: ESA, 2017; DKS, 2017; SACOG SACSIM data, 2012.

Development of the non-residential uses in the DSP area would create an estimated 22,750 jobs in a variety of employment sectors including medical office, retail/commercial, office, government, and services such as restaurants.

Some parcels within the DSP area are more likely than others to result in development under the proposed DSP. Parcels that are currently vacant or are developed with uses less than the maximum density/intensity permitted by the General Plan are likely to be developed or redeveloped with new or intensified uses.

Development anticipated under the proposed DSP would be consistent with the growth projections anticipated in the City's 2035 General Plan. The 2035 General Plan's buildout assumptions and population projections, as well as the transportation assumptions, are based largely on information provided by the SACOG for the MTP/SCS.

Policy Changes

Planning and Development Code

Downtown Special Planning District

A new Downtown Special Planning District (SPD) is proposed for the DSP area in order to facilitate housing and non-residential growth, as shown on Figure 2-6. Currently, there are four SPDs within the DSP area: the Central Business District SPD, a portion of the R Street Corridor SPD, Entertainment and Sports Center (ESC) SPD, and a portion of the Alhambra Corridor SPD. The Central Business District SPD would be removed and the R Street Corridor SPD would be incorporated into the Downtown SPD. More specifically, the following existing requirements found in the current R Street Corridor SPD[10] would be incorporated into the Downtown SPD:

- Limiting heights within the R Street Corridor based on the Maximum Height Map currently provided in the R Street Corridor SPD;
- Allowing office uses for parcels within the R Street Corridor designated as OB with a planning and design commission conditional use permit; and
- Within the current R Street Corridor SPD boundaries, prohibiting uses in the C-4 zone, as currently indicated in the R Street Corridor SPD.

The ESC SPD and Alhambra Corridor SPD[11] would remain unchanged. The Downtown SPD would cover the entire DSP area outside of the ESC SPD and the Alhambra Corridor SPD, and the regulations of the Downtown SPD would not apply to parcels located within these two existing SPDs.

Maximum Heights

The proposed Downtown SPD would allow for an increase in maximum height in three of the City's zoning designations within the DSP area: the C-2, OB, and RMX zones (see Figure 2-6 in Chapter 2, Project Description for the location of these three zoning designations within the Downtown SPD). Within the proposed Downtown SPD, the C-2 zone is generally concentrated along several of the area's commercial corridors, which include portions of H, I, J, K, and O streets running east and west and portions of 16th, 19th, 20th, 21st, and 29th streets running north and south. There are approximately 400 acres within the proposed Downtown SPD that are designated as C-2, and the maximum height requirements in this zone would increase from 65 feet to 85 feet.

[10] The R Street Corridor SPD, per Section 17.444.020 of the Sacramento City Code, encompasses 54 blocks and is bounded by Q Street on the north, S Street on the south, 2nd Street on the west, and 29th Street on the east.

[11] The Alhambra Corridor SPD, per Section 17.420.010 of the Sacramento City Code, includes properties located between 29th and 34th streets from the Southern Pacific railroad mainline levee to the W/X Freeway (US 50).

There are approximately 35.6 acres within the Downtown SPD that are designated as OB. Within the Downtown SPD, the OB zone is generally concentrated along portions of G Street and 7th Street near the Alkali Flat neighborhood, between Q Street and R Street west of 8th Street, and at the intersection of R Street and 16th Street. The maximum height requirements in this zone would increase from 35 feet to 65 feet.

There are 80.4 acres within the Downtown SPD that are designated as RMX. Within the Downtown SPD, the RMX zone is generally concentrated along the entire length of R Street and near the intersection of L Street and 18th Street. The maximum height requirements in this zone would increase from 45 feet to 65 feet, but this increase in allowable height would apply only to parcels outside the existing R Street Corridor SPD Maximum Height Map. Within the RMX zone maximum height requirement would be required to be tiered between 45 feet and 65 feet when located in proximity to the R-1, R-1B, and R-2 zones.

Collectively, these allowances in height across the C-2, OB, and RMX zones would allow for greater density and intensity of development in the affected zones, within the limits of maximum density established for the zone. However, the residential densities and non-residential intensities within these zones would remain the same, and it is anticipated that the total amount of development in the DSP area would not exceed the projections assumed in the 2035 General Plan.

Maximum Densities

There are approximately 35.6 acres within the proposed Downtown SPD that are designated as OB. Within the Downtown SPD, the OB zone is generally concentrated along portions of G Street and 7th Street near the Alkali Flat neighborhood, between Q Street and R Street west of 8th Street, and at the intersection of R Street and 16th Street (see Figure 2-7). The maximum residential density in this zone would increase from 36 dwelling units per acre to 65 dwelling units per acre. In addition, for parcels zoned RMX, within the R Street Corridor and within a quarter mile from a light rail station, the maximum density is 100 dwelling units an acre. This is consistent with the current R Street SPD.

Permitted and Prohibited Uses

Permitted Uses

All zoning districts within the proposed DSP SPD would allow residential uses to be permitted in the C-4, M-1 and M-2 zones. Currently residential uses need a conditional use permit for residential uses.[12] It is anticipated that this change would help achieve, but would not be inconsistent with, the number of additional housing units projected to be built in the DSP area assumed in the 2035 General Plan and 2035 General Plan MEIR.

[12] New residential projects will still require Site Plan and Design Review, as established in Chapters 17.808 and 17.812 of the City's Planning and Development Code.

Prohibited Uses

Within a half mile of any light rail or streetcar station, the following land uses within the Downtown SPD would be prohibited: stand-alone parking facilities; drive-through restaurants; equipment—rental, sales yards; gas stations; mini storage; towing services, vehicle storage yards; and accessory drive-through facilities.

This would change current regulations which allow such uses in the DSP area, as follows:

- Gas stations, mini storage, and towing services are permitted uses within the C-4, M-1, and M-2 zones;
- Equipment rental and sales yards are a permitted use in the C-4 and M-2 zones;
- Stand-alone parking facilities are allowed as a conditional use in the C-1, C-2, C-3, C-4, H, M-1, M-2, OB, R-1, R-1B, R-2B, R-3A, R-4, R-4A, R-5, RMX, RO, and TC zones;
- Drive-through restaurants are allowed as a conditional use in the C-2, C-4, M-1, and M-2 zones;
- Equipment rental and sales yards are allowed as a conditional use in the C-2 and M-1 zones;
- Gas stations are allowed as a conditional use in the C-2, C-3, and C-4 zones;
- Mini storage and towing services, vehicle storage yards are allowed as a conditional use in the C-2 zone; and
- Accessory drive-through facilities are currently permitted, when accessory to a permitted or conditional use, in the C-2, C-4, H, M-1, M-2, OB, R-4, R-4A, R-5, and TC zones.
- Fuel storage yards would be prohibited in the M-2 zone.

While these changes would create new restrictions across large portions of the DSP area, the non-residential intensities within these zones would remain the same, and it is anticipated that the total amount of development would not exceed the projections assumed in the 2035 General Plan.

Parking Maximums

The Sacramento PDC establishes minimum parking requirements for certain uses; the requirements are stratified by district based on urban form. The districts include the Central Business and Arts & Entertainment District, Urban District, Traditional District, and Suburban District. The proposed Downtown SPD would include revisions to the parking standards for commercial and industrial uses. For all commercial[13] and industrial[14] uses within the Downtown SPD, the following maximum allowable parking standards would be established:

- Central Business and Arts & Entertainment District: one space per 500 gross sf (gsf);

[13] Per Table 17.608.030B, under Section 17.608.030(B), Commercial Uses consist of the following uses: auto sales lot; bed and breakfast inn; Commercial services (except from others specifically included in the table); hotel; motel; office, medical clinic or office; restaurant, bar, brew pub, or wine bar; retail store; and warehouse retail.

[14] Per Table 17.608.030B, under Section 17.608.030(B), Industrial Uses consist of the following uses: wholesale warehousing and manufacturing; towing service, vehicle storage yard; and mini storage; locker building.

- Urban District: one space per 250 gsf;
- Traditional District: one space per 250 gsf; and
- Suburban District: one space per 250 gsf.

Open Space Requirements

The Downtown SPD would provide for multi-family private and common open space requirements that differ from those that are currently provided in the citywide open space standards (Chapter 17.600.135 of City Code). Multi-unit dwellings would be exempt from the requirement that open space on site must be open to the sky. The SPD would also modify the existing standard for open space provision in multi-unit dwellings, which is currently 100 sf per dwelling unit (beyond the required front, side, and rear yard setbacks). For multi-unit dwellings in the DSP SPD, parcels located in the Open Space Districts of the Central Business and Arts & Entertainment District would eliminate the requirement for open space for multi-unit dwellings; parcels located in the Urban Open Space District would change to 25 sf per dwelling unit; and parcels located in the Traditional Open Space District would change to 50 sf per dwelling unit. Parcels located in the Suburban Open Space District would remain at 100 sf per dwelling unit. Additionally, in order to encourage adaptive reuse, conversion of nonresidential buildings to a multi-unit dwelling will not create a requirement for new open space.

Historic Preservation

PDC section 17.604.740(c) currently establishes a maximum density for adaptive reuse of one dwelling unit per 750 sf of original building space. Under the proposed Downtown SPD, the maximum density would be increased to allow up to one dwelling unit per 350 sf of gross floor area within the original building envelope. This change is intended to encourage residential uses as part of adaptive reuse of historic resources in the DSP area.

Design Review

PDC section 17.808.130, requires site plan and design review by the City Planning and Design Commission for projects that exceed 60 feet. In the C-3 Zone (the Central Business District), the Downtown SPD would provide that height would not be a triggering factor for automatic review by the Planning and Design Commission.

General Plan

Under the proposed DSP, the DSP area would retain the existing land use designations as described in the 2035 General Plan and depicted on Figure 2-4, General Plan Land Use Designations. The existing land use designations within the DSP area are Traditional Neighborhood Low, Traditional Neighborhood Medium, Traditional Neighborhood High, Urban Neighborhood Low, Urban Neighborhood Medium, Urban Neighborhood High, Traditional Center, Urban Center Low, Urban Center High, Central Business District, Urban Corridor Low, Urban Corridor High, Employment Center Low Rise, Public/Quasi-Public, and Parks and Recreation.

With implementation of the DSP, the 2035 General Plan would be amended to facilitate development that includes modifications to floor-area ratio (FAR) standards. The general plan would be amended to offer additional language that clarifies the way in which open space can be factored into calculation of the FAR. General Plan Policy LU 1.1.10 would similarly be modified to allow new development to exceed the required FAR by no more than 20 percent if it is determined that the project provides a significant community benefit. Following the development of Public Art Plan for the proposed DSP, Section LU 2.4 of the General Plan would be revised to include additional policies and goals focusing on public art.

Lastly, on page 2-74 of the general plan, under the Urban Form Guidelines for the Urban Center Low designation, Guideline 5 would be revised to allow for up to 100 percent lot coverage, which is an increase from the current 80 percent limit.

3.2.5 Land Use Evaluation

This section evaluates the proposed DSP for compatibility with existing and planned adjacent land uses and for consistency with adopted plans, policies, and zoning designations. Physical environmental impacts resulting from implementation of the DSP are discussed in the applicable environmental resource sections in this EIR. This section differs from impact discussions in that only compatibility and consistency issues are discussed, as opposed to environmental impacts and mitigation measures. This discussion complies with section 15125(d) of the State CEQA Guidelines, which requires EIRs to discuss inconsistencies with general plans and regional plans as part of the environmental setting.

Compatibility with Existing and Planned Adjacent Land Uses

As is described above and in Chapter 2, Project Description, the proposed DSP anticipates construction and operation of new development (new buildings and new uses) combined with intensification of existing buildings and occupancy of currently vacant parcels or buildings. The DSP is expected to result in 13,401 dwelling units and 7,173,044 sf of non-residential uses. Although the proposed DSP would allow for increased opportunities for development, it is anticipated that the actual amount of development that would occur over the next 20 years would be generally consistent with what has been previously assumed to occur under the 2035 General Plan.

As discussed above, the DSP area is bordered on the north by the Railyards Specific Plan area and the River District on the west by the Sacramento River and West Sacramento, on the east by the East Sacramento neighborhood, and on the south by the Land Park and Curtis Park neighborhoods. The DSP area is a developed urban environment surrounded on all sides by existing urban areas and areas planned for increased urban development. The DSP would result in gradual new development (new buildings and new uses) combined with intensification of existing buildings and occupancy of currently vacant parcels or buildings; this new development would be of uses, intensities, and densities that are similar to those which currently exist in the DSP area. While implementation of the DSP could result in physical environmental effects that could affect

existing and planned adjacent land uses (and which are addressed in the environmental resource sections of this EIR), the proposed DSP would not allow for any new urban uses that would be anticipated to be incompatible with similar uses in the DSP area or adjacent urban neighborhoods and communities. Thus, new urban development that would result from implementation of the DSP would tend to reinforce and support existing land use patterns, and would not be incompatible with existing and planned adjacent land uses.

Consistency with Adopted Plans, Policies, and Zoning

Sacramento Area Council of Governments Blueprint and MTP/SCS

As described above, the goals 2016 MTP/SCS are to link land use and transportation facilities and programs in a way to provide long-term environmental and social benefits, including shortened commute times, reduced traffic congestion, less dependence on automobiles, improved air quality, reduced greenhouse gas emissions, reduced distances traveled between jobs and housing, and housing choices more aligned with the changing demographic of the Sacramento region. While not a land use plan, the success of the MTP/SCS is based upon certain assumptions about land use and development.

The DSP area is part of the Center and Corridor Community type in the 2016 MTP/SCS. In this area, the MTP/SCS forecasts 23,007 new housing units and 45,308 new employees. However, it should be noted that the downtown Center and Corridor Community area in the MTP/SCS encompasses the DSP area, as well as the Railyards Specific Plan and RDSP areas. In 2018, SACOG is expected begin its quadrennial update of the MTP/SCS (scheduled for adoption in 2020) and would work with the City to determine if there is a need to update the projections for the downtown Center and Corridor Community area for the next MTP/SCS. In addition, the MTP/SCS includes significant transportation infrastructure in the downtown Center and Corridor Community area, including the Downtown/Riverfront Streetcar project.[15]

The proposed DSP would provide for the development of dense residential and non-residential uses at the center of the region, in a location proximate to a multitude of transportation options, including light rail, passenger heavy rail, and buses. Development pursuant to the proposed DSP would be consistent with the land use, density, and intensity of development anticipated in the Center and Corridor Community type under the 2016 MTP/SCS, and the land use designations in the proposed DSP would accommodate the 2016 MTP/SCS assumptions for the downtown Center and Corridor Community area.

Although the MTP/SCS is a transportation plan, not a land use plan, and "consistency" of a land use project is determined by SACOG, based on the City's review of the MTP/SCS the proposed DSP is consistent with and would promote the ability of SACOG and the region to achieve the goals established in the 2016 MTP/SCS.

[15] Sacramento Area Council of Governments, 2017. Letter to Tom Buford, Senior Planner, City of Sacramento Community Development Department, Response to Notice of Preparation of a Draft Environmental Impact Report for the Downtown Specific Plan. February 27, 2017.

City of Sacramento 2035 General Plan

The DSP is designed to facilitate future development within the City of Sacramento's central core and serve as a bridge between 2035 General Plan and the CCCP, customizing the planning process and land use regulations to the unique characteristics of the DSP area. Under the proposed DSP, the DSP area would retain the existing land use and zoning designations as described in the 2035 General Plan. However, the proposed DSP would include modifications to allowable maximum heights, maximum densities, and other uses within certain portions of the DSP area. A new SPD would be created for the DSP area in order to facilitate housing and non-residential growth. In addition, with implementation of the DSP, the 2035 General Plan would be amended to include modifications to FAR standards.

The DSP would support and further existing General Plan policies by focusing development on infill areas by encouraging the development of vacant or underutilized parcels within the existing urban fabric. Due to the multiple, diverse neighborhoods within the DSP area, the DSP provides direction to strengthen and preserve individual neighborhood identities and directs new development in the DSP area to be in context with the surrounding area and sensitive to surrounding uses. The DSP provides expanded opportunities for access to multi-modal transportation options by enhancing the pedestrian, bicycle, and transit networks throughout the DSP area, linking existing neighborhoods within the DSP area. The DSP provides policies to encourage development of neighborhood amenities such as grocery stores, neighborhood-serving retail, parks and open space, and enhancement of the public realm.

The proposed DSP allows for increased opportunities for development in the DSP area, and it is anticipated that the actual amount of development that would occur over the next 20 years would be consistent with what is assumed to occur under the 2035 General Plan. All development projects, public improvements, and related activities that would occur with implementation of the DSP would be required to be consistent with the 2035 General Plan. Consequently, the proposed DSP would be consistent with the goals and policies of the City of Sacramento 2035 General Plan.

Central City Community Plan

The primary goal of the CCCP is to continue revitalization of the Central City to provide a viable living, working, shopping, and cultural environment with a full range of day and night activities for residents, employees, and visitors. The CCCP land use designations for the DSP area are Traditional Neighborhood Low, Traditional Neighborhood Medium, Traditional Neighborhood High, Urban Neighborhood Low, Urban Neighborhood Medium, Urban Neighborhood High, Traditional Center, Urban Center Low, Urban Center High, Central Business District, Urban Corridor Low, Urban Corridor High, Employment Center Low Rise, Public, and Parks.

As discussed above, the DSP is designed to facilitate future development within the City of Sacramento's central core and serve as a bridge between 2035 General Plan and the CCCP, customizing the planning process and land use regulations to the unique characteristics of the DSP area. Under the proposed DSP, the DSP area would retain the existing land use designations

as described in the CCCP. Thus, the implementation of the proposed DSP would be consistent with the goals and policies of the CCCP.

3.3 Population and Housing

The evaluation included in this section was developed based on project-specific features and data provided by the United States Census Bureau's (U.S. Census) American Fact Finder, California Department of Finance (DOF) Population and Housing Estimates, SACOG's 2013-2021 Regional Housing Needs Assessment Plan,[16] City of Sacramento 2035 General Plan,[17] City of Sacramento 2035 General Plan MEIR,[18] and the *Sacramento Downtown Specific Plan Draft Housing Market Analysis, Phase I and Phase II*, prepared by Bay Area Economics.[19]

3.3.1 Notice of Preparation Comments

An NOP for preparation of this EIR was circulated for public review from February 15, 2017 to March 17, 2017. During the public comment period, two letters were received which commented on population and housing issues related to the DSP. The comments addressed the following issue:

- Provision of a diversity of housing types, including low-income housing.

3.3.2 Environmental Setting

Population

Regional Population

The counties that comprise the SACOG and the greater Sacramento region, El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba counties, have experienced steady growth over the past 16 years (see **Table 3-2**). The regional population increased a total of 25 percent between 2000 and 2016, from approximately 1,936,006 in 2000,[20] to 2,236,491 in 2007,[21] to 2,439,051 in 2016.[22] SACOG predicts the regional population to increase to 2,472,567 by 2020 and 3,078,772 by 2036.[23]

16 Sacramento Area Council of Governments, 2012. Regional Housing Needs Plan 2013-2021. Adopted September 20, 2012.
17 City of Sacramento, 2015. *City of Sacramento 2035 General Plan*. Adopted March 3, 2015.
18 City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report*. Certified March 3, 2015.
19 Bay Area Economics. 2016. *Sacramento Downtown Specific Plan Draft Housing Market Analysis, Phase I and Phase II*. November.
20 California Department of Finance, 2012. E-4 Population Estimates for Cities, Counties, and the State, 2001-2010, with 2000 & 2010 Census Counts. Revised November 9, 2012.
21 *Ibid*.
22 California Department of Finance, 2015. E-4 Population Estimates for Cities, Counties, and the State, 2011-2016, with 2010 Benchmark. Released May 1, 2016.
23 Sacramento Area Council of Governments. 2016. Metropolitan Transportation Plan/Sustainable Communities Strategy. p. 22, Table 3.1. Adopted February 18, 2016.

TABLE 3-2
POPULATION AND HOUSING TRENDS, 2000-2016

	2000[1]
Sacramento Region	
Population	1,936,006
Housing Units	765,936[3]
City of Sacramento	
Population	407,018
Housing Units	163,957

SOURCES:
1. California Department of Finance. 2012. E-4 Population Estimates for Cities, Counties, and the State, 2001-2010, with 2000 & 2010 Census Counts. Revised Novemb
2. California Department of Finance. 2015. E-5 Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2015, with 2010 Benchmark. Rele
3. U.S. Census Bureau, American Fact Finder, Housing Units, 2000 Summary File, Accessed April 9, 2016.
4. U.S. Census Bureau, American Fact Finder, Housing Units, 2005-2007 American Community Survey 3-Year Estimates, Accessed April 9, 2016.
5. U.S. Census Bureau, American Fact Finder, Housing Units, 2005-2007 American Community Survey 3-Year Estimates, Accessed April 9, 2016.

City of Sacramento Population

Between 2000 and 2016, the City of Sacramento experienced a 19 percent increase in population. According to the California DOF, the City's population was 407,018 in 2000,[24] 452,711 in 2007,[25] and 485,683 in 2016.[26]

The City's share of the total population in Sacramento County has decreased substantially since 2000, from 46.1 percent of the County[27] to 32.4 percent in 2016,[28] while the City's share of the state population has remained stable at 1.2 from 2000 through 2016.

Sacramento Population Characteristics

The median age of Sacramento residents increased from 33 years in 2010[29] to 33.8 years in 2014.[30] The median age in Sacramento has remained younger than the statewide median age, which was 35.2 in 2010[31] and rose to 35.6 in 2014.[32] The percentage of residents over the age of 18 increased from 75.1 percent (350,367 people) in 2010[33] to 75.8 percent (361,097 people) in

24 California Department of Finance, 2012. E-4 Population Estimates for Cities, Counties, and the State, 2001-2010, with 2000 & 2010 Census Counts. Revised November 9, 2012.
25 *Ibid*.
26 California Department of Finance. 2015. E-4 Population Estimates for Cities, Counties, and the State, 2011-2016, with 2010 Benchmark. Released May 1, 2016.
27 California Department of Finance. 2007. E-8 Historical Population and Housing Estimates for Cities, Counties and the State, 1990-2000. August 2007.
28 California Department of Finance. 2015. E-4 Population Estimates for Cities, Counties, and the State, 2011-2016, with 2010 Benchmark. Released May 1, 2016.
29 U.S. Census Bureau, 2010. Profile of General Population and Housing Characteristics: 2010 – 2010 Demographic Profile Data. Geography: Sacramento city, California.
30 U.S. Census Bureau, 2014. ACS Demographic and Housing Estimates: 2010-2014 American Community Survey 5-Year Estimates, Sacramento city, California.
31 U.S. Census Bureau, 2010. Profile of General Population and Housing Characteristics: 2010 – 2010 Demographic Profile Data. Geography: California.
32 U.S. Census Bureau. 2014. ACS Demographic and Housing Estimates: 2010-2014 American Community Survey 5-Year Estimates, California.
33 U.S. Census Bureau, 2010. Profile of General Population and Housing Characteristics: 2010 – 2010 Demographic Profile Data. Geography: Sacramento city, California.

2014.[34] The percentage of seniors (ages 65 and older) between 2010 and 2014 increased from 10.6 percent[35] to 11.4 percent.[36] The aging of the population is a trend that is reflected statewide as the senior population increased from 11.4 percent in 2010[37] to 12.1 percent in 2014.[38]

Downtown Population

According to the U.S. Census, the Central City, which includes the DSP area, Railyards Specific Plan Area, and the River District, contained 32,655 residents as of the year 2000. Most recent American Community Survey (ACS) estimates show that the Central City averaged 32,488 residents between 2010 and 2014. This represents a nominal decrease of 167 residents since the year 2000.[39]

According to 2010-2014 ACS estimates, the Central City features a resident population that is somewhat younger than the City as a whole. Between 2010 and 2014 the median age in the Central City averaged 33.3 years, a decrease from the median age of 35.3 in 2000. In contrast, the City's median age increased during the period studied, from 32.8 to 33.8. Based on this information, the Central City is attracting a larger than proportional share of the region's younger adult population.[40]

Housing

Regional Housing Supply

While the economic recession of 2008 caused a downturn in housing values and new home construction across the Sacramento region, in line with general statewide and national trends, the region has recently experienced a period of economic growth. However, housing values across the region are considerably lower than in the Bay Area. As such, Sacramento continues to remain a more affordable housing option for people working and commuting to other regions in northern California.

Approximately 24,706 housing units were added in the City of Sacramento between 1990[41] and 2010,[42] a 14.9 percent increase. From 2010 to 2016, housing stock in the City increased by 1,118

34 U.S. Census Bureau, 2014. ACS Demographic and Housing Estimates: 2010-2014 American Community Survey 5-Year Estimates, Sacramento city, California.
35 U.S. Census Bureau, 2010. Profile of General Population and Housing Characteristics: 2010 – 2010 Demographic Profile Data. Geography: Sacramento city, California.
36 U.S. Census Bureau, 2014. ACS Demographic and Housing Estimates: 2010-2014 American Community Survey 5-Year Estimates, Sacramento city, California.
37 U.S. Census Bureau, 2010. Profile of General Population and Housing Characteristics: 2010 – 2010 Demographic Profile Data. Geography: California.
38 U.S. Census Bureau, 2014. ACS Demographic and Housing Estimates: 2010-2014 American Community Survey 5-Year Estimates, California.
39 Bay Area Economics. 2016. *Sacramento Downtown Specific Plan Draft Housing Market Analysis, Phase I and Phase II*. November. p. 5.
40 *Ibid*. p. 9.
41 California Department of Finance, 2007. E-8 Historical Population and Housing Estimates for Cities, Counties and the State, 1990-2000. August 2007.
42 California Department of Finance, 2015. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2016 with 2010 Census Benchmark. May 2016.

housing units, or 0.6 percent. The housing vacancy rate for Sacramento decreased from approximately 8.5 percent in 2010 to 7.9 percent in 2016.[43]

Downtown Housing Stock

According to the U.S. Census, the Central City contained 19,432 total housing units in 2000. Of the total units, single-family units comprised just 17.8 percent of the total Central City housing inventory, compared to 65.4 percent citywide. Conversely, multifamily units comprised 82.1 percent of the Central City units, ranging from duplex units to complexes of 50 or more units. This is compared to just 32.3 percent citywide. Within the Central City, units in smaller multifamily complexes represent the majority of units, with units in structures of two to four units representing 23.3 percent of all units, compared to just 9.7 percent citywide. The Central City multifamily units are fairly evenly distributed between medium and large structures, ranging from five units to 50 or more units in the structure, all of which represent significantly higher proportions of the overall housing stock relative to the city as a whole. Based on the average number of units in place between 2010 and 2014, the Central City housing stock increased by roughly 0.6 per year between 2000 and 2010-2014, somewhat slower than the average citywide growth rates of 1.4 percent. For the time period, the Central City captured 5.1 percent of the increase in total Citywide housing unit growth and 14.6 percent of the increase in multifamily housing unit growth within the city.[44]

Jobs-Housing Relationship

Jobs-housing relationship is used to describe the ratio of residences to jobs in a particular community or geographic area. Low jobs-housing ratio (i.e., few jobs for the number of households in the area) indicates that many workers commute out of their residence area to their place of employment. In areas with high jobs-housing ratio (i.e., many jobs for the number of households in the area), jobs need to be filled by workers from outside the area. A jobs-housing ratio of 1.0 reflects that there is one job available per household and is considered to be in "balance." Areas with high or low jobs-housing ratios are likely to generate longer home-to-work commutes.[45]

When assuming that the affordability of housing and the incomes of jobs in the local market are paired reasonably closely, if the quantity and proximity of housing units is proportionate to the quantity and proximity of jobs, the majority of employees would be able to work and reside in the same community. A more balanced relationship between jobs and housing can help reduce the number of vehicle trips and the overall vehicle miles traveled as a result of shorter commutes to employment within the same proximate residential areas. Such a reduction in vehicle trips and vehicle miles traveled would tend to reduce levels of air pollutant emissions (including greenhouse gas emissions) and would create less vehicular congestion on area roadways and

43 *Ibid*.
44 Bay Area Economics. 2016. *Sacramento Downtown Specific Plan Draft Housing Market Analysis, Phase I and Phase II*. November. p. 35.
45 Sacramento Area Council of Governments. 2016. 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy. Chapter 9, Economic Vitality. p. 220. February 18, 2016.

intersections. It is important that the determination of the jobs-housing relationship focuses on whether housing in the community is affordable to local employees. The availability of an adequate housing supply, presenting a range of price levels that include prices that are reasonably affordable for local employees, can potentially reduce the commute mileage between homes and work sites.

The SACOG MTP/SCS evaluated the change in jobs-housing ratio between 2008 (considered to be a somewhat normal year in the regional economy) and the ratio projected for 2036 (see **Table 3-3**). Within the SACOG region, there were 969,838 jobs and 819,277 households in 2008, resulting in a jobs-housing ratio of 1.18. By 2036, the SACOG MTP/SCS projects there will be 1,327,279 jobs and 1,140,202 households resulting in a jobs-housing ratio of 1.16.[46]

TABLE 3-3
JOBS AND HOUSEHOLDS, 2008 AND 2036

	"Base" Jobs[1]		Total Jobs		Households		Jobs-Housing Ratio	
Geographic Area	**2008**	**2036**	**2008**	**2036**	**2008**	**2036**	**2008**	**2036**
SACOG Region	N/A	N/A	969,838	1,327,279	819,277	1,140,202	1.18	1.16
Sacramento County	N/A	N/A	626,155	831,171	511,402	699,811	1.22	1.19
Sacramento CBD/ Riverfront Employment Center	99,243	133,026	109,719	144,559	17,523	46,211	6.26	3.13

NOTES:
1. "Base" jobs exclude retail and food service.
N/A = not available

SOURCES: Sacramento Area Council of Governments. 2016. 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy. Chapter 9, Economic Vitality. February 18, 2016; Kacey Lizon, Planning Manager, Sacramento Area Council of Governments, personal communication, April 14, 2016.

In 2008, Sacramento County had 626,155 jobs and 511,402 households, resulting in a jobs-housing ratio of 1.22.[47] In 2036, the County is expected to have 831,171 jobs and 699,811 households, resulting in a jobs-housing ratio of 1.19.[48]

The City of Sacramento's employment base in 2016 was approximately 244,028, with 184,885 households.[49] This generates a jobs/housing ratio of 1.32, reflective of Sacramento's continuing role as the regional employment center, and demonstrating that employees commute from other neighboring communities in the region to work within the City.

46 *Ibid*. p. 220. Table 9.5.
47 *Ibid*.
48 *Ibid*.
49 City of Sacramento. 2015. City of Sacramento, Economic Development Department: Key Demographics. Available: http://www.cityofsacramento.org/Economic-Development/Why-Sacramento/Demographics-and-Market-Information/Key-Demographics. Accessed May 5, 2017.

Homelessness

As described in the 2013-2021 Housing Element, the City maintains a commitment to combating homelessness throughout Sacramento through the provision of affordable housing and support services. To achieve these efforts, the City maintains a partnership with a variety of supporting organizations and agencies, such as the Sacramento County Department of Human Assistance, SHRA, Sacramento Steps Forward (SSF), and several local and resident-based groups. In a January 2015 count, SSF found a total of 2,659 homeless individuals living in Sacramento County, with 1,711 people living in transitional housing or shelters, and 948 living in unsheltered conditions.[50]

The City's 2013-2021 Housing Element outlines policies aimed at addressing homelessness and collaborating with groups to better ensure improved housing conditions for the homeless population in Sacramento, including Policies H-3.1.1 (to provide extremely low-income housing), H-3.2.2 (to work with community-based non-profit organizations that develop affordable housing and provide supportive services for special needs populations), H-3.2.3 (to work with SSF to implement and update the Ten-Year Plan to End Chronic Homelessness and the Continuum of Care to meet the needs of homeless families and individuals), H-3.2.5 (to continue to provide emergency shelters for the homeless population), H-3.2.9 (to prioritize special needs housing, particularly for chronically homeless individuals). The City's 2035 General Plan also identifies Policy PHS 5.1.4 to work with public and private social service agencies to locate support facilities for the homeless population.

In March 2017 Sacramento County Supervisor Phil Serna and City of Sacramento Mayor Darrell Steinberg announced their support for SHRA's recommendation that 1,755 housing units and vouchers will be allocated to the homeless and those at risk of homelessness over the next three years. A total of 1,355 units and vouchers are guaranteed to be allocated to the homeless or those at risk of homelessness. SHRA also proposes to allocate an additional 300 units and 100 vouchers to the targeted populations by leveraging project-based vouchers to create additional units as well as seeking federal funding through the Performance Partnership Pilot for Disconnected Youth Program. With those additional units and vouchers, Sacramento will be able to provide housing resources for a total of 1,755 individuals experiencing or at risk of homelessness.[51]

3.3.3 Regulatory Setting

Federal

There are no federal regulations that specifically regulate land use or land use compatibility on non-federal lands that would be applicable to the proposed DSP.

[50] Sacramento Steps Forward. 2015. 2015 Point-in-Time Homeless Count Report. December 17, 2013. p. 3, unlabeled table.

[51] City of Sacramento, 2017. *Mayor Steinberg and County Supervisor Serna Announce Strong Support for Homeless Housing Proposal*. March 14. Available: https://www.cityofsacramento.org/Mayor-Council/Districts/Mayor/Press-Releases/2017-03-14-SHRA-Homeless-Housing-Reco. Accessed June 22, 2017.

State

California Housing Element Requirements

California law (Government Code Section 65580, et seq.) requires cities and counties to include as part of their General Plans a housing element to address housing conditions and needs in the community. Housing elements are prepared approximately every five years (eight following implementation of SB 375), following timetables set forth in the law. The housing element must identify and analyze existing and projected housing needs and "make adequate provision for the existing and projected needs of all economic segments of the community," among other requirements.

Regional Housing Needs Assessment

State law mandates that all cities and counties offer a portion of housing to accommodate the increasing needs of regional population growth. The statewide housing demand is determined by the California Department of Housing and Community Development, while local governments and councils of governments decide and manage their specific regional and jurisdictional housing needs and develop a regional housing needs assessment (RHNA).

In the greater Sacramento region, including the City of Sacramento, SACOG has the responsibility of developing and approving an RHNA and a regional housing needs plan (RHNP) every eight years (Government Code, Section 65580 et seq.). This document has a central role of distributing the allocation of housing for every county and city in the six-county SACOG region. Housing needs are assessed for very low income, low income, moderate income, and above moderate households. The RHNP, adopted by SACOG on September 20, 2012, identifies a total of 24,101 housing units to be built in Sacramento over the period of January 1, 2013 to October 31, 2021, with a breakdown of 4,944 (20.5%) very low income units, 3,467 (14.4%) low income units, 4,482 (18.6%) moderate income units, and 11,208 (46.5%) above moderate units.[52]

Local

Sacramento Area Council of Governments

As described above, SACOG is an association of local governments that covers six counties in the Greater Sacramento Region. In addition to preparing the long-range transportation plan for the region, SACOG approves the distribution of affordable housing in the region through its RHNP and assists in planning for transit, bicycle networks, clean air and airport land uses.[53]

[52] Sacramento Area Council of Governments. 2012. Regional Needs Housing Plan 2013-2021. Adopted September 20, 2012. Table 1, p. 4.

[53] Sacramento Area Council of Governments. 2015. About Us. SACOG website. Available: http://www.sacog.org/about/. Accessed December 16, 2015.

Sacramento 2035 General Plan

Housing Element

The Housing Element is part of the City of Sacramento 2035 General Plan and provides the policies and programs to address the housing needs for all Sacramento households. State law (Government Code Sections 65580-65589.8) requires that every city and county in California adopt a Housing Element, subject to State approval, as part of its General Plan. The City adopted the 2013-2021 Housing Element on December 17, 2013.

The City's 2013-2021 Housing Element assumes that new growth would occur and accounts for an influx of new residents as a result of land use changes. The Housing Element projects that the City needs to add approximately 24,101 housing units by 2021, consistent with the SACOG RHNP (of which 8,411 units are for low-income and very-low income households). In addition, the Housing Element estimates that Sacramento would increase its population by 160,276 new residents by 2021, and its population to 640,381 people in 2035.[54]

The Housing Element includes 2008 population data and 2020 and 2035 population projections by community plan area for the City of Sacramento. The population of the Central City, which encompasses the DSP area, is expected to grow from 48,261 in 2008 to 71,436 in 2020, a 48 percent increase. From 2020 to 2035, the Central City population is expected to grow by another 53 percent, from 71,436 to 109,312.[55]

The Housing Element anticipates substantial growth in employment in the Central City between 2008 and 2035.[56] By 2020 the Central City is projected to experience the greatest increase in employment, adding 6,642 jobs from 2008 to 2020 (for a total of 121,450 jobs).[57] From 2020 to 2035, the Central City is projected to experience another substantial increase in, adding 31,386 jobs (for a total of 152,836 jobs).[58]

The following goals and policies from the adopted 2013-2021 Housing Element relate to new development and are applicable to the DSP:

Goal H 1.2 **Housing Diversity. Provide a variety of quality housing types to encourage neighborhood stability.**

Policies

H 1.2.1 **Variety of Housing.** The City shall encourage the development and revitalization of neighborhoods that include a variety of housing tenure, size and types, such as second units, carriage homes, lofts, live-work spaces, cottages, and manufactured/modular housing. (RDR)

Goal H 1.3 **Balanced Communities. Promote racial, economic, and demographic integration in new and existing neighborhoods.**

54 City of Sacramento, 2013. City of Sacramento 2013-2021 Housing Element. Adopted December 17, 2013. p. H 3-3.
55 *Ibid*. p. H 3-5.
56 *Ibid*. p. H 3-3.
57 *Ibid*. p. H 3-15.
58 *Ibid*. p. H 3-15.

Policies

H 1.3.4 **A Range of Housing Opportunities.** The City shall encourage a range of housing opportunities for all segments of the community. (RDR)

H 1.3.5 **Housing Type Distribution.** The City shall promote an equitable distribution of housing types for all income groups throughout the city and promote mixed income neighborhoods rather than creating concentrations of below-market-rate housing in certain areas. (RDR)

Goal H 2.2 Development. Assist in creating housing to meet current and future needs.

Policies

H 2.2.1 **Quality Infill Development.** The City shall promote quality residential infill development by maintaining and implementing flexible development standards. (RDR)

H 2.2.2 **Financial Tools to Diversify Residential Infill Development.** To the extent resources are available, the City shall use financial tools to diversify market developments with affordable units, especially in infill areas. (FB)

H 2.2.3 **Offsetting Development Costs for Affordable Housing.** The City shall defer fees to Certificate of Occupancy (COO) to help offset development costs for affordable housing and will offer other financial incentives including, but not limited to, water development fee waivers and sewer credits. (FB/SO)

H 2.2.4 **Funding for Affordable Housing.** The City shall pursue and maximize the use of all appropriate state, federal, local and private funding for the development, preservation, and rehabilitation of housing affordable for extremely low-, very low-, low-, and moderate-income households, while maintaining economic competitiveness in the region. (FB)

H 2.2.5 **Review and Reduce Fees for Affordable Housing.** The City shall work with affordable housing developers as well as other agencies and districts to review and reduce applicable processing and development impact fees for very low- and low-income housing units. (SO)

H 2.2.6 **Update the Mixed Income Housing Ordinance.** The City shall revise its Mixed-Income Housing Ordinance to promote affordable housing citywide and to require developers to contribute towards production of housing affordable to lower- and moderate-income households. (RDR)

Goal LU 1.1 Growth and Change. Support sustainable growth and change through orderly and well-planned development that provides for the needs of existing and future residents and businesses, ensures the effective and equitable provision of public services, and makes efficient use of land and infrastructure.

Policies

LU 1.1.2 **Building Intensity and Population Density.** The City shall regulate the levels of building intensity and population density according to the standards and land use designations set out in the General Plan and the Sacramento City Code. Within these designations, cumulative development shall not exceed 640,400 persons and 390,100 employees by 2035. (RDR/PSR)

Goal LU 2.8 City Fair and Equitable. Ensure fair and equitable access for all citizens to employment, housing, education, recreation, transportation, retail, and public services, including participation in public planning for the future.

Policies

LU 2.8.6 **Jobs Housing Balance.** The City shall encourage a balance between job type, the workforce, and housing development to reduce the negative impacts of long commutes and provide a range of employment opportunities for all city residents. (RDR/MPSP)

Central City Community Plan

The CCCP, first adopted in 1980, is an additional guiding document within the City of Sacramento 2035 General Plan that provides guidance for the Central City area. The following policy from the adopted CCCP relates to new development and is applicable to the DSP:

Policies

CC.H 1.1 **Mixed-Use Buildings.** The City shall provide the opportunity for mixture of housing with other uses in the same building or on the same site at selected locations to capitalize on the advantages of close-in living. (RDR/MSPS)

Consistent with the above housing policies found in the 2013-2021 Housing Element, the proposed DSP would accommodate a variety of mixed-use buildings, containing a variety of densities and intensities, to promote several mixed use structures in the Central City area. Additionally, flexible zoning would allow for development of a wide variety of mixed uses, including businesses and amenities designed to serve the neighborhood residents.

Mixed-Income Ordinance

Sacramento City Code Chapter 17.712 and Section 17.808.260 were adopted on September 1, 2015 to establish additional requirements for the provision of affordable housing across Sacramento. In particular, Section 17.712.030 requires all owners of residential projects not exceeding 100 gross acres in size to pay a housing impact fee on all newly constructed market-rate housing units. It is anticipated that this provision would apply to all development within the DSP area.

For projects exceeding 100 acres, owners are required to pay the same housing impact fee but also create a mixed income housing strategy demonstrating the ways in which the project would provide housing for a variety of incomes and family types consistent with the 2013-2021 Housing Element. The owner must obtain approval for their strategy from the City Council, and the Planning Director must also approve this strategy. It is anticipated that this provision would not apply to development facilitated under the proposed DSP.

Single-Room Occupancy Ordinance

Title 18, Chapter 18.20 of the City Code establishes protections for certain downtown single-room-occupancy residences and their residents. In particular, in section 18.20.160, the Code states that "[t]he city shall maintain or cause to be maintained an inventory of not less than seven hundred twelve (712) residential hotel or comparable units; and to this end shall replace or cause to be replaced the residential hotel units subject to this chapter that are to be withdrawn, converted or demolished." The Code establishes a process that must be implemented prior to the conversion of the single-room-occupancy units, including the provision of relocation benefits to the residents of the units and, under certain circumstances, to recent past occupants of converted units (see section 18.20.060 of the City Code). Section 18.20.160 provides that if a conversion plan is approved by the City Council that would reduce the number of protected SRO units below the required 712 units, within 90 days the City must bring forward a plan to provide replacement units within 7 years.

3.3.4 Proposed DSP Analysis

Proposed DSP Population and Housing

It is anticipated that up to 13,401 new housing units would be built in the DSP area over the next 20 years. To determine the estimated population increase that would result from implementation of the proposed DSP, this analysis assumes an average household size of 1.62 persons. This average household size is calculated based on the number of people living in households, divided by the number of occupied housing units. Households in the DSP area tend to be smaller than those of the City of Sacramento as a whole. Between 2010 and 2014, the DSP area averaged 1.62 persons per household, while the City averaged 2.63 persons per household.[59] Using this factor, the projected population increase associated with development under the proposed DSP would be 21,710 persons. As discussed earlier in this section, population increases and decreases are not, in and of themselves, considered physical environmental effects. Physical environmental effects that would be a result of population growth within the DSP area are examined in the appropriate environmental resource sections of this EIR.

Proposed DSP Employment

It is anticipated that up to 3,820,394 sf of new non-residential uses and 750 hotel rooms would be built in the DSP area. In addition, there would also be up to 3,352,650 sf of new backfill non-residential development that would occur within existing buildings. Together the proposed DSP would allow for a total development potential of 7,173,044 sf of non-residential uses in the DSP area. Development of the non-residential uses in the DSP area would create an estimated 22,751 jobs in a variety of employment sectors, including food service, government, office, retail, services, and medical. Projected DSP employment by general plan land use designation is summarized in **Table 3-4**.

Proposed DSP Affordable Housing

The 2013-2021 Housing Element contains goals and policies designed to aid in the development, improvement, and maintenance of housing across the City of Sacramento. The City believes that diversifying the current housing stock and creating a range of alternative housing options as a major component in the establishment of strengthened neighborhoods. The City has identified several areas where rehabilitation can occur to promote sustainability in the existing housing stock. The DSP would accommodate a diverse range of market-rate and affordable housing options and would also provide for a variety of housing types of varying densities and tenures to cater to the City's diverse housing demands.

[59] U.S. Census Bureau, Census 2000, Summary File 1, 2016; U.S. Census Bureau, 2010-2014 American Community Survey, 2016; Bay Area Economics. 2016. *Sacramento Downtown Specific Plan Draft Housing Market Analysis, Phase I and Phase II*. November. p. 6.

Proposed DSP Jobs-Housing Relationship

As described above, it is anticipated that up to 13,401 new housing units could be built in the DSP area over the next 20 years, and development of the non-residential uses in the DSP area could create an estimated 22,751 jobs in a variety of employment sectors, including food service, government, office, retail, services, and medical. Based on these housing unit and employment estimates the jobs-housing ratio for new development under the proposed DSP would be 1.7.

The 2035 General Plan anticipates that the City of Sacramento's employment base in 2035 would be 386,215, with a total of 260,699 residential units, which would result in a jobs-housing ratio of 1.48.[60] Consequently, implementation of the DSP could result in an increase in the projected imbalance between jobs and housing in the City over the next 20 years. However, as noted in General Plan MEIR, over time, several factors, including recent demographic trends and ongoing housing and development patterns would likely result in a more balanced ratio of jobs and housing in the City, along with a reduction in vehicle trips and associated pollutant emissions and congestion on area roadways and intersections. Major infill projects, including the Railyards and Township 9 developments, as well as recently approved loft, condominium, and single-family residential projects in the CBD and Midtown neighborhoods provide a wide range of housing types as well as housing and employment centers in close proximity to transit, bike lanes, and the network of sidewalks.[61]

60 City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report*. Certified March 3, 2015. p. 3-10.

61 *Ibid*.

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CHAPTER 4
Environmental Setting, Impacts, and Mitigation Measures

4.0 Introduction to the Analysis

This Environmental Impact Report (EIR) evaluates the physical environmental effects that would be potentially affected by the implementation of the proposed DSP.

4.0.1 Definitions of Terms Used in the EIR

This EIR uses a number of terms that have specific meaning under CEQA. Among the most important of the terms used in the EIR are those that refer to the significance of environmental impacts. The following terms are used to describe environmental effects of the proposed plan:

- **Significance Criteria:** A set of criteria used by the lead agency to determine at what level or threshold an impact would be considered significant. Standards of Significance used in this EIR include those standards provided by the City of Sacramento. In determining the level of significance, the analysis assumes that the DSP would comply with relevant federal, State, and local regulations and ordinances.

- **Significant Impact:** A project impact is considered significant if the DSP would result in a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project-related physical change compared to specified significance criteria. A significant impact is defined as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance."[1]

- **Potentially Significant Impact:** A potentially significant impact is identified where the Proposed Project may cause a substantial adverse change in the environment, depending on certain unknown conditions related to the project or the affected environment. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.

- **Less-than-Significant Impact:** A project impact is considered less than significant when the physical change caused by the Proposed Project would not exceed the applicable significance criterion.

[1] State CEQA Guidelines, section 15382.

- **Significant and Unavoidable Impact:** A project impact is considered significant and unavoidable if it would result in a substantial adverse physical change in the environment that cannot be feasibly avoided or mitigated to a less-than-significant level.

- **Cumulative Impact:** Under CEQA, a cumulative impact refers to "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."[2] Like any other significant impact, a significant cumulative impact is one in which the cumulative adverse physical change would exceed the applicable significance criterion and the DSP's contribution is "cumulatively considerable."[3]

- **Mitigation Measure:** A mitigation measure is an action that could be taken that would avoid or reduce the magnitude of a significant impact. Section 15370 of the State CEQA Guidelines defines mitigation as:

  a. Avoiding the impact altogether by not taking a certain action or parts of an action;

  b. Minimizing impacts by limiting the degree of magnitude of the action and its implementation;

  c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

  d. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and

  e. Compensating for the impact by replacing or providing substitute resources or environments.

4.0.2 Section Format

Chapter 4 is divided into technical sections (e.g., Section 4.1, Aesthetics, Light, and Glare) that present for each environmental resource issue area the physical environmental setting, regulatory setting, significance criteria, methodology and assumptions, and impacts on the environment. Where required, potentially feasible mitigation measures are identified to lessen or avoid significant impacts. Each section includes an analysis of project-specific and cumulative impacts for each issue area.

The technical environmental sections each begin with a description of the DSP's **environmental setting** and the **regulatory setting** as it pertains to a particular issue. The environmental setting provides a point of reference for assessing the environmental impacts of the proposed plan and plan alternatives. The environmental setting discussion addresses the conditions that exist prior to implementation of the DSP. This setting establishes the baseline by which the proposed plan and plan alternatives are measured for environmental impacts. The regulatory setting presents relevant information about federal, state, regional, and/or local laws, regulations, plans or policies that pertain to the environmental resources addressed in each section.

[2] State CEQA Guidelines, section 15355.
[3] State CEQA Guidelines, section 15130(a).

Next, each section presents **significance criteria**, which identify the standards used by the City of Sacramento to determine the significance of effects of the proposed plan. The significance criteria used for this analysis were derived from the City of Sacramento's established significance standards, which, in turn, reflect policies of the 2035 General Plan, as well as other criteria applicable under CEQA, including thresholds established by trustee and responsible agencies.

A **methods and assumptions** description in each section presents the analytical methods and key assumptions used in the evaluation of effects of the proposed plan, and is followed by an **impacts** and **mitigation** discussion. The impact and mitigation portion of each section includes impact statements, prefaced by a number in bold-faced type. An explanation of each impact is followed by an analysis of its significance. The subsection concludes with a statement that the impact, following implementation of the mitigation measure(s) and/or the continuation of existing policies and regulations, would be reduced to a less-than-significant level or would remain significant and unavoidable.

The analysis of environmental impacts considers both the construction and operational phases associated with implementation of the proposed plan. As required by section 15126.2(a) of the State CEQA Guidelines, direct, indirect, short-term, long-term, onsite, and/or off-site impacts are addressed, as appropriate, for the environmental issue area being analyzed. Under CEQA, economic or social changes by themselves are not considered to be significant impacts, but may be considered in linking the implementation of a plan to a physical environmental change, or in determining whether an impact is significant.

Where enforcement exists and compliance can be reasonably anticipated, this EIR assumes that the proposed plan would meet the requirements of applicable laws and other regulations.

Mitigation measures pertinent to each individual impact, if available, appear after the impact discussion section. The magnitude of reduction of an impact and the potential effect of that reduction in magnitude on the significance of the impact is also disclosed. An example of the format is shown below.

Impacts and Mitigation Measures

Impact 4.X-1: Impact Statement.

A discussion of the potential impact of the DSP on the resource is provided in paragraph form. To identify impacts that may be site- or project element-specific, where appropriate, the discussion differentiates between construction effects and operational effects. A statement of the level of significance before application of any mitigation measures is provided in **bold**.

Mitigation Measure

If the impact is determined to be less than significant, the text here will say, "None required." If the impact is determined to be potentially significant, mitigation will be listed here.

Mitigation Measure 4.X-1:

Recommended mitigation measure in italics and numbered in consecutive order, provided in italics.

Where appropriate, one or more potentially feasible mitigation measures are described. If necessary, a statement of the degree to which the available mitigation measure(s) would reduce the significance of the impact is included in **bold**.

Cumulative Impacts

An analysis of cumulative impacts follows the project-specific impacts and mitigation measures evaluation in each section. A cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other past, present and reasonably foreseeable projects causing related impacts.[4]

The beginning of the cumulative impact analysis in each technical section includes a description of the cumulative analysis methodology and the geographic or temporal context in which the cumulative impact is analyzed (e.g., the City of Sacramento, the Sacramento Valley Air Basin, other activity concurrent with project construction). In some instances, a project-specific impact may be considered less than significant, but when considered in conjunction with other cumulative projects or activities may be considered significant or potentially significant.

As noted above, where a cumulative impact is significant when compared to existing or baseline conditions, the analysis must address whether the project's contribution to the significant cumulative impact is "considerable." If the contribution of the project is considerable, then the EIR must identify potentially feasible measures that could avoid or reduce the magnitude of the project's contribution to a less-than-considerable level. If the project's contribution is not considerable, it is considered less than significant and no mitigation of the project contribution is required.[5] The cumulative impacts analysis is formatted the same as the project-specific impacts, as shown above.

4 State CEQA Guidelines section 15355.
5 State CEQA Guidelines section 15130(a)(3).

4.1 Aesthetics, Light, and Glare

This section describes existing visual resources in the DSP area and vicinity and describes the changes to those conditions that would result from implementation of the proposed DSP.

The Environmental Setting includes descriptions of existing visual characteristics of the DSP area. Existing plans and policies relevant to urban design and visual resource issues associated with implementation of the proposed DSP are provided. Potential impacts to aesthetic and visual resources resulting from implementation of the proposed DSP are evaluated in the context of existing conditions based on analyses of photographs, site reconnaissance, and project data. Where significant impacts are identified, potentially feasible measures that could be undertaken to avoid or reduce the magnitude of those significant impacts are described.

A Notice of Preparation (NOP) for preparation of this EIR was circulated for public review from February 15, 2017 to March 17, 2017. During the public comment period, two letters were received which included comments on visual resource issues related to the proposed DSP. The comments addressed the following issues:

- Encouragement of appropriate building massing and scale.
- Bothersome lighting from landfills.
- Elevated landfill areas that are highly visible to surrounding areas.

This section addresses building massing and scale. This section does not address visual resource issues related to landfills because the proposed DSP would not allow for construction or operation of new landfill facilities in the DSP area, and is not anticipated to result in changes to existing landfill facilities that would result in visual changes that would affect views to or from the DSP area.

The analyses included in this section were developed based on site visits and documented photographs, review of the proposed DSP and policies, and information and policies provided in the City of Sacramento 2035 General Plan, the City of Sacramento 2035 General Plan Master Environmental Impact Report, the Central City Community Plan (CCCP), the Central City Urban Design Guidelines.

4.1.1 Environmental Setting

Regional Setting

The City of Sacramento is characterized by a downtown urban core surrounded by suburbs and agricultural land. To the east, on clear days, the foothills of the Sierra Nevada Mountains provide a backdrop to the visual setting of the City. Downtown Sacramento is framed by a grid pattern of bisecting streets. Buildings range from one- and two-story single-family residences to large high-rise office buildings. Buildings are clad in a multitude of materials, including metal, glass, wood, brick, and stone. Typical of the visual character of a downtown area of a city, the Central

Business District (CBD) of Sacramento is characterized by larger multi-story buildings constructed of metal and glass. High-rise buildings in downtown Sacramento range in height from approximately 150 feet to 425 feet. The DSP area is also characterized by the intense urban forest of street trees that line almost all streets. During summers the trees become a canopy of green leaves that shade the DSP area most of the day; during winters these largely deciduous trees lose their leaves, with the trunk and branch structures becoming dominant features of the visual landscape.

Sacramento's downtown skyline is visible from nearby locations such as the West Sacramento riverfront, the State Route (SR) 160 and Business 80 bridges over the American River, as well as from miles around the city, including from eastbound Interstate 80 (I-80) on the Sacramento-Yolo Causeway, from westbound I-80 east of the City of Roseville, from northbound Interstate 5 (I-5) between Elk Grove and Sacramento, from southbound I-5 in Natomas north of the downtown area, and from westbound US 50 as far east as El Dorado Hills. High-rise buildings are the distinctive features of the skyline.

In most areas within the City, surrounding development includes artificial light sources that provides ambient nighttime light in the vicinity. Headlights from motor vehicles contribute to the ambient light conditions. Some freeways in the City are landscaped. Such sections of freeways are improved by planting of lawns, trees, shrubs, flowers or other ornamental vegetation on at least one side and/or in the median of the freeway. None of the freeway segments within the City, including I-5 as it passes through downtown Sacramento, have been identified by the California Department of Transportation (Caltrans) as scenic.[1]

The City is located at the confluence of the Sacramento and American Rivers, which occurs at the northwest corner of the Central City adjacent to the River District Specific Plan area. These river corridors create two of the primary natural scenic resources of the DSP area. The Sacramento River flows in a north to south, and serves as the western boundary for much of the city. The American River flows westward on the northern boundary of the DSP area and meets the Sacramento River just west of I-5. The American River Parkway, an open space greenbelt/ riparian corridor, extends 29 miles from the confluence of the Sacramento River east to Folsom Dam. The two rivers create a permanent visual break in the pattern of urban development, and provide a scenic contrast to the urbanized DSP area.

The American River is designated as a recreational river under the Wild and Scenic Rivers Act from the confluence with the Sacramento River to Nimbus Dam, located just east of the city. This prohibits federal construction, assistance, or licensing of water projects "adversely affecting the characteristics qualifying the river for the national system." This designation recognizes the importance of recreational opportunities and preservation of the river's natural qualities.[2]

[1] California Department of Transportation, 2017. *California Scenic Highway Program.* Available: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed April 11, 2017.
[2] City of Sacramento, 2014. *City of Sacramento 2035 General Plan Draft Master Environmental Impact Report.* August 2014. p. 4.13-1.

DSP Area

The DSP area comprises several neighborhoods and corridors, including the CBD, Midtown/ Winn Park/Capitol Avenue, Old Sacramento, Alkali Flat, Mansion Flats, New Era Park, Boulevard Park, Marshall School, Southside Park, Richmond Grove, and Newton Booth. Major corridors within the DSP area include sections of J Street, K Street, R Street, 12th Street, 16th Street, 19th Street, 21st Street, Capitol Mall, Capitol Avenue, and Broadway. An overview of the visual characteristics of the DSP area is provided below (see **Figure 4.1-1**).

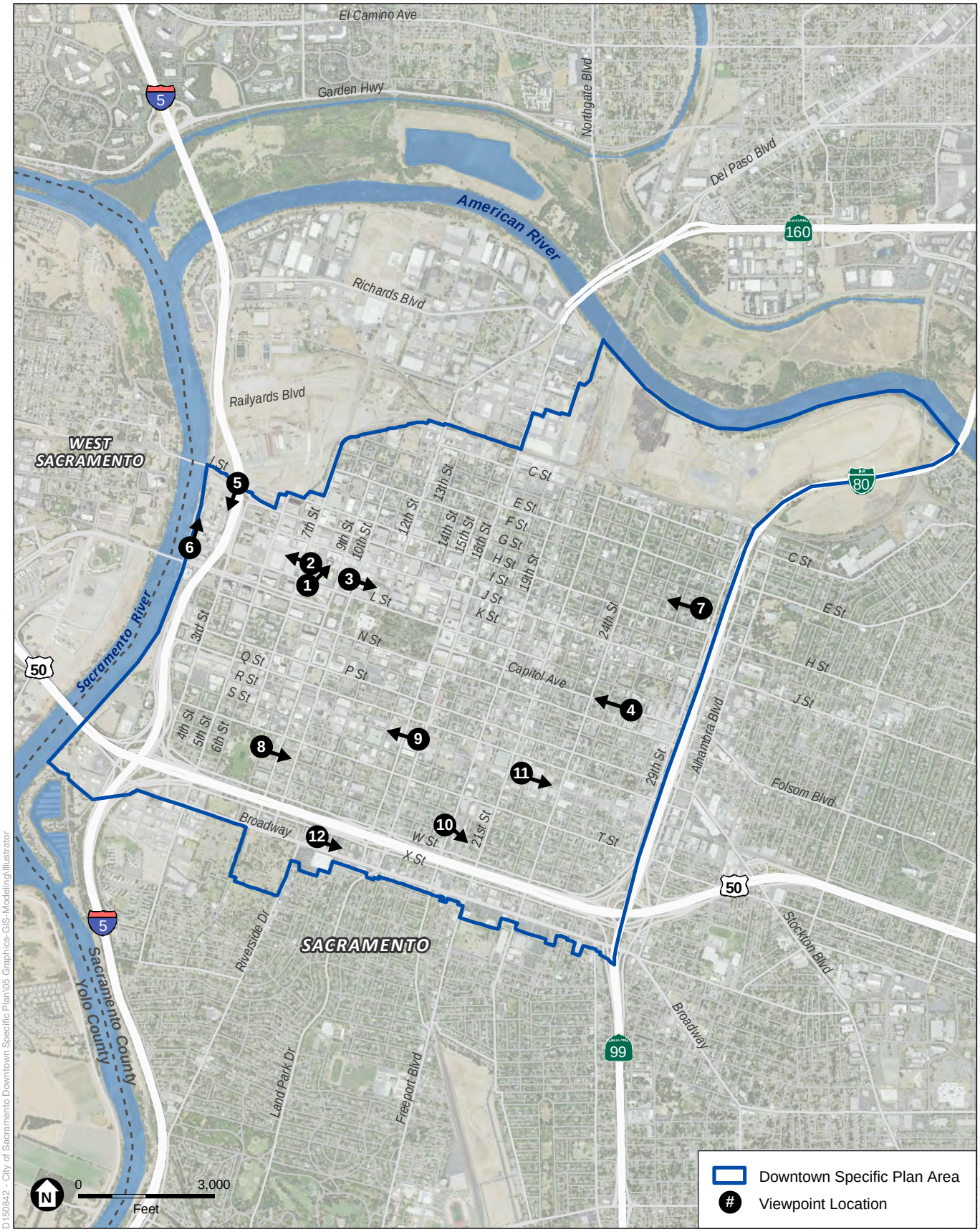
Central Business District

The CBD is defined as the area generally bounded by I Street to the north, I-5 to the west, P Street to the south, and 16th Street to the east. The CBD is a developed urban area characterized by a wide mix of building types and sizes and other urban features. Much of the CBD is developed in mid-rise buildings ranging from two to six stories, multi-story high rises constructed mainly of stone, brick, metal and glass, interspersed with parks and municipal uses. More recently constructed buildings tend to be taller than the older buildings. The CBD includes buildings of varying styles, from the 1920s Italianate masonry and terra-cotta facades, to the 1950s-era modern steel and glass clad exteriors, to more recently constructed postmodern buildings.

Visually prominent buildings in the CBD, which are also visible from outside the DSP area, include the Wells Fargo Center at 400 Capitol Mall, a 423-foot tall postmodern, granite skyscraper with a light-brown façade; the 500 Capitol Mall building, a 420-foot-tall postmodern skyscraper with a light-brown-granite-and blue-glass curtain-wall façade; the US Bank Tower at 621 Capitol Mall, a 403-foot-tall postmodern skyscraper with a steel, light-brown-granite, and blue-glass curtain-wall façade; the US Bank Plaza at 845 J Street, a 381-foot-tall postmodern skyscraper with a brick curtain-wall façade; the California Environmental Protection Agency Building at 1001 I Street, a 371-foot-tall postmodern skyscraper with light-grey-granite-and-blue-glass façade; the Robert T. Matsui Federal Building and U.S. Courthouse at 501 I Street, a 351-foot-tall postmodern skyscraper with a light-brown-granite-and-glass façade; and the Renaissance Tower at 801 K Street, a 371-foot-tall, postmodern skyscraper with steel-and-dark-glass façade (see **Figure 4.1-2**).

The Golden 1 Center at 500 David J. Stern Walk is an indoor arena in the CBD that opened in September 2016. The building's multi-faceted façade rises approximately 100 feet above grade and is created from materials that include recycled aluminum, precast concrete, and glass (see Figure 4.1-2). Extending westward from the Golden 1 Center, K Street is a mixed-use entertainment and shopping district bounded on the south by L Street and the State Capitol, to the north by J Street, the Golden 1 Center on the west end, and the Convention Center to the east.

Situated along a portion of the future Sacramento streetcar route, views within the K Street mall include the facades of predominately low- and mid-rise buildings of varying architectural styles, materials, and colors; signs of various sizes, colors, and lighting schemes attached to the buildings and signifying the commercial, retail, and restaurant uses within; various species of street trees that line either side of the brick street surface; the regular movement of Sacramento



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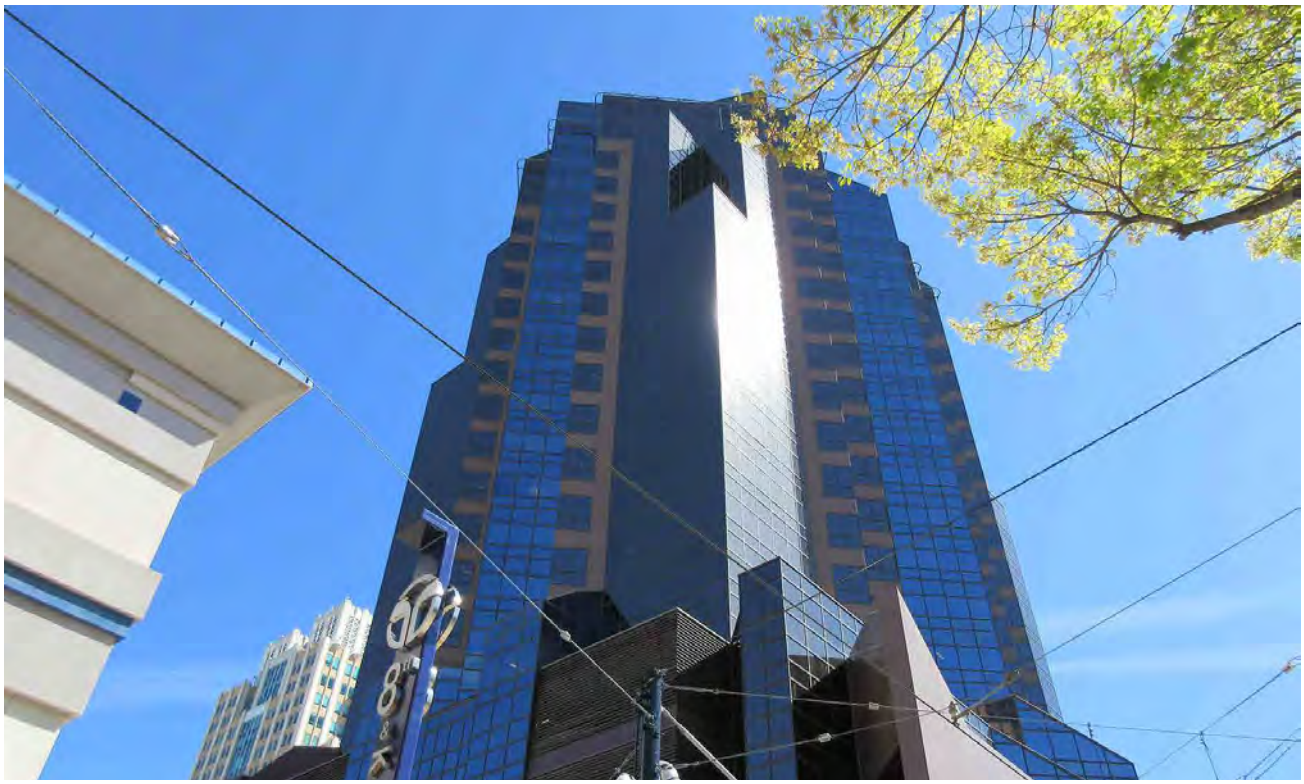
SOURCE: ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.1-1
Aesthetics Photo Location Map

ESA



Viewpoint 1: The Renaissance Tower at 801 K Street. View facing northeast.

Viewpoint 2: The Golden One Center viewed from K and 7th streets. View facing west.

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SOURCE: ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.1-2
DSP Area Viewpoints 1 and 2

ESA

Regional Transit District light rail transit cars; and human activity in the form of pedestrian movement and seated patrons in the outdoor seating areas of the many restaurants, coffee shops, bars, and cafes located along K Street (see **Figure 4.1-3**).

The neoclassical State Capitol building at 1000-1030 L Street is a key scenic landmark within CBD, owing to its governmental and historic importance. The visual prominence of the Capitol is accentuated by its distinctive and traditional architectural design, its height and massing, and its isolated location on a raised terrain and open landscaping of the Capitol grounds and Capitol Park. Extending west from the Capitol Building is Capitol Mall, a wide boulevard between the Capitol and the Tower Bridge crossing of the Sacramento River. Views of Capitol Mall are characterized by the mostly tree-lined roadway, which includes two lanes each of west- and eastbound traffic, divided in the middle with a broad, turf-covered median strip. The views on Capitol Mall are accentuated by the large massing of mid-rise and high-rise buildings that line the street with a large uniform setback that makes the view of the corridor substantially wider and more open than the street right of way itself.

Midtown/Winn Park/Capitol Avenue

Sacramento's Midtown neighborhood is bordered by R Street on the south, J Street on the north, 16th Street on the west and 30th Street on the east. Midtown is characterized by tree-lined streets flanked by residences of a multitude of ages, heights, colors, materials, and architectural styles, including Italianate, Colonial Revival, Craftsman, Prairie Style, Victorian, and Greek Revival, among others. Interspersed among the traditional residential neighborhoods are commercial corridors and other distinct pockets of more typically urban uses, including recently constructed residential loft and mixed-use buildings with granite, metal, and glass facades, and restaurants, cafes, shops, boutiques, galleries, supermarkets, office buildings, and auto repair shops of varying heights, styles, colors, materials, and ages.

Winn Park is a 3-acre park bounded by 27th Street to the north, 28th Street to the south, Q Street to the west, and P Street to the east. The park is characterized visually be the X-shaped pattern of walkways that traverse the park, a fenced tot lot, and stands of mature trees.

Extending from 16th Street, near the eastern edge of Capitol Park to 30th Street on the eastern edge of the DSP area, Capitol Avenue is a visually prominent corridor within the DSP area, combing a mixture of mid-rise governmental, office, and commercial buildings of various heights, colors, and architectural styles from Capitol Park to 22nd Street, to a predominately residential corridor shrouded by a dense tree canopy from 22nd Street to 26th Street (see Figure 4.1-3), to a mixture of mainly office, church, hospital, and restaurant buildings of various heights and styles from 26th Street to 30th Street. Visually prominent buildings in this eastern segment of Capitol Avenue include the red-brick Trinity Episcopal Cathedral at 2620 Capitol Avenue, the English Revival Old Tavern building at 2801 Capitol Avenue, and the postmodern Anderson Lucchetti Women's and Children's Center high-rise hospital building within the Sutter Medical Center at 2825 Capitol Avenue.

Viewpoint 3: K Street Mall near 11th Street. View facing east.

Viewpoint 4: Capitol Avenue near 26th Street. View facing west.

SOURCE: ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.1-3
DSP Area Viewpoints 3 and 4

ESA

A key scenic landmark (and historic resource) in Midtown is Sutter's Fort State Historic Park, which is bound by K, L, 26th, and 28th streets. Sutter's Fort consists of the original central two-story white adobe building, as well as reproductions of the surrounding structures such as stores, a print shop, and a blacksmith shop.[3] Sutter's Fort is situated on an elevated grade within a two-square block, 6-acre park that includes natural turf, unpaved pathways, a pond, and numerous mature trees. The California State Indian Museum, a white brick building with a cross-gabled roof is situated on the northwestern portion of the park.

Old Sacramento

Old Sacramento is an historic commercial district and State Park within the DSP area bounded generally by the Sacramento River to the west, I-5 to the east, I Street to the north, and Capitol Avenue to the south. The visual character of Old Sacramento is that of the mid-nineteenth century gold rush town from which it originated. Virtually all of the buildings in Old Sacramento date from the nineteenth century, and through preservation and rehabilitation efforts have largely retained their original appearance. Most of the buildings are multi-storied masonry structures with large arched doorways and full-height balcony windows. Many of the buildings have decorative wrought-iron balconies. Most of the buildings include signage that reflects restaurants, gift shops, or other businesses catering to tourists (see **Figure 4.1-4**).

Located along the waterfront, Old Sacramento provides views of the Sacramento River, the Tower Bridge and I Street Bridge, and portions of the City of West Sacramento located across the Sacramento River. The West Sacramento riverfront is largely in a natural condition as viewed from the Old Sacramento riverfront. However, two buildings in West Sacramento, the Ziggurat Building, an 11-story, 158-foot office building with a distinctive ziggurat shape, and the California State Teachers Retirement System (CalSTRS) headquarters building, a 19-story, 300-foot-tall, steel-and-glass-façade skyscraper, are visible from the Old Sacramento riverfront.

Alkali Flat

The Alkali Flat neighborhood is generally bounded by the UPRR railroad tracks and embankment to the north, 7th Street to the west, G Street to the south; and 12th Street to the east. One of the first residential neighborhoods in Sacramento, Alkali Flat is characterized visually by numerous mature trees and several historic buildings, including brick or wood homes constructed in the mid-nineteenth century, Victorian homes, and historic commercial buildings. Numerous newer residential buildings are present in Alkali Flat, including The Creamery with 3-story residences in a modern brownstone style.

Among the more visually prominent structures in the Alkali Flat neighborhood are the Globe Mills Building at 1131 C Street and the 550-foot-tall KCRA radio tower located at 9th and D Street. Operating historically as a grain and flour mill, the Globe Mills Building has been adaptively repurposed as an apartment complex called the Lofts at Globe Mills. The concrete

[3] City of Sacramento, 2014. Sacramento 2035 General Plan Background Report. Public Review Draft, August 2014. p. 6-123.

Viewpoint 5: Second Street in Old Sacramento. View facing south.

Viewpoint 6: Front Street in Old Sacramento. View facing north.

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SOURCE: ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.1-4
DSP Area Viewpoints 5 and 6

ESA

walls and circular poured-concrete silos from the original mill building remain in the large, block-shaped, tan structure situated on the northeast portion of the Alkali Flat neighborhood.

Mansion Flats

Mansion Flats is a neighborhood generally bounded by 12th Street on the west, J Street on the south, 16th Street on the east, and the UPRR railroad tracks on the north. Primarily a residential neighborhood, Mansion Flats is characterized visually by brick or wood homes constructed in the mid-nineteenth century arranged on a grid street pattern and shaded by mature trees. Visually prominent buildings and structures in the southern portion of Mansion Flats, along H, I, and J Streets, include the three-story Victorian historic Governor's Mansion as 1526 H Street, which is listed on the National Register of Historic Places; the Wells Fargo Pavilion 1419 H Street, with its distinctive round main theater building and white roof shaped to conform to the shape of the underlying circus tent; and the Sacramento Memorial Auditorium at 1515 J Street. Composed mainly of brick, with elements of stone, plaster, and terra cotta, the Memorial Auditorium is a multi-purpose venue completed in 1926 and listed on the National Register of Historic Places.

New Era Park

New Era Park is a residential neighborhood bordered by E Street to the south, the UPRR tracks to the north, 29th Street to the east, and 16th Street to the west. The neighborhood portion of New Era Park is visually characterized by residences of a multitude of ages, heights, colors, materials, and architectural styles, including Craftsman and Prairie Style, situated in a grid street pattern shaded by various species of mature trees.

Immediately north the New Era Park neighborhood and within the DSP area is an expanse of largely undeveloped land within the Sutter's Landing Area Master Plan area that extends from the northern boundary the New Era Park neighborhood to the American River. This area is characterized visually by barren land with sparse groupings of trees and other vegetation; a large array of dark-blue solar panels on a paved surface; earthen and debris mounds, various discarded vehicles, and other refuse that comprise a closed landfill; metal equipment and sheds associated with former sand and gravel operations; and the paved surface, transformers, and assorted non-descript buildings and equipment that comprise an 11-acre Sacramento Municipal Utility District property on the eastern edge of the expanse of undeveloped land. Immediately west of this expanse of undeveloped land, north of the New Era Park neighborhood, and also within the DSP area, large concrete and metal industrial buildings, including those of Blue Diamond Growers and Capital Machine, are visually consistent with industrial and commercial buildings and structures in the adjacent River District, north and west of the DSP area.

Sutter's Landing Park is within the DSP area and located immediately east of the aforementioned expanse of undeveloped land and north of the New Era Park neighborhood. Comprising mostly unimproved land, Sutter's Landing Park includes several improvements and features that stand in visual relief to the largely unadorned natural landscape, including basketball courts (one full court and one half court), bocce ball courts with shade canopy seating areas, landscaping, shade structures, walkways, parking lots, a dog park, and a large corrugated metal building that houses

the Sutter's Landing Skate Park. From ground level, along the gravel levee trail that traverses the northern extent of the expanse of undeveloped land and Sutter's Landing Park, direct views of the American river and its vegetated northern bank are intermittently obscured by trees and other vegetation.

Boulevard Park

The Boulevard Park neighborhood is immediately south of the New Era Park neighborhood, and is bounded by E Street to the north, J Street to the south, 16th Street to the west, and 24th Street to the east. It is also recognized as the Boulevard Park Historic District, listed on the National Register of Historic Places. Boulevard Park is primarily a residential neighborhood situated in the familiar grid street pattern and shaded by various species of mature trees. Boulevard Park is noted for its exceptionally preserved late Victorian and Cube type structures. The southern extent of Boulevard Park, along J Street between 16th and 24th Streets, is characterized visually by low-rise and mid-rise commercial, retail, restaurant, and office buildings of varying heights, colors, materials, and styles along with numerous street trees and other ornamental plantings.

Marshall School

The Marshall School neighborhood is bounded by D Street to the north, J Street to the south, Business 80 to the east, and 25th Street to the west. Marshall School is primarily a residential neighborhood situated on a grid street pattern and shaded by the canopies of various species of large mature trees (see **Figure 4.1-5**). Residential architecture in the Marshall School neighborhood includes Victorian, Craftsman, and Prairie Style situated among other nondescript constructions. Marshall School is named for the original K-12 school of the same name at 2718 G Street, a green mansion-like building that is currently vacant.

Southside Park

The Southside Park neighborhood is bounded by R Street to the north, the W/X freeway to the south, I-5 to the west, and 12th Street to the east. Southside Park is primarily a residential neighborhood situated on a grid street pattern and shaded by various species of mature trees (see Figure 4.1-5). Residential architecture in the Marshall School neighborhood includes Craftsman and Prairie Style situated among other nondescript constructions. Southside Park, for which the neighborhood is named, is an approximately 20-acre park bounded by T Street to the north, W Street to the south, 6th Street to the west, and 8th Street to the east. Visually prominent features in Southside Park include the natural pond that forms its centerpiece, the multi-colored mural that serves as a backdrop to the park's amphitheater, the colorful and textured pathways of the park's "Universal Universe" playground, and stands of mature trees.

Richmond Grove

The Richmond Grove neighborhood is bounded by R Street to the north, the W/X freeway to the south, 12th Street to the west, and 19th Street to the east. Richmond Grove is primarily a residential neighborhood situated on a grid street pattern and shaded by various species of mature trees. The Richmond Grove neighborhood includes numerous well-preserved historic homes in a wide variety of architectural styles, including Victorian, Tudor, Colonial Revival, and Spanish Colonial.

Viewpoint 7: G Street at 27th Street in Marshall School neighborhood. View facing west.

Viewpoint 8: U Street between 9th and 10th streets in Southside Park. View facing east.

SOURCE: ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.1-5
DSP Area Viewpoints 7 and 8

ESA

Located on three half-blocks bounded by 16th Street, 18th Street, R Street, and Rice Alley, the Ice Blocks project is being developed and includes a 6-story residential apartment building and commercial-retail and office buildings. At the corner of 19th and S Streets, immediately east of the Ice Blocks project, is a one-to-two story, red brick commercial shopping center.

Views along the R Street corridor, west of the Ice Blocks project, on the northern boundary of Richmond Grove include a mixture of low-rise and mid-rise industrial buildings, warehouse buildings, mid-century office buildings of varying colors and materials, including brick, stucco, and concrete. Some of the buildings have been adaptively repurposed as residential, restaurant, and retail properties as part of ongoing redevelopment efforts that are gradually changing the visual character of portions of the R Street corridor from strictly office/industrial setting to a lively urban commercial district (see **Figure 4.1-6**).

South of the R Street corridor and east and west of the BNSF Railway tracks that extend through the DSP area between 19th and 20th Streets, the burgeoning S Street commercial corridor includes a mix of modern commercial and retail buildings and former industrial buildings that have been converted to commercial and retail uses, situated among recently constructed and long-established multi-family attached and single-family detached dwelling units of varying styles, materials, and colors.

Poverty Ridge

The Poverty Ridge neighborhood is bounded by R Street to the north, the W/X freeway to the south, 19th Street to the west, and 25th Street to the east. Situated on a slight rise within the largely flat DSP area, Poverty Ridge is primarily a residential neighborhood situated on a grid street pattern and shaded by various species of mature trees. The residential portion of the neighborhood contains an eclectic blend of architectural styles, including Colonial Revival, Craftsman, Italianate, Tudor Revival, and Prairie Style.

Views along the R Street corridor on the northern boundary of Poverty Ridge include a mixture of low-rise and mid-rise industrial buildings, warehouse buildings, mid-century office buildings of varying colors and materials, including brick, stucco, and concrete. Wooden and metal power poles and overhead lines and Sacramento Regional Transit District tracks, overhead power lines, and trains in motion are also visually prominent features in this area (see **Figure 4.1-7**). The aforementioned S Street commercial corridor is also located in Poverty Ridge.

Newton Booth

The Newton Booth neighborhood is bounded by R Street to the north, the W/X freeway to the south, 25th Street to the west, and 29th Street to the east. Newton Booth is primarily a residential neighborhood situated on a grid street pattern and shaded by various species of mature trees. Residential architecture in the Newton Booth neighborhood includes Craftsman, Four-Squares, Victorians, and Tudors amongst other architectural styles. The neighborhood was named for the former Californian governor and the two-story, red-brick with tile roof Newton Booth Assembly School (now the Merryhill Elementary and Middle School) at 2600 V Street.

Viewpoint 9: R Street near 14th Street. View facing west.

Viewpoint 10: Craftsman style home on elevated portion of Poverty Ridge. View facing southwest.

SOURCE: ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.1-6
DSP Area Viewpoints 9 and 10

Viewpoint 11: R Street near 24th Street. View facing east.

Viewpoint 12: Broadway and 14th Street. View facing east.

SOURCE: ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.1-7
DSP Area Viewpoints 11 and 12

Broadway Corridor

The DSP area includes the Broadway corridor, which is generally bounded by the Sacramento riverfront on west, 28th Street to the east, the W/X Freeway on the north and one parcel south of Broadway on the south. The Broadway corridor is home to a wide variety of commercial buildings, residences, government facilities, and industrial centers. The visual character of the Broadway corridor is generally that of an eclectic mix of commercial and industrial, mostly one- or two-story nondescript commercial buildings, parking lots, gas stations. With a few exceptions, buildings located along Broadway are predominantly low-rise and include various office and industrial buildings, restaurants, fast food restaurants, bars, gas stations, drug stores, and other retail and commercial buildings of various heights, shapes, sizes, and color schemes (see Figure 4.1-7).

Visually prominent buildings and features along Broadway include the recently renovated six-story postmodern concrete-and-glass-façade DMV headquarters building at 2415 1st Avenue; the neon-lighted, the rail tracks and steel structure of the RT Broadway Station, the 100-foot-high art deco tower and complex of mature palm and cypress trees at the Tower Theater at 2508 Land Park Drive; the red brick barracks-like brick buildings that comprise the Alder Grove housing project at 2530 Muir Way, and the red-steel KXTV transmission tower at 400 Broadway (near the intersection of 3rd Street and Broadway).

There are several visually distinctive open spaces are located in the western end of the Broadway Corridor. At the intersection of Broadway and Riverside Drive, the Sacramento Historic City Cemetery stretches on the south side of Broadway. With its heavily-treed landscape and surrounding wrought iron fencing and landscaped street median, the Cemetery is a distinctive visual break from the commercial buildings to the east and residential buildings to the west. On the north side of Broadway between 6th and 8th Street is O'Neil Park, largely turfed with a dirt baseball diamond and surrounding street trees.

X Street is a tree-lined three-lane one-way street that parallels and serves as a frontage road for the adjacent elevated W/X Freeway. West of 6th Street the visual landscape is dominated by the elevated freeway and landscaped embankment, and one-story concrete block industrial buildings and vacant lots. Many parcels are surrounded by chain link fencing. Between 6th and 28th Streets, views from X Street include parking lots situated under the elevated freeway on the north side of the street, and a mixture of one-story residential and commercial buildings on the south side.

Views to and from the DSP Area

Skyline

Sacramento's downtown skyline is created by high-rise buildings and is highly visible from many locations throughout the region, including nearby locations such as the West Sacramento riverfront, the SR 160 and Business 80 bridges over the American River, as well as from miles around the City, including from eastbound I-80 on the Sacramento-Yolo Causeway, from westbound I-80 east of the City of Roseville, from northbound I-5 between Elk Grove and

Sacramento, from southbound I-5 north of the downtown area, and from westbound US 50 as far east as El Dorado Hills.

The average elevation in the DSP area is approximately 25 feet above sea level. The flatness of the landscape creates a striking visual contrast with the silhouette of downtown high-rises. This is particularly true of the view of the downtown skyline as one approaches from the west and north. Views of Midtown and other residential areas within the DSP area from elevated portions of I-5, I-80, and SR-51 (Business 80) offer a mix of building types and sizes, interspersed with parks, and trees.

Views to the West

The Sacramento River lies immediately to the west of the DSP area, and West Sacramento is on the west side of the river. Buildings and trees in West Sacramento are visible from portions of the DSP area, including from Old Sacramento, from the Sacramento River Bike Trail and Front Street extending south from Old Sacramento to Broadway, and from the Docks and Miller Park areas within the DSP area. The West Sacramento riverfront is largely in a natural condition as viewed the western edge of the DSP area, from Old Sacramento south to the Docks and Miller Park areas.

Two major buildings north of Tower Bridge are visible from the DSP area riverfront. The Ziggurat Building in West Sacramento is an 11-story, 158-foot office building with a distinctive ziggurat shape. The CalSTRS headquarters building is 19 stories over a two-level parking garage, approximately 300 feet in height.

The Bridge District (Triangle) Specific Plan (BDSP) is located within West Sacramento, south of the Gateway Boulevard. Several structures within the BDSP area are visible from the Sacramento riverfront between the Tower Bridge and Pioneer Bridge. The upper concrete and glass portions of the Raley Field baseball stadium, including portions of the stadium's large digital scoreboard, a billboard that sits atop the western portion of the stadium roof, and the upper portions of the six pole-mounted stadium lighting fixtures that surround the stadium and which are visible when unlit during the day and when lighted for nighttime stadium events, are visible from the Sacramento waterfront and points east of the waterfront within the DSP area. Southern portions of Habitat, a 96-unit apartment complex, and the Park Moderns, 32 single-family homes, both within the BDSP are also visible from the Sacramento waterfront within the DSP area and are constructed of concrete, wood, and glass materials of varying colors. Both residential developments sit within largely undeveloped land.

South of the Bridge District and immediately west of the I-80 bridge over the Sacramento River, industrial structures located on the Shell Oil, Ramos Oil, and Buckeye Terminal facilities are visible from the Docks and Miller Park areas within the DSP area. Several white cylindrical storage tanks are the most prominent visual features viewed from this portion of the DSP area.

Views to the North

The Railyards Specific Plan area and the River District lie to the north of the DSP area. The visible features of the Railyards Specific Plan area currently consists of the UPRR tracks.

Views of the Railyards Specific Plan area from downtown are generally from I Street where the existing Depot and adjacent Railway Express Agency (REA) buildings are the most visible structures. Both the Depot building and the REA building are distinguished by red brick facades with symmetrical elevations and patterned bricks that frame the windows. Limited views past those buildings and the recently constructed Amtrak passenger platforms and trains on the tracks provide glimpses of the Central Shops buildings, an historic water tower, and scattered vegetation in the Railyards Specific Plan area.

Views to Railyards Specific Plan area from Alkali Flat, east of 7th Street, are limited by the height of the railroad embankment, but generally are made up of scattered vegetation and large mounds of soil and other materials (e.g., broken concrete, railroad timbers, rusty metal).

Further to the north, the River District is an area undergoing a transition from primarily industrial uses to a mixture of one-story industrial, office, and residential buildings, parking lots, and trucking yards. Views to the River District from the northern edges of Alkali Flat and Mansion Flats within the DSP area are also limited by the height of the railroad embankment that forms the northern edge of the Railyards Specific Plan area.

Views to the East

Business 80 and the East Sacramento neighborhood lie to the east of the DSP area. Ground-level views of the East Sacramento neighborhood from 29th Street are dominated by the elevated concrete deck, cylindrical support columns, and abutments of the Business 80 freeway that runs along the entire eastern boundary of the DSP area. Various residential, commercial, office buildings, and restaurants to the east of Business 80 along 30th Street and Alhambra are visible beyond the freeway structure from cross-street locations along 29th Street.

Alhambra Boulevard, a major north-south arterial roadway, runs parallel to Business 80. Buildings that front Alhambra Boulevard include a variety of commercial retail and office buildings, ranging in height from one- to four-stories. McKinley Park is an approximately 30-acre, six square block community park located immediately east of Alhambra Boulevard between E Street/McKinley Boulevard and H Street. Views of McKinley Park are dominated by open turf, mature trees, a pond, ballfields, tennis courts, a large wooden play structure, and a swimming pool.

Views to the South

The DSP area is bordered on the south by the Curtis Park, Land Park, and Upper Land Park neighborhoods. Views to the south of the DSP area are primarily from the Broadway Corridor and vary substantially depending on location.

Mid-rise office buildings, associated parking lots, trees and landscaping within the parking lots, and intermittent views of tree-lined streets of residential neighborhoods in Curtis Park comprise the primary views between 28th and 21st Streets. From 21st Street to Riverside Boulevard, the fronts of commercial, restaurant, bar, office, and industrial buildings of varying heights, materials, and colors, combined with intermittent of views of tree-lined streets of residential neighborhoods in Land Park comprise the predominant views. From Riverside Boulevard to Muir Way, views are occupied by the black wrought-iron fence, turf, mature trees, landscaping, statues, and ornate stone grave markers and monuments within the portion of the Old City Cemetery within the DSP area. Views south from the Old City Cemetery within the DSP area, views consist primarily of the southern, more densely wooded portion of the Old City Cemetery that lies outside of the DSP area.

From Riverside Boulevard to the western boundary of the DSP area at the Sacramento riverfront, south-facing views (moving east to west) comprise the red brick buildings, turf lawns, and mature trees of the Alder Grove housing project that front Broadway; commercial, office, and industrial buildings of varying heights, materials, and colors, including the red brick KXTV office and studio building and associated multi-colored and decoratively paneled broadcast tower; trees, paved surface, fences, and corrugated-metal buildings within the Latino Center of Art and Culture within the Miller Park corporation yard; stands of mature trees and partial views of the blue corrugated metal structures that shade boat slips in the Sacramento River; and the trees, turf, paved surface of Marina View Drive within the portion of Miller Park immediately adjacent to the Sacramento riverfront.

Light and Glare

Introduction to Light and Glare

Nighttime lighting is necessary to provide and maintain safe, secure, and attractive environments; however, these lights have the potential to produce spillover light and glare, and if designed incorrectly, could be considered unattractive. Although nighttime light is a common feature of urban areas, spillover light can adversely affect light-sensitive uses, such as residential units at nighttime.

Ambient light levels or illumination is measured in foot-candles. **Table 4.1-1** lists typical ambient illumination levels in foot-candles for exterior and interior lighting. “Horizontal” foot-candles measure light illumination on a horizontal surface, such as a sidewalk or parking lot; “vertical” foot-candles measure light illumination on a vertical surface.

Glare results when a light source directly in the field of vision is brighter than the eye can comfortably accept. Squinting or turning away from a light source is an indication of glare. The presence of a bright light in an otherwise dark setting may be distracting or annoying, referred to as discomfort glare, or it may diminish the ability to see other objects in the darkened environment, referred to as disability glare. Reflective glare, such as the reflected view of the sun from a window or mirrored surface, can be distracting during the day.

TABLE 4.1-1
TYPICAL ILLUMINATION LEVELS IN FOOT-CANDLES

Light Source	Foot-Candles
Starlight	0.0002
Moonlight	0.02
Street Lighting	0.6-1.6
Office Lighting	70-150
Direct Sunlight	6,000-10,000

SOURCE: City of Sacramento, 2014. *Sacramento 2035 General Plan Background Report*. Public Review Draft, August 2014. Table 6-13, p. 6-122.

DSP Area Lighting and Glare

The DSP area is largely built-out, and a significant amount of artificial light and glare from urban sources already exists. The downtown area has a higher concentration of artificial light and reflective surfaces that produce glare than outlying residential areas due to the amount of artificial light associated with exterior building lights, lighted signs, street lights, roadways, signal lights, and parking area lights. Aside from streetlights, some of the most notable sources of nighttime light in the downtown skyline include colored light features on high-rise buildings such as the Esquire Building and US Bank Tower.

The City of Sacramento Public Works Department maintains approximately 40,000 street lights within the City limits. This includes light varieties from the newest street lights installed in North Natomas (outside of the DSP area) to the lights in the older parts of the City, which encompasses the majority of the DSP area, installed over 80 years ago. The majority of lights in the City are High Pressure Sodium (HPS), which produce an orange light. Older lights in some portions of the City still include Mercury Vapor lamps, which produce white light, while some newer lights use energy efficient light-emitting diodes (LED), which produce a white light that is even brighter than the comparable HPS.

Although many of the buildings in the DSP area are clad in non-reflective surfaces such as stone or terra cotta, the CBD contains a few notable sources of reflective glare, including several buildings with exteriors dominated by glass and/or mirrored glass, including 300 Capitol Mall, Renaissance Tower, 500 Capitol Mall, and the US Bank Tower.

Finally, automobiles traveling along nearby and adjacent roadways and highways also contribute to nighttime sources of light and glare in the DSP area.

4.1.2 Regulatory Setting

Federal

Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act (16 U.S. Code 1271-1287) established a method for providing Federal protection for certain free-flowing rivers, preserving them and their immediate environments for the use and enjoyment of present and future generations. Eligible rivers can be designated as Wild River Areas, Scenic River Areas, or Recreational River Areas. Recreational River Areas are those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past. The Wild and Scenic Rivers Act, under Section 10, includes management direction for designated rivers, with primary emphasis given to protecting its aesthetic, scenic, historic, archaeologic, and scientific features.

The American River from the Nimbus Dam to the confluence of the Sacramento River is designated as a Recreational River Area. The Sacramento River as it passes by the DSP area is not designated under the Wild and Scenic Rivers Act.

State

California Scenic Highway Program

California's Scenic Highway Program was created by the Legislature in 1963 to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the Streets and Highways Code.

A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. When a city or county nominates an eligible scenic highway for official designation, it must identify and define the scenic corridor of the highway. A scenic corridor is the land generally adjacent to and visible from the highway. A scenic corridor is identified using a motorist's line of vision. A reasonable boundary is selected when the view extends to the distant horizon. The corridor protection program does not preclude development, but seeks to encourage quality development that does not degrade the scenic value of the corridor. Jurisdictional boundaries of the nominating agency are also considered. The agency must also adopt ordinances to preserve the scenic quality of the corridor or document such regulations that already exist in various portions of local codes. These ordinances make up the scenic corridor protection program.

County roads can also become part of the Scenic Highway System. To receive official designation, the county must follow the same process required for official designation of State Scenic Highways.

According to the Caltrans list of designated scenic highways under the California Scenic Highway Program, there are no highway segments within the City of Sacramento that are designated scenic. SR 160 from the Contra Costa County line to the south limit of the City of Sacramento is the only officially designated state scenic highway near the City of Sacramento.[4] The DSP area is not visible from this portion of SR 160.

Local

City of Sacramento 2035 General Plan

The 2035 General Plan includes the following goals and policies that are relevant to the proposed DSP.

Land Use and Urban Design Element

The following policies of the Land Use and Urban Design Element of the 2035 General Plan address both the visual character of the city, the relationship of visual issues to new development, and how such issues relate to the usability and sense of place.

Goal LU 2.2 City of Rivers. Preserve and enhance Sacramento's riverfronts as signature features and destinations within the city and maximize riverfront access from adjoining neighborhoods to facilitate public enjoyment of this unique open space resource.

Policies

LU 2.2.1 **World-Class Rivers.** The City shall encourage development throughout the city to feature (e.g., access, building orientation, design) the Sacramento and American Rivers and shall develop a world-class system of riverfront parks and open spaces that provide a destination for visitors and respite from the urban setting for residents.

LU 2.2.3 **Improving River Development and Access.** The City shall require new development along the Sacramento and American Rivers to use the natural river environment as a key feature to guide the scale, design, and intensity of development, and to maximize visual and physical access to the rivers.

Goal LU 2.3 City of Trees and Open Spaces: Maintain a multi-functional "green infrastructure" consisting of natural areas, open space, urban forest, and parkland, which serves as a defining physical feature of Sacramento, provides visitors and residents with access to open space and recreation, and is designed for environmental sustainability.

Policies

LU 2.3.1 **Open Space System.** The City shall strive to create a comprehensive and integrated system of parks, open space, and urban forests that frames and complements the city's urbanized areas.

LU 2.3.2 **Adjacent Development.** The City shall require that development adjacent to parks and open spaces complements and benefits from this proximity by:

[4] California Department of Transportation, 2017. *California Scenic Highway Program.* Available: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed April 11, 2017.

- Preserving physical and visual access;
- Requiring development to front, rather than back, onto these areas;
- Using single-loaded streets along the edge to define and accommodate public access;
- Providing pedestrian and multi-use trails;
- Augmenting non-accessible habitat areas with adjoining functional parkland; and
- Extending streets perpendicular to parks and open space and not closing off visual and/or physical access with development.

Goal LU 2.4 City of Distinctive and Memorable Places. Promote community design that produces a distinctive, high-quality built environment whose forms and character reflect Sacramento's unique historic, environmental, and architectural context, and create memorable places that enrich community life.

Policies

LU 2.4.1 **Unique Sense of Place.** The City shall promote quality site, architectural and landscape design that incorporates those qualities and characteristics that make Sacramento desirable and memorable including: walkable blocks, distinctive parks and open spaces, tree-lined streets, and varied architectural styles. (RDR)

LU 2.4.2 **Responsiveness to Context.** The City shall require building design that respects and responds to the local context, including use of local materials where feasible, responsiveness to Sacramento's climate, and consideration of cultural and historic context of Sacramento's neighborhoods and centers. (RDR)

LU 2.4.3 **Enhanced City Gateways.** The City shall ensure that public improvements and private development work together to enhance the sense of entry at key gateways to the city. (JP)

LU 2.4.4 **Iconic Buildings.** The City shall encourage the development of iconic public and private buildings in key locations to create new landmarks and focal features that contribute to the city's structure and identity. (RDR/MPSP)

LU 2.4.5 **Distinctive Urban Skyline.** The City shall encourage the development of a distinctive urban skyline that reflects the vision of Sacramento with a prominent central core that contains the city's tallest buildings, complemented by smaller urban centers with lower-scale mid- and high-rise development. (RDR/MPSP)

Goal LU 2.7 City Form and Structure. Require excellence in the design of the city's form and structure through development standards and clear design direction.

Policies

LU 2.7.3 **Transitions in Scale.** The City shall require that the scale and massing of new development in higher-density centers and corridors provide appropriate transitions in building height and bulk that are sensitive to the physical and visual character of adjoining neighborhoods that have lower development intensities and building heights. (RDR)

LU 2.7.4 **Public Safety and Community Design.** The City shall promote design of neighborhoods, centers, streets, and public spaces that enhances public safety and discourages crime by providing street-fronting uses ("eyes on the street"), adequate lighting and sight lines, and features that cultivate a sense of community ownership. (RDR)

LU 2.7.5 **Development along Freeways.** The City shall promote high-quality development character of buildings along freeway corridors and protect the public from the adverse effects of vehicle-generated air emissions, noise, and vibration, using such techniques as:

- Requiring extensive landscaping and trees along the freeway fronting elevation

- Establish a consistent building line, articulating and modulating building elevations and heights to create visual interest
- Include design elements that reduce noise and provide for proper filtering, ventilation, and exhaust of vehicle air emissions (RDR/MPSP)

LU 2.7.6 **Walkable Blocks.** The City shall require new development and redevelopment projects to create walkable, pedestrian scaled blocks, publicly accessible mid-block and alley pedestrian routes where appropriate, and sidewalks appropriately scaled for the anticipated pedestrian use. (RDR)

LU 2.7.7 **Buildings that Engage the Street.** The City shall require buildings to be oriented to and actively engage and complete the public realm through such features as building orientation, build-to and setback lines, façade articulation, ground-floor transparency, and location of parking. (RDR)

LU 2.7.8 **Screening of Off-street Parking.** The City shall reduce the visual prominence of parking within the public realm by requiring most off-street parking to be located behind or within structures or otherwise fully or partially screened from public view. (RDR/MSPS)

Goal LU 4.1 Neighborhoods. Promote the development and preservation of neighborhoods that provide a variety of housing types, densities, and designs and a mix of uses and services that address the diverse needs of Sacramento residents of all ages, socio-economic groups, and abilities.

Policies

LU 4.1.3 **Walkable Neighborhoods.** The City shall require the design and development of neighborhoods that are pedestrian friendly and include features such as short blocks/ broad and well-appointed sidewalks (e.g., lighting, landscaping, adequate width), tree-shaded streets, buildings that define and are oriented to adjacent streets and public spaces, limited driveway curb cuts, paseos and pedestrian lanes, alleys, traffic-calming features, convenient pedestrian street crossings, and access to transit. (RDR/MPSP)

LU 4.1.4 **Traditional Grid**. The City shall require all new neighborhoods to be designed with traditional grid block sizes. (RDR)

LU 4.1.7 **Neighborhood Transitions.** The city shall provide for appropriate transitions between different land use and urban form designations along the alignment of alleys or rear lot lines and along street centerlines, in order to maintain consistent scale, form, and character on both sides of public streetscapes. (RDR)

LU 4.1.9 **Neighborhood Street Trees.** The City shall encourage the strategic selection of street tree species to enhance neighborhood character and identity and preserve the health and diversity of the urban forest. (RDR/MPSP)

Goal LU 4.5 Urban Neighborhoods. Promote vibrant, high-density, mixed-use urban neighborhoods with convenient access to employment, shopping, entertainment, transit, civic uses (e.g., school, park, place of assembly, library, or community center), and community-supportive facilities and services.

Policies

LU 4.4.1 **Well-Defined Street Forms.** The City shall require that new buildings in urban neighborhoods maintain a consistent setback from the public right-of-way in order to create a well-defined public sidewalk and street. (RDR)

LU 4.4.2 **Building Orientation**. In buildings with nonresidential uses at street level, the City shall require that building facades and entrances directly face the adjoining street frontage and include a high proportion of transparent windows facing the street. (RDR)

LU 4.4.3 **Building Design**. The City shall encourage sensitive design and site planning in urban neighborhoods that mitigates the scale of larger buildings through careful use of building massing,

setbacks, façade articulation, fenestration, varied parapets and roof planes, and pedestrian-scaled architectural details. (RDR)

LU 4.4.4 **Ample Public Realm**. The City shall require that higher-density urban neighborhoods include small public spaces and have broad tree-lined sidewalks furnished with appropriate pedestrian amenities that provide comfortable and attractive settings to accommodate high levels of pedestrian activity. (RDR)

Goal LU 9.1 Open Space, Parks, and Recreation. Protect open space for its recreational, agricultural, safety, and environmental value and provide adequate parks and open space areas throughout the City.

Policies

LU 9.1.4 **Open Space Buffers.** The City shall use traditional, developed parks and employ innovative uses of open space to "soften" the edges between urban areas and the natural environment. (RDR/MPSP)

Urban Form Guidelines

The DSP area is currently designated Traditional Neighborhood Low, Traditional Neighborhood Medium, Traditional Neighborhood High, Urban Neighborhood Low, Urban Neighborhood Medium, Urban Neighborhood High, Traditional Center, Urban Center Low, Urban Center High, Central Business District, Urban Corridor Low, Urban Corridor High, Employment Center Low Rise, Public/Quasi-Public, and Parks and Recreation by the City of Sacramento 2035 General Plan.[5]

The 2035 General Plan includes Urban Form Guidelines for the Urban Neighborhood, Urban Center High, Central Business District, and Employment Center Low Rise designations, as presented below:

Urban Neighborhood

1. Buildings establishing a consistent setback from street that produces a pleasing definition to the public right-of-way (e.g., sidewalk, parkway strip, and street);
2. Building facades and entrances that directly addressing the street and have a high degree of transparency (i.e., numerous windows on street-fronting facades);
3. Building heights generally ranging from four to twenty-four stories for High Density;
4. Lot coverage generally not exceeding 80 percent;
5. An interconnected street system providing for traffic and route flexibility;
6. Vertical and horizontal integration of complementary nonresidential uses;
7. Off-street parking integrated into the buildings or placed in separate paring structures;
8. Minimal or no curb cuts along street fronts and facades;

[5] City of Sacramento, 2014. Sacramento 2035 General Plan Land Use and Urban Form Diagram. June 26, 2014.

9. Side or rear access to parking and service functions;
10. Broad sidewalks appointed with appropriate pedestrian amenities/facilities;
11. Street design that integrates pedestrian, bicycle, and vehicular use and incorporates traffic-calming features and on-street parking;
12. Consistent planting of street trees providing shade and enhance a character and identity; and
13. Public parks and open space areas within walking distance of local residents.

Urban Center High

1. A mix of low- and mid-rise buildings (two to twenty-four stories creating a varied and defined skyline;
2. Lot coverage generally does not exceeding 90 percent;
3. Building heights stepping down to not more than one story higher at the property line than permitted in the adjacent neighborhood unless separated by a roadway, rail corridor, or other setback or buffer;
4. Buildings sited to positively define the public streetscape and public spaces;
5. Building facades and entrances directly addressing the street and having a high degree of transparency;
6. An interconnected street system providing greater distribution of traffic and route flexibility;
7. Vertical and horizontal integration of residential uses;
8. Public parks and open space areas within walking distance of local residents;
9. Parking integrated into buildings or placed in separate structures;
10. Minimal or no curb cuts along primary street facades, with side or rear access to parking and service functions;
11. Broad sidewalks appointed with appropriate pedestrian amenities/facilities;
12. Street design integrating safe pedestrian, bicycle, transit and vehicular use and incorporates traffic-calming features on-street parking; and
13. Consistent planting of street trees providing shade and enhance character and identity.

Central Business District

1. A mixture of mid- and high-rise buildings creating a varied and dramatic skyline with unlimited heights;
2. Lot coverage generally not exceeding 90 percent;
3. Buildings are sited to positively define the public streetscape and public spaces;
4. Building facades and entrances directly addressing the street and have a high degree of transparency;

5. An interconnected street system providing for traffic and route flexibility;
6. Vertical and horizontal integration of residential uses;
7. Public parks and open space areas within walking distance of local residents;
8. Paring is integrated into buildings or placed in separate structures;
9. Minimal or no curb cuts along primary streets;
10. Side or rear access to parking and service functions;
11. Broad sidewalks appointed with appropriate pedestrian amenities, including sidewalk restaurant/café seating;
12. Street design integrating pedestrian, bicycle, transit and vehicular use and incorporates traffic-calming features and on-street parking; and
13. Consistent planting of street trees providing shade and enhance character and identity.

Employment Center Low Rise

1. Building heights generally ranging from one to three stories;
2. Lot coverage generally not exceeding 60 percent;
3. Building entrances oriented to the primary street frontage rather than to parking areas;
4. Sidewalks to accommodate pedestrian movement, with connecting walkways from sidewalks into individual sites;
5. Bicycle lanes along key roadways;
6. Transit stops near business park entries;
7. Location of surface parking behind or to the side of buildings rather than between primary street and primary street façade;
8. Location of outdoor storage and production yards so that they are screened from public view by buildings, fencing and/or landscaping; and
9. Easily accessible support uses.

Environmental Resources Element

Policies

ER 7.1.1 **Protect Scenic Views.** The City shall avoid or reduce substantial adverse effects of new development on views from public places to the Sacramento and American Rivers and adjacent greenways, landmarks, and the State Capitol along Capitol Mall. (RDR)

ER 7.1.2 **Visually Complimentary Development.** The City shall require new development be located and designed to visually complement the natural environment/setting when near the Sacramento and American Rivers, and along streams. (RDR)

ER 7.1.3 **Lighting.** The City shall minimize obtrusive light by limiting outdoor lighting that is misdirected, excessive, or unnecessary, and requiring light for development to be directed downward to minimize spill-over onto adjacent properties and reduce vertical glare. (RDR)

ER 7.1.4 **Reflective Glass**. The City shall prohibit new development from (1) using reflective glass that exceeds 50 percent of any building surface and on the bottom three floors, (2) using mirrored glass, (3) using black glass that exceeds 25 percent of any surface of a building, (4) using metal building materials that exceed 50 percent of any street-facing surface of a primarily residential building, and (5) using exposed concrete that exceeds 50 percent of any building. (RDR)

ER 7.1.5 **Scenic Resources at River Crossings.** The City shall require the style, scale, massing, color, and lighting of new bridges to complement the natural and/or community setting. Design considerations for river crossings will include the degree to which bridges minimize obstruction of scenic views of the river and riparian areas from publically accessible open space areas, including from the river, and enhance the scenic setting by incorporating design features that complement the surrounding area and/or provide high quality and visually interesting design. (RDR)

Central City Community Plan

The City of Sacramento currently has ten adopted community plans that include policies and land use diagrams that pertain to the respective community plan areas. The DSP Area is located within the CCCP area bounded by the Sacramento River on the west, the American River on the north, Business 80 and Alhambra Boulevard on the east, and parcels fronting southern edge of Broadway on the south. Community plans are part of the 2035 General Plan and are intended to supplement city-wide policies based on conditions or issues unique to the community plan area. The following policies from the CCCP are applicable to the visual characteristics of development within the DSP area:

Land Use and Urban Design

Policies

CC.LU 1.2 **Visual Qualities.** The City shall improve the visual qualities of improvements, especially signing, building and yard maintenance, commercial developments and overhead utilities. (RDR)

CC.LU 1.3 **Interrelated Land Uses.** The City shall provide for organized development of the Central City whereby the many interrelated land use components of the area support and reinforce each other and the vitality of the community. (RDR/MPSP)

City of Sacramento Planning and Development Code (Title 17)

The City of Sacramento's Planning and Development Code (Sacramento City Code Title 17) is intended "[t]o implement the city's general plan through the adoption and administration of zoning laws, ordinances, rules, and regulations" (§17.100.010(B)). To achieve this outcome the Planning and Development Code:

- regulates the use of land, buildings, or other structures;
- regulates the location, height, and size of buildings or structures, yards, courts, and other open spaces, the amount of building coverage permitted in each zone, and population density; and
- regulates the physical characteristics of buildings, structures, and site development, including the location, height, and size of buildings and structures; yards, courts, and other open spaces; lot coverage; land use intensity through regulation of residential density and floor area ratios; and architectural and site design.

Site Plan and Design Review

Pursuant to Chapter 17.808 of the City Code, with specific and limited exemptions described below, development in the City is subject to site plan and design review. The intent of this process is to (1) ensure that the development is consistent with applicable plans and design guidelines; (2) is high quality and compatible with surrounding development; (3) is supported by adequate circulation, utility, and related infrastructure; (4) is water and energy efficient; and (5) avoids environmental effects to the extent feasible. The aspects of design considered in the site plan and design review process include architectural design, site design, adequacy of streets and accessways for all modes of travel, energy consumption, protection of environmentally sensitive features, safety, noise, and other relevant considerations.

Pursuant to Chapter 17.808.160 of the City Code, the following development projects are exempt from the site plan and design review requirement: alterations to an existing building or structure that is not in a historic district and that does not substantially alter the exterior appearance of the building or structure, as determined by the director; an alteration to an existing site that does not significantly alter the functioning of the site with respect to traffic circulation, parking, infrastructure, and environmentally sensitive features, as determined by the director; secondary dwelling units; sidewalk cafes; convenience recycling facilities; and registered house plans (subject to site plan review, but not design review). For development projects located in a historic district or that involve a landmark, activities exempt from site plan and design review include repainting of surfaces that were originally painted when the color scheme is not a significant character-defining feature of the historic resource; routine nonabrasive cleaning and maintenance; and site plantings when plantings and landscape elements are not significant character-defining features of the historic resource.

Through the site plan and design review process, the City has the authority to approve or require deviations from design and development standards to respond to site- and project-specific considerations. Deviations are subject to review and approval of either the City Design Director or the City Planning and Design Commission, depending on the nature of the deviation.

Depending on the nature of the proposal, site plan and design review may be conducted by staff, the City Design Director, or the Planning and Design Commission. The Planning and Design Commission review is required for certain large projects (more than 150 residential units or 125,000 square feet for non-residential or mixed use projects), projects more than 60 feet in height, or where a deviation requires Commission review and approval. City Design Director review is required where a project is not in substantial compliance with applicable design guidelines, or requests a deviation. For projects taking place in a historic district or related to an historic landmark, site plan and design review is undertaken by the Preservation Commission or the City Preservation Director, as appropriate. All other projects not requiring review by the respective Commission or Director are reviewed by City staff.

Capitol View Protection Ordinance

Section 17.216.860 of the Sacramento City Code recognizes the State Capitol building and the surrounding grounds of Capitol Park as a unique cultural and open-space resource. The ordinance establishes height restrictions, setback requirements, and parking regulations for certain areas of the CBD located near the State Capitol building and Capitol Park, including along Capitol Mall. These regulations are designed to provide visual protection to and from the Capitol building and Capitol Park.

Sacramento River Parkway Plan

The Sacramento River Parkway Plan (Parkway Plan) is a comprehensive plan for the Sacramento River Parkway adopted by the City of Sacramento in October 1997. The Parkway Plan area includes all land within 10 feet of the landside tow of the Sacramento River levee or the inland boundary of public land along the River, whichever is the most appropriate for land uses.[6] The Parkway Plan contains specific goals and policies that address recreation, trails, public access, urban development, public safety, security, natural and cultural resources, erosion, and land use.

The primary policies of the Parkway Plan that are relevant to the aesthetic character of the DSP Area are the Urban Development Policies, as noted below:[7]

Policies

D1. The City shall ensure that all developments which take place within and adjacent to the Parkway will adhere to the intent and purpose of the Parkway Concept.

D3. Commercial and residential development within the Parkway, subject to the city's planning review process, shall be designed to visually blend with and be in scale with the surrounding riverine environment. Color, texture, style, height, width, and bulk should be considered in design.

D4. Commercial, office, residential, or residential structures within the Parkway should be built so as to not obscure the view of or public access to the River. All development within or immediately adjacent shall have linear lot coverage no greater than 60%.

D5. Proposed development within the Parkway should strive to create a visually appealing landscape along the river by incorporating, to the extent feasible, native or indigenous vegetation for landscaping consistent with the City's Plant List.

D6. All commercial development within the Parkway shall incorporate amenities that enhance the public's enjoyment of the river resources. The following are examples of possible amenities:

- Public promenades
- Public areas
- Parks
- Amphitheaters for public performances
- Museums or interpretive centers
- Bicycle paths.

6 City of Sacramento, 1997. *Sacramento River Parkway Plan*, October 21, 1997, p. 3.
7 *Ibid*., p. 36.

Sacramento Riverfront Master Plan

The Sacramento Riverfront Master Plan provides a planning document that aims to guide development and the enhancement of natural and open space for both the West Sacramento and Sacramento sides of the Sacramento River. Its general study area extends between Discovery and Tiscornia parks to the north and Miller Park to the south. The plan seeks to realize four guiding principles for the riverfront: creating riverfront neighborhoods and districts, establishing a web of connectivity, enhancing the green backbone of the community, and creating places for celebration.

The following goals and proposed policies are relevant to the visual character of the riverfront area.

Goal **Treat the Sacramento River and the river's edge as a focus of the riverfront area**

Proposed Policies

- Provide a strong public open space framework that is continuous along the riverfront and connects to the neighboring districts.
- Maintain a mostly natural and semi-formal character in the riverfront open space areas.
- Give the riverfront a public, open space emphasis.
- Site housing and other adjacent mixed-uses to capture maximum orientation to the river and to the riverfront open space, as well as to parkways and streets.
- Provide visual and physical connections among neighboring districts that emphasize the river and its public open space.
- Where feasible, orient private development toward open space features and the river.

Goal **Provide for uses and amenities that complement the existing parks and visitor attractions**

Proposed Policies

- Provide for visitor and community-serving uses and amenities.

Goal **Establish the riverfront area as an active, vibrant, urban district and public precinct**

Proposed Policies

- Provide people-oriented land uses, public space, and amenities that attract people and activity
- Provide for mixed/integrated land uses
- Vary development densities, intensities, and mix of uses along the riverfront edge

American River Parkway Plan

The American River Parkway Plan, developed by the City and County of Sacramento, is a policy and action document that was developed to ensure preservation of the naturalistic environment of the American River Parkway, while providing limited developments to facilitate human enjoyment. The Parkway Plan addresses the entire length of the Parkway, which includes areas in Sacramento County, the City of Sacramento, and a portion of the Folsom State Recreation Area. The following policies from the American River Parkway Plan are applicable to the visual characteristics of development within the DSP area:

Policies

7.20 New public utilities or similar public service facilities should be placed underground and the area revegetated with native plantings. If new public utilities or similar public service facilities must be placed above ground, impacts shall be minimized by clustering the facilities with existing facilities and Parkway crossings. Facilities shall be camouflaged with native trees and shrubbery plantings, and if appropriate, soundproof pump stations, without compromising public safety.

7.21 New drainage outfalls, or improvements and expansions to existing outfalls, shall be designed and built to minimize erosion and to be visually unobtrusive and naturalistic in appearance. Culverts and gate valves, if necessary, should be set back from the river; if this is not possible, the outfall shall be integrated into a comprehensive grading and landscaping plan that screens the outfall with native vegetation

7.22 Structures that are in the Parkway shall be of a design, color, texture and scale that minimizes adverse visual impacts within the Parkway.

7.22.1 Structures shall be located so that neither they, nor activities associated with them, cause damage to native plants or wildlife, without appropriate mitigation.

7.22.2 Structures shall be constructed of naturalistic materials which blend with the natural environment.

7.22.3 Colors shall be earth tones or shall blend with the colors of surrounding vegetation.

7.22.4 Structures may emulate authentic historic design, but shall be unobtrusive.

7.22.5 To the extent possible, structures shall be screened from view by native landscaping or other naturally occurring features.

7.22.6 Commercial advertising generally shall not be permitted within the Parkway. Signage associated with approved commercial activities shall be limited by the provisions governing visual intrusion but should be sufficient to provide visitors essential information regarding location and services.

7.22.7 Structures shall be of fire resistant construction and designed and located in a manner such that adequate emergency services and facilities can be provided.

7.23 Levees, landscaping, or other man-made or natural buffers should be used to separate, buffer or screen the Parkway visually from adjoining land uses, unless the adjacent land uses are indistinguishable from the Parkway.

7.24 In order to minimize adverse visual impacts on the aesthetic resources of the Parkway, local jurisdictions shall regulate adjacent development visible from the Parkway. These local regulations shall take into account the extent to which the development is visible from the Parkway. Regulations may include tools to address design, color, texture and scale, such as:

a. Setbacks or buffers between the Parkway and the development.

b. Structures to be stepped away from the Parkway or limits on building scale.

c. Screening of structures visible from the Parkway with landscaping, preferably native vegetation or other naturally occurring features.

d. Use of colors and materials including non-reflective surfaces, amount of glass, and requiring medium to dark earth tone colors that blend with the colors of surrounding vegetation, particularly in sensitive bluff or river's edge locations.

e. Guidelines to discourage intrusive lighting and commercial advertising.

7.25 Between the confluence of the Sacramento and American Rivers and the Capital City Freeway (Business-80) the Parkway context is the Sacramento downtown urban core for the Sacramento metropolitan region. Protection of the Parkway's aesthetic values in this reach should be accomplished

within the context of creating a vital urban area. Development immediately adjacent to the Parkway shall respect the intent of the Parkway goals by reducing visual impacts through context sensitive site planning and building design.

7.26 Development of the bluffs within and adjacent to the Parkway shall be designed so as not to degrade the stability of the bluffs, while minimizing the visual impacts into the Parkway.

Sacramento Central City Urban Design Guidelines

The Central City Urban Design Guidelines (CCUDG) direct future growth in the CCCP area. The CCUDG generally provide guidance in three areas: the urban design framework, the public realm, and the private realm. They establish a framework of urban design concepts intended to inform all decisions relating to the physical form and character of public and private development throughout the Central City. The CCUDG are intended to provide direction rather than impose prescriptive requirements. The City Commission or Director responsible for design review has the authority to waive individual guidelines for specific projects where it is found that such waiver will better achieve the design policy objectives than strict application of the CCUDG. Key urban design framework concepts established for the whole of the Central City include:

- The Central City Skyline. High-rise towers should add visual interest to the skyline; that high-rise towers should reflect the role of the Central Core as the regional center of culture, commerce, and government; and that care is to be given to transitions from the Central Core to adjacent neighborhoods;

- Central City Gateways. Care should be taken to enhance the design of key entries to the Central City from freeways and on Capitol Mall;

- Primary Streets and the Street Grid. Protection and enhancement of the traditional street grid to improve connectivity around the Central City, including the re-connection of the Railyards/ River District via Railyards street network, and north-south streets such as 5th, 6th, 7th, and 10th streets; and design of streets so as to accommodate high traffic volumes without creating barriers to a safe, convenient, and attractive pedestrian and bicycle environment;

- Transit Streets and Transit-Oriented Development. Location of higher density transit-oriented development within one-quarter mile of transit stops, and emphasis on transit-friendly street design;

- A Pedestrian- and Bicycle-Friendly Central City. Designation and design of special streets as primary pedestrian and bicycle routes, providing connections among Central City neighborhoods and to the riverfront open space and trail system; and a focus on enhanced pedestrian environment on streets and in alleys;

- A Healthy Urban Forest. Protection and enhancement of the Central City's urban forest, maximizing shade coverage from street trees; recognition of the important role that the urban forest plays in the economic and social well-being, and sustainability of the Central City;

- Distinctive Urban Neighborhoods and Districts. Development that enhances existing and creates new neighborhoods and districts, such as the Railyards; high quality design that enhances the public realm and responds to the physical, historical and cultural context;

- Preserving Historic Resources. Recognition of the importance of the Central City's historic resources; protection of historic resources and features, and integration into new development; new development that positively responds and relates to the historic character of the Central City;

- Parks and Open Space. Enhancement of existing and provision of new parks to serve existing and future residents of the Central City; public streets as greenways that connect Central City neighborhoods to the riverfront and other major parks; provision of private open space and recreation facilities in high density residential projects; developing parks, trails, and other recreational amenities consistent with flood protection; balance in uses between public spaces and private development along the American and Sacramento River Corridors;

- Creating a Complete, Well-served Community. Plan for new accessible parks, schools, community centers, fire stations and other public facilities, as well as neighborhood retail and services, to meet the needs of the future residential population in the Central City;

- Active Streetscapes and Sidewalk Cafes. Design streets and alleys and adjacent development to promote active use, including sidewalk cafes;

- The Retail Environment. Promote retail development by requiring minimum retail frontages, identifying retail streets, and requiring ground-floor transparency to promote window-shopping; and

- A Well-defined Public Realm. Continuity of street-wall, with consistent setbacks and build-to lines that define the pedestrian realm for retail and commercial streets, and reflect the historic character for institutional and residential uses.

4.1.3 Analysis, Impacts, and Mitigation

Significance Criteria

For purposes of this EIR and consistent with the criteria presented in Appendix G of the State CEQA Guidelines, impacts to aesthetics may be considered significant if implementation of the DSP would:

- Have a substantial adverse effect on a scenic vista;
- Substantially degrade the existing visual character or quality of the site and its surroundings;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway; or
- Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.
  - *Glare.* Glare is considered to be significant if it would be cast in such a way as to cause public hazard or annoyance for a sustained period of time.
  - *Light*. Light is considered significant if it would be cast onto oncoming traffic or residential uses.

Issues not Discussed in Impacts

None of the freeway segments within the DSP area have been designated as scenic. Thus, implementation of the DSP would not damage scenic resources in the vicinity of a scenic highway. For these reasons, the third significance criteria listed above is not further addressed in this section of the EIR.

Methodology and Assumptions

The analysis of aesthetics is a qualitative analysis that compares the existing built and natural environment to the future built and natural environment, and addresses the visual changes that would result from implementation of the proposed DSP. Key view corridors were examined, and existing views to and from the site were compared to those that would be expected to occur in the future under the proposed DSP. In addition, the changes proposed in the DSP were evaluated in the context of adopted City urban design policies and regulations.

In order to assess the aesthetic characteristics of future development under the proposed DSP, the analysis examines the new, changed, or eliminated development standards included in the proposed DSP, as well as the provisions of the proposed DSP Design Guidelines. The ultimate designs of future specific development projects under the proposed DSP would be proposed on a project-by-project basis, and specific project architectural and engineering design would be reviewed through the City's site plan and design review permit process.

Impacts and Mitigation Measures

Impact 4.1-1: The proposed DSP could have a substantial adverse effect on an existing scenic resource or degrade the view of an important, existing scenic resource, as seen from a visually sensitive public location.

Scenic Resources

The City of Sacramento 2035 General Plan Background Reports indicates that "scenic resources" can include natural open spaces, topographic formations, and landscapes.[8] Many people associate natural landforms and landscapes with scenic resources, such as oak woodlands, lakes, rivers, and streams. In an urban setting, scenic resources can also include urban open spaces and elements of the built environment. Examples of these would include parks, trails, pathways, nature centers, archaeological and historical resources, and buildings and infrastructure that includes distinctive architectural features.

As discussed above, the City is located at the confluence of the Sacramento and American Rivers. These river corridors create two of the primary natural scenic resources of the DSP area. The Sacramento River is situated in a north/south direction, and serves as the western boundary for the DSP area. The American River flows eastward on the northeastern boundary of the DSP area occupied by Sutter's Landing Park. The American River is designated as a recreational river

8 City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report, Appendix C, Background Report*, February 24, 2015. p. 6-121.

under the Wild and Scenic Rivers Act from the confluence with the Sacramento River to Nimbus Dam, located just east of the city. The two rivers provide recreational opportunities, create a permanent visual break in the pattern of urban development, and provide scenic contrast and interest in the DSP area.

Another important scenic resource in the DSP area is the State Capitol. As discussed above, the Capitol View Protection Ordinance (Section 17.216.860 of the Sacramento City Code) recognizes the State Capitol building and the surrounding grounds of Capitol Park as a unique cultural and open-space resource. The ordinance establishes height restrictions, setback requirements, and parking regulations for certain areas of the CBD located near the State Capitol building and Capitol Park, including along Capitol Mall. These regulations are designed to provide visual protection to and from the Capitol building and Capitol Park.

Other historically significant buildings, structures, and districts that comprise important scenic resources within the DSP area include Old Sacramento, the Capitol Mansions Historic District, the R Street Historic District, the Poverty Ridge Historic District, the Cathedral Square Historic District, Sutter's Fort, the Tower Bridge, the Sacramento Memorial Auditorium, and the historic Governor's Mansion (see Section 4.4, Cultural Resources, for a complete discussion of historical resources within the DSP area).

DSP Elements

Heights

The proposed DSP is intended to facilitate physical development and resultant physical change within the DSP area that could affect existing views of important scenic resources. A new special planning district (SPD) would be created in the DSP area to facilitate housing and non-residential growth. Among other things, the Downtown SPD would allow for an increase in maximum height in three of the City's zoning designations – the General Commercial (C-2), Office Building (OB), and Residential Mixed Use (RMX) zones. Collectively, these allowances in height across the C-2, OB, and RMX zones would encourage and enhance development opportunities along these corridors. However, the residential densities and non-residential intensities within these zones would remain the same, and it is anticipated that the total amount of development in the DSP area would not exceed the projections assumed in the 2035 General Plan.

C-2 Zone

There are approximately 400 acres within the proposed Downtown SPD that are designated as C-2, and the maximum height requirement in this zone would increase from 65 feet to 85 feet. Within the proposed Downtown SPD, the C-2 zone is generally concentrated along several commercial corridors, including portions of H, I, J, K, and O Streets and portions of 16th, 19th, 20th, 21st, and 29th Streets.

The provisions for existing transitional height tiering that can be applied to portions of buildings located in the C-2 zone within specific distances of the R-1, R-1B, and R-2 zones would be modified to accommodate the new maximum height requirement. When located 0–39 feet from

the R-1, R-1B, and R-2 zone, the maximum height limit would remain 45 feet. From 40–79 feet from the R-1, R-1B, and R-2 zone, the maximum height limit would remain 55 feet. However, for locations 80 feet or greater from the R-1, R-1B, and R-2 zone, the maximum height limit would be increased from 65 feet to 85 feet.

OB Zone

There are approximately 35.6 acres within the proposed Downtown SPD that are designated as OB where the maximum height limit would increase from 35 feet to 65 feet. Within the Downtown SPD, the OB zone is generally concentrated along portions of G Street and 7th Street near the Alkali Flat neighborhood, between Q Street and R Street west of 8th Street, and at the intersection of R Street and 16th Street. The OB zone would allow the maximum height limit to be tiered between 45 feet and 65 feet when located in proximity to the R-1, R-1B, and R-2 zones. From 0–39 feet from the R-1, R-1B, and R-2 zone, the maximum height limit would be 45 feet. From 40–79 feet from the R-1, R-1B, and R-2 zone, the maximum height limit would be 55 feet. From 80 feet or greater from the R-1, R-1B, and R-2 zone, the maximum height limit would be 65 feet.

RMX Zone

There are 80.4 acres within the proposed Downtown SPD that are designated as RMX, and the maximum height limit in this zone would increase from 45 feet to 65 feet. This increase in allowable height from 45 feet to 65 feet applies only to parcels not located within the existing R Street Corridor SPD Maximum Height Map, as discussed earlier. Within the Downtown SPD, the RMX zone is generally concentrated along the entire length of R Street and near the intersection of L Street and 18th Street. The RMX zone would allow the maximum height limit to be tiered between 45 feet and 65 feet when located in proximity to the R-1, R-1B, and R-2 zones. When located 0–39 feet from the R-1, R-1B, and R-2 zone, the maximum height limit would be 45 feet. When located 40–79 feet from the R-1, R-1B, and R-2 zone, the maximum height limit would be 55 feet. When located 80 feet or greater from the R-1, R-1B, and R-2 zone, the maximum height limit would be 65 feet.

Public Art

The DSP includes guidance for the selection of locations for the placement of public art and types of art displayed. Public art exists within in a variety of forms and locations throughout the city. Examples of existing public art within the DSP area include installations outside of the Golden 1 Center, Capitol Mall, and the Crocker Art Museum. The DSP requires that all public art be located in areas that are accessible to the public, respect the local and regional context, and ensure artistic quality.

Infrastructure

The DSP identifies potential infrastructure improvements necessary to accommodate the development and intensification anticipated with implementation of the DSP. Existing sanitary sewer, storm drainage, water, electrical power, telecommunications, and natural gas infrastructure capacity would be provided as needed to adequately serve these new demands. Above-ground

infrastructure improvements, such as new or extended overhead electrical transmission lines, could affect views of important scenic resources.

Site Plan and Design Review

Planning and Development Code section 17.808.130, which provides for site plan and design review by the City Planning and Design Commission, would be amended to require projects that exceed 65 feet in height to undergo Site Plan and Design Review at the Commission level, an increase from the current standard of 60 feet. In addition, in the C-3 Zone (the Central Business District), the Planning and Development Code would be revised to provide that height would not be a triggering factor for automatic review by the Planning and Design Commission.

Analysis

The DSP area is largely built out urban environment and implementation of the elements of the DSP described above would result in gradual physical changes within the DSP area, including increased building heights above existing conditions and an overall increase and intensification of physical development. These physical changes could result in changes to important scenic resources as seen from visually sensitive locations, including views of the Sacramento and American Rivers, the State Capitol, other historic buildings and structures that serve as important scenic resources, and urban open spaces, including parks, trails, pathways, nature centers. In addition, by allowing for more intense development and increased building heights, implementation of the DSP could result in changes to views of the City skyline including a more dense concentration of taller buildings than presently viewed from within and outside the DSP area.

Although the proposed DSP allows for increased building heights and other physical development, it is anticipated that the actual amount of development that would occur over the next 20 years under the DSP would be generally consistent with what is assumed to occur under the 2035 Sacramento General Plan, which includes policies that are designed to protect scenic resources. Specifically, General Plan Policy ER 7.1.1 would guide the City to avoid or reduce substantial adverse effects of new development on views from public places to the Sacramento and American Rivers and adjacent greenways, landmarks, and the State Capitol along Capitol Mall. Policy ER 7.1.1 is further complemented by Policy ER 7.1.2, which states that the City shall require new development be located and designed to visually complement the natural environment/setting when near the Sacramento and American Rivers, and along streams. In addition, Policy ER 7.1.5 directs the City to require the style, scale, massing, color, and lighting of new bridges to complement the natural and/or community setting. Policy ER 7.1.5 further requires that design considerations for river crossings will include the degree to which bridges minimize obstruction of scenic views of the river and riparian areas from publically accessible open space areas, including from the river, and enhance the scenic setting by incorporating design features that complement the surrounding area and/or provide high quality and visually interesting design. Policy LU 2.2.3 directs the City to require new development along the Sacramento and American Rivers to use the natural river environment as a key feature to guide

the scale, design, and intensity of development, and to maximize visual and physical access to the rivers.

As described above, the Capitol View Protection Ordinance recognizes the State Capitol building and the surrounding grounds of Capitol Park as a unique cultural and open space resource. The ordinance establishes height restrictions, setback requirements, and parking regulations for certain areas of the CBD located near the State Capitol building and Capitol Park, including along Capitol Mall. These regulations would provide visual protection to and from the Capitol building and Capitol Park.

Finally, pursuant to Chapter 17.808 of the City Code, with specific and limited exemptions (described above under *Regulatory Setting*), development in the city is subject to site plan and design review. The intent of this process is to (1) ensure that the development is consistent with applicable plans and design guidelines; (2) is high quality and compatible with surrounding development; (3) is supported by adequate circulation, utility, and related infrastructure; (4) is water and energy efficient; and (5) avoids environmental effects to the extent feasible. The aspects of design considered in the site plan and design review process include architectural design, site design, adequacy of streets and accessways for all modes of travel, energy consumption, protection of environmentally sensitive features, safety, noise, and other relevant considerations.

Site plan and design review for all but a few exempt projects is conducted by staff, the City Design Director, or the Planning and Design Commission. Planning and Design Commission review is required for certain large projects (more than 150 residential units or 125,000 square feet for non-residential or mixed use projects), projects more than 60 feet in height, or where a deviation requires Commission. City Design Director review is required where a project is not in substantial compliance with applicable design guidelines, or requests a deviation. All development on the riverfront in the DSP area would be subject to the City's site plan and design review process. For projects taking place in a historic district or related to an historic landmark, site plan and design review is undertaken by the Preservation Commission or the City Preservation Director, as appropriate. All other projects not requiring review by the respective Commission or Director are reviewed by City staff. Site plan and design review would ensure that development within the DSP is consistent with applicable plans and design guidelines, is of high quality, and is compatible with surrounding development, thus avoiding adverse impacts to scenic resources.

In summary, new physical development that would occur under the DSP would be required to comply with applicable plans, policies, and guidelines that are designed to protect views of important scenic resources from visually sensitive areas. Consequently, the effects of the proposed DSP on scenic resources would be a **less-than-significant** impact.

Mitigation Measure

None required.

Impact 4.1-2: The proposed DSP could substantially degrade the existing visual character or quality of the DSP area and its surroundings.

DSP Elements

As discussed above, the proposed DSP allows for increased development and resultant physical change within the DSP area over an anticipated 20-year period. Specifically, the physical changes would include an increase in the allowable maximum height in the C-2 (from 65 feet to 85 feet), OB (from 35 feet to 65 feet), and RMX (from 45 feet to 65 feet) zones; placement of public art in multiple locations in the DSP area; above-ground infrastructure improvements, including new or extended overhead electrical transmission lines and street lighting.

Additionally, the SPD would provide for different multi-family private and common open space requirements than what are currently provided in the citywide open space standards (Chapter 17.600.135 of City Code). Multi-unit dwellings would be exempt from the requirement that open space on site must be open to the sky. The SPD would also modify the existing standard for open space provision in multi-unit dwellings, which is currently 100 sf per dwelling unit (beyond the required front, side, and rear yard setbacks). For multi-unit dwellings in the Downtown SPD, parcels located in the Parking Districts of the Central Business and Arts & Entertainment District would eliminate the requirement for open space for multi-unit dwellings; parcels located in the Urban Parking District would change to 25 sf per dwelling unit; and parcels located in the Traditional Parking District would change to 50 sf per dwelling unit. Parcels located in the Suburban Parking District would still remain at 100 sf per dwelling unit. Additionally, in order to encourage adaptive reuse, conversion of nonresidential buildings to a multi-unit dwelling will not create a requirement for new open space.

The DSP would also include changes to the Central Core Design Guidelines to include provisions for more intense development, allowing increased lot coverage, increased height, and decreased setbacks in areas throughout the Central City.

Finally, proposed DSP would provide guidance for the selection of locations for the placement of public art and types of art displayed. Public art exists in a variety of forms and locations throughout the DSP area. The proposed DSP would require that all public art be located in areas that are accessible to the public, respect the local and regional context, and ensure artistic quality.

Analysis

As previously discussed, implementation of the elements of the DSP described above would result in gradual physical changes within the DSP area, including increased building heights and an overall increase in the amount and intensity physical development within an existing urban environment. These physical changes would result in changes to the existing visual character of the DSP area and its surroundings. Specifically, increases in allowable maximum heights in the C-2, OB, and RMX zones would result in a substantially increased verticality of urban

development in these zones, gradually intensifying the metropolitan visual character as viewed from within the zones and from more distant views of a more dense and vertical City skyline than viewed at present. Changes in residential and office open space requirements and allowances for more intense development, allowing increased lot coverage, increased height, and decreased setbacks in areas throughout the Central City would gradually change the visual character of the DSP area by creating a more dense concentration of urban development and decreased open space, gradually transitioning the DSP area to a visual environment more commonly associated with larger metropolitan centers.

Although the proposed DSP allows for increased physical development within the DSP area, it is anticipated that the actual amount of development that will occur over the next 20 years under the DSP would be generally consistent with what is assumed to occur under the 2035 Sacramento General Plan, which assumes and facilitates increased residential population and urban development in the Central City and which includes policies designed to ensure new development is visually compatible and complimentary to its site and surroundings.

Specifically, General Plan Policy LU 2.4 ensures that the City shall require building design that respects and responds to the local context, including use of local materials where feasible, responsiveness to Sacramento's climate, and consideration of cultural and historic context of Sacramento's neighborhoods and centers. Policy LU 2.7.3 requires that the scale and massing of new development in higher-density centers and corridors provide appropriate transitions in building height and bulk that are sensitive to the physical and visual character of adjoining neighborhoods that have lower development intensities and building heights. Policy LU 2.7.7 requires buildings to be oriented to and actively engage and complete the public realm through such features as building orientation, build-to and setback lines, façade articulation, ground-floor transparency, and location of parking. Policy LU 4.1.7 ensures that the City provides for appropriate transitions between different land use and urban form designations along the alignment of alleys or rear lot lines and along street centerlines, in order to maintain consistent scale, form, and character on both sides of public streetscapes. Policy LU 4.4.3 ensures that the City encourages sensitive design and site planning in urban neighborhoods that mitigates the scale of larger buildings through careful use of building massing, setbacks, façade articulation, fenestration, varied parapets and roof planes, and pedestrian-scaled architectural details. Policy ER 7.1.2 requires new development to be located and designed to visually complement the natural environment/setting when near the Sacramento and American Rivers, and along streams. Policy ER 7.1.4 guides the City to seek to ensure that new development does not significantly impact Sacramento's natural and urban landscapes. In addition, CCCP Policy CC.LU 1.3 requires the City to provide for organized development of the Central City whereby the many interrelated land use components of the area support and reinforce each other and the vitality of the community.

Finally, as previously discussed, all development in the city is subject to site plan and design review to ensure that the development is consistent with applicable plans and design guidelines and is compatible with surrounding development. Site plan and design review would ensure that

development within the DSP is consistent with applicable plans and design guidelines, is of high quality, and is compatible with surrounding development, thus avoiding adverse impacts to visual character within the context of a built-up downtown setting.

In summary, new physical development that would occur under the DSP would be required to comply with applicable plans, policies, and guidelines that are designed to ensure new development is visually compatible and complimentary to its site and surroundings. Consequently, the effects of the proposed DSP on visual character and quality would be a **less-than-significant** impact.

Mitigation Measure

None required.

Impact 4.1-3: The proposed DSP could create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.

Light

The DSP area is mostly built out, and a large amount of widespread ambient light from urban uses already exists. New development permitted under the proposed DSP could add sources of light that are similar to the existing urban light sources from any of the following: exterior building lighting, new street lighting, parking lot lights, headlights of vehicular traffic, and public art in which light display or light sculptures could be cast onto existing structures or developed as an independent public art installation.

The City has identified needed street lighting in two older predominantly residential areas of the DSP. These two areas are depicted as the Northeast DSP Street Light Area and the Southeast DSP Street Light Area on Figures 2-21 through 2-24 in Chapter 2, *Project Description*, of this EIR and include portions of Alkali Flat, Mansion Flats, New Era Park, Boulevard Park, Marshall School, Midtown, Southside Park, Richmond Grove, Poverty Ridge, and Newton Booth. The proposed lighting in these areas is ornamental style street lights.

New residential land uses would be developed with implementation of the DSP and in some cases would be located adjacent to commercial uses and other uses that include night lighting. Commercial facilities typically include substantial amounts of lighting for building exteriors and parking lots. Nighttime lighting is necessary to provide safe environments (e.g., roadways, sidewalks, parking lots) and promote nighttime activities (e.g., signs for movie theaters, restaurants, nightclubs).

Glare

Daytime glare could be produced by the increased amount of surface area of commercial and residential structures that would be developed with implementation of the DSP. Glare is caused

by light reflections from pavement, vehicles, and building materials such as reflective glass and polished surfaces. During daylight hours, the amount of glare depends on the intensity and direction of sunlight. Glare can create hazards to motorists and nuisances for pedestrians and other viewers. It can also contribute to a heat island effect.

Analysis

Night Sky Lighting Effects

As discussed above, new development can result in increases to ambient nighttime lighting that can affect nighttime views of the sky. While there would be an increase in ambient light in the DSP area as a result of implementation of the proposed DSP, because the DSP area and surrounding area is already urbanized and subject to substantial amounts of existing nighttime ambient light, the increase in such light that would be attributable to proposed DSP would not significantly affect nighttime views of the sky (ability to see the stars), because such views are already limited in city settings. Consequently, impacts of the proposed DSP on nighttime views of the sky would be a **less than significant**.

Spillover Light

Development in the DSP area would be required to adhere to City policies and design guidelines that are designed to minimize impacts from spillover light. Specifically, General Plan Policy ER 7.1.3 requires the City to minimize obtrusive light by limiting outdoor lighting that is misdirected, excessive, or unnecessary, and requiring light for development to be directed downward to minimize spill-over onto adjacent properties. In addition, the CCUDG include policies designed to minimize impacts from spillover light. Policy 3.D.2.6 directs that light fixtures should have a low enough intensity or have adequate diffusing lenses to minimize their brightness. The emphasis should be on lighting landscape or building surface with downcast and cut off fixtures.

Finally, lighting issues, including adverse effects of excessive or spillover light, are considerations that are addressed by the City through the site plan and design review process. Development in the DSP area would be subject to this review process, ensuring that spillover light impacts resulting from implementation of the DSP would be a **less than significant**.

Glare

As discussed above, daytime glare could be produced by the increased amount of surface area of commercial and residential structures that would be developed with implementation of the DSP. However, development within the DSP area would be required to adhere to City policies that are designed to minimize glare. Specifically, General Plan Policy ER 7.1.4 prohibits new development from (1) using reflective glass that exceeds 50 percent of any building surface and on the bottom three floors, (2) using mirrored glass, (3) using black glass that exceeds 25 percent of any surface of a building, (4) using metal building materials that exceed 50 percent of any street-facing surface of a primarily residential building, and (5) using exposed concrete that exceeds 50 percent of any building.

Finally, lighting issues, including adverse effects of glare, are considerations that are addressed by the City through the site plan and design review process. All future development in the DSP area would be subject to this review process, ensuring that glare impacts resulting from implementation of the DSP would be a **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

The geographic context for the analysis of cumulative aesthetic and visual resources impacts varies by threshold. The cumulative context for each threshold is presented in the impact discussions below.

Impact 4.1-4: Implementation of the proposed DSP, in combination with other cumulative development, could contribute to cumulative impacts on scenic resources or degrade the views of an important, existing scenic resource, as seen from visually sensitive public locations.

The geographic context for the analysis of cumulative scenic resource impacts is cumulative development on the Sacramento and West Sacramento riverfronts. Because the areas south and east of the DSP area are largely built out and set off from the DSP area by elevated freeways, and because no there is no planned or allowable development within the portion of the American River Parkway that lies north of the DSP area, this analysis focuses on cumulative development on the Sacramento and West Sacramento riverfronts, as river views (as opposed to scenic views and resources within interior of the DSP) comprise the scenic resources that would be affected by cumulative development. Cumulative development on the Sacramento and West Sacramento riverfronts may have effect on the character of the riverfront, including effects on public views of scenic vistas.

Sacramento Riverfront

Although the Sacramento River defines the western boundary of the city, existing public views of the river from the downtown area and other portions of the city are quite limited due to the presence of I-5 (which visually separates the City from the Sacramento River riverfront), intervening structures and landscaping, the topography of the levee which is raised over grade in areas, as well as the sloping edge of the river bank. In addition to the pedestrian path along the riverbank, most public viewing opportunities are afforded while driving across along frontage roads (like Front Street and Jibboom Street), bridges, or I-5. Key views from the west bank of the river, in West Sacramento, are afforded from the Riverwalk which starts at the A Street Boat Ramp and travels south toward the Bridge District.

The 2003 Sacramento Riverfront Master Plan and the DSP call for revitalization in order to provide more high quality open space along the riverfront around which dense urban redevelopment could occur, such as in the Docks and Miller Park areas within the DSP area. The

Railyards Specific Plan calls for development in the Railyards Riverfront District (between I-5 and the Sacramento River). On the West Sacramento side of the river, the Washington Specific Plan and BDSP both call for substantial development in the vicinity of the riverfront. Thus, new cumulative development would occur along the riverfront.

Construction of cumulative projects, particularly high-rise development as would be allowed in the Raley's Landing and Bridge District areas of West Sacramento, intensive development in the Docks and Miller Park areas within the DSP area, development in the Railyards Riverfront District, and projects such as the I Street Bridge Replacement Project and the Powerhouse Science Center would cumulatively alter the riverfront in ways that fail to visually blend with and be in scale with the surrounding riverine environment, as called for in policy D3 of the Parkway Plan, and may reduce the visual openness of the river corridor. Because future cumulative development could adversely affect public views to and from the river, and because some of that development could conflict with the desired scale and mass of the riverfront, this cumulative impact is considered potentially significant.

As previously discussed, development that will occur over the next 20 years under the DSP would be generally consistent with what is assumed to occur under the 2035 Sacramento General Plan, which includes policies that are designed to protect scenic resources. Specifically, General Plan Policy ER 7.1.1 would guide the City to avoid or reduce substantial adverse effects of new development on views from public places to the Sacramento and American Rivers. Policy ER 7.1.1 is further complemented by Policy ER 7.1.2, which states that the City shall require new development be located and designed to visually complement the natural environment/setting when near the Sacramento and American Rivers. Policy LU 2.2.3 directs the City to require new development along the Sacramento and American Rivers to use the natural river environment as a key feature to guide the scale, design, and intensity of development, and to maximize visual and physical access to the rivers.

Finally, as previously discussed, all development in the city is subject to site plan and design review to ensure that the development is consistent with applicable plans and design guidelines and is compatible with surrounding development.

In summary, new physical development that would occur under the DSP would be required to comply with applicable plans, policies, and guidelines that are designed to protect views of important scenic resources from visually sensitive areas. Consequently, the contribution of the proposed DSP to the cumulative impact would be **less than considerable**, and this impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.1-5: Implementation of the proposed DSP, in combination with other cumulative development, could contribute substantial cumulative degradation of the existing visual character or quality in the vicinity.

The geographic context for cumulative impacts associated with the degradation of visual quality includes the areas adjacent to and visible from the DSP area, or areas that would be visible from locations that currently afford views of the DSP Area. The neighborhoods south and east of the DSP area are largely built out, and it is assumed that the majority of cumulative development surrounding the DSP area would occur west of the DSP area in West Sacramento and north of the DSP area in the Railyards Specific Plan area and in the River District. Cumulative development in the DSP area, West Sacramento, the Railyards Specific Plan area, and the River District would gradually change the visual character of the land occupied by the plan areas by creating a more dense concentration of buildings, decreased open space, and increase vertical development. With regards to vertical development, the Railyards Specific Plan and BDSP both allow for high-rise development that would be visually additive to development in the DSP area and could affect views of the skyline.

The Sacramento Planning and Development Code and the CCUDG, implemented through the City's site plan and design review process, are intended to ensure that the uses, site planning, design, and landscaping of future public and private development occurs in a manner that is reflective of, and not inconsistent with, its surroundings. Additional infill development within areas surrounding the DSP area, including in West Sacramento and north of the DSP area in the Railyards Specific Plan area and in the River District would constitute further intensification of an area that is visually urban and (with the exception of the Railyards) largely built-out. In conjunction with the development of the DSP area, cumulative development would not be expected to result in substantial degradation of the visual quality of the area because the area is already a largely built-up urban center. Consequently, the cumulative change in the visual character of the areas surrounding the DSP area would be **less than significant**.

Mitigation Measure

None required.

Impact 4.1-6: Implementation of the proposed DSP could contribute to cumulative sources of substantial light or glare which would adversely affect daytime or nighttime views in the area.

Light

The cumulative context for lighting is the areas surrounding the DSP area, including West Sacramento to the west, the Railyards Specific Plan area and the River District to the north, east Sacramento to the east, and Land Park and Curtis Park to the south.

Night Sky Lighting Effects

Although cumulative new development or redevelopment could include direct illumination of structures, features, and/or walkways, the increase in ambient nighttime lighting levels in these areas would only rise minimally because a significant amount of ambient lighting currently exists due to the urbanized nature of the city as a whole, and because lighting is addressed through the City's site plan and design review process. Increases in nighttime lighting that would occur under cumulative development would not significantly affect nighttime views of the sky because such views are already limited. The Railyards Specific Plan area to the north is largely vacant with fairly minimal existing light sources, and future development within the Railyards would increase the ambient nighttime lighting in the area. However, because nighttime views of the sky are already limited due to the glow created by urban development in the City, cumulative development within the areas surrounding the DSP area, in combination with development under the DSP, is not anticipated to result in the creation of new sources of light that could negatively affect nighttime views. Therefore, cumulative impacts associated with ambient nighttime lighting would be considered **less than significant**.

Spillover Light

The cumulative context for spillover light would be other development that could add to the spillover light effects of DSP on properties in the Railyards Specific Plan area and the River District to the north, east Sacramento to the east, and Land Park and Curtis Park to the south. Spillover light is a site-specific effect that could only be added to by other projects in the immediate vicinity of the affected property. As discussed above, lighting issues, including adverse effects of excessive or spillover light, are considerations that are addressed by in the General Plan and by the City through the site plan and design review process. Development in the DSP area, the Railyards Specific Plan area, the River District, east Sacramento, Land Park and Curtis Park would be subject to general plan policies and the site plan and design review processes that address excessive or spillover, ensuring that cumulative spillover light impacts would be a **less than significant**.

Glare

The cumulative context for glare effects is the areas surrounding the DSP area potentially affected by glare produced from development in the DSP area, including West Sacramento to the west, the Railyards Specific Plan area and the River District to the north, east Sacramento to the east, and Land Park and Curtis Park to the south. Daytime glare could be produced the increased amount new of surface area of commercial and residential structures that would be developed with implementation of the DSP and in surrounding areas, particularly new development in West Sacramento, the Railyards Specific Plan Area, and the River District that is visible to drivers on 1-5, US 50, and SR 160. This cumulative impact is considered potentially significant.

As previously discussed, development that will occur over the next 20 years under the DSP would be generally consistent with what is assumed to occur under the 2035 Sacramento General Plan, which includes policies that are designed to minimize impacts from glare. Specifically, General Plan Policy ER 7.1.4 prohibits new development from (1) using reflective glass that exceeds

50 percent of any building surface and on the bottom three floors, (2) using mirrored glass, (3) using black glass that exceeds 25 percent of any surface of a building, (4) using metal building materials that exceed 50 percent of any street-facing surface of a primarily residential building, and (5) using exposed concrete that exceeds 50 percent of any building.

Finally, as previously discussed, all development in the city is subject to site plan and design review to ensure that the development is consistent with applicable plans and design guidelines and is compatible with surrounding development.

In summary, new physical development that would occur under the DSP would be required to comply with applicable plans, policies, and guidelines that are designed to minimize impacts from glare. Consequently, the contribution of the proposed DSP to the cumulative impact would be **less than considerable**, and this impact would be **less than significant**.

Mitigation Measure

None required.

4.2 Air Quality

This section addresses the potential impacts of the proposed DSP on ambient air quality and its potential to expose people to unhealthful pollutant concentrations. This section also identifies mitigation measures to reduce the severity of any significant air quality impacts of the proposed DSP.

Comments on the NOP (see Appendix B) included a letter from the Sacramento Metropolitan Air Quality Management District (SMAQMD) that requested the assessment of air quality impacts for construction and operation of the proposed DSP. In addition to requesting that the EIR include estimates of short-term and long-term air pollutant emissions, the SMAQMD asked that an Air Quality Mitigation Plan (AQMP) be prepared for the project. These issues have been addressed in this section.

The analysis included in this section is based on a set of construction assumption defaults found in the California Emission Estimator Model (CalEEMod 2016.3.1) and growth projections found in the Sacramento Area Council of Government's (SACOG) Sacramento Activity-Based Travel Simulation Model, and data provided in the *City of Sacramento 2035 General Plan*,[1] the *City of Sacramento 2035 General Plan Master Environmental Impact Report*,[2] traffic information provided by DKS Associates and Fehr & Peers,[3,4] and SMAQMD's *CEQA Guide to Air Quality Assessment.*[5] The discussion and evaluation of the proposed DSP's effects on global climate change is can be found in Section 4.7, Global Climate Change.

4.2.1 Environmental Setting

Physical Setting

Climate and Topography

Air quality is affected by the rate, amount, and location of pollutant emissions and the associated meteorological conditions that influence pollutant movement and dispersal. Wind speed, wind direction, and air temperature combined with geographic features such as mountains and valleys determine how air pollutant emissions affect local air quality.

Sacramento lies within the Sacramento Valley Air Basin (SVAB). The topographic features giving shape to the SVAB are the Coast Range to the west, the Sierra Nevada to the east, and the Cascade Range to the north. These mountain ranges channel winds through the SVAB, but also inhibit the dispersion of pollutant emissions. The SVAB, including Sacramento, is characterized

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 Report* (SCH No. 2012122006). Certified March 3, 2015.
3 DKS Associates, 2017. DSP Traffic Impact Study. March 2017.
4 Fehr & Peers, 2017. DSP Traffic Study. March 2017.
5 Sacramento Metropolitan Air Quality Management District, 2009. Guide to Air Quality Assessment. Available: http://www.airquality.org/ceqa/ceqaguideupdate.shtml. December 2009.

by a Mediterranean climate that includes mild, rainy winter weather from November through March and warm to hot, dry weather from May through September. Sacramento Valley temperatures range from 20 to 115 degrees Fahrenheit and the average annual rainfall is 20 inches.

The predominant annual and summer wind pattern in the Sacramento Valley is the full sea breeze, commonly referred to as Delta breezes. These cool winds originate from the Pacific Ocean and flow through the Carquinez Straits, a sea-level gap in the Coast Range. In the winter (December to February) northerly winds predominate. Wind directions in the Sacramento Valley are influenced by the predominant wind flow pattern associated with each season. During about half the days from July through September, a phenomenon called the "Schultz Eddy," a large isotropic vertical-axis eddy on the north side of the Carquinez Straits, prevents the Delta breezes from transporting pollutants north and out of the Sacramento Valley and causes the wind pattern to circle back south, all of which tends to keep air pollutants in the Sacramento Valley. This phenomenon's effect exacerbates the pollution levels in the area, and increases the likelihood of violations of State and/or federal air quality standards.

The vertical and horizontal movement of air is an important atmospheric component involved in the dispersion and subsequent dilution of air pollutants. Without movement, air pollutants can collect and concentrate in a single area, increasing the associated health hazards. For instance, in the winter, persistent inversions occur frequently in the SVAB, especially during autumn and early winter, and restrict the vertical dispersion of pollutants released near ground level.

Criteria Air Pollutants

Criteria air pollutants are a group of pollutants for which federal or state regulatory agencies have adopted ambient air quality standards. Criteria air pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM) in size fractions of 10 microns or less in diameter (PM_{10}), particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), and lead. **Table 4.2-1** lists the health effects associated with these pollutants. Most of the criteria pollutants are directly emitted. Ozone, however, is a secondary pollutant that is formed in the atmosphere by chemical reactions between nitrogen oxides (NOx) and reactive organic gases (ROG).

Criteria air pollutants are classified in each air basin, county, or in some cases, within a specific urbanized area. The classification is determined by comparing actual monitoring data with State and federal standards. If a pollutant concentration is lower than the standard, the area is classified as "attainment" for that pollutant. If an area exceeds the standard, the area is classified as "nonattainment" for that pollutant. If there are not enough data available to determine whether the standard is exceeded in an area, the area is designated "unclassified". The ambient state and national air quality standards can be found in **Table 4.2-2**.

TABLE 4.2-1
HEALTH EFFECTS OF MAIN CRITERIA AIR POLLUTANTS

Pollutant	Adverse Effects
Ozone (O_3)	• Ozone can irritate lung airways and cause inflammation. Other symptoms include wheezing, coughing, and breathing difficulties during exercise or outdoor activities. People with respiratory problems are most vulnerable, but even healthy people that are active outdoors can be affected when O_3 levels are high. • Repeated exposure to O_3 pollution for several months may cause permanent lung damage. • Even at very low levels, ground-level O_3 triggers a variety of health problems including aggravated asthma, reduced lung capacity, and increased susceptibility to respiratory illnesses like pneumonia and bronchitis. • Ground-level O_3 interferes with the ability of plants to produce and store food, which makes them more susceptible to disease, insects, Other pollutants, and harsh weather. • Ozone reduces crop and forest yields and increases plant vulnerability to disease, pests, and weather.
Carbon Monoxide (CO)	• The health threat from lower levels of CO is most serious for those who suffer from heart disease. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise; repeated exposures may contribute to other cardiovascular effects. • Healthy people can be affected by high levels of CO as well. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death • CO contributes to the formation of ground-level O_3, which can trigger serious respiratory problems.
Particulate Matter (PM)	• Particle pollution, especially fine particles, contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Numerous scientific studies have linked particle pollution exposure to a variety of problems, including: increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; decreased lung function, aggravated asthma, development of chronic bronchitis; irregular heartbeat, nonfatal heart attacks; and premature death. • Particles can be carried over long distances by wind and then settle on ground or water. The effects of this settling include: making lakes and streams acidic; changing the nutrient balance in coastal waters and large river basins; depleting the nutrients in soil; damaging sensitive forests and farm crops; and affecting the diversity of ecosystems.
Nitrogen Dioxide (NO_2)	• One of the main constituent involved in the formation of ground-level O_3, which can trigger serious respiratory problems. • Reacts to form nitrate particles, acid aerosols, as well as NO_2, which also cause respiratory problems. • Contributes to formation of acid rain; to nutrient overload that deteriorates water quality; and to atmospheric particles that cause visibility impairment. • Reacts to form toxic chemicals.

SOURCE: U.S. Environmental Protection Agency, 2006. https://www3.epa.gov/airtrends/aqtrnd95/sixpoll.html.

TABLE 4.2-2
STATE AND NATIONAL CRITERIA AIR POLLUTANT STANDARDS, EFFECTS, AND SOURCES

Pollutant	Averaging Time	State Standard	National Standard	Major Pollutant Sources
Ozone	1 hour	0.09 ppm	---	Formed when reactive organic gases (ROG) and nitrogen oxides (NOx) react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide	1 hour	0.18 ppm	100 ppb	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
	Annual Avg.	0.030 ppm	0.053 ppm	
Sulfur Dioxide	1 hour	0.25 ppm	75 ppb	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	3 hours	---	0.5 ppm	
	24 hours	0.04 ppm	0.14 ppm	
	Annual Avg.	---	0.030 ppm	
Respirable Particulate Matter (PM_{10})	24 hours	50 ug/m3	150 ug/m3	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	Annual Avg.	20 ug/m3	---	
Fine Particulate Matter ($PM_{2.5}$)	24 hours	---	35 ug/m3	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.
	Annual Avg.	12 ug/m3	12.0 ug/m3	
Lead	Monthly Ave.	1.5 ug/m3	---	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Quarterly	---	1.5 ug/m3	
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	Geothermal Power Plants, Petroleum Production and refining
Sulfates	24 hour	25 ug/m3	No National Standard	Produced by the reaction in the air of SO2.
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	See PM2.5.

NOTE:
ppb = parts per billion; ppm = parts per million; ug/m^3 = micrograms per cubic meter.

SOURCE: California Air Resources Board, 2015. *Ambient Air Quality Standards.* Available: www.arb.ca.gov/research/aaqs/aaqs2.pdf. Standards last updated October 1, 2015; California Air Resources Board, 2009. *ARB Fact Sheet: Air Pollution Sources, Effects and Control*. Available: www.arb.ca.gov/research/health/fs/fs2/fs2.htm. Page last reviewed by ARB December 2009.

The County's attainment status for the criteria pollutants are summarized in **Table 4.2-3**. Air pollutants of concern in the Sacramento region include O_3, CO, and PM_{10} and $PM_{2.5}$. Sacramento is considered a federal nonattainment area for O_3 and $PM_{2.5}$, and a state nonattainment area for O_3, PM_{10}, and $PM_{2.5}$. In addition, Sacramento is designed as attainment-maintenance for the federal CO and PM_{10} standards. The attainment-maintenance designation means that an area was previously nonattainment for this pollutant but has since been redesignated as attainment, but must maintain the standards for a number of years.

TABLE 4.2-3
SACRAMENTO COUNTY ATTAINMENT STATUS

Pollutant	Designation/Classification	
	State Standards	Federal Standards
Ozone	Nonattainment/Serious	Nonattainment/Severe
Carbon Monoxide	Attainment	Attainment/Maintenance
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified
Fine Particulate Matter (PM_{10})	Nonattainment	Attainment/Maintenance*
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment	Nonattainment/Moderate

NOTE:
* Effective October 28, 2013, the US EPA formally re-designated Sacramento County as attainment for the federal PM_{10} standard.

SOURCES: California Air Resources Board, 2015. *Area Designation Maps*. Available: http://www.arb.ca.gov/desig/adm/adm.htm. Accessed March 14, 2017;

Currently, the monitoring stations that include data representative of the proposed project sites are located in Sacramento on T Street (monitors O_3, PM_{10}, and $PM_{2.5}$) located within the DSP area and at El Camino and Watt (a busy intersection where CO is monitored), approximately 4.9 miles northeast of the project site. **Table 4.2-4** presents a five-year summary of air pollutant concentration data collected at these monitoring stations for O_3, PM_{10}, $PM_{2.5}$ and CO, as well as the number of days the applicable standards were exceeded during the given year.

Existing Ambient Air Quality

The criteria air pollutants most relevant to air quality planning and regulation in the SVAB include O_3, CO, PM_{10} and $PM_{2.5}$.

Ozone (O_3)

Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG, also sometimes referred to as volatile organic compounds or VOC by some regulating agencies) and NOx. The main sources of ROG and NOx, often referred to as ozone precursors, are combustion processes (including motor vehicle engines) and the evaporation of solvents, paints, and fuels. Ozone is referred to as a regional air pollutant because its precursors are transported and diffused

TABLE 4.2-4
SUMMARY OF AIR QUALITY MONITORING DATA (2014–2016)

Pollutant	Applicable Standard	Number of Days Standards Were Exceeded and Maximum Concentrations Measured[a]		
		2014	2015	2016
Ozone – T Street Station				
Days 1-hour State Std. Exceeded	>0.09 ppm[b]	0	0	0
Max. 1-hour Conc. (ppm)		0.085	**0.092**	**0.094**
Days 8-hour National Std. Exceeded[e]	>0.070 ppm[c]	**3**	**4**	**3**
Days 8-hour State Std. Exceeded[e]	>0.070 ppm[b]	**4**	**4**	**3**
Max. 8-hour Conc. (ppm)		**0.072**	**0.076**	**0.074**
Nitrogen Dioxide (NO_2) – T Street Station				
Days 1-hour State Std. Exceeded	> 0.18 ppm	0	0	0
Days 1-hour National Std. Exceeded	>0.10 ppm	0	0	0
Max. 1-hour Conc. (ppm)		0.064	0.055	0.055
Annual Average Conc. (ppm)		11	11	NA
Suspended Particulates (PM_{10}) – T Street Station				
Estimated Days Over 24-hour National Std.[d]	>150 µg/m^3 [c]	0	0	0
Estimated Days Over 24-hour State Std.[d]	>50 µg/m^3 [b]	NA	NA	NA
Max. 24-hour Conc. National/State (µg/m^3)		105.7/**106.4**	57.8/**59.1**	37.1/36.5
State Annual Average (µg/m^3)	>20 µg/m^3 [b]	NA	NA	NA
Suspended Particulates ($PM_{2.5}$) – T Street Station				
Estimated Days Over 24-hour National Std.[d]	>35 µg/m^3 [c]	0	**3**	NA
Max. 24-hour Conc. National (µg/m^3)		26.3	**36.3**	17
National Annual Average (µg/m^3)	>12.0 µg/m^3 [b]	8	9.5	NA
Carbon Monoxide (CO) – El Camino & Watt Station				
Days 8-hour State Std. Exceeded	>9.0 ppm[b]	0	0	0
Max. 8-hour Conc. (ppm)		NA	NA	NA
Days 1-hour State Std. Exceeded	>20 ppm[b]	NA	NA	NA
Max. 1-hour Conc. (ppm)		2.3	2.1	2.3

NOTES:

Bold values are in excess of applicable standard. "NA" indicates that data is not available.
conc. = concentration; ppm = parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter; ND = No data or insufficient data.

a. Number of days exceeded is for all days in a given year, except for particulate matter. PM_{10} and $PM_{2.5}$ are monitored every six days.
b. State standard, not to be exceeded.
c. National standard, not to be exceeded.
d. Particulate matter sampling schedule of one out of every six days, for a total of approximately 60 samples per year. Estimated days exceeded mathematically estimates of how many days concentrations would have been greater than the level of the standard had each day been monitored.
e. The CARB and US EPA use different methods to calculate the emissions for comparisons to the state and national standards.

SOURCE: California Air Resources Board, 2015. *Summaries of Air Quality Data, 2014-2016*. Available: http://www.arb.ca.gov/adam/index.html. Accessed March 14, 2017.

by wind concurrently with ozone production through a photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath, and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

According to the American Lung Association, healthy adults and children are harmed by air pollution; most at risk are children, the elderly, those with heart and lung disease, diabetes, or who live in proximity to major sources of pollution, like ports, railyards, or busy roadways or freeways.[6] For these vulnerable populations, particle pollution increases the risk of asthma attacks and respiratory distress, heart attacks, stroke, and premature death. The World Health Organization concluded in 2013 that breathing particle pollution causes lung cancer. Ground-level ozone triggers asthma attacks, increases the risk of hospital admissions and emergency room visits, and even increases the risk of premature death.

Carbon Monoxide (CO)

CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicle engines; the highest emissions occur during low travel speeds, stop-and-go driving, cold starts, and hard acceleration. Exposure of humans to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impaired central nervous system function, and angina (chest pain) in persons with serious heart disease. Very high concentrations of CO can be fatal.

Fine Particulate Matter (PM_{10} and $PM_{2.5}$)

PM_{10} and $PM_{2.5}$ consist of fine particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively (a micron is one-millionth of a meter). PM_{10} and $PM_{2.5}$ represent fractions of particulate matter that can be inhaled into air passages and the lungs and can cause adverse health effects. Some sources of fine particulate matter, such as wood burning in fireplaces, demolition, and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates also can damage materials and reduce visibility.

Large dust particles (diameter greater than 10 microns) settle out rapidly and are easily filtered by human breathing passages. This large dust is of more concern as a soiling nuisance rather than a health hazard. The remaining fine particulate matter, PM_{10} and $PM_{2.5}$, are a health concern particularly at levels above the federal and state ambient air quality standards. $PM_{2.5}$ (including diesel exhaust particles) has greater effects on health because these particles are small enough to be able to penetrate to the deepest parts of the lungs. Scientific studies have suggested links between fine particulate matter and numerous health problems including asthma, bronchitis, and

6 American Lung Association, 2015. State of the Air 2015: Sacramento Regional Summary.

acute and chronic respiratory symptoms, such as shortness of breath and painful breathing. Recent studies have shown an association between morbidity and mortality and daily concentrations of particulate matter in the air. Children are more susceptible to the health risks of PM_{10} and $PM_{2.5}$ because their immune and respiratory systems are still developing.

Mortality studies since the 1990s have shown a statistically significant direct association between mortality (premature deaths) and daily concentrations of particulate matter in the air. Despite important gaps in scientific knowledge and continued reasons for some skepticism, a comprehensive evaluation of the research findings provides persuasive evidence that exposure to fine particulate air pollution has adverse effects on cardiopulmonary health.[7]

According to the SMAQMD, exposure to PM pollution can cause coughing, wheezing, and decreased lung function even in otherwise healthy children and adults. U.S. Environmental Protection Agency (US EPA) estimates that thousands of elderly people die prematurely each year from exposure to fine particles. CARB has estimated both the public health and economic impacts caused by exposure to $PM_{2.5}$. In the Sacramento Metropolitan Area, CARB estimates that: 90 people die prematurely; 20 people are admitted to hospitals; 1,200 asthma and lower respiratory symptoms cases; 1,110 acute bronchitis cases; 7,900 lost work days; 42,000 minor restricted activity days; and total economic impact of PM is over $700 million per year.[8]

Nitrogen Dioxide (NO_2)

NO_2 is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, NO_2 can increase the risk of acute and chronic respiratory disease and reduce visibility. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels.

Sulfur Dioxide (SO_2)

SO_2 is a combustion product of sulfur or sulfur-containing fuels such as coal and diesel. SO_2 is also a precursor to the formation of particulate matter, atmospheric sulfate, and atmospheric sulfuric acid formation that could precipitate downwind as acid rain. The maximum SO_2 concentrations recorded in the project vicinity are well below federal and state standards. Accordingly, the region is currently designated as attainment with both the national and State SO_2 standards.

Lead

Leaded gasoline (phased out in the United States beginning in 1973), lead based paint (on older houses and cars), smelters (metal refineries), and manufacture of lead storage batteries have been

7 Dockery, D. W. and C.A. Pope, III, 2006. *Health Effects of Fine Particulate Air Pollution: Lines that Connect.* Journal Air & Waste Management Association. pp. 709–742.

8 Sacramento Metropolitan Air Quality Management District, 2016. Particulate Matter ($PM_{2.5}$) and Planning. Available: http://www.airquality.org/plans/federal/pm/PM2.5/index.shtml. Accessed April 8, 2016.

the primary sources of lead released into the atmosphere. Lead has a range of adverse neurotoxic health effects, which puts children at special risk. Some lead-containing chemicals cause cancer in animals. Lead levels in the air have decreased substantially since leaded gasoline was eliminated. Ambient lead concentrations are only monitored on an as-warranted, site-specific basis in California. Accordingly, the region is currently designated as attainment with both the national and State lead standards.

Toxic Air Contaminants (TACs)

TACs are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, diesel engines, dry cleaners, industrial operations, and painting operations.

CARB has identified diesel particulate matter (DPM) as a TAC in 1998, primarily based on evidence demonstrating cancer effects in humans. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Mobile sources such as trucks and buses are among the primary sources of diesel emissions, and concentrations of DPM are higher near heavily traveled highways and rail lines on which diesel locomotive operate. The risk from DPM as determined by the CARB declined from 750 in one million in 1990 to 570 in one million in 1995; by 2000, CARB estimated that the average statewide cancer risk from DPM was 540 in one million.[9] These calculated cancer risk values from ambient air exposure generated by mobile sources can be compared against the lifetime probability of being diagnosed with cancer in the United States, from all causes, which is more than 40 percent (based on a sampling of 17 regions nationwide), or greater than 400,000 in one million, according to the National Cancer Institute.[10]

Asbestos is also a TAC of concern due to the demolition of buildings and structures. Asbestos is a fibrous mineral, which is both naturally occurring in ultramafic rock (a rock type commonly found in California) and used as a processed component of building materials. Because asbestos has been proven to cause serious adverse health effects, including asbestosis and lung cancer, it is strictly regulated based on its natural widespread occurrence and its use as a building material.

Odor Emissions

Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The

9 California Air Resources Board, 2009. *California Almanac of Emissions and Air Quality - 2009 Edition.* Table 5-44 and Figure 5-12.

10 National Cancer Institute, 2012. *Lifetime Risk (Percent) of Being Diagnosed with Cancer by Site and Race/ Ethnicity, Both Sexes: 18 SEER Areas, 2007-2009 (Table 1.14).* Available: http://seer.cancer.gov/csr/1975_2009_ pops09/results_merged/topic_lifetime_risk_diagnosis.pdf. Accessed June 27, 2013.

ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity. The occurrence and severity of odor impacts depends on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors. Odor impacts should be considered for any proposed new odor sources located near existing receptors, as well as any new sensitive receptors located near existing odor sources.

Sensitive Receptors

Air quality does not affect every individual or group in the population in the same way, and some groups are more sensitive to adverse health effects caused by exposure to air pollutants than others. Population subgroups sensitive to the health effects of air pollutants include the elderly and the young, those with higher rates of respiratory disease such as asthma and chronic obstructive pulmonary disease, and with other environmental or occupational health exposures (e.g., indoor air quality) that affect cardiovascular or respiratory diseases.

Land uses such as schools, children's day care centers, hospitals, and nursing and convalescent homes are considered to be the most sensitive to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Parks and playgrounds are considered moderately sensitive to poor air quality because persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality; however, exposure times are generally far shorter in parks and playgrounds than in residential locations and schools, which typically reduces the overall health risk associated with exposure to pollutants. Residential areas are considered more sensitive to air quality conditions compared to commercial and industrial areas because people generally spend longer periods of time at their residences, with associated greater exposure to ambient air quality conditions. Workers are not considered sensitive receptors because all employers are required to follow regulations set forth by the Occupational Safety and Health Administration (OSHA) to ensure the health and well-being of their employees.

4.2.2 Regulatory Setting

Federal

Criteria Pollutants

The 1970 Federal Clean Air Act (FCAA) (last amended in 1990) required that regional planning and air pollution control agencies prepare a regional air quality plan to outline the measures by which both stationary and mobile sources of pollutants will be controlled in order to achieve all national ambient standards by the deadlines specified in the FCAA. These ambient air quality standards are intended to protect public health and welfare, and they specify the concentration of

pollutants (with an adequate margin of safety) to which the public can be exposed without adverse health effects. They are designed to protect those segments of the public most susceptible to respiratory distress, including asthmatics, the very young, the elderly, people weak from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels that are somewhat above ambient air quality standards before adverse health effects are observed.[11]

Table 4.2-2 presents current national and state ambient air quality standards and provides a brief discussion of the related health effects and principal sources for each pollutant. Pursuant to the 1990 Federal Clean Air Act Amendments (FCAAA), the US EPA classifies air basins (or portions thereof) as "attainment" or "nonattainment" for each criteria air pollutant, based on whether or not the National Ambient Air Quality Standards (NAAQS) had been achieved. "Unclassified" is defined by the FCAAA as any area that cannot be classified, on the basis of available information, as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.

The FCAA required each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The FCAAA added requirements for states containing areas that violate the NAAQS to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The US EPA has responsibility to review all state SIPs to determine if they conform to the mandates of the FCAAA and will achieve air quality goals when implemented. If the US EPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (FIP) for the nonattainment area and may impose additional control measures. Failure to submit an approvable SIP or to implement the plan within mandated timeframes can result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

Toxic Air Contaminants

TACs are regulated under both state and federal laws. Federal laws use the term "Hazardous Air Pollutants" (HAPs) to refer to the same types of compounds that are referred to as TACs under State law. Both terms encompass essentially the same compounds. The 1977 FCAAA required the US EPA to identify National Emission Standards for Hazardous Air Pollutants (NESHAPs) to protect public health and welfare. These substances include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 FCAAA, a total of 189 substances are regulated as HAPs.

[11] U.S. Environmental Protection Agency, 2006. Available: https://www3.epa.gov/airtrends/aqtrnd95/sixpoll.html.

State

Criteria Pollutants

Although the FCAA established the NAAQS, individual states can adopt more stringent standards and include other pollutants. California had already adopted its own air quality standards when federal standards were established, and because of the unique meteorology in California, there is considerable diversity between some of the state standards and NAAQS, as shown in Table 4.2-2. Most of the California ambient standards tend to be at least as protective as NAAQS and are often more stringent.

In 1988, California passed the California Clean Air Act (CCAA) (California Health and Safety Code Sections 39600 et seq.), which, like its federal counterpart, called for the designation of areas as attainment or nonattainment, but based on state ambient air quality standards rather than the federal standards. As previously discussed, Sacramento County is located within the SMAQMD. The CCAA requires each air district in which state air quality standards are exceeded to prepare a plan that documents reasonable progress towards attainment. A three-year update is required. If an air district exceeds the California Air Quality Standards for a particular criteria pollutant, it is considered to be nonattainment of that criteria pollutant until the district can demonstrate compliance. As indicated in Table 4.2-3, Sacramento County is classified as nonattainment and serious nonattainment for the 8-hour and 1-hour state ozone standards, respectively, and is nonattainment of the 24-hour state PM_{10} standard.

Toxic Air Contaminants

The California Health and Safety Code defines TACs as air pollutants which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. The State Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807 (Tanner). A total of 243 substances have been designated TACs under California law; they include the 189 (federal) HAPs adopted in accordance with AB 2728. The Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources; however, AB 2588 does not regulate air toxics emissions. Toxic air contaminant emissions from individual facilities are quantified and prioritized. “High-priority” facilities are required to perform a health risk assessment and, if specific thresholds are violated, are required to communicate the results to the public in the form of notices and public meetings.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines. The regulation is anticipated to result in an 80 percent decrease in statewide diesel health risk in 2020 as compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel. Subsequent regulations of diesel emissions by the CARB include the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Offroad Diesel Vehicle Regulation, and the New Offroad Compression Ignition Diesel Engines and

Equipment Program. All of these regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel powered equipment.

Despite these reduction efforts, CARB recommends that proximity to sources of DPM emissions be considered in the siting of new sensitive land uses. In April 2005, the CARB published *Air Quality and Land Use Handbook: a Community Health Perspective*. This handbook is intended to give guidance to local governments in the siting of sensitive land uses near sources of air pollution. Recent studies have shown that public exposure to air pollution can be substantially elevated near freeways and certain other facilities such as ports, rail yards, and distribution centers.

Specifically, the document focuses on risks from emissions of DPM, a known carcinogen, and establishes recommended siting distances of sensitive receptors. With respect to freeways, the report recommends the following: "Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with more than 100,000 vehicles per day, or rural roads with 50,000 vehicles/day."[12] CARB notes that these recommendations are advisory and should not be interpreted as defined "buffer zones," and that local agencies must balance other considerations, including transportation needs, the benefits of urban infill, community economic development priorities, and other quality of life issues. CARB's position is that with careful evaluation of exposure, health risks, and affirmative steps to reduce risk where necessary, infill development, mixed use, higher density, transit-oriented development, and other concepts that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level.

Local

Sacramento Metropolitan Air Quality Management District

The SMAQMD is the regional agency responsible for air quality regulation within the SVAB. The SMAQMD regulates air quality through its planning and review activities and has permit authority over most types of stationary emission sources and can require operators of stationary sources to obtain permits, can impose emission limits, set fuel or material specifications, and establish operational limits to reduce air emissions. The SMAQMD regulates new or modified stationary sources of TACs.

For state air quality planning purposes, Sacramento County is classified as a severe non-attainment area for ozone. The "severe" classification triggers various plan submittal requirements and transportation performance standards. In order to demonstrate the District's ability to eventually meet the federal ozone standards, the SMAQMD, along with the other air districts in the nonattainment area, maintains the region's portion of the SIP for ozone. The Sacramento Air Basin's part of the SIP is a compilation of regulations that govern how the region and State will comply with the FCAA requirements to attain and maintain the federal ozone

[12] California Air Resources Board, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April 2005. p. 4.

standard. The compilation of rules that comprises the Sacramento Nonattainment Area's portion of the SIP is contained in the Sacramento Area Regional Ozone Attainment Plan. The latest revisions made to the SIP include the *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2013 SIP Revisions),*[13] which addresses attainment of the federal 8-hour ozone standard, as well as the *2009 Triennial Report and Plan Revision,*[14] which addresses attainment of the state ozone standard, are the latest plans issued by the SMAQMD.

These attainment plans depend heavily on the SMAQMD's permit authority, which is exercised through SMAQMD's rules and regulations. With respect to the construction phase of the Proposed Project, the applicable SMAQMD regulations would relate to construction and stationary equipment, particulate matter generation, architectural coatings, and paving materials. Equipment used during Proposed Project construction would be subject to the requirements of SMAQMD Regulation 2 (Permits), Rule 201 (General Permit Requirements); Regulation 4 (Prohibitory Rules), Rule 401 (Ringelmann Chart/Opacity), Rule 402 (Nuisance), Rule 403 (Fugitive Dust), Rule 404 (Particulate Matter), Rule 405 (Dust and Condensed Fumes), Rule 420 (Sulfur Content of Fuels), Rule 442 (Architectural Coatings), and Rule 453 (Cutback and Emulsified Asphalt Paving Materials).

City of Sacramento 2035 General Plan

The following goals and policies from the *City of Sacramento 2035 General Plan*[15] are relevant to air quality.

Goal ER 6.1 Improved Air Quality. Improve the health and sustainability of the community through improved regional air quality and reduced greenhouse gas emissions that contribute to climate change.

Policies

ER 6.1.1 **Maintain Ambient Air Quality Standards.** The City shall work with the CARB and the SMAQMD to meet State and Federal ambient air quality standards.

ER 6.1.2 **New Development.** The City shall review proposed development projects to ensure projects incorporate feasible measures that reduce construction and operational emissions for reactive organic gases, nitrogen oxides and particulate matter (PM_{10} and $PM_{2.5}$) through project design.

ER 6.1.3 **Emissions Reduction.** The City shall require development projects that exceed SMAQMD ROG and NOx operational thresholds to incorporate design or operational features that reduce emissions equal to 15 percent from the level that would be produced by an unmitigated project.

ER 6.1.4 **Sensitive Uses.** The City shall coordinate with SMAQMD in evaluating exposure of sensitive receptors to toxic air contaminants, and will impose appropriate conditions on projects to protect public health and safety.

[13] Sacramento Metropolitan Air Quality Management District, 2013. *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2013 SIP Revisions)*. September 26, 2013.
[14] Sacramento Metropolitan Air Quality Management District, 2009. *2009 Triennial Report and Plan Revision*. December 2009.
[15] City of Sacramento, 2009. *City of Sacramento 2030 General Plan.* Adopted March 3, 2009.

ER 6.1.10 **Coordination with SMAQMD.** The City shall coordinate with SMAQMD to ensure projects incorporate feasible mitigation measures if not already provided for through project design.

ER 6.1.13 **Zero-Emission and Low-Emission Vehicle Use.** The City shall encourage the use of zero-emission vehicles, low-emission vehicles, bicycles and other non-motorized vehicles, and car-sharing programs by requiring sufficient and convenient infrastructure and parking facilities in residential developments and employment centers to accommodate these vehicles.

The proposed DSP would be consistent with policies ER 6.1.1, ER 6.1.2, and ER 6.1.3 because each project developed pursuant to the proposed DSP would be required to implement all recommended SMAQMD mitigation measures during construction and operational, and comply with the SMAQMD's 15 percent emission reduction/mitigation guideline through the preparation of the AQMP. Also, the proposed DSP would include residential units that would have access to transit and would not need to rely solely on automobile travel. The proposed DSP would be energy efficient by exceeding Title 24 energy standards and would encourage the use of zero-emission and low emission vehicle use such as non-motorized vehicles or car-sharing programs, therefore the proposed DSP would be consistent with policy ER 6.1.13. All mitigation measures proposed under the DSP would be implemented through coordination with the SMAQMD; therefore, the proposed DSP would be consistent with ER 6.1.4 and ER 6.1.10.

Sacramento Central City Community Plan

The City's *Central City Community Plan*[16] does not contain goals and policies specific to air quality.

4.2.3 Analysis, Impacts and Mitigation

Significance Criteria

Impacts related to air quality are considered significant if implementation of the proposed DSP would result in the following:

- Result in short-term (construction) emissions of NOx above 85 pounds per day (ppd);
- Result in short-term (construction) emissions of PM_{10} above 0 ppd without implementation of all best management practices (BMPs) and above 80 ppd or 14.6 tons per year (tpy) after implementation of all BMPs;
- Result in short-term (construction) emissions of $PM_{2.5}$ above 0 ppd without implementation of all BMPs and above 82 ppd or 15.0 tpy after implementation of all BMPs;
- Result in long-term (operational) emissions of NOx or ROG above 65 ppd;
- Result in long-term (operational) emissions of PM_{10} above 0 ppd without implementation of all BMPs and above 80 ppd or 14.6 tpy after implementation of all BMPs;

16 City of Sacramento, 2015. *Central City Community Plan*. Adopted March 3, 2015.

- Result in long-term (operational) emissions of $PM_{2.5}$ above 0 ppd without implementation of all BMPs and above 82 ppd or 15.0 tpy after implementation of all BMPs;
- Result in CO concentrations that exceed the 1-hour state ambient air quality standard (i.e., 20.0 ppm) or the 8-hour state ambient standard (i.e., 9.0 ppm);
- Create objectionable odors affecting a substantial number of people; or
- Result in TAC exposures that cause a lifetime cancer risk exceeding 10 in 1 million for stationary sources, or substantially increase the lifetime cancer risk as a result of increased exposure to TACs from mobile sources.

Methodology and Assumptions

Air quality emissions from construction and operation of the proposed DSP could result in significant impacts. Construction emissions would affect local particulate and ozone (ROG and NOx) concentrations, primarily due to fugitive dust sources and diesel exhaust. DSP operations would increase emissions from motor vehicle trips and on-site stationary sources. Other operational sources include fuel combustion associated with landscaping activities, space and water heating in buildings, and the use of consumer products.

Construction Impacts

The proposed DSP would facilitate the construction of up to approximately 13,401 residential dwelling units, 280,030 square feet of restaurant uses, 435,837 square feet of government office building uses, 3,510,892 square feet of office uses, 2,303,044 square feet of retail/service uses and 643,797 square feet of medical office uses within the DSP area by the year 2010. The CalEEMod version 2016.3.1 was used to calculate construction-related emissions of criteria air pollutants and to determine if such emissions would exceed SMAQMD's applicable regional significance thresholds. Since the proposed DSP would be built-out based on market demand, there is no project-specific information available for construction of the development allowed pursuant to the DSP. Consequently, reasonable assumptions and default CalEEMod settings were used to estimate criteria air pollutant and ozone precursor emissions, which can be found in Appendix C1.

Operational Impacts

Operation of the DSP would increase emissions of ozone precursors (ROG and NOx), PM_{10} and $PM_{2.5}$ from vehicle trips, area sources (landscape maintenance, consumer products such as hairsprays, deodorants, and cleaning products), and energy sources (e.g., natural gas combustion for space and water heating).

CalEEMod was used to estimate vehicle, area and energy use emissions associated with the DSP. For on-road vehicles, emissions were calculated using CalEEMod default trip rates and trip lengths. A separate CalEEMod run was used to adjust CalEEMod's default vehicle miles traveled (VMT) to match the VMT data presented in section 4.12, Transportation and Circulation. The operational emissions were estimated for 2035, the horizon year assumed in this analysis.

The California Supreme Court recently found that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents." In *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4th 369, the Supreme Court explained that an agency is only required to analyze the potential impact of such hazards on future residents if the project would exacerbate those existing environmental hazards or conditions. CEQA analysis is therefore concerned with a project's impact on the environment, rather than with the environment's impact on a project and its users or residents. Thus, the City is not required to consider the effects of bringing a new population into an area where such TAC emissions exist. However, in the interest of disclosure, this EIR discusses potential effects of the environment on people in the DSP area, including TAC exposure on proposed sensitive land uses under the DSP from the existing environment (e.g., auto and rail traffic).

Appendix C1 includes additional air quality information and modeling results.

Localized CO Concentrations

CO concentration levels are highest near crowded or congested intersections where traffic is slow or idling. The proposed DSP would increase traffic volumes on surrounding roadways, degrading the existing level of service (LOS) and increasing CO concentrations at nearby intersections. According to the SMAQMD, a project would not result in a significant CO impact if one of following tiers is met:[17]

First Tier

The proposed DSP would result in a less-than-significant impact to air quality for local CO if:

- Traffic generated by the proposed DSP will not result in deterioration of intersection level of service (LOS) or LOS E or F; and
- The DSP will not contribute additional traffic to an intersection that already operates at LOS E or F.

Second Tier

If all of the following criteria are met, the proposed DSP would result in a less-than-significant impact to air quality for local CO.

- The DSP would not result in an affected intersection experiencing more than 31,600 vehicles per day;
- The DSP would not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadway; or other locations where horizontal or vertical mixing of air will be substantially limited; and

[17] South Coast Air Quality Management District, 2015. *The CEQA Guidance*. Available: http://www.airquality.org/ceqa/ceqaguideupdate.shtml. December 2009.

- The mix of vehicle types at the intersection is not anticipated to be substantially different from the County average (as identified by the EMFAC or CalEEMod models).

The CALINE4 dispersion model is the preferred method of estimating CO pollutant concentrations at sensitive land uses near congested roadways and intersections. For each intersection analyzed, CALINE4 uses traffic volumes, CO emission rates, and receptor locations to estimate peak hour CO concentrations. For this analysis, CO concentrations were calculated based on a simplified CALINE4 screening procedure and CO emissions rates for Sacramento County from the California Air Resources Board's Emissions Factors (EMFAC) 2014 model. The model is used to identify potential CO hotspots. The modeling methodology assumed worst-case conditions to provide a maximum, worst-case CO concentration. To ensure that an adequate margin of safety was used, the highest 1-hour and 8-hour CO readings from Sacramento County were used as the background concentration. Year 2016 and 2035 was selected for the baseline and cumulative analysis, respectively, in order to generate conservative emission factors and emission estimates. Appendix C1 contains the CO modeling results.

Air Quality Mitigation Plan

SMAQMD has developed guidance to mitigate operational emissions for projects subject to the California Environmental Quality Act.[18] SMAQMD's guidance recommends that project applicants prepare an AQMP for all projects that exceed SMAQMD's operational significance thresholds of 65 ppd for ROG and/or 65 ppd for NO_x.

If a project exceeds these thresholds, mitigation must be identified to reduce on-road mobile source emissions by 15 percent if the project is within the current SIP, or by 35 percent if not within the SIP. Since the proposed population and housing estimates under the proposed DSP are equal to those provided in the Sacramento 2035 General Plan, the DSP would be included within the SIP.[19] Therefore, the 15 percent reduction applies to the proposed DSP.

The following steps were used to determine if the proposed DSP would meet the 15 percent reduction goal. The first step involves estimating total unmitigated ROG and NO_x emissions using CalEEMod default values. Since the DSP includes a traffic analysis, the second step involves estimating mitigated ROG and NOx emissions using CalEEMod, but adjusted for the VMT estimates included in Section 4.12, Transportation. Then, the decrease in ROG and NO_x mobile source emissions between unmitigated and mitigated is calculated, and the difference is converted to NO_x equivalents or NO_xe. NO_xe is the sum of NO_x reductions plus one-third of ROG reductions. If the project meets the 15 percent NO_xe reduction goal, it is considered consistent

[18] Sacramento Metropolitan Air Quality Management District, 2016. *Recommended Guidance for Land Use Emission Reductions, Version 3.3 (for Operational Emissions).* Available: http://www.airquality.org/LandUseTransportation/Documents/SMAQMD%20Land-Use-Emission-Reductions-FINALv3-3.pdf. Last updated September 26, 2016. Accessed May 2, 2017.

[19] City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report* (SCH No. 2012122006). Certified March 3, 2015.

with the SIP and other recent SMAQMD air quality management plans. Appendix C2 includes additional information and modeling results.

Toxic Air Contaminants

The primary TACs during construction would be DPM from construction equipment exhaust. DPM exhaust is a complex mixture of thousands of gases and fine particles commonly known as soot. Although construction activities within the DSP could be ongoing incrementally for several years, construction within the DSP area would be intermittent and occur in different areas for varying durations. TAC emissions would be spread out geographically over time, reducing exposure at any individual sensitive receptor. Based on guidance from the SMAQMD, the health risk resulting from exposure to DPM emissions from construction equipment was evaluated qualitatively.

Odors

Notwithstanding this judicial finding in the California Supreme Court's *CBIA v. BAAQMD* decision, an assessment of odor impacts is included in this section, for informational purposes. An odor analysis typically evaluates the potential for a project to generate odors and for the project to be affected by odors from nearby sources of odors. Land uses to be developed under the proposed DSP (i.e., residential, office, retail, restaurant, etc.) are not generally considered sources of substantial odors. Consequently, the focus of the odor analysis is on the potential for existing sources of odors to affect future residents.

Potential odor impacts were evaluated by examining the distances from existing odor sources to sensitive land uses within the DSP area. The analysis also considers existing odor complaints, prevailing wind direction, and policies designed to minimize odor impacts. Odor sources typically include industrial land uses, such as fiberglass manufacturing, coating operations, foundries, refineries, sewage treatment plants, landfills, and recycling facilities.

Impacts and Mitigation Measures

Impact 4.2-1: Implementation of the proposed DSP could conflict with or obstruct implementation of an applicable air quality plan.

The *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2013 SIP Revisions),*[20] which addresses attainment of the federal 8-hour ozone standard, and the *2015 Triennial Report and Plan Revision,*[21] are the latest plans issued by the SMAQMD, which incorporate land use assumptions and travel demand modeling from SACOG. To determine compliance with the applicable air quality plan, the SMAQMD recommends comparing the project to the SACOG growth projections included in the *Metropolitan Transportation Plan/*

[20] Sacramento Metropolitan Air Quality Management District, 2013. *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2013 SIP Revisions)*. September 26, 2013.

[21] Sacramento Metropolitan Air Quality Management District, 2009. *2009 Triennial Report and Plan Revision*. December 2009.

Sustainable Communities Strategy (MTP/SCS),[22] a comparison of the project's projected VMT and population growth rate. Since the 13,401 residential dwelling units and 7,173,600 square feet of non-residential uses anticipated under the proposed DSP are consistent with the development assumptions in the current City of Sacramento 2035 General Plan, the proposed DSP is already included in the 2016 MTP/SCS growth projects.[23]

Although the proposed DSP would be consistent with the SACOG 2016 MTP/SCS, as discussed in Impact 4.2-3 below, the proposed DSP unmitigated operational emissions would generate ROG and NOx emissions that would exceed the SMAQMD significance thresholds and would be considered significant for CEQA purposes, as shown in **Table 4.2-5**. If not mitigated, the pollutant emissions generated during future operations of the proposed DSP could conflict with or obstruct implementation of applicable air quality plans.

TABLE 4.2-5
PERCENT REDUCTION OF MOBILE EMISSIONS OF NO_XE AFTER IMPLEMENTATION OF ALL DESIGN FEATURES[1]

Category	Emissions Without Proposed Design Features (ppd)			Emissions With Proposed Design Features (ppd)			Percent Reduction	Exceed 15%?
	ROG	NO_X	NO_{Xe}[2]	ROG	NO_X	NO_{Xe}[2]		
DSP	302	1,179	1,222	65	260	269	78%	Yes

NOTES:
1. Operational emissions estimates for summertime conditions were made using CalEEMod 2016.3.1. See Appendix C1 for details.
2. NOxe as defined by the SMAQMD is the reduction in ROG divided by 7 plus the reduction in NO_X.

SOURCE: ESA, 2017.

The SMAQMD recommends that lead agencies require projects exceeding their significance thresholds of ROG and/or NOx reduce their ozone precursor emissions from transportation sources by 15 percent. This percentage is based on the project location within the Sacramento Urban Core, which is part of the Sacramento Area Ozone Implementation Plan. SMAQMD calculates this 15 percent using NO_xe, which is calculated by adding the mitigated ROG emissions (divided by 7) to mitigated NOx emissions. Using the SMAQMD Recommended Guidance for Land Use Emission Reduction,[24] an AQMP was prepared demonstrating that the proposed DSP could achieve the requisite percent reduction of NO_xe after all proposed design features have been implemented; the AQMP can be found in Appendix C2.

Because the proposed DSP would facilitate the development of higher-density, transit-oriented development, combined with the effects of regular updates to Title 24 and the California Building Codes (including CALGreen), much of the reduction would be achieved by project design. Most

22 Sacramento Area Council of Governments, 2016. *Metropolitan Transportation Plan/Sustainable Communities Strategy*. Adopted February 18, 2016.
23 City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report* (SCH No. 2012122006). Certified March 3, 2015.
24 NO_xe as defined by the SMAQMD is the reduction in ROG divided by 7 plus the reduction in NOx.

of the project design features included in development under the proposed DSP would not require monitoring beyond completion of the project. As shown in Table 4.2-5, the proposed DSP would result in a 78 percent reduction in NO_xe emissions by simply implementing the design features proposed under the proposed DSP.[25] The proposed DSP AQMP achieved the required reduction through identification and commitment to a series of mitigation measures, each of which is assigned a point value representing the approximate percentage reduction in emissions.

Since the proposed DSP would be designed as a higher-density, transit-oriented development, much of the reduction would be achieved by project design and location within the Sacramento urban core with access to a variety of transportation options. Thus, the proposed DSP would be consistent with the land use parameters established for the DSP area in the SACOG MTP/SCS and would incorporate provisions that would reduce unmitigated emissions by at least 15 percent, this impact is considered **less than significant**.

Summary

The proposed DSP would be consistent with the growth projections for the DSP area included in the City's 2035 General Plan and the SACOG MTP/SCS. The proposed DSP would generate unmitigated operational emissions of ROG and NOx that would exceed the SMAQMD's significance thresholds and would be considered operationally significant for CEQA purposes. Because the proposed DSP would require future projects to incorporate emission reduction measures, on an overall basis it would exceed the minimum 15 percent reduction in operational mobile source emissions. Since the proposed DSP would facilitate higher-density, transit-oriented development, much of the reduction would be achieved by project design and location within the Sacramento urban core with access to a variety of transportation options. Thus, the proposed DSP would be consistent with the land use parameters established for the DSP area in the SACOG MTP/SCS and would incorporate provisions that would reduce unmitigated emissions by at least 15 percent; this impact is considered **less than significant**.

Mitigation Measure

None required.

Impact 4.2-2: Construction of development under the proposed DSP could result in short-term emissions of NOx, PM_{10} and $PM_{2.5}$.

Construction emissions are considered short term in duration, but nevertheless can have the potential to represent a significant, adverse impact on air quality. Construction related emissions arise from a variety of activities, including: (1) grading, excavation, road building, and other earth moving activities; (2) operation of construction equipment and employee vehicles, especially

[25] NO_xe as defined by the SMAQMD is the reduction in ROG divided by 7 plus the reduction in NOx.

on unpaved surfaces; (3) exhaust from stationary construction equipment (e.g., generators, etc.); (4) architectural coatings; and (5) asphalt paving.

Emissions of ozone precursors, ROG and NOx, are generated primarily by mobile sources and largely vary as a function of vehicle trips per day, the types and number of heavy-duty, off-road equipment used and the intensity and frequency of their operation. A large portion of construction-related ROG emissions also results from the application of asphalt.

Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather. In the absence of mitigation, construction activities could result in significant and adverse quantities of dust, and, as a result, local visibility and PM_{10} concentrations may be adversely affected on a temporary and intermittent basis during construction of projects pursuant to the proposed DSP. In addition, the fugitive dust generated by construction would include particles larger than PM_{10}, which would fall out of the atmosphere within several hundred feet of the specific construction site and could result in nuisance-type impacts, rather than adverse health effects.

Construction of residential and non-residential uses as proposed in the DSP area would include site grading, excavation for infrastructure and building foundations, building construction, and paving and landscaping installation. Construction of development pursuant to the proposed DSP is anticipated to begin in early 2018 and, conservatively assuming completion by 2027, would take place over a period of approximately 10 years. Since construction of individual residential and non-residential buildings under the proposed DSP would occur incrementally as dictated by market conditions, it is conservatively assumed for this analysis that building construction would occur uniformly throughout the 10-year construction period.

Construction emissions were estimated for the DSP using the methods contained in SMAQMD's *Guide to Air Quality Assessment in Sacramento County.*[26] According to the SMAQMD guidance, projects that do not implement the District's BMPs must meet a zero peak daily and annual emission threshold for PM_{10} and $PM_{2.5}$. With implementation the SMAQMD's BMPs, the SMAQMD's peak daily and annual thresholds increase to 80 ppd/14.6 tpy of PM_{10}, 82 ppd/15 tpy of $PM_{2.5}$.

Annual and peak daily construction-related emission estimates were made using CalEEMod. The predicted unmitigated and mitigated construction emission estimates can be found in **Table 4.2-6** and 4.2-11, respectively, and are compared to the SMAQMD significance thresholds. As shown in Tables 4.2-10, construction emissions would exceed the SMAQMD's annual and peak daily emission thresholds for PM_{10} and $PM_{2.5}$ as well as the NOx emission threshold. Without implementation of the SMAQMD's BMPs, construction activities would generate emissions that would result in a **significant impact**.

[26] Sacramento Metropolitan Air Quality Management District, 2009. *Guide to Air Quality Assessment*. Adopted December 2009 and Chapter 3 last updated May 2017. pp. 3-1 - 3-11.

TABLE 4.2-6
UNMITIGATED DSP CONSTRUCTION EMISSIONS

Construction Year	NO_X (ppd)	PM_{10} (ppd)	$PM_{2.5}$ (ppd)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
2017	**157.5**	**28.4**	**13.3**	**11.9**	**5.0**
2018	**139.9**	**27.4**	**12.3**	**13.9**	**5.9**
2019	**127.9**	**26.8**	**11.7**	**13.8**	**5.8**
2020	**117.3**	**26.2**	**11.2**	**13.7**	**5.8**
2021	**107.6**	**25.7**	**10.7**	**13.7**	**5.7**
2022	**94.7**	**25.1**	**10.1**	**13.6**	**5.6**
2023	84.1	**24.6**	**9.7**	**13.5**	**5.6**
2024	79.6	**24.4**	**9.5**	**13.5**	**5.5**
2025	72.6	**24.1**	**9.2**	**13.5**	**5.5**
2026	72.0	**24.1**	**9.2**	**13.5**	**5.5**
2027	71.6	**24.0**	**9.2**	**13.5**	**5.5**
SMAQMD Thresholds[3]	85	0	0	0	0
Maximum	**157.5**	**28.4**	**13.3**	**11.9**	**5.0**
Significant (Yes or No)?	Yes	Yes	Yes	Yes	Yes

NOTES:
1. Project construction emissions estimates were made using CalEEMod version 2016.3.1. See Appendix C1 for model outputs and more detailed assumptions
2. Values in **bold** are in excess of the applicable SMAQMD significance threshold.
3. SMAQMD has established a zero emissions threshold for PM_{10} and $PM_{2.5}$ when project do not implement their Best Available Practices (BMPs).

SOURCE: ESA, 2017.

Implementation of the Mitigation 4.2-2 would reduce construction emissions to levels shown in **Table 4.2-7**. PM_{10} and $PM_{2.5}$ emissions would be reduced to levels below SMAQMD thresholds. However, emissions of NO_X would remain in excess of the thresholds each year from 2017 through 2021, after which annual NOx emissions would fall below the SMAQMD threshold of 85 pounds per year.

Summary

As previously discussed, projects that do not implement the District's BMPs must meet a zero peak daily and annual emission threshold for PM_{10} and $PM_{2.5}$. With implementation the SMAQMD's BMPs, the SMAQMD's peak daily and annual thresholds increase to 80 ppd/14.6 tpy of PM_{10} and 82 ppd/15 tpy of $PM_{2.5}$. Assuming implementation of such required practices, construction of residential and non-residential development pursuant to the proposed DSP would result in emissions of PM_{10} and $PM_{2.5}$ that would be below the SMAQMD significance thresholds. Construction of development pursuant to the proposed DSP would generate NOx emissions that would exceed SMAQMD's thresholds through at least 2021. Consequently, implementation of the proposed DSP would result in a **short-term significant impact** due to NOx emissions.

TABLE 4.2-7
MITIGATED DSP CONSTRUCTION EMISSIONS[1, 2]

Construction Year	NO_X (ppd)	PM_{10} (ppd)	$PM_{2.5}$ (ppd)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
2017	**134.0**	25.2	10.5	11.6	4.8
2018	**119.4**	24.6	9.9	13.3	5.5
2019	**109.3**	24.2	9.6	13.3	5.4
2020	**100.3**	23.9	9.3	13.2	5.4
2021	**92.0**	23.6	9.0	13.2	5.3
2022	81.3	23.2	8.6	13.1	5.3
2023	72.0	23.0	8.4	13.1	5.8
2024	68.3	22.9	8.3	13.1	5.3
2025	62.6	22.7	8.1	13.1	5.2
2026	62.0	22.7	8.1	13.1	5.2
2027	61.5	22.7	8.1	13.1	5.2
SMAQMD Thresholds	85	80	82	14.6	15.0
Maximum	**134**	25.4	10.5	13.3	5.6
Significant (Yes or No)?	Yes	No	No	No	No

NOTES:
1. Project construction emissions estimates were made using CalEEMod version 2016.3.1. See Appendix C1 for model outputs and more detailed assumptions. Mitigated construction NOx and PM emissions account for a 20 and 45 percent reduction in off-road equipment emissions, respectively, as a result of the implementation of Mitigation Measures 4.2-2(a) through 4.2-2(d).
2. Values in **bold** are in excess of the applicable SMAQMD significance threshold.

SOURCE: ESA, 2017.

Mitigation Measure

Mitigation Measure 4.2-2(a)

For any development project within the DSP area that would involve excavation, grading, or site preparation that would expose soil, the applicant shall comply with all applicable Rules of the Sacramento Air Quality Management District (SMAQMD) and shall include the required SMAQMD Basic Construction Emission Control Practices on all grading or improvement plans.

Mitigation Measure 4.2-2(b)

Prior to the issuance of a demolition or building permit for major development projects in the DSP area, each project shall be screened for construction emissions based on the then-current screening criteria established by the SMAQMD. If the project emissions fall within the limit of the screening criteria no further action is required.

If the project exceeds the screening criteria the applicant shall model emissions for the project. If the emissions fall below the thresholds of significance for construction air emissions no further action is required.

If the air emissions model reflects emissions above the thresholds for construction emissions, the applicant shall mitigate such emissions consistent with applicable rules and procedures of the SMAQMD and City of Sacramento. This includes the following:

The applicant shall include on all grading or improvement plans the following SMAQMD Enhanced Exhaust Control Practices:

- *Provide a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the proposed project to the City and the SMAQMD. The inventory shall include the horsepower rating, engine model year, and projected hours of use for each piece of equipment. The construction contractor shall provide the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman. This information shall be submitted at least four business days prior to the use of subject heavy-duty off-road equipment. The inventory shall be updated and submitted monthly throughout the duration of the proposed DSP, except that an inventory shall not be required for any 30-day period in which no construction activity occurs.*

- *Provide a plan in conjunction with the equipment inventory, approved by the SMAQMD, demonstrating that the heavy-duty (50 horsepower or more) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.*

- *Emissions from all off-road diesel powered equipment used on the project site shall not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately, and the City and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this measure shall supersede other SMAQMD or state rules or regulations.*

- *If at the time of granting of each building permit, the SMAQMD has adopted a regulation applicable to construction emissions, compliance with the regulation may completely or partially replace this mitigation. Consultation with the SMAQMD prior to construction will be necessary to make this determination.*

The applicant shall include the following SMAQMD Fugitive Dust Control Practices on all grading or improvement plans:

- *Water exposed soil with adequate frequency for continued moist soil.*
- *Suspend excavation, grading, and/or demolition activity when wind speeds exceed 20 mph.*
- *Install wind breaks (e.g., plant trees, solid fencing) on windward side(s) of construction areas.*
- *Plant vegetative ground cover (fast-germinating native grass seed) in disturbed areas as soon as possible. Water appropriately until vegetation is established.*
- *Install wheel washers for all exiting trucks, or wash off all trucks and equipment leaving the site.*
- *Treat site accesses to a distance of 100 feet from the paved road with a 6- to 12-inch layer of wood chips, mulch, or gravel to reduce generation of road dust and road dust carryout onto public roads.*
- *Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The phone number of the District shall also be visible to ensure compliance.*

The applicant shall estimate and quantify the construction emissions of NOx. The applicant shall pay into the SMAQMD's construction mitigation fund to offset construction-generated emissions of NOx that exceed SMAQMD's daily emission threshold of 85 ppd. The applicants shall keep track of actual equipment use and their NOx emissions so that mitigation fees can be adjusted accordingly *for payment to the SMAQMD.*

Significance after Mitigation: With implementation of the above mitigation measures, fugitive dust would be controlled, exhaust emissions would be reduced on-site, and mitigation fees would be provided to SMAQMD to offset project NOx emissions that exceed the SMAQMD significance threshold. SMAQMD would use the fees to fund off-site projects and programs that would offset the project's NOx emissions. These measures would reduce construction emissions of NOx from projects under the proposed DSP to **less than significant**.

Impact 4.2-3: Development under the proposed DSP could result in long-term (operational) emissions of NO_X, ROG, PM_{10}, and $PM_{2.5}$.

Over the long-term, implementation of the proposed DSP would increase emissions from motor vehicle trips and onsite area and energy sources (e.g., natural gas combustion for space and water heating, landscape maintenance, use of consumer products such as hairsprays, deodorants, cleaning products). The proposed DSP would facilitate the construction of 13,401 residential units, 280,030 square feet of restaurant uses, 435,837 square feet of government office building uses,

3,510,892 square feet of office uses, 2,303,044 square feet of retail/service uses and 643,797 square feet of medical office uses within the DSP area by 2035.

The CalEEMod computer model was used to estimate operational emissions for year 2035 for the proposed DSP. The predicted annual and peak daily operational emission estimates are presented in **Table 4.2-8**, along with a comparison of the predicted emissions levels to the SMAQMD significance thresholds. As shown in Table 4.2-8, emissions of ROG, NOx, PM_{10} and $PM_{2.5}$ would exceed the SMAQMD's significances thresholds even with the implementation of operational BMPs.

TABLE 4.2-8
DSP OPERATIONAL EMISSIONS

Pollutant	SMAQMD Thresholds		DSP Year 2035 Build-out Operation Emissions[1,2]				
	Without BMPs	With BMPs	Area Sources	Energy Sources	Mobile Sources	Total Emissions	Significant (Yes or No)?
ROG (ppd)	65	65	537.5	8.7	64.8	611	**Yes**
NOx (ppd)	65	65	12.7	76.5	259.6	348.9	**Yes**
PM_{10} (ppd)	0	80	6.1	6	414.3	426.5	**Yes**
$PM_{2.5}$ (ppd)	0	82	6.1	6	111.7	123.9	**Yes**
PM_{10} (tpy)[5]	0	14.6	0.8	1.1	64.5	66.4	**Yes**
$PM_{2.5}$ (tpy)[5]	0	15	0.8	1.1	17.5	19.3	**Yes**

NOTES:
ppd = pounds per day
tpy = tons per year

1. DSP operational emissions estimates for summertime conditions were made using CalEEMod 2016.3.1, which includes all feasible BMPs. See Appendix C1 for details.
2. Several adjustments were made to the CalEEMod default assumptions that were not considered mitigation. The default trip rates and lengths were adjusted to match the traffic data provided by DKS Associates.

SOURCE: ESA, 2017.

As is described under Impact 4.2-1, the SMAQMD recommends that lead agencies require projects creating emissions that would exceed the District's daily thresholds of ROG and/or NOx reduce their ozone precursor emissions from transportation sources by at least 15 percent. This percentage reduction is based on the project location within the urban core of the City of Sacramento, which is part of the Sacramento Area Ozone Implementation Plan. SMAQMD calculates this 15 percent using NO_xe, which is calculated by adding 14.3 percent of the mitigated ROG emissions to mitigated NOx emissions. As described under Impact 4.2-1, using SMAQMD's *Recommended Guidance for Land Use Emission Reduction*,[27] the percent reduction of NO_xe after implementation of the proposed DSP is presented in Table 4.2-5.

As shown in Table 4.2-5, a 78 percent reduction in NO_xe emissions would be achieved by simply implementing the design features proposed under the proposed DSP. However, according to

[27] NO_xe as defined by the SMAQMD is the reduction in ROG divided by 7 plus the reduction in NOx.

SMAQMD's *CEQA Guidance*, projects that exceed the air district's criteria pollutant emission thresholds, even after demonstrating a 15 percent reduction in ozone precursor emissions from transportation sources, are still considered a significant under CEQA.[28]

Summary

The incremental development of residential and non-residential uses pursuant to the proposed DSP would result in peak daily and annual emissions of ROG, NOx, PM_{10}, and $PM_{2.5}$ that would exceed the significance thresholds specified by the SMAQMD. This is considered a **significant impact**.

Mitigation Measure

None feasible.

> **Significance after Mitigation:** An AQMP (see Appendix C2) has already been prepared demonstrating that the DSP through project design can achieve the SMAQMD's required 15 percent reduction of ozone precursor emissions from transportation sources. Consistent with the direction of the SMAQMD's *CEQA Guidance*, no further mitigation required.[29] As shown in Table 4.2-5, a 78 percent reduction in NO_xe emissions would be achieved by simply implementing the design features proposed under the proposed DSP. However, even with achievement of the SMAQMD-required 15 percent reduction in operational mobile source emissions of ROG, NOx, PM_{10}, and $PM_{2.5}$, emissions associated with the proposed DSP would exceed the SMAQMD threshold of 65 ppd. Thus, this impact would remain **significant and unavoidable**.

Impact 4.2-4: Implementation of the proposed DSP could result in a significant increase in CO concentrations.

CO is a localized pollutant of concern. Due to the temporary operation of equipment in any one area, construction of individual development or infrastructure projects pursuant to the proposed DSP would not emit CO in quantities that could pose health concerns. For analysis of operational CO emissions of development that would be pursuant to the proposed DSP, traffic was analyzed to determine its potential to affect CO concentrations near surface streets and intersections in and around the DSP area. The analysis presented in section 4.12, Transportation and Circulation, shows that one intersection would operate at LOS C or worse during the AM or PM peak hours. CO modeling was conducted for this intersection using CALINE4.

Conservative assumptions were used to estimate CO concentrations. Those assumptions included the use of worst case meteorology, the inclusion of the highest 1-hour and 8-hour background CO

[28] Sacramento Metropolitan Air Quality Management District, 2009. CEQA Guidance. Available: http://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools. December 2009.
[29] *Ibid.*

concentrations recorded in Sacramento during the past five years, the use of baseline plus project (2016) traffic volumes, and the use of 2016 CO emission rates.

As shown in **Table 4.2-9**, no exceedances of the CO 1- hour or 8-hour standard would occur at any of the intersections. Thus, implementation of the proposed DSP would have a less-than-significant impact on local CO concentrations.

TABLE 4.2-9
CARBON MONOXIDE CONCENTRATIONS AT AFFECTED INTERSECTIONS
PROPOSED DSP

Intersection	CO Concentrations	
	1-hour (ppm)	8-hour (ppm)
3rd Street/J Street/I-5 Off-Ramp	4.8	3.7
Threshold	20	9
Exceed Threshold?	No	No

NOTES:
CO concentrations include a worst case 1-hour CO background concentration of 2.8 ppm and a worst case 8-hour background concentration of 2.1 ppm. The modeled 1-hour concentrations were converted to 8-hour concentrations using a persistence factor of 0.80. CALINE4 modeling results and additional assumptions are included in Appendix C1.

Summary

As shown in Table 4.2-9, at the one intersection that would operate at LOS C or worse as a result of development under the proposed DSP, CO concentrations would not exceed the operational CO significance threshold. This impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.2-5: Implementation of the proposed DSP could result in short-term and long-term exposure to Toxic Air Contaminants.

Construction

DPM represents the primary TAC of concern from construction activities. Construction of development under the proposed DSP would generate DPM emissions due to operation of internal combustion engines in equipment such as loaders, backhoes, and cranes, as well as haul trucks.

Exposure of sensitive receptors - both existing residences and future proposed residences within the DSP area - is the primary factor used to determine health risk. Exposure is a function of the concentration of a substance or substances in the environment and the extent of exposure.

A longer exposure period would result in a higher exposure level. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time.

According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments should be based on a 30-year exposure period.[30] However, such assessments should be limited to the period/duration of activities associated with the project. Thus, the duration of the proposed construction activities under the proposed DSP would only constitute a small percentage of the total 30-year exposure period. Due to this relatively short period of exposure, TACs generated during construction would not be expected to result in concentrations causing significant health risks. Construction of development under the proposed DSP would result in **less-than-significant** construction-related health risks.

DPM exhaust emissions from construction equipment would be further reduced by 45 percent as compared to the state fleet-wide average, as a result of implementation of **Mitigation Measure 4.2-2(b)**. Therefore, health risks associated with construction of development under the DSP would be **less than significant**.

Operation

Long-term operation of the DSP could include the development of stationary sources that emit TACs. However, any stationary sources that may emit TACs would be subject to SMAQMD permitting and Toxics Best Available Control Technology (T-BACT) requirements. SMAQMD would assess such sources for potential health risk impacts based on their potential to emit TACs. If it is determined that the sources would be considered a major source of TACs, T-BACT would be implemented to reduce emissions (such as through process changes or control equipment incorporation) to ensure a level of control that, at a minimum, is no less stringent than new source maximum achievable control technology. If the implementation of T-BACT would achieve the required level of control, then SMAQMD would deny the required permit. As a result, impacts associated with exposure of sensitive receptors to substantial toxic air emissions from stationary source operations would be **less than significant**.

As previously discussed, the California Supreme Court recently ruled in *CBIA v. BAAQMD,* "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents." The City is not required to consider the effects of bringing a new population into an area where such TAC emissions exist. Nonetheless, in order to provide a thorough understanding of the potential effects of the DSP, these impacts are addressed below.

According to SMAQMD CEQA guidance, projects that place sensitive receptors within 500 feet from a freeway with a daily traffic volume of 100,000 or urban roadway with a daily traffic volume of 50,000 must evaluate potential cancer risks using the screening criteria found in the

[30] Office of Environmental Health Hazard Assessment, 2015. *Guidance Manual for Preparation of Health Risk Assessments*. February 2015.

SMQAMD's *Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways*.

According to SMAQMD, roadways nearest to the DSP area with average daily trips greater than 100,000 are Highway 50, Business 80 and Interstate-5. According to traffic data collected by Caltrans in 2015, the segment of roadway along Highway 50 closest to the DSP area (i.e., the W/X freeway between I-5 and SR 99/Business 80) has a peak hour traffic volume of 20,500 vehicles per hour. According to traffic data compiled by Esri, segments of Business 80 and I-5 closest to the DSP area have a peak hour traffic volume of 22,600 and 29,900 vehicles per hour, respectively.

Although the exact locations of the future residential units developed pursuant to the proposed DSP are unknown at this time, it is conservatively assumed for this analysis that these residential dwelling units could be placed 100 feet from Highway 50, Business 80 or I-5. According to the screening tables provided in the SMQAMD's *Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways*, a sensitive receptor located within 100 feet of either Highway 50, Business 80 or I-5 would be exposed to a cancer risk ranging from 248 to 537 per million, which would exceed the SMAQMD's screening criteria for mobile cancer risks of 276 per million. Therefore, the health risks associated with the placement of sensitive receptors within the DSP area near Highway 50, Business 80 and I-5 operation could be **potentially significant**.

Summary

In summary, the duration of construction of development under the proposed DSP would constitute a small percentage of the total 30-year exposure period used for health risk evaluations. Since it is conservatively estimated that the proposed DSP would be developed over a period of approximately 10 years, representing only approximately 33 percent of the 30-year evaluation period, and because DPM exhaust emissions from construction equipment would be reduced by 45 percent as compared to the state fleet average based on implementation of Mitigation Measure 4.2-2 (b), TACs generated during construction would not be expected to result in concentrations that would cause significant health risks. Any sources of TAC during the operation of the DSP would be regulated through the SMAQMD permitting process. Therefore, this impact would result in a **less than significant impact**.

However, some of the proposed 13,401 residential dwelling units could be located within 500 feet of the Business 80, Highway 50 or I-5 and could be exposed to mobile source TAC emissions that would result in significant cancer health risk; therefore, this impact is **potentially significant**.

Mitigation Measure

Mitigation Measure 4.2-5

The City shall require implementation of the following mitigation measures as part of approval of any residences in the DSP area within 500 feet of Business 80, Highway 50 or I-5:

- *Locate sensitive receptors as far as possible from Business 80, Highway 50 or I-5.*
- *Provide vegetative barriers between the source and receptors. Guidance from the US EPA's July 2016 Recommendations for Constructing Roadside Vegetation Barriers to Improve Near-Road Air Quality or Sacramento Metropolitan Air Quality Management District Landscaping Guidance for Improving Air Quality near Roadways may be incorporated.*
- *Install HVAC systems capable of at least MERV 13 in each proposed building.*
    - *The ventilation systems installed should be properly maintained, following standard practices, and as specified by the manufacturer.*
    - *A fixed notice should be placed on the filter compartment door of each ventilation unit advising that MERV 13 (or greater) filters shall be used.*

Significance after Mitigation: Mitigation Measure 4.2-5 would reduce the exposure of future residents to TAC emissions at each proposed building located 500 feet or less from Business 80, Highway 50, or I-5. Even with implementation of these mitigation measures, future proposed residences could be exposed to mobile source TAC emissions in excess of significance thresholds resulting in a **significant and unavoidable impact**.

Impact 4.2-6: Implementation of the proposed DSP could create objectionable odors.

The SMAQMD has identified typical odor sources in its *CEQA Guide to Air Quality Assessment.* Such sources include wastewater treatment plants, sanitary landfills, composting and green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting and coating operations, rendering plants, and food packaging plants.[31] The proposed DSP would not include uses that have been identified by SMAQMD as potential sources of objectionable odors. In addition, the proposed DSP would not be located within one mile of any facilities or uses known to generate objectionable odors. Diesel equipment used during construction can produce odorous exhaust, but equipment use in any one area of the project site would be temporary and potential odors would not affect a substantial number of people. This impact would be **less than significant**.

[31] Sacramento Metropolitan Air Quality Management District, 2009. *Guide to Air Quality Assessment.* Adopted December 2009 and Chapter 7 last updated June 2016. pp. 7-2.

Summary

In summary, none of the proposed activities or uses proposed within DSP area would be classified by the SMAQMD as typical odor sources. Although odors could be generated by diesel exhaust from off-road equipment during the construction of the proposed DSP, these odors would be temporary and would not affect a substantial number of people. Therefore, this impact would result in **less-than-significant impact.**

Mitigation Measure

None required.

Cumulative Impacts

The geographic context for changes in the air quality environment due to development under the proposed DSP would be both regional and local. Ozone and $PM_{2.5}$ would be the primary pollutants of regional concern, meaning that the cumulative context would include entirety of the SVAB.

Particulates (fugitive dust and fine particulate matter, including DPM) and TACs could result in localized impacts in close proximity to pollutant sources. In addition to the proposed DSP, the other active cumulative construction projects in the immediate vicinity are development under the Railyards Specific Plan and the River District Specific Plan, the I Street Bridge Replacement project and the Powerhouse Science Center, development in the Bridge District of West Sacramento, other potential future development in Downtown Commons, and the Downtown Riverfront Streetcar project.

As described above in Impact 4.2-1, the proposed DSP would not conflict with or obstruct implementation of applicable air quality plans based on SACOG's future growth projections for the region, and thus, this impact is not discussed further in the cumulative analysis. Finally, as described above in Impact 4.2-6, the proposed DSP would not include uses that have been identified by SMAQMD as potential sources of objectionable odors, nor would the proposed DSP result in odor sensitive-receptors being located in close proximity to substantial sources of odor. This impact would not be affected by cumulative development.

Impact 4.2-7: Implementation of the proposed DSP could contribute to cumulative increases in short-term (construction) emissions.

NOx, PM_{10}, and $PM_{2.5}$ are the pollutants that SMAQMD has identified as the primary concerns from construction. The proposed DSP plus other concurrent construction activities elsewhere in the SVAB could contribute to cumulative construction-related NO_X, PM_{10} and $PM_{2.5}$ emissions. Construction of the DSP would result in significant emissions of NO_X, PM_{10} and $PM_{2.5}$, which could combine with emissions generated by other existing and future development within the SVAB to contribute to an air quality impact in the region. Since the DSP exceeds the SMAQMD significance thresholds, they would also be considered significant contributors to cumulative

emissions. Consequently, without mitigation, the proposed DSP would have a cumulatively considerable contribution to a **significant cumulative impact.**

Mitigation Measures

Mitigation Measure 4.2-7

Implement Mitigation Measure 4.2-2.

Significance After Mitigation: With implementation of the above mitigation measure for the proposed DSP, exhaust emissions would be reduced onsite and mitigation fees would be provided to SMAQMD to offset project NOx emissions that exceed the SMAQMD significance threshold. SMAQMD uses these fees to fund off-site projects that would offset the project's NOx emissions. Although cumulative NO_X emissions in the SVAB would be significant due to existing violations in the region, with implementation of Mitigation Measure 4.2-2 the contribution of the proposed DSP would be reduced to a level that would result in a less than considerable contribution to the significant cumulative impact. Thus, this impact would be mitigated to **less than significant**.

Impact 4.2-8: The proposed DSP could contribute to cumulative increases in long-term (operational) emissions of NOx, ROG, PM_{10}, and $PM_{2.5}$.

ROG and NOx are ozone precursors and are primarily of regional concern. Thus, all other mobile, area, and energy sources in the SVAB that would operate concurrently with the development under the proposed DSP would contribute to cumulative operational-related ROG and NO_X emissions. As described in Impact 4.2-3, the proposed DSP would result in substantial emissions of ROG, NO_X, PM_{10} and $PM_{2.5}$, which would combine with emissions generated by other existing and future development within the SVAB to contribute to an air quality violation in the region. The proposed DSP exceedance of the thresholds indicates that its contribution to such a violation would be considerable. Consequently, without mitigation the contribution of the proposed DSP to ozone precursor emissions would be cumulatively considerable, resulting in a **significant cumulative impact**.

As is also described under Impact 4.2-3, the DSP would result in a 78 percent reduction in NO_xe emissions by implementing the design features proposed under the DSP, Design Guidelines, and would meet or exceed the 15 percent emission reduction/mitigation guideline established by the SMAQMD. Nevertheless, even with achievement of the SMAQMD-required 15 percent reduction in operational mobile source emissions, NOx and ROG emissions associated with DSP would exceed the SMAQMD threshold of 65 ppd, contributing to significant cumulative air emissions. Consequently, this cumulative impact would remain **significant**.

Mitigation Measures

None feasible.

Significance after Mitigation: An AQMP (see Appendix C2) has already been prepared demonstrating that the DSP through project design can achieve the SMAQD's required 15 percent reduction of ozone precursor emissions from transportation sources. Consistent with the direction of the SMAQMD's *CEQA Guidance*, no further mitigation required.[32] As is described under Impact 4.2-3, above, the traffic reduction and other emission reductions built into the design and locality of the proposed DSP would exceed 15 percent reduction in NO_xe emissions after mitigation.[33] Since the proposed DSP would be designed as a higher-density, transit-oriented development, much of the reduction would be achieved by project design and location within the Sacramento urban core with access to a variety of transportation options. Nonetheless, even with the inclusion of the above-mentioned design features, NO_X and ROG emissions associated with either of the project scenarios would still exceed the SMAQMD threshold of 85 ppd. Thus, operational emissions of ozone precursors would be **significant and unavoidable**.

Impact 4.2-9: The proposed DSP could contribute to cumulative increases in CO concentrations.

Cumulative traffic was analyzed to determine its potential to affect CO concentrations along surface streets near sensitive receptors in the vicinity of the proposed DSP. A review of the traffic data shows that three intersections would result in an LOS worse than C during the AM or PM peak hours during cumulative year 2035. **Table 4.2-10** shows the results of the cumulative CO modeling. As shown in Table 4.2-10, there would be no exceedances of the CO 1- hour or 8-hour standard at any of the three intersections. Thus, the proposed DSP would rest in a **less-than-significant** cumulative impact on local CO concentrations.

TABLE 4.2-10
CARBON MONOXIDE CONCENTRATIONS AT AFFECTED INTERSECTIONS UNDER CUMULATIVE PLUS DSP CONDITIONS

Intersection	CO Concentrations	
	1-hour (ppm)	8-hour (ppm)
3rd Street / J Street	5.1	4.0
5th Street / X Street	4.1	3.2
16th Street / J Street	4.7	3.7
Threshold	20	9
Exceed Threshold?	No	No

NOTES:
CO concentrations include a worst case 1-hour CO background concentration of 2.8 ppm and a worst case 8-hour background concentration of 2.14 ppm. The modeled 1-hour concentrations were converted to 8-hour concentrations using a persistence factor of 0.80. CALINE4 modeling results and additional assumptions are included in Appendix C1.

[32] Sacramento Metropolitan Air Quality Management District, 2009. CEQA Guidance. Available: http://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools. December 2009.
[33] NOxe as defined by the SMAQMD is the reduction in ROG divided by 7 plus the reduction in NOx.

Mitigation Measure

None required.

Impact 4.2-10: Implementation of the proposed DSP could contribute to cumulative increases in short- and long-term exposures to Toxic Air Contaminants.

The evaluation of health risks from TAC represents a local rather than regional analysis. The qualitative discussion in Impact 4.2-5 shows that TACs and resulting health risks produced during construction of the DSP would result in a less-than-significant impact. Impact 4.2-5 also includes an evaluation of the TAC emissions generated during the operation of the DSP, which concluded that any sources of onsite TAC emissions would be regulated through the SMAQMD permitting process, and the DSP's contribution would be less than significant. However, TAC emissions generated by vehicles on Business 80, Highway 50 and I-5 could adversely affect future residents. The qualitative discussion in Impact 4.2-5 concluded that future proposed residences would be placed within the SMAQMD's health risk screening distance of 500 feet of Business 80, Highway 50 and I-5 resulting in a significant impact. Regionally, there are many residential areas that are adjacent to high volume roadways and freeways, exposing residents to TAC. Portions of the DSP area are within 500 feet of a freeway, and the DSP's contribution to residents' exposure is cumulatively considerable. Therefore, this impact is **potentially significant**.

Mitigation Measure

Mitigation Measure 4.2-10

Implement Mitigation Measure 4.2-5.

Significance after Mitigation: Mitigation Measure 4.2-10 would reduce the exposure of future residents to TAC emissions. However, since residences could be less than 500 feet from Business 80, Highway 50 or I-5, future residents would be exposed to mobile source TAC emissions that constitute a **significant and unavoidable impact**.

4.3 Biological Resources

This section examines the potential impacts of the implementation of the proposed DSP on biological resources and identifies mitigation measures to avoid or reduce those impacts, where appropriate. The discussion includes a summary of the current regulatory status relevant to biological resources potentially present within and near the DSP area.

The analysis is based on a review of potentially occurring special-status species,[1] wildlife habitats, vegetation communities, and jurisdictional waters of the United States (U.S.) and of the State. The results of this assessment are based upon literature review and queries of the California Department of Fish and Wildlife's (CDFW) Natural Diversity Database (CNDDB), the U.S. Fish and Wildlife Service (USFWS) list of federal endangered and threatened species, and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants. While a formal aquatic resources delineation was not conducted, potential wetlands and other waters of the U.S. occur within the DSP area, including the Sacramento River and American River. The sources of reference data reviewed for this evaluation included the following:

- City of Sacramento 2035 General Plan Update Draft Master EIR (MEIR);[2]
- Railyards Specific Plan Update, KP Medical Center, MLS Stadium, & Stormwater Outfall Subsequent EIR (RSPU EIR);[3]
- Sacramento West[4] and Sacramento East,[5] U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles;
- Federal Endangered and Threatened Species that may occur in the proposed project location, and/or may be affected by the proposed project;[6]
- CNDDB list of special-status species occurrences within the Sacramento East and Sacramento West and ten surrounding USGS 7.5-minute topographic quadrangles (Grays Bend, Taylor Monument, Rio Linda, Citrus Heights, Carmichael, Elk Grove, Florin, Clarksburg, Saxon, and Davis);[7]

1 Species that are protected pursuant to Federal or State endangered species laws, or have been designated as Species of Special Concern by the CDFW, or species that are not included on any agency listing but meet the definition of rare, endangered or threatened species of the CEQA Guidelines section 15380(b), are collectively referred to as "special-status species."

2 City of Sacramento, 2015. *City of Sacramento 2035 General Plan Update Master Environmental Impact Report*. Certified March 3, 2015.

3 City of Sacramento. 2016. Railyards Specific Plan Update, KP Medical Center, MLS Stadium, & Stormwater Outfall Subsequent Environmental Impact Report. Certified November 10, 2016.

4 U.S. Geological Survey, 1997.

5 *Ibid*.

6 U.S. Fish and Wildlife Service, 2017. List of Threatened and Endangered Species that May Occur in the Proposed Project Location, and/or May be Affected by the Proposed Project. Available: www.fws.gov/sacramento/es_species/Lists/es_species_lists-overview.htm. Accessed April 12, 2017.

7 California Department of Fish and Wildlife. 2017. California Natural Diversity Database RareFind 5 personal computer program. Available: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed April 12, 2017. Data set expires October 1, 2017.

- CNPS Inventory of Rare and Endangered Plants (v8-03) known to occur within the Sacramento East and Sacramento West and ten surrounding USGS 7.5-minute topographic quadrangles;[8]
- Special Vascular Plants, Bryophytes, and Lichens List;[9] and
- Special Animals List.[10]

No comments related to biological resources were received in response to the NOP circulated for the proposed DSP.

4.3.1 Environmental Setting

Regional Setting

The study area for biological resources is comprised of the DSP area, which encompasses approximately 3,071.42 acres, and is located in the City of Sacramento, within the Sacramento Valley floristic province of the Great Central Valley[11] (see Figure 2-1 in Chapter 2, Project Description). Historically, the region supported extensive marshes, riparian woodland intermixed with oak woodland, vernal pool complexes, and native grasslands. Intensive agricultural and urban development has resulted in substantial changes and conversions of these habitats. The remaining native vegetative communities exist now as isolated remnant patches within urban and agricultural landscapes.

DSP area

The DSP area is generally bounded by the American River to the north, the Capital City Freeway (Business 80) to the east, Highway 50 to the south, and Sacramento River to the west (see Figure 2-3 in Chapter 2, Project Description), in the central portion of the Sacramento East and Sacramento West USGS 7.5-minute topographic quadrangles. The DSP area contains a mix of land use designations as depicted by the City of Sacramento 2035 General Plan Land Use and Urban Form Diagram, including Central Business District, Traditional Center, Parks and Recreation District, Traditional Neighborhood Medium, Regional Commercial Center, Suburban Center, Urban Center High, Public/Quasi-Public District, and Employment Center Low Rise District. The Central Business District is Sacramento's most intensely developed area and includes a mixture of retail, office, governmental, entertainment, and visitor-serving uses. The DSP area is generally flat with elevation of approximately 16 feet above mean sea level.

Urban habitat comprises the majority of the DSP area, with limited areas of natural or semi-natural habitats occurring along the west and northeast portions of the DSP area. Urban

8 California Native Plant Society, 2017. Inventory of Rare and Endangered Plants (online edition, v8-03). California Native Plant Society. Sacramento, CA. Accessed April 12, 2017.
9 California Department of Fish and Wildife. 2017. Natural Diversity Database. Special Vascular Plants, Bryophytes, and Lichens List. Quarterly publication. 126 pp. Data dated April 2017.
10 California Department of Fish and Wildife. 2017. Natural Diversity Database. Special Animals List. Periodic publication. 51 pp. Data dated April 2017.
11 Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors, 2012. *The Jepson manual: vascular plants of California, second edition*. University of California Press, Berkeley. p. 41.

vegetation associated with the DSP area consists of lawns, ornamental shrubs, shade trees along street sidewalks, and mature trees within established city parks. Natural to semi-natural habitat types within the DSP area include riverine (American and Sacramento rivers), annual grassland, valley foothill riparian, valley oak woodland, and eucalyptus.

The Sacramento River bounds the DSP area to the west and the American River bounds the DSP area to the north. These riverine and associated valley foothill riparian habitats provide suitable movement corridors, refuge and foraging habitat for a variety of wildlife. Sutter's Landing Regional Park, located in the northeast portion of the DSP area, contains mature trees that could provide suitable nesting habitat for protected bird species, elderberry shrubs (*Sambucus* sp.) that could support federally threatened valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*), and annual grassland, riparian, and woodland habitats that support a variety of other bird and wildlife species. **Figure 4.3-1** illustrates habitats within the DSP area.

Potentially jurisdictional wetlands and other waters of the U.S. occur within the DSP area and include the major waterways of the American River and the Sacramento River as well as wetlands associated with those rivers. A formal aquatic resources delineation was not conducted for the project; therefore, the full extent of jurisdictional waters of the U.S. within the DSP area is not known. However, due to the urban nature of the DSP area, jurisdictional waters are not known to be outside of the river corridors and are not anticipated to be significant restraints to development in the DSP area.

Wildlife Habitat and Vegetation Types

Wildlife habitats are generally described in terms of vegetation types along with landform, disturbance regime, and other unique environmental characteristics. Vegetation types are assemblages of plant species that occur together in the same area and are repeated across landscapes, and are defined by species composition and relative abundance. Wildlife habitats generally correspond to vegetation types. Those described in this document refer to the CDFW's *A Guide to Wildlife Habitats of California*[12] that is used in CDFW's California Wildlife Habitat Relationship System. The vegetation types described in this section were classified according to *A Manual of California Vegetation, 2nd Edition.*[13] **Table 4.3-1** presents the habitats that occur within the DSP area.

Annual Grassland

Annual grassland habitat (approximately 204.47 acres) occurs entirely in the northeast part of the DSP area, primarily in association with Sutter's Landing Park and adjacent areas that have not been developed. This habitat type is typically dominated by nonnative Mediterranean annual grasses such as wild oats (*Avena* sp.), soft chess (*Bromus hordeaceus*) and ripgut brome (*Bromus*

12 Mayer, Kenneth E., and W.F. Laudenslayer, Jr. 1988. *A Guide to Wildlife Habitats of California*. State of California Resources Agency, Department of Fish and Game. Sacramento, CA. 166 pp. Available: http://www.wildlife.ca.gov/Data/CWHR/Wildlife-Habitats. Accessed April 12, 2017.

13 Sawyer, J.O., T. Keeler-Wolf, and J. Evens, 2009. *A Manual of California Vegetation, 2nd Edition.* California Native Plant Society. Sacramento, California. pp. 775 and 784.

TABLE 4.3-1
HABITATS PRESENT WITHIN THE DSP AREA

Habitat Type	Area (acres)
Annual Grassland	204.47
Barren	22.88
Eucalyptus	2.71
Riverine	93.77
Urban	2,713.55
Valley Foothill Riparian	30.41
Valley Oak Woodland	3.63
Total DSP area	3,071.42

SOURCE: ESA, 2017

diandrus). Native and nonnative forbs typically found in annual grasslands include California poppy (*Eschscholzia californica*), sky lupine (*Lupinus nanus*), spring vetch (*Vicia sativa*), redstem filaree (*Erodium cicutarium*), longbeak filaree (*E. botrys*), and bur clover (*Medicago polymorpha*). Wildlife such as western fence lizard (*Sceloporus occidentalis*), field mouse (*Peromyscus maniculatus*), California vole (*Microtus californicus*), and black-tailed jackrabbit (*Lepus californicus*) commonly occur in annual grassland habitat.

Barren

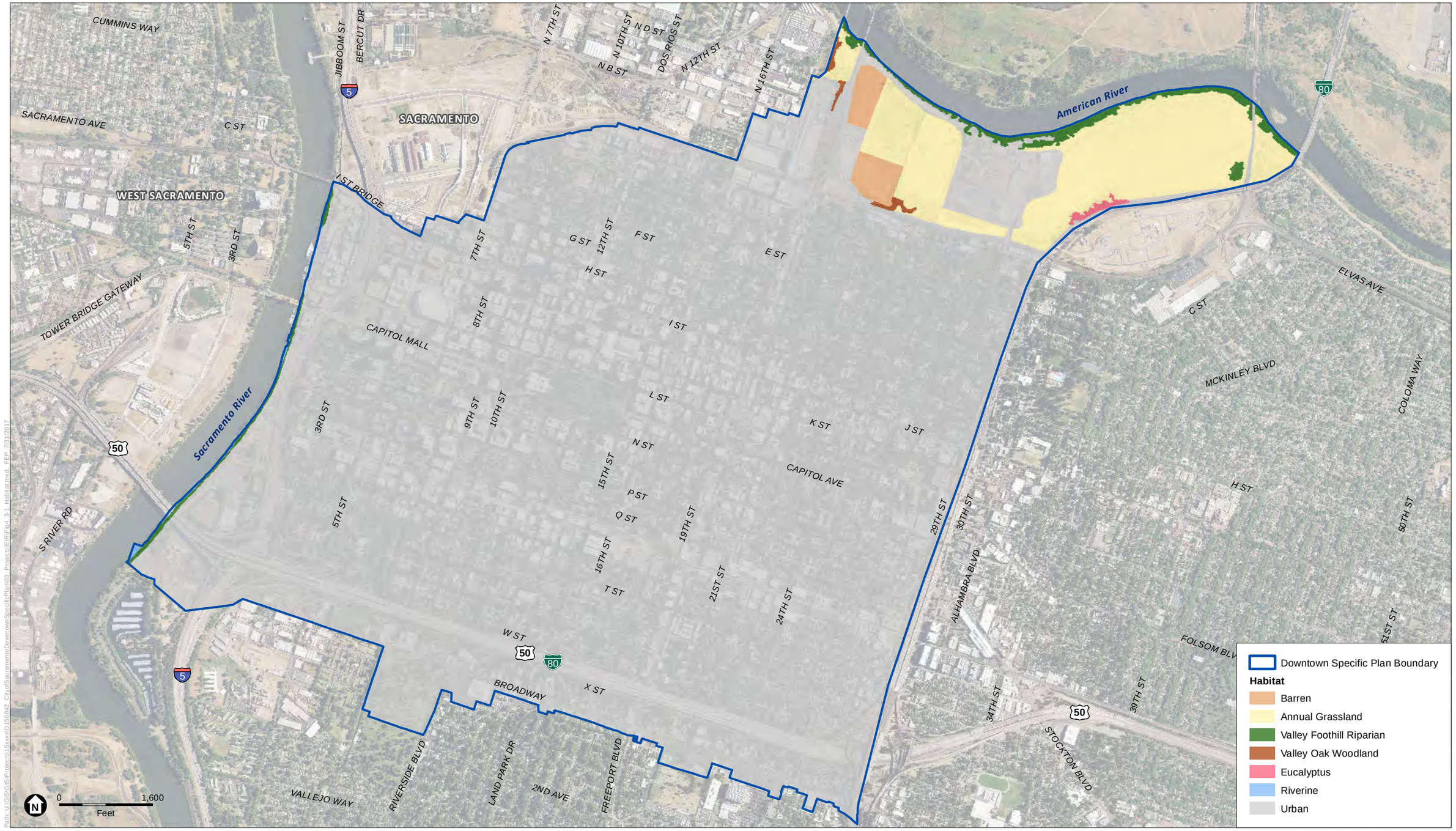
Barren habitat is defined by the absence of vegetation (less than two percent total vegetation cover by herbaceous species and less than 10 percent cover by tree or shrub species). Barren habitat within the DSP area (approximately 22.88 acres) includes graveled areas or bare ground in association with empty lots, ruderal vegetation, and other open spaces adjacent to transportation corridors and trails. Barren habitat provides limited opportunities for wildlife; however, certain species are known to use barren (gravelly) habitat, including killdeer (*Charadrius vociferus*).

Eucalyptus

Eucalyptus stands are semi-natural woodland stands or groves characterized by open to relatively dense stands of eucalyptus trees (*Eucalyptus* sp.). Although eucalyptus stands are dominated by nonnative eucalyptus trees, they often provide suitable nesting habitat for birds, including raptors such as red-tailed hawk (*Buteo jamaicensis*) and Swainson's hawk (*Buteo swainsoni*). Approximately 2.71 acres of eucalyptus woodland habitat occurs within the DSP area at Sutter's Landing Regional Park.

Riverine

The Sacramento River and American River (open-water, riverine habitat), comprising approximately 93.77 acres, are located along the western and northern boundaries, respectively, of the DSP area. Riverine habitat type is distinct from valley-foothill riparian habitat, which occurs on the riverbanks adjacent to riverine habitat.



Path: U:\GIS\GIS\Projects\15xxxx\D150842_CityofSacramentoDowntownSpecifiePlan\03_Projects\EIR\F&4_3-1_Habitat.mxd, FEP 7/31/2017

SOURCE: USDA, 2016; City of Sacramento, 2017; CDFW, 2012; ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.3-1
Habitat

ESA

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The open water zones of the Sacramento and American rivers provide cover and foraging for bird species. Many species of waterfowl, such as American coot (*Fulica americana*), use the open water for resting and escape. Gulls (*Larus* sp.) forage on open water, and species of insectivorous birds, such as black phoebe (*Sayornis nigricans*) and violet-green swallow (*Tachycineta thalassina*), hunt insect prey over the water.

In addition to the terrestrial species identified above, native and non-native, resident and migratory fish species use the Sacramento and American rivers. Fish species residing within the rivers include native channel hardhead (*Mylopharodon conocephalus*), Sacramento sucker (*Catostomus occidentalis*), Sacramento pikeminnow (*Ptychocheilus grandis*), and tule perch (*Hysterocarpus traski*); and non-native channel catfish (*Ictalurus punctatus*), white catfish (*Ictalurus catus*), largemouth bass (*Micropterus salmoides*), and redeared sunfish (*Lepomis microlophus*). The native Sacramento splittail (*Pogonichthys macrolepidotus*) spawns in the Sacramento River near the DSP area, but occupies habitat in the Sacramento-San Joaquin Delta (Delta) for much of its life history. The native delta smelt (*Hypomesus transpacificus*) primarily inhabit tidally influenced brackish water of the mixing zone, but migrate upstream to spawn in freshwater sloughs and shallow edge-waters of the Delta.

Anadromous fish species use the Sacramento and American rivers as migration corridors between the ocean and spawning areas upstream. These species include native Central Valley steelhead distinct population segment (DPS) (*Oncorhynchus mykiss*), Sacramento River winter-run Chinook salmon Evolutionarily Significant Unit (ESU) (*Oncorhynchus tshawytscha*), Central Valley spring-run Chinook salmon ESU, Central Valley fall-/late fall-run Chinook salmon ESU, southern DPS of North American green sturgeon (*Acipenser medirostris*), and white sturgeon (*Acipenser transmontanus*); and non-native striped bass (*Morone saxatilis*) and American shad (*Alosa sapidissima*). Although striped bass is an anadromous species, young striped bass are present in the Sacramento and American rivers area year-round.

Near shore waters, riverbanks, and adjacent riparian vegetation provide several specialized habitats for a variety of bird species. Steep banks provide nesting habitat for northern rough-winged swallow (*Stelgidopteeryx serripennis*). In the near shore waters, mallard (*Anas platyrhynchos*) and wood duck (*Aix sponsa*) feed on plants, and green heron (*Butorides striatus*) and belted kingfisher (*Ceryle alcyon*) forage for fish. Additionally, fish feed on insects that drop from riparian vegetation overhanging the water, and rocky substrates provide habitat for crayfish, sunfish, and bass.

Urban/Developed

Urban and developed habitat comprises approximately 2,713.55 acres, the vast majority of the DSP area. This habitat type consists of public, residential, and commercial buildings, roadways, and other built infrastructure. Typically, urban vegetation associated with developed areas consists of landscaping, including lawns, ornamental shrubs, shade trees and hedges. Wildlife use of landscaped areas increases with the distance from urban areas, plant species diversity and varied structure, and proximity to natural habitats. Landscaped vegetation provide habitat for

common species of wildlife such as house sparrow (*Passer domesticus*), house finch (*Haemorhous mexicanus*), and western scrub jay (*Aphelocoma californica*).

Valley Foothill Riparian

Valley foothill riparian habitat in the DSP area comprises approximately 30.41 acres and is found adjacent to the Sacramento and American rivers. Valley-foothill riparian habitat is found regionally in valleys bordered by sloping alluvial fans, terraces, and lower foothills. It generally occurs where there are deep alluvial soils and a high water table, such as on floodplains or on flat to gently sloping areas adjacent to low-velocity streams. This habitat type consists of Fremont cottonwood (*Populus fremontii*), California sycamore (*Platanus racemosa*), and valley oak (*Quercus lobata*) trees in the canopy layer. The subcanopy layer and understory shrub layer typically supports boxelder (*Acer negundo*), narrow-leaved willow (*Salix exigua*), and Oregon ash (*Fraxinus latifolia*). Valley-foothill riparian habitats provide food, water, migration, and dispersal corridors, escape, nesting, and thermal cover for many species of wildlife. Trees within the valley-foothill riparian area provide suitable nesting habitat for the state threatened Swainson's hawk, white-tailed kite (*Elanus leucurus*), and other protected bird species, and roosting habitat for special-status bat species.

Valley Oak Woodland

Valley oak woodland habitat in the DSP area comprises approximately 3.63 acres, and is only found in the northeast part of the DSP area near Sutter's Landing Regional Park. This habitat type is almost exclusively dominated by valley oaks, but other species such as interior live oak (*Quercus wislizeni*), boxelder, and blue oak (*Quercus douglasii*) may also occur. The understory may consist of poison oak (*Toxicodendron diversilobum*), blue elderberry (*Sambucus cerulea*), California wild grape (*Vitus californa*), toyon (*Heteromeles arbutifolia*), California coffeeberry (*Rhamnus californica*), and California blackberry (*Rubus ursinus*). Valley oak woodland often merge with annual grassland and agricultural habitats in the Central Valley, and intergrades with Valley foothill riparian habitat in areas near major streams and rivers. Valley oak woodland provides food and cover for many species of wildlife, including 30 bird species and 80 mammal species.[14]

Special-Status Species

Special-status species are legally protected under the State and federal Endangered Species Acts or other regulations, or are species that are considered sufficiently rare by the scientific community to qualify for such listing. These species are in the following categories:

1. Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (FESA) (50 Code of Federal regulations [CFR] 17.12 [listed plants], 17.11 [listed animals] and various notices in the Federal Register [FR] [proposed species]);

[14] Mayer, Kenneth E., and W.F. Laudenslayer, Jr. 1988. *A Guide to Wildlife Habitats of California*. State of California Resources Agency, Department of Fish and Game. Sacramento, CA. 166 pp. Available: http://www.wildlife.ca.gov/Data/CWHR/Wildlife-Habitats. Accessed April 12, 2017.

2. Species that are candidates for possible future listing as threatened or endangered under FESA (61 FR 40, February 28, 1996);

3. Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (14 California Code of Regulations [CCR] 670.5);

4. Plants listed as rare or endangered under the California Native Plant Protection Act (NPPA) (California Fish and Game Code, Section 1900 et seq.);

5. Animal species of special concern to CDFW;

6. Animals fully protected under Fish and Game Code (California Fish and Game Code, Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]);

7. Species that meet the definitions of rare and endangered under CEQA. CEQA Section 15380 provides that a plant or animal species may be treated as "rare or endangered" even if not on one of the official lists (State CEQA Guidelines, Section 15380); and

8. Plants considered under the CDFW and CNPS to be "rare, threatened or endangered in California" (California Rare Plant Rank [CRPR] 1A, 1B, and 2) as well as CRPR Rank 3 and 4[15] plant species.

A list of special-status species that have the potential to occur within the vicinity of the plan area was compiled based on data in the CNDDB;[16] the USFWS list of Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Sacramento East, Sacramento West, Clarksburg, Florin, Rio Linda, and Taylor Monument USGS Quads;[17] and the CNPS Inventory of Rare and Endangered Plants (see **Appendix D**).[18] A list of special-status species, their general habitat requirements, and an assessment of their potential to occur within the DSP area is provided below in **Table 4.3-2**. Recorded observations of special-status species within five miles of the DSP area are shown in **Figure 4.3-2**.[19] Table 4.3-2 lists special-status plants and animals with medium to high potential to occur within the DSP area. The full list of species is presented in **Appendix D**.

[15] CRPR 3 and 4 plants may be analyzed under CEQA §15380 if sufficient information is available to assess potential impacts to such plants. Factors such as regional rarity vs. statewide rarity should be considered in determining whether cumulative impacts to a CRPR 3 or 4 plant are significant even if individual project impacts are not. CRPR 3 and 4 plants may be considered regionally significant if, for example, the occurrence is located at the periphery of the species' range, or exhibits unusual morphology, or occurs in an unusual habitat/substrate. For these reasons, CRPR 3 and 4 plants should be included in the special-status species analysis. CRPR 3 and 4 plants are also included in the California Natural Diversity Database Special Plants, Bryophytes, and Lichens List. [Refer to the current online published list available at: http://www.dfg.ca.gov/biogeodata.].

[16] California Department of Fish and Wildlife. 2017. California Natural Diversity Database RareFind 5 personal computer program. Available: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed April 12, 2017. Data set expires October 1, 2017.

[17] U.S. Fish and Wildlife Service, 2017. *Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Sacramento East, Sacramento West, Clarksburg, Florin, Rio Linda, and Taylor Monument USGS quads.* Available: www.fws.gov/sacramento/es/spp_list.htm. Accessed April 12, 2017.

[18] California Native Plant Society, 2017. *Inventory of Rare and Endangered Plants (online edition, v8-03).* http://www.rareplants.cnps.org/. Accessed September April 12, 2017.

[19] California Department of Fish and Wildlife. 2017. California Natural Diversity Database RareFind 5 personal computer program. Available: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed April 12, 2017. Data set expires October 1, 2017.

TABLE 4.3-2
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE DSP AREA

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence within the DSP area
Amphibians				
Ambystoma californiense	California tiger salamander	FT/ST,WL/--	Grassland, oak savanna, and edges of mixed woodland and lower elevation coniferous forest. Requires temporary breeding ponds to breed. Spends most time underground in animal burrows, especially those of California ground squirrels, valley pocket gophers, and moles. Requires both suitable upland terrestrial habitat with mammal burrows for refuge and temporary breeding ponds in order to survive and reproduce.	**Unlikely**. No suitable habitat present within the DSP area. Species not known to occur within five miles of the DSP area.
Rana draytonii	California red-legged frog	FT/CSC/--	Found mainly near ponds in humid forests, woodlands, grasslands, coastal scrub, and streamsides with plant cover. Most common in lowlands or foothills. Frequently found in woods adjacent to streams. Breeding habitat is in permanent or ephemeral water sources; lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. Ephemeral wetland habitats require animal burrows or other moist refuges for estivation when the wetlands are dry.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Spea hammondii	western spadefoot	--/CSC/--	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Birds				
Accipiter cooperii	Cooper's hawk	--/WL/--	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains. Also nests in live oaks.	**High.** Suitable nest trees are present along the Sacramento and American Rivers. Species recorded in the CNDDB in the DSP area and within five miles of the DSP area.
Agelaius tricolor	tricolored blackbird	--/SC,CSC/--	Highly colonial species, most numerous in central valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, & foraging area with insect prey within a few km of the colony.	**Low.** Marginal and low quality habitat occurs along the American River. Species recorded in the CNDDB within five miles of the DSP area.
Ammodramus savannarum	grasshopper sparrow	--/CSC/--	Dense grasslands on rolling hills, lowland plains, in valleys & on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs & scattered shrubs. Loosely colonial when nesting.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Aquila chrysaetos	golden eagle	--/FP,WL/--	Rolling foothills, mountain areas, sage-juniper flats, & desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.

TABLE 4.3-2
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE DSP AREA

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence within the DSP area
Ardea alba	great egret	--/--/--	Colonial nester in large trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	**Low.** Marginal and low quality nesting habitat occurs along the Sacramento and American Rivers. Species recorded in the CNDDB within five miles of the DSP area.
Ardea herodias	great blue heron	--/--/--	Colonial nester in tall trees, cliff sides, and sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows.	**Low.** Marginal and low quality nesting habitat occurs along the Sacramento and American Rivers. Species recorded in the CNDDB within five miles of the DSP area.
Athene cunicularia	burrowing owl	--/CSC/--	Forages in open plains, grasslands, and prairies; typically nests in abandoned small mammal burrows.	**Medium.** Suitable nesting and foraging habitat occurs in annual grasslands in the northeast portion of the DSP area. Species recorded in the CNDDB within five miles of the DSP area.
Buteo regalis	ferruginous hawk	--/WL/--	Open grasslands, sagebrush flats, desert scrub, low foothills & fringes of pinyon-juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Buteo swainsoni	Swainson's hawk	--/ST/--	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	**High.** Suitable nest trees are present along the Sacramento and American Rivers. Open areas of the project site and patchy ruderal vegetation provides limited foraging opportunities for this species. Species recorded in the CNDDB in the DSP area and within five miles of the DSP area.
Charadrius alexandrinus nivosus	western snowy plover	FT/CSC/--	Sandy beaches, salt pond levees & shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Charadrius montanus	mountain plover	--/CSC/--	Short grasslands, freshly plowed fields, newly sprouting grain fields, & sometimes sod farms, short vegetation, bare ground & flat topography. Prefers grazed areas & areas with burrowing rodents.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area. The DSP area is located outside of the species' range.
Coccyzus americanus occidentalis	western yellow-billed cuckoo	FT/SE/--	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, w/ lower story of blackberry, nettles, or wild grape.	**Unlikely.** No suitable habitat for this species within the DSP area. No recent occurrences recorded within five miles of the DSP area. Species historically occurred in the region.
Egretta thula	snowy egret	--/--/--	Colonial nester, with nest sites situated in protected beds of dense tule. Rookery sites situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes.	**Unlikely.** No suitable habitat for this species within the DSP area. No recent occurrences recorded within five miles of the DSP area.

TABLE 4.3-2
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE DSP AREA

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence within the DSP area
Elanus leucurus	white-tailed kite	--/FP/--	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**Medium**. Suitable nest trees are present along the Sacramento and American Rivers. Open areas of the project site and patchy ruderal vegetation provides marginal foraging habitat for this species. Species recorded in the CNDDB within five miles of the DSP area.
Falco columbarius	merlin	--/WL/--	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands & deserts, farms & ranches. Clumps of trees or windbreaks are required for roosting in open country.	**Low**. Species does not breed in California; breeds in Alaska and Canada. Uncommon winter migrant from September to May. Open areas of the project site and patchy ruderal vegetation provides marginal foraging habitat for this species.
Melospiza melodia	song sparrow ("Modesto" population)	--/CSC/--	Emergent freshwater marshes dominated by tule (*Scirpus* spp., *Schoenoplectus* spp.) and cattail (*Typha* spp.) as well as riparian willow (*Salix* spp.) thickets. Also nest in riparian forests of valley oak (*Quercus lobata*) with a sufficient understory of blackberry (*Rubus* spp.), along vegetated irrigation canals and levees, and in recently planted valley oak restoration sites.	**Medium.** Potential nesting habitat occurs along the Sacramento and American Rivers. Species recorded in the CNDDB within five miles of the DSP area.
Nycticorax nycticorax	black-crowned night heron	--/--/--	Forages in marshes swamps and wooded streams; nests in thickets or reedbeds.	**Unlikely.** No suitable nesting or foraging habitat for this species within the DSP area. Species not recorded in the CNDDB within five miles of the DSP area.
Phalacrocorax auritus	double-crested cormorant	--/WL/--	Colonial nester on coastal cliffs, offshore islands, & along lake margins in the interior of the state.	**Low.** Marginal habitat occurs within the Sacramento and American Rivers. Species not recorded in the CNDDB within five miles of the DSP area.
Plegadis chihi	white-faced ibis	--/WL/--	Shallow fresh-water marsh. Dense tule thickets for nesting interspersed with areas of shallow water for foraging.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Progne subis	purple martin	--/CSC/--	Inhabits woodlands, low elevation coniferous forest of Douglas-fir (*Pseudotsuga menziesii*), ponderosa pine (*Pinus ponderosa*), and Monterey pine (*Pinus radiata*). Nests primarily in old woodpecker cavities, also in human-made structures. Nest often located in tall, isolated tree/snag.	**High**. This species is known to nest at four locations within the DSP area, including under the Interstate 5 and I Street onramp, under Highway 50 between 18th and 20th Streets, at the Highway 99 interchange, and under the Capital City Freeway (Business 80) between R and S Streets.
Riparia riparia	bank swallow	--/ST/--	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	**Unlikely.** No suitable nesting habitat for this species within the DSP area. Species recorded in the CNDDB within five miles of the DSP area.

TABLE 4.3-2
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE DSP AREA

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence within the DSP area
Vireo bellii pusillus	least Bell's vireo	FE/SE/--	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, *Baccharis* sp., and mesquite.	**Low.** Marginal and low quality nesting habitat occurs along the Sacramento and American Rivers. Species is known to occur along South Fork Putah Creek, Putah Creek, Putah Creek sinks, in the vicinity of the Yolo Bypass Wildlife Area and was last observed in 2011. There is one historical record from 1877 in West Sacramento.
Xanthocephalus xanthocephalus	yellow-headed blackbird	--/CSC/--	Nests in freshwater emergent wetlands with dense vegetation and deep water. Often along borders of lakes or ponds. Nests only where large insects such as *Odonata* are abundant, nesting timed with maximum emergence of aquatic insects.	**Unlikely.** No suitable nesting or foraging habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Fish				
Acipenser medirostris	Green sturgeon	FT/CSC/--	Spawns in the Klamath River and Sacramento River Watersheds. Preferred spawning substrate is large cobble, but can range from clean sand to bedrock. Requires cool, freshwater streams with suitable substrate for spawning; rears in rivers, tributaries, and Delta.	**High.** The Sacramento and American Rivers within the DSP area do not support spawning or rearing habitat. However, suitable migration habitat exists within the Sacramento and American Rivers in the DSP area. No recent occurrences recorded within five miles of the DSP area.
Archoplites interruptus	Sacramento perch	--/CSC/--	Historically found in the sloughs, slow-moving rivers, and lakes of the central valley. Prefers warm water. Aquatic vegetation is essential for young. Tolerates wide range of physio-chemical water conditions.	**Unlikely.** Extirpated from the Sacramento and American Rivers. Populations may exist in farm ponds and reservoirs, but no instream populations remain. No recent occurrences recorded within five miles of the DSP area.
Hypomesus transpacificus	Delta smelt	FT/SE/--	Open surface waters in the Sacramento/San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Found in Delta estuaries with dense aquatic vegetation and low occurrence of predators. May be affected by downstream sedimentation.	**High.** Adult delta smelt are known to occur in the Sacramento River as far upstream as its confluence with the American River. As of 1993, delta smelt were known to spawn in the Sacramento River as far upstream as the City of Sacramento.
Oncorhynchus mykiss	Central Valley steelhead	FT/--/--	This ESU enters the Sacramento and San Joaquin Rivers and their tributaries from July to May; spawning from December to April. Young move to rearing areas in and through the Sacramento and San Joaquin Rivers, Delta, and San Pablo and San Francisco Bays.	**High.** Suitable migration habitat exists within the Sacramento and American Rivers in the DSP area. Species recorded in the CNDDB within five miles of the DSP area.
Oncorhynchus tshawytscha	chinook salmon - Sacramento River winter-run ESU	FT/SE/--	Adult nos. Depend on pool depth & volume, amount of cover, & proximity to gravel. Water temps >27 C is lethal to adults federal listing refers to pops spawning in Sacramento River & tributaries.	**High.** Suitable migration habitat exists within the Sacramento and American Rivers in the DSP area. Species recorded in the CNDDB within five miles of the DSP area.

TABLE 4.3-2
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE DSP AREA

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence within the DSP area
Oncorhynchus tshawytscha	chinook salmon - Central Valley spring-run ESU	FT/ST/--	Sacramento river below Keswick Dam. Spawns in the Sacramento River but not in tributary streams. Requires clean, cold water over gravel beds with water temperatures between 6 & 14 C for spawning.	**High.** Suitable migration habitat exists within the Sacramento and American Rivers in the DSP area. Species recorded in the CNDDB within five miles of the DSP area.
Pogonichthys macrolepidotus	Sacramento splittail	--/CSC/--	Endemic to the lakes and rivers of the Central Valley, but now confined to the delta, Suisun Bay & associated marshes. Slow moving river sections, dead end sloughs. Requires flooded vegetation for spawning & foraging for young.	**High.** Suitable migration habitat exists within the Sacramento and American Rivers in the DSP area. Species recorded in the CNDDB within five miles of the DSP area.
Spirinchus thaleichthys	longfin smelt	FC/ST,CSC/--	Euryhaline, nektonic & anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.	**Unlikely.** Potential suitable habitat within the Sacramento River. However, this species is known to spawn as far upstream as Isleton in the Sacramento River, approximately 35 miles south of the DSP area.
Invertebrates				
Andrena subapasta	vernal pool andrenid bee	--/--/--	Collects pollen primarily from *Arenaria californica* but also *Orthocarpus erianthus* & *Lasthenia* sp. Nests in uplands near vernal pools.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Branchinecta conservatio	Conservancy fairy shrimp	FE/--/--	Endemic to the grasslands of the northern two-thirds of the central valley; found in large, turbid pools. Inhabit astatic pools located in swales formed by old, braided alluvium; filled by winter/spring rains, last until June.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Branchinecta lynchi	vernal pool fairy shrimp	FT/--/--	Endemic to the grasslands of the central valley, central coast mountains, and south coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	**Unlikely.** No suitable habitat for this species within the DSP area. Species known to occur within five miles of the DSP area.
Branchinecta mesovallensis	midvalley fairy shrimp	--/--/--	Vernal pools in the Central Valley.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Cicindela hirticollis abrupta	Sacramento Valley tiger beetle	--/--/--	Sandy floodplain habitat in the Sacramento valley. No beetles located during intensive 2001- 2004 surveys. Requires fine to medium sand, terranced floodplains or low sandy water edge flats.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.

TABLE 4.3-2
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE DSP AREA

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence within the DSP area
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	FT/--/--	Occurs only in the Central Valley of California, in association with blue elderberry (*Sambucus nigra* ssp. *caerulea*). Prefers to lay eggs in elderberrries 2-8 inches in diameter; some preference shown for "stressed" elderberries.	**High**. Several elderberry shrubs and shrub clusters are known to occur within or directly adjacent to the DSP area. CNDDB records show several occurrences of valley elderberry longhorn beetle along the Sacramento and American River within one mile of the DSP area.
Dumontia oregonensis	hairy water flea	--/--/--	Vernal pools. In California, known only from Mather Field.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Hydrochara rickseckeri	Ricksecker's water scavenger beetle	--/--/--	Aquatic.	**Unlikely.** Species not known to occur within five miles of the DSP area.
Lepidurus packardi	vernal pool tadpole shrimp	FE/--/--	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mud-bottomed & highly turbid.	**Unlikely.** No suitable habitat for this species within the DSP area. Species known to occur within five miles of the DSP area.
Linderiella occidentalis	California linderiella	--/--/--	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity, conductivity, and TDS.	**Unlikely.** No suitable habitat for this species within the DSP area. Species known to occur within five miles of the DSP area.
Myrmosula pacifica	Antioch multilid wasp	--/--/--	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest. Vernal pools and swales; adobe or alkaline soils. 5-950m.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Mammals				
Antrozous pallidus	pallid bat	--/CSC/--	Deserts, grasslands, shrublands, woodlands & forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Medium.** Potential habitat for this species is found within the DSP area, including older buildings in downtown Sacramento and in human-made structures along the Sacramento and American Rivers. Species not known to occur within five miles of the DSP area.
Lasionycteris noctivagans	silver-haired bat	--/--/--	Primarily a coastal & montane forest dweller feeding over streams, ponds & open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes & rarely under rocks. Needs drinking water.	**Low.** Species range typically includes coastal and montane forests from the Oregon border south along the coast to San Francisco Bay and along the Sierra Nevada and Great Basin region to Inyo County. It is unlikely to occur in the DSP area. Species not known to occur within five miles of the DSP area. Species may be present during migration in the Sacramento Area.

TABLE 4.3-2
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE DSP AREA

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence within the DSP area
Lasiurus blossevillii	Western red bat	--/CSC/--	Roosts primarily in trees, 0-40 feet above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	**Medium**. Species may roost within riparian habitat along the Sacramento River and forage within the DSP area. Species not known to occur within five miles of the DSP area.
Lasiurus cinereus	hoary bat	--/--/--	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths.	**Medium.** Species may roost within riparian habitat along the Sacramento River and forage within the DSP area. Recorded occurrence in West Sacramento, west of the DSP area and the Sacramento River.
Myotis yumanensis	Yuma myotis	--/--/--	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.	**Medium**. Potential habitat for this species is found within the DSP area, including older buildings in downtown Sacramento and in human-made structures along the Sacramento and American Rivers. Species may roost within riparian habitat along the Sacramento River and forage within the DSP area. Species not known to occur within five miles of the DSP area.
Taxidea taxus	American badger	--/CSC/--	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils & open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	**Low.** Marginal burrowing and foraging habitat occurs in annual grasslands in the northeast portion of the DSP area. However, species not recorded within DSP area.
Reptiles				
Emys marmorata	western pond turtle	--/CSC/--	A thoroughly aquatic turtle of ponds, marshes, rivers, streams & irrigation ditches, usually with aquatic vegetation, below 6000 FT elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	**Medium.** The Sacramento and American Rivers provide suitable aquatic habitat and adjacent riparian areas provide suitable upland habitat. Species recorded in the CNDDB within five miles of the DSP area.
Thamnophis gigas	giant garter snake	FT/ST/--	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals & and irrigation ditches. This is the most aquatic of the garter snakes in California.	**Unlikely**. No suitable habitat present within the DSP area. Giant garter snake is not known to occur south of the American River and east of the Sacramento River in the vicinity of the DSP area.

TABLE 4.3-2
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE DSP AREA

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence within the DSP area
Plants				
Astragalus pauperculus	depauperate milk-vetch	--/--/4.3	Alkali playa, valley and foothill grassland, vernal pools. low ground, alkali flats, and flooded lands; in annual grassland or in playas or vernal pools. 196-3986 feet.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Astragalus tener var. *ferrisiae*	Ferris' milk-vetch	--/--/1B.1	Meadows, valley and foothill grassland. Subalkaline flats on overflow land in the central valley; usually seen in dry, adobe soil. 15-245 feet. Blooms April through May	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Astragalus tener var. *tener*	alkali milk-vetch	--/--/1B.2	Alkali playa, valley and foothill grassland, vernal pools. Low ground, alkali flats, and flooded lands; in annual grassland or in playas or vernal pools. 3-557 feet. Blooms March through June	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Atriplex cordulata var. *cordulata*	heartscale	--/--/1B.2	Chenopod scrub, valley and foothill grassland, meadows. Alkaline flats and scalds in the central valley, sandy soils. 3-492 (1,968) feet. Blooms April through October.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Atriplex depressa	brittlescale	--/--/1B.2	Chenopod scrub, meadows, playas, valley and foothill grassland, vernal pools. Usually in alkali scalds or alkaline clay in meadows or annual grassland; rarely associated with riparian, marshes, or vernal pools. 3-1,049 feet. Blooms April through October	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Carex comosa	bristly sedge	--/--/2B.1	Marshes and swamps. Lake margins, wet places; site below sea level is on a delta island. 16-3,297 feet. Blooms May through September.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Centromadia parryi subsp. *rudis*	Parry's rough tarplant	--/--/4.2	Alkaline, vernally mesic, seeps, sometimes roadsides. Valley and foothill grassland, vernal pools. 0-328 feet.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Chloropyron palmatum	palmate-bracted bird's-beak	FE/SE/1B.1	Chenopod scrub, valley and foothill grassland. Usually on pescadero silty clay which is alkaline, with *Distichlis* sp., *Frankenia* sp., etc. 15-508 feet. Blooms May through October.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Cuscuta obtusiflora var. *glandulosa*	Peruvian dodder	--/--/2B.2	Marshes and swamps (freshwater). Freshwater marsh. 50-918 feet. Blooms July through October.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Downingia pusilla	dwarf downingia	--/--/2B.2	Vernal pools in foothill woodland and valley grassland. 0-997 feet. Blooms March through May.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.

TABLE 4.3-2
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE DSP AREA

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence within the DSP area
Eryngium jepsonii	Jepson's coyote-thistle	--/--/1B.2	Vernal pools in clay soils. 10-984 feet. Blooms April through August.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Extriplex joaquiniana	San Joaquin spearscale	--/--/1B.2	Chenopod scrub, alkali meadow, playas, valley and foothill grassland.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Fritillaria agrestis	stinkbells	--/--/4.2	Cismontane woodland, chaparral, valley and foothill grassland. Usually on serpentine; mostly found in nonnative grassland or in grassy openings in clay soil. 30-5,100 feet.	**Unlikely.** No suitable habitat for this species within the DSP area. Species recorded in the CNDDB within five miles of the DSP area.
Gratiola heterosepala	Boggs Lake hedge-hyssop	--/SE/1B.2	Marshes and swamps (freshwater), vernal pools. Clay soils; usually in vernal pools, sometimes on lake margins. 32-7,791 feet. Blooms April through August.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Hesperevax caulescens	hogwallow starfish	--/--/4.2	Valley and foothill grassland (mesic, clay), vernal pools (shallow). 0-1657 feet.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Hibiscus lasiocarpos var. *occidentalis*	woolly rose-mallow	--/--/1B.2	Marshes and swamps (freshwater). Moist, freshwater-soaked river banks & low peat islands in sloughs; can also occur on riprap and levees. In California, known from the delta watershed. 0-393 feet. Blooms June through September.	**Medium.** Potential habitat occurs along the Sacramento and American Rivers. Species recorded in the CNDDB within five miles of the DSP area.
Juglans hindsii	Northern California black walnut	--/--/1B.1	Riparian forest, riparian woodland. Few extant native stands remain; widely naturalized. Native stands are now only known to occur in Napa and Contra Costa counties. Deep alluvial soil associated with a creek or stream. 0-1,443 feet. Blooms April through May.	**Medium.** Potential habitat occurs along the Sacramento and American Rivers. Species not known to occur within five miles of the DSP area.
Juncus leiospermus var. *ahartii*	Ahart's dwarf rush	--/--/1B.2	Vernal pools, valley and foothill grassland. Restricted to the edges of vernal pools. 98-751 feet. Blooms March through May.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Legenere limosa	legenere	--/--/1B.1	Vernal pools. Many historical occurrences are extirpated. In beds of vernal pools. 3-2,887 feet. Blooms April through June.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Lepidium latipes var. *heckardii*	Heckard's pepper-grass	--/--/1B.2	Valley and foothill grassland. Grassland, and sometimes vernal pool edges. Alkaline soils. 6-656 feet. Blooms March through May.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.

TABLE 4.3-2
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE DSP AREA

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence within the DSP area
Lilaeopsis masonii	Mason's lilaeopsis	--/SR/1B.1	Freshwater and brackish marshes, riparian scrub. Tidal zones, in muddy or silty soil formed through river deposition or river bank erosion. 0-32 feet. Blooms April through November.	**Medium.** Potential habitat occurs along the Sacramento and American Rivers. Species not known to occur within five miles of the DSP area.
Myosurus minimus ssp. *apus*	Little mousetail	--/--/3.1	Valley and foothill grassland, vernal pools (alkaline). 65-2,099 feet elevation. Blooms March through June.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Navarretia eriocephala	hoary navarretia	--/--/4.3	Vernally mesic. Cismontane woodland, valley and foothill grassland. 344-1312 feet.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Navarretia leucocephala ssp. *bakeri*	Baker's navarretia	--/--/1B.1	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest. Vernal pools and swales; adobe or alkaline soils. 16-3,116 feet. Blooms April through July.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Neostapfia colusana	Colusa grass	FT/SE/1B.1	Vernal pools. Usually in large, or deep vernal pool bottoms; adobe soils. 16-656 feet. Blooms may through august	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Orcuttia tenuis	slender Orcutt grass	FT/SE/1B.1	Vernal pools. Often in gravelly pools. 35-1760 m. Blooms May through September (October).	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Orcuttia viscida	Sacramento Orcutt grass	FE/SE/1B.1	Vernal pools. 98-328 feet. Blooms April through July (September).	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Plagiobothrys hystriculus	bearded popcornflower	--/--/1B.1	Vernal pools, valley and foothill grassland. Wet sites. 0-902 feet. Blooms April through May	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Puccinellia simplex	California alkali grass	--/--/1B.2	Saline flats and mineral springs. 7-3051 feet. Blooms March through May.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Sagittaria sanfordii	Sanford's arrowhead	--/--/1B.2	Marshes and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches. 0-2,000 feet. Blooms May through October.	**Medium.** Potential habitat occurs along the Sacramento and American Rivers. Species recorded in the CNDDB within five miles of the DSP area.
Symphyotrichum lentum	Suisun Marsh aster	--/--/1B.2	Marshes and swamps (brackish and freshwater). Most often seen along sloughs with *Phragmites* sp., *Scirpus* sp., blackberry, *Typha* sp., etc. 0-10 feet. Blooms May through November.	**Unlikely.** No suitable habitat for this species within the DSP area. Species recorded in the CNDDB within five miles of the DSP area.

TABLE 4.3-2
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE DSP AREA

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence within the DSP area
Trifolium hydrophilum	saline clover	--/--/1B.2	Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. 0-984 feet. Blooms April through June.	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Tuctoria mucronata	Crampton's tuctoria or Solano grass	FE/SR/1B.1	Vernal pools, valley and foothill grassland. Clay bottoms of drying vernal pools and lakes in valley grassland. 15-32 feet. Blooms April through August	**Unlikely.** No suitable habitat for this species within the DSP area. Species not known to occur within five miles of the DSP area.
Sensitive Vegetation Communities				
Elderberry savanna	--	--	Open to moderately closed stands characterized by *Sambucus Mexicana*. Understory typically dominated by grasses. Occurs in association with remnant riparian forest vegetation.	**Unlikely.** Habitat not present within or directly adjacent to the DSP area.
Great Valley Cottonwood Riparian Forest	--	--	A dense, broadleafed, winter deciduous riparian forest dominated by Fremont cottonwood (*Populus fremontii*) and Goodding's black willow (*Salix gooddingii*). The understory is usually dense, with abundant vegetative reproduction of canopy dominants and California wild grape is the most conspicuous vine. Habitat experiences frequent flooding.	**Unlikely.** Habitat not present within or directly adjacent to the DSP area.
Great Valley Valley Oak Riparian Forest	--	--	Medium to tall (rarely to 100 feet) broadleaved, winter deciduous, closed-canopy riparian forest dominated by Valley oak (*Quercus lobata*). Understories include scattered Oregon ash, Northern California black walnut, and western sycamore as well as young valley oaks. Vines are relatively scattered throughout the shady understory but quickly become conspicuous occupying gaps where light is available.	**High.** Habitat occurs along the Sacramento and American Rivers.
Northern Claypan Vernal Pool	--	--	Similar to Northern Hardpan Vernal Pools, but with less topographical relief, and usually lower overall cover. Pools range in size from the small (a few square meters) to quite large (covering several hectares).	**Unlikely.** Habitat not present within or directly adjacent to the DSP area.
Northern Hardpan Vernal Pool	--	--	Community is dominated by annual grasses and herbs that grow in and out of the water. Germination and growth begin with winter rains, often continuing even when inundated. These pools gradually evaporate during spring, leaving concentric bands of vegetation that colorfully encircle the drying pools.	**Unlikely.** Habitat not present within or directly adjacent to the DSP area.

TABLE 4.3-2
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE DSP AREA

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence within the DSP area
Northern Volcanic Mudflow Vernal Pool	--	--	Pools occur on Tertiary volcanic mudflows called lahars. Pools form after winter rains in settings of impeded water over rock-bound depressions. The pools are small, forming in irregular depressions in gently sloping surfaces. Habitat is seasonally flooded and seasonally saturated.	**Unlikely.** Habitat not present within or directly adjacent to the DSP area.

KEY:

Federal: (USFWS)

FE = Listed as Endangered by the Federal Government
FT = Listed as Threatened by the Federal Government
FC = Candidate for listing by the Federal Government
(PD) = Proposed for Delisting

State: (CDFW)

SE = Listed as Endangered by the State of California
ST = Listed as Threatened by the State of California
SR = Listed as Rare by the State of California (plants only)
SC = Candidate for listing by the State of California
CSC = California Species of Special Concern
FP = CDFW Fully Protected Species
WL = Species on the CDFW Watch List

CRPR: (California Rare Plant Rank)

Rank 1A = Plants presumed extinct in California
Rank 1B = Plants rare, threatened, or endangered in California and elsewhere
Rank 2 = Plants rare, threatened, or endangered in California but more common elsewhere
Rank 3 = Need more information
Rank 4 = Limited distribution – a watch list
0.1 = Seriously endangered in California
0.2 = Fairly endangered in California
0.3 = Not very endangered in California
– = No Listing

SOURCES: CDFW, 2017a; CNPS, 2017; and USFWS, 2017a.

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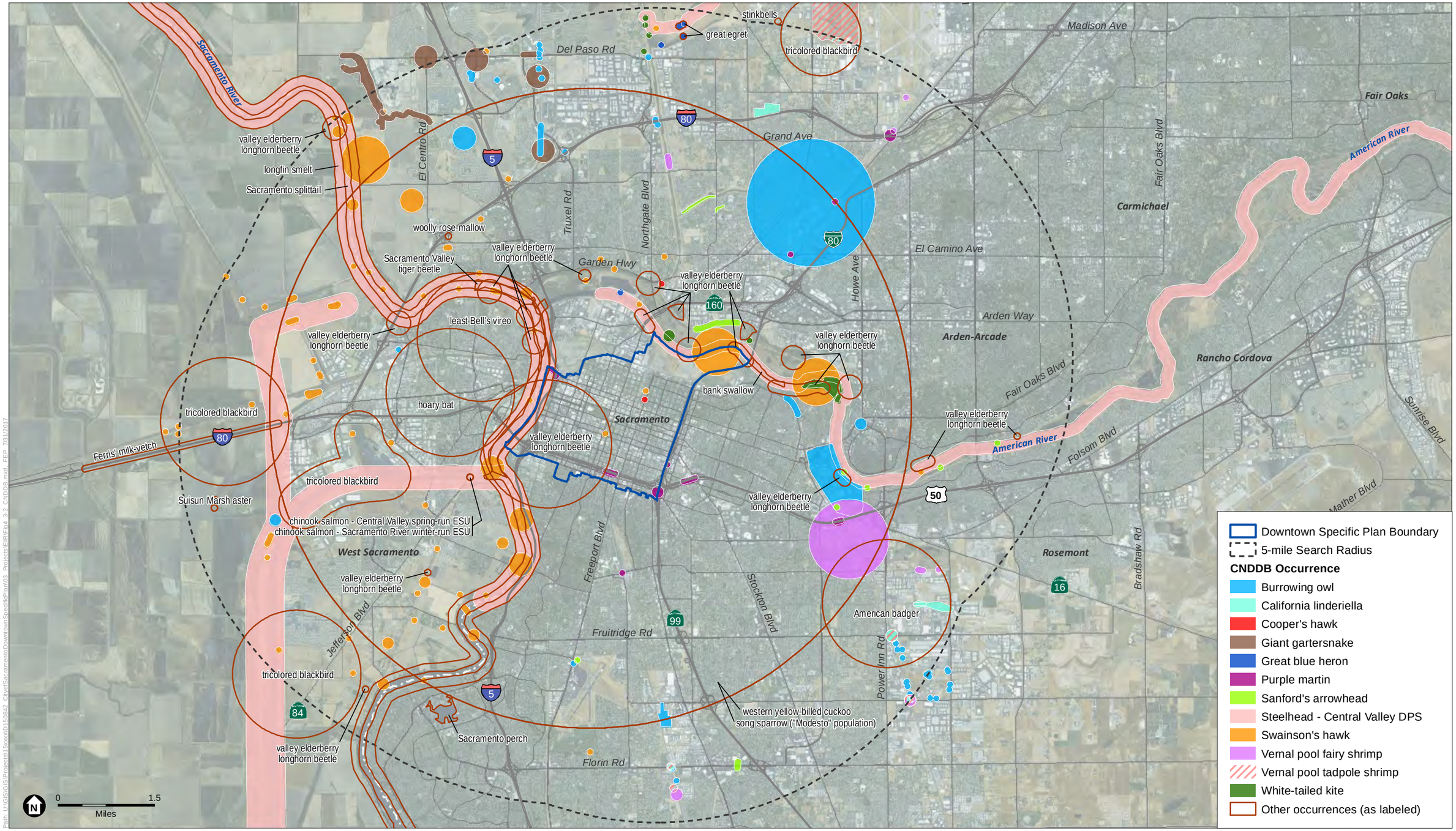

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SOURCE: USDA, 2016; City of Sacramento, 2017; CDFW, 2017; ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.3-2
Special-status Species within a 5-mile Search Radius of the Plan Area

ESA

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The "Potential for Occurrence" category is defined as follows:

- **Unlikely:** The plan area and/or surrounding area do not support suitable habitat for a particular species, or the plan area is outside of the species known range;
- **Low Potential:** The plan area and/or immediate area only provide limited amounts and low quality habitat for a particular species. In addition, the known range for a particular species may be outside of the immediate plan area;
- **Medium Potential:** The plan area and/or immediate area provide suitable habitat for a particular species; and
- **High Potential:** The plan area and/or immediate area provide ideal habitat conditions for a particular species and/or known populations occur in immediate area and/or within the plan area.

Conclusions regarding habitat suitability and species occurrence are based on the analysis of existing literature and databases described previously and known habitats occurring within the DSP area and regionally.

Database queries identify 86 special-status plant and wildlife species records. Of these, 56 species were eliminated from further consideration based upon a lack of suitable habitat in the plan area, or the plan area being outside the known range of the species. Ten (10) special-status species have high potential to occur and 12 special-status species have medium potential to occur in the DSP area. Eight species have low potential to occur in the DSP area. Species with a medium or high potential to occur are identified in Table 4.3-2 and are described in detail below. Only species classified as having a medium or high potential for occurrence were considered in the impact analysis.

Birds

Cooper's Hawk

Cooper's hawk (*Accipiter cooperii*) is on the CDFW Watch List. Cooper's hawks nest in dense forested habitats near freshwater and forage mostly on small birds and mammals, although they will take reptiles and amphibians. Peak breeding season is May through July, although it can occur anywhere from March to August.[20] Cooper's hawks use dense wooded stands for breeding and patchy to open woodlands and habitat edges for foraging. They can often be found in live oak and riparian deciduous habitats. Other habitats used frequently include forested habitats near water.[21]

Currently, breeding populations occur in the southern Sierra Nevada foothills, New York Mountains, Owens Valley, and other local areas in southern California. However, Cooper's hawk occurs anywhere with dense stands of live oak, riparian deciduous, or other forest habitats near

[20] Zeiner, David C., William F. Laudenslayer Jr., and Kenneth E. Mayer, 1988. *California's Wildlife. Volumes 1, 2, and 3*. Wildlife and Habitat Data Analysis Branch, California Department of Fish and Wildlife. Available: http://www.wildlife.ca.gov/Data/CWHR/Life-History-and-Range. Accessed April 12, 2107.

[21] *Ibid.*

water from sea level to 9,000 feet.[22] After breeding, Cooper's hawks from the north migrate to winter throughout woodlands in California.

Suitable nesting habitat occurs within or in close proximity to the Sacramento and American Rivers in association with valley foothill riparian habitat. In addition, this species may utilize large trees within the urban setting for nesting. There are two CNDDB recorded occurrences of Cooper's hawk within five miles of the DSP area, including one within the DSP area boundaries. A 2008 CNDDB occurrence documents a nest tree for a nesting pair of Cooper's hawk in the vicinity of 21st Street and H Street. In addition, this species was observed nesting along the Natomas East Main Drainage Canal north of the DSP area.[23]

Burrowing Owl

Burrowing owl (*Athene cunicularia*), a California Species of Special Concern, is a small diurnal owl that nests underground in the burrows of small mammals, especially those of ground squirrels. Culverts and other human-made structures may also be suitable habitat for the burrowing owl. Often a burrowing owl will occupy several burrows in an area. In the Central Valley, the burrowing owl is a year-round resident of open spaces such as grasslands, agricultural fields, air fields, and levees. Vegetation must be very short or very sparse to be suitable habitat for burrowing owl. Breeding peaks from April to May, but can occur from March to August. The burrowing owl forages on insects and small mammals and will also consume reptiles, birds, and carrion.[24]

Suitable habitat occurs in the annual grasslands at Sutter's Landing Regional Park and adjacent areas. There are 13 CNDDB recorded occurrences of burrowing owl within five miles of the DSP area, although none are within the DSP area boundaries.[25]

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is listed as a threatened species under CESA. This raptor is found primarily in open country, foraging in grasslands and agricultural fields, especially after disking or harvest. They use tall riparian trees (typically oaks or cottonwoods) for nesting, but will occasionally nest in large eucalyptus or other large ornamental trees if there is suitable foraging habitat nearby. The species has lost much of its former nesting habitat as a result of the significant reduction in riparian woodland and forest habitat throughout the state over the last 100 years, and is losing foraging habitat to urban development.

22 *Ibid*.
23 California Department of Fish and Wildlife. 2017. California Natural Diversity Database RareFind 5 personal computer program. Available: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed April 12, 2017. Data set expires October 1, 2017.
24 Zeiner, David C., William F. Laudenslayer Jr., and Kenneth E. Mayer, 1988. *California's Wildlife. Volumes 1, 2, and 3*. Wildlife and Habitat Data Analysis Branch, California Department of Fish and Wildlife. Available: http://www.wildlife.ca.gov/Data/CWHR/Life-History-and-Range. Accessed April 12, 2107.
25 California Department of Fish and Wildlife. 2017. California Natural Diversity Database (CNDDB) RareFind 5 personal computer program. Available: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed April 12, 2017. Data set expires October 1, 2017.

Swainson's hawks can forage as far as 20 miles from the nest, but nests are generally more successful if suitable foraging habitat is present within an approximate ten-mile radius. Suitable foraging habitat is defined as annual grasslands, fallow fields, dry and irrigated pasture, and a variety of croplands including alfalfa, beet, tomato and other low growing row or field crops, rice (when not flooded), and cereal grain crops (including corn after harvest). When forced to travel greater distances from the nest, the adults must expend much more time and energy gathering food, leaving the eggs and young in the nests much more vulnerable to predation and the elements.[26]

The greatest concentration of nesting records for Swainson's hawks within the region occurs along the Sacramento and American rivers, within the foraging range of numerous Swainson's hawk nests. Suitable nesting habitat occurs within or in close proximity to the Sacramento and American Rivers in association with valley foothill riparian habitat. In addition, this species may utilize large trees within the urban setting for nesting.

There are 58 CNDDB recorded occurrences of Swainson's hawk within five miles of the DSP area, including three within the DSP area boundaries. A 2012 CNDDB occurrence documents a nesting pair in cottonwoods trees in riparian habitat in Sutter's Landing Park. Another CNDDB occurrence from 2014 documents a nest in a redwood tree within Fremont Park in downtown Sacramento. A 2016 CNDDB occurrence documents a nesting pair in a redwood tree in a backyard at the corner of 21st and F Streets.[27]

White-tailed Kite

The white-tailed kite (*Elanus leucurus*) is listed as a "fully protected" raptor under Section 3511 of the California Fish and Game Code. The white-tailed kite is a year-round resident in central California. It typically nests in oak woodlands or trees, especially along marshes or river margins, and may use any suitable tree or shrub that is of moderate height. Its nesting season may begin as early as February and extends into August. This raptor forages during the day for rodents—especially voles—in wet or dry grasslands and fields.[28] White-tailed kites forage characteristically by hovering over the location of a potential prey item. Although, like other raptors, kites build solitary nests, they often roost, and occasionally nest communally, especially during the non-breeding season.

Disturbance of a relatively small roost or nesting area could affect a large number of birds. The white-tailed kite can commonly be observed foraging in open grasslands throughout the region,

[26] Zeiner, David C., William F. Laudenslayer Jr., and Kenneth E. Mayer, 1988. *California's Wildlife. Volumes 1, 2, and 3*. Wildlife and Habitat Data Analysis Branch, California Department of Fish and Wildlife. Available: http://www.wildlife.ca.gov/Data/CWHR/Life-History-and-Range. Accessed April 12, 2107.

[27] California Department of Fish and Wildlife. 2017. California Natural Diversity Database RareFind 5 personal computer program. Available: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed April 12, 2017. Data set expires October 1, 2017.

[28] Zeiner, David C., William F. Laudenslayer Jr., and Kenneth E. Mayer, 1988. *California's Wildlife. Volumes 1, 2, and 3*. Wildlife and Habitat Data Analysis Branch, California Department of Fish and Wildlife. Available: http://www.wildlife.ca.gov/Data/CWHR/Life-History-and-Range. Accessed April 12, 2107.

but breeding sites are primarily located near riparian corridors along the Sacramento and American Rivers. Suitable nesting habitat occurs within or in close proximity to the Sacramento and American Rivers in association with valley foothill riparian habitat. There are seven CNDDB recorded occurrences of white-tailed kite within five miles of the DSP area, although none are within the DSP area boundaries. This includes three occurrences along the American River just north and east of Sutter's Landing Regional Park.[29]

Song Sparrow ("Modesto" Population)

The Modesto song sparrow (*Melospiza melodia*), a California Species of Special Concern, is a year-round resident in California and is locally numerous in the Sacramento Valley, Sacramento-San Joaquin River Delta, and northern San Joaquin Valley.[30] The ecological requirements of the Modesto song sparrow are largely undescribed. Throughout the year, Modesto song sparrows prefer riparian and freshwater emergent wetlands and marshes. It requires riparian thickets of willows, other shrubs, vines, tall herbs, and in fresh emergent vegetation for breeding. Nests are built on the ground and in shrubs, thickets, emergent vegetation, and small trees within four feet of the ground. The species is seldom found in densely wooded habitats. Primary diet consists of seeds, but song sparrows also consume insects, spiders, and other small invertebrates.

Suitable nesting habitat occurs within or in close proximity to the Sacramento and American Rivers in association with valley foothill riparian habitat. There are no records of the Modesto song sparrow from the CNDDB within five miles of the DSP area.[31]

Purple Martin

The purple martin (*Progne subis*) can be found throughout nearly the entire U.S. east of the Rocky Mountains. Although declining in many western states, it is also found in isolated areas of Canada, Oregon, Washington, California, Utah, Colorado, Arizona, New Mexico and Mexico. In California it is a Species of Special Concern. It is an early spring migrant from its wintering grounds in South America. Generally, purple martins inhabit open areas with an open water source nearby. Martins adapt well in and around people, but are out-competed by starlings (*Sturnus vulgaris*) and sparrows in urban areas. Purple martins are colonial cavity nesters in abandoned woodpecker holes, human-made nest boxes, or cavities in other structures such as bridges and overpasses. Once established at a nest location, martins usually come back to the same site every year.

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29 California Department of Fish and Wildlife. 2017. California Natural Diversity Database RareFind 5 personal computer program. Available: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed April 12, 2017. Data set expires October 1, 2017.

30 Shuford, W. D., and Gardali, T., editors. 2008. *California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1*. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento. pp. 400-404.

31 California Department of Fish and Wildlife. 2017. California Natural Diversity Database RareFind 5 personal computer program. Available: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed April 12, 2017. Data set expires October 1, 2017.

Since the mid-1900s, purple martin has been eliminated from most of California's Central Valley. The last known populations of purple martin in the Central Valley nests in elevated roadways (i.e., bridges) in the City of Sacramento. Within the DSP area the colony of martins known to use the underside of the I Street on-ramp to Interstate 5 (I-5) and the east bank viaduct to the I Street Bridge is one of four known nesting colonies in the greater Sacramento region in 2015,[32] and seems to have been used by purple martins since 1974.[33] Systematic monitoring of purple martins at the I Street colony has documented a 73 percent decline in nesting pairs from 2002 to 2015. In the larger Sacramento region, there has been a 71 percent decline in breeding pairs since 2002.[34]

Many factors are thought to be contributing to the current downward trend in the Sacramento region martin population. A major factor is thought to be the alteration of habitat around known nest sites including localized predation by feral cats and/or American kestrels (*Falco sparverius*), removal of perch sites, loss of nest material collection sites, and exclusion of nest sites during construction projects. Other factors contributing to the decline in martin populations in the Sacramento region may include mortality due to West Nile virus, increased nest site competition with starlings, and mortality of individuals from vehicle collisions with light rail and freight trains, and motor vehicles. In addition, experts have recently begun to analyze the possible negative effects of neonicotinoid pesticides on martins and their food source (i.e., flying insects). Without significant reversal of current trends, it is predicted that the Sacramento region purple martin population could disappear in as little as five years.[35]

There are numerous potential nesting sites for this urban-adapted species throughout the DSP area. There are 10 CNDDB recorded occurrences of purple martin within five miles of the DSP area. This species is known to nest at four locations within the DSP area, including under the elevated I Street Bridge viaduct and I-5 onramp, under Highway 50 between 18th and 20th Streets, at the Highway 50 and Highway 99 interchange, and under the Business 80 between R and S Streets.[36]

Common Raptor Species

Common raptor species, such as the red-tailed hawk (*Buteo jamaicensis*), are not considered special-status species because they are not rare or protected under the federal or State Endangered Species Acts. However, nests of these species are protected under the Migratory Bird Treaty Act (MBTA) and Section 3503.5 of the California Fish and Game Code. Common raptor species may nest in trees located in close proximity to the Sacramento and American Rivers in association with

[32] Airola, D.A and D. Kopp, 2015. Sacramento Purple Martin in 2015: When a Population Increase May be Misleading. Central Valley Bird Club Bulletin. Fall 2015.
[33] California Department of Fish and Wildlife. 2017. California Natural Diversity Database RareFind 5 personal computer program. Available: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed April 12, 2017. Data set expires October 1, 2017.
[34] Airola, D.A. and J. Grantham, 2003. Purple Martin Status, Nesting Habitat +Characteristics, and Management in Sacramento, California. Western Birds. 34:235-251.
[35] Airola, D.A., B. Cousens, and D. Kopp, 2014. Accelerating Decline of the Sacramento Purple Martin Breeding Population in 2014: What are the Possible Causes? Central Valley Bird Club Bulletin, Winter 2014.
[36] California Department of Fish and Wildlife, 2017. California Natural Diversity Database RareFind 5 personal computer program. Available: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed April 12, 2017. Data set expires October 1, 2017.

valley foothill riparian habitat. In addition, these species may utilize large trees within the urban setting for nesting.

Common Migratory Birds

A large number of common bird species are migratory and are afforded protection under the MBTA. Examples of common migratory bird species that may use the DSP area include northern mockingbird (*Mimus polyglottos*), mourning dove (*Zenaida macroura*), cliff swallow (*Petrochelidon pyrrhonota*) and western kingbird (*Tyrannus verticalis)*. Occupied nests of all migratory birds are protected under the MBTA, which makes it illegal to destroy any active migratory bird nest.

Fish

Delta Smelt

Delta smelt (*Hypomesus transpacificus*) is a state threatened species and was listed as a federal threatened species in 1993 (58 FR 12854). The reach of Sacramento River adjacent to the DSP area was designated as critical habitat for this species in 1994 and became effective on 18 January 1995 (59 FR 65256). Delta smelt is a euryhaline (tolerant of a wide salinity range) species that spawns in freshwater dead-end sloughs and shallow edge-waters of channels of the Delta (59 FR 65256) between February and June. Adult smelt migrate upstream from the brackish water habitat of the mixing zone to spawn in freshwater areas, beginning in December to July and August (59 FR 65256). After hatching, larvae are transported downstream toward the mixing zone where they mature. The location of the mixing zone varies. When the mixing zone is contained within Suisun Bay, young delta smelt are dispersed throughout a large expanse of shallow-water and marsh habitat. However, when the mixing zone is located upstream, it becomes confined in deep river channels that have smaller total surface area, fewer shoal areas, and swifter, more turbulent water currents (59 FR 65256).

Historically, delta smelt congregated in upper Suisun Bay and Montezuma Slough (mainly during March to mid-June when the Sacramento and San Joaquin river flows are high (58 FR 12854). It is thought to have occurred from Suisun Bay to the City of Sacramento in the Sacramento River and Mossdale in the San Joaquin River (59 FR 65256). Spawning has been recorded in Montezuma and Suisun sloughs and their tributaries north of Suisun Bay, in the Sacramento River up to Rio Vista, and in Barker, Lindsey, Cache, Georgiana, Prospect, Beaver, Hog, and Sycamore sloughs (Radtke 1966 and Wang 1986 in 58 FR 12854; Wang 1991 in 59 FR 65256).

Critical Habitat. The DSP area includes the upstream extent of delta smelt critical habitat in the Sacramento River. The northern boundary of critical habitat occurs at the I Street Bridge, which is the northern boundary of the river portion of the DSP area. Critical habitat is designated as Suisun Bay (including the contiguous Grizzly and Honker Bays); the length of Goodyear, Suisun, Cutoff, First Mallard (Spring Branch), and Montezuma sloughs; and the existing contiguous waters contained within the Delta, as defined in Section 12220 of the California Water Code (59 FR 65256).

The primary constituent elements of critical habitat for this species are physical habitat, water, river flow, and salinity concentrations required to maintain delta smelt habitat for spawning, larval and juvenile transport, rearing, and adult migration (59 FR 65256).

Chinook Salmon

Chinook salmon (*Oncorhynchus tshawytscha*) consists of four Evolutionary Significant Units (ESU): winter-run, spring-run, fall-run, and late fall-run. The different runs of Chinook salmon are distinguished based on the timing of the adult return to freshwater on their spawning migration. Adult and juvenile salmon migrate in the Sacramento and American Rivers within the DSP area on their way to and from the ocean, but spawning does not occur in these sections of the rivers because there is no suitable spawning habitat.[37]

Sacramento River winter-run Chinook salmon ESU are listed as endangered under CESA and FESA. They spawn in the Sacramento River and are distinguishable from other Chinook salmon runs found in the river based on the timing of both upstream migration and the spawning season. Prior to the construction of Shasta and Keswick dams in 1943 and 1955, respectively, winter-run Chinook salmon spawned in the upper reaches of the Sacramento River, the McCloud River, the lower Pit River,[38] and Battle Creek. Presently, all winter-run Chinook salmon spawning occurs on the main stem of the Sacramento River downstream of Keswick Dam located near the town of Redding. Approximately 95 percent of the spawning occurs between Keswick Dam and the Red Bluff Diversion Dam.[39] Designated critical habitat extends from Keswick Dam to the mouth of San Francisco Bay at the Golden Gate Bridge, including the Sacramento River within the DSP area.

Physical and biological features that are essential for the conservation of winter-run Chinook salmon include: (1) unimpeded access from the ocean to the spawning areas, in this case the upper Sacramento River, (2) the availability of clean gravel for spawning substrate, (3) adequate river flows for successful spawning, incubation of eggs, fry[40] development and emergence, and downstream transport of juveniles, (4) suitable water temperatures for successful spawning, egg incubation, and fry development, (5) habitat and prey free of contaminants, (6) riparian habitat for juvenile rearing, and (7) unimpeded passage of juveniles from their natal riffles to the ocean.[41]

Central Valley spring-run Chinook salmon ESU are listed as a threatened species under CESA and FESA. Spring-run Chinook salmon enter the Sacramento River between March and September and move upstream into the headwaters, where they hold in pools until they spawn between August and October. Juveniles emigrate from the tributaries from mid-November through June; however, some juveniles spend a year in the streams and emigrate as yearlings the

37 Moyle, P.B., 2002. *Inland Fishes of California, Revised and Expanded.* University of California Press.
38 *Ibid.*
39 *Ibid.*
40 Fry is the term used for small fish just after hatching. Most fry do not have well developed swimming capabilities.
41 National Marine Fisheries Service, 1997. *Proposed recovery plan for the Sacramento River winter-run Chinook salmon*. NMFS, Southwest Region, Long Beach, California.

following October.[42] Typically, spring-run Chinook salmon utilize mid-to high-elevation streams that provide compatible temperatures and sufficient flow, cover, and pool depth to allow over summering. Spawning occurs between September and October and, depending on water temperature, emergence occurs between November and February. Although spring-run Chinook salmon emigration is highly variable, the emigration period extends from November to early May, with up to 69 percent of young-of-the-year out migrants passing through the lower Sacramento River between mid-November and early January.[43]

Central Valley fall- and late fall-run Chinook salmon ESU are not listed under CESA or FESA but are classified as a California Species of Special Concern due to specific risk factors. The fall-run Chinook salmon is the most abundant ESU, documented to comprise about 80 percent of the Sacramento Basin stock in the early1980s. The ESU includes all naturally spawned populations of fall-run Chinook salmon in the Sacramento and San Joaquin River Basins and their tributaries, east of Carquinez Strait.

Critical Habitat. Critical habitat has been designated for both winter and spring-run Chinook salmon ESUs. The portion of the Sacramento River within the DSP area is designated critical habitat for the Central Valley winter-run and spring-run Chinook salmon ESUs. In addition, the portion of the American River within the DSP area is designated critical habitat for the spring-run Chinook salmon ESU.

Critical habitat designations identify those physical and biological features of the habitat that are essential to the conservation of the species and that may require special management consideration or protection. The primary constituent element of critical habitat found within the Sacramento River is freshwater migration corridors free of obstruction with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival" (69 FR 74582). Within the Sacramento River this includes the river water, river bottom (including those areas and associated gravel used by Chinook and steelhead as spawning substrate), and adjacent riparian zone. The lateral extent of the critical habitat includes the stream channels within the designated stream reaches, and includes a lateral extent as defined by the ordinary high-water line (33 CFR 329.11). In areas where the ordinary high-water line has not been defined, the lateral extent will be defined by the bankfull elevation. Bankfull elevation is the level at which water begins to leave the channel and move into the floodplain and is reached at a discharge which generally has a recurrence interval of one to two years on the annual flood series.

Central Valley Steelhead

The Central Valley steelhead (*Oncorhynchus mykiss*) (DPS) includes all naturally spawned populations of steelhead in the Sacramento and San Joaquin rivers and their tributaries, including

[42] Moyle, P.B., 2002. *Inland Fishes of California, Revised and Expanded.* University of California Press.
[43] Snider, B., and R.G. Titus, 2000. Timing, composition, and abundance of juvenile anadromous salmonid *emigration in the Sacramento River near Knights Landing*.

the Sacramento and American Rivers within the DSP area. This species was listed as threatened under FESA in March of 1998 (63 FR 13347).

Steelhead begin their migration from the ocean when winter rains provide large amounts of cold water for migration and spawning. Peak migration periods for adult fish in the Sacramento River are in mid-winter. They typically spawn in tributaries to mainstream rivers, often long distances from the ocean. Juvenile steelhead generally spends one to three years in freshwater before migrating to the ocean.[44] Suitable steelhead conditions primarily occur in mid to high elevation streams. Because access to large areas of suitable rearing habitat has been blocked by dam construction, juvenile rearing is generally confined to lower elevation stream reaches where water temperatures during late summer and early fall can be high. While steelhead migrate along these sections of the Sacramento and America Rivers, the DSP area does not support spawning habitat for adult fish, or rearing habitat for juvenile steelhead.[45]

Critical Habitat. The portions of the Sacramento and American rivers within the DSP area are designated critical habitat for Central Valley steelhead DPS. The primary constituent elements of critical habitat for this species are freshwater spawning, rearing, and migration areas; estuarine areas free of obstructions and of sufficient quality to support adult and juvenile rearing; and nearshore and offshore marine areas. The lateral extent of the critical habitat includes the stream channels within the designated stream reaches, and includes a lateral extent as defined by the ordinary high-water line (33 CFR 329.11).

Sacramento Splittail

Sacramento splittail (*Pogonichthys macrolepidotus*) was listed under FESA as a threatened species in 1999 (64 FR 5963). The listing was prompted by long-term population declines and a corresponding reduction in range. The listing was challenged in court and in subsequent review, the USFWS determined that listing was not warranted and removed splittail from the list of threatened species (68 FR 55139). The species is a California Species of Special Concern.

Sacramento splittail are primarily freshwater fish, but are tolerant of moderate salinity and can be found in brackish waters of the lower Delta. Typically, adults migrate upstream in January and February and spawn on seasonally inundated floodplains in March and April. In May, the juveniles migrate back downstream to shallow, brackish water rearing grounds, where they feed on detritus and invertebrates for one to two years before migrating back upstream to spawn.[46] Larvae remain in the shallow, weedy inshore areas near their spawning sites and move into the deeper offshore habitat as they mature.

Historically, splittail were found as far north as Redding on the Sacramento River and as far south as the Friant Dam on the San Joaquin River. They were also common in San Pablo Bay and Carquinez Strait, but now appear to be largely confined to the Delta, Suisun Bay, Suisun Marsh,

44 Moyle, P.B., 2002. *Inland Fishes of California, Revised and Expanded*. University of California Press.
45 *Ibid*.
46 *Ibid*.

Napa River, Petaluma River, and other parts of the Sacramento-San Joaquin Estuary. Although this species has lost considerable habitat through much of its former range, it appears that the splittail has benefited from habitat-restoration and water-management actions currently underway to benefit Central Valley fish, including several federally protected species. The principal spawning areas of splittail—the Yolo Bypass and the Cosumnes River—are largely protected and being further enhanced and restored. This species is likely to be present in the American and Sacramento Rivers and their tributaries, but the nearest significant breeding habitat is in the Yolo Bypass. Thus, the portions of the Sacramento and American Rivers within the DSP area does not support spawning habitat for adult fish, or rearing habitat for juveniles.

Green Sturgeon

North American green sturgeon (*Acipenser medirostris*) have been separated into two DPSs: the northern DPS (all populations that spawn in rivers north of and including the Eel River) and the southern DPS (coastal and Central Valley populations spawning south of the Eel River). The southern DPS is federally listed as threatened under FESA.[47]

Green sturgeon is a large, bottom-dwelling, anadromous fish that is widely distributed along the Pacific coast of North America. North American green sturgeon is the most broadly distributed, wide ranging, and marine-oriented species of the sturgeon family; however, it is not abundant in comparison to white sturgeon. San Francisco Bay, San Pablo Bay, Suisun Bay, the Delta, and the Sacramento River support the southernmost reproducing population of green sturgeon.

Habitat requirements of green sturgeon are poorly understood, but spawning and larval ecologies are probably similar to those of white sturgeon. Indirect evidence indicates that green sturgeon spawn mainly in the Sacramento River. They are slow growing and late maturing, spawning every 3–5 years between March and July. Adult fish spawn in freshwater and then return to estuarine or marine environments. Preferred spawning habitat occurs in large rivers that contain large cobble in deep and cool pools with turbulent water. Larval and juvenile green sturgeon may rear for up to 2 years in freshwater and then migrate to an estuarine environment, primarily during summer and fall. They remain near estuaries at first but may migrate considerable distances as they grow larger.[48] Both adult and juvenile North American green sturgeon are known to occur in the lower reaches of the Sacramento (within the DSP area) and San Joaquin Rivers and in the Delta.

Critical Habitat. Critical habitat has been designated to include the Sacramento River (including portions within the DSP area); the lower Feather and Yuba rivers; Yolo and Sutter bypasses, the Delta; and Suisun, San Pablo, and San Francisco bays.[49]

47 71 Federal Register 17757, April 7, 2006.
48 Moyle, P.B., 2002. *Inland Fishes of California, Revised and Expanded*. University of California Press.
49 71 Federal Register 17757, April 7, 2006.

Invertebrates

Valley Elderberry Longhorn Beetle

The VELB (*Desmocerus californicus dimorphus*) occurs throughout the year in riparian woodlands and other Central Valley habitats containing elderberry shrubs (*Sambucus* spp.), upon which the VELB are completely dependent for all stages of their life cycle. The females lay their eggs in crevices in the bark. After hatching, the larvae burrow into the stems of the tree where they feed on the interior wood for the next one to two years until they form pupae, from which the adults emerge. The adults bore their way out of the stems, leaving a distinctive oval-shaped hole. As the larvae and adults are rarely seen, these borer holes are often the only evidence of this species' presence. After emergence from the stems, the adults remain in association with the elderberry shrub, where they will feed on the elderberry foliage and eventually reproduce.[50]

VELB utilize elderberry shrubs with a stem diameter of at least one-inch (at ground level) as a host plant. All elderberry shrubs within the known range of the VELB that have one or more stems with diameters of one inch or greater at ground level, are considered potential habitat for this species. In the Central Valley, elderberry shrubs are fairly common in remaining riparian forests and adjacent uplands. Elderberry shrubs are typically found growing in association with other riparian species, but they can also occur as isolated shrubs in upland areas. Historically, VELB ranged throughout the Central Valley. Currently, they are locally common in scattered populations from Redding to Bakersfield where historical riparian forests still exist.[51]

VELB is listed as Threatened by USFWS, with critical habitat designated in 1980 and a final Recovery Plan issued in 1984. Decline has been primarily due to loss of riparian forests. It has been estimated that over 90% of historical riparian forests in the Central Valley have been lost to development or agriculture. Additional threats include inappropriate grazing, levee construction, stream channelization, bank stabilization, and predation by nonnative ants.[52] Although the USFWS 5-year review of the status of VELB released in September 2006[53] recommended delisting of this species, VELB currently remains federally-listed as Threatened.

Suitable habitat for the VELB occurs in close proximity to the Sacramento and American Rivers in association with valley foothill riparian habitat. There are 21 CNDDB recorded occurrences of VELB within five miles of the DSP area, including three within the DSP area boundaries, and

50 U.S. Fish and Wildlife Service, 2009. *Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus) Species Account*. Sacramento Fish and Wildlife Office, Sacramento, CA. May 20, 2009. Available: http://www.fws.gov/sacramento/es_species/Accounts/Invertebrates/Documents/velb.rtf. Accessed April 18, 2017.
51 *Ibid*.
52 *Ibid*.
53 U.S. Fish and Wildlife Service, 2006. *Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus) 5-Year Review: Summary and Evaluation*. Sacramento Fish and Wildlife Office, Sacramento, CA. September 2006. p. 19.

numerous others immediately adjacent to the DSP area. These occurrences are all associated with riparian habitat along the Sacramento and American Rivers.[54]

Mammals

Special-Status Bats

Special-status bat species with the potential to occur within the DSP area include the pallid bat (*Antrozous pallidus*) and Western red bat (*Lasiurus blossevillii*), both California Species of Special Concern, and the hoary bat (*Lasiurus cinereus*) and Yuma myotis (*Myotis yumanensis*), species considered uncommon within the State.[55] The hoary bat roosts in woodlands and forests with medium to large-size trees and dense foliage. Habitat for this species is present in dense-foliaged trees within the DSP area, including trees the riparian area along the Sacramento River. The pallid bat and Western red bat roosts in caves, crevices, mines, and occasionally in hollow trees and buildings.

Habitat for foliage-roosting species is present in the DSP area in the riparian area along the Sacramento and American Rivers. Habitat for cavity-roosting species is present under the elevated structure of I-5, Highway 50, and Business 80, as well as various buildings and infrastructure throughout the DSP area. In 2007, six roosts of unknown bat species were observed under the elevated section of I-5 and under the I Street Bridge and its approaches.[56] In addition, several occupied and potential bat roosts were observed under the I Street viaduct and Jibboom Street viaduct during surveys in 2015. Surveys in the vicinity of the DSP area in May and June of 2015 recorded Yuma myotis and western red bat.[57]

Reptiles

Western Pond Turtle

The western pond turtle (*Emys marmorata*) is an aquatic turtle that ranges throughout much of the state from the Sierra Nevada foothills to the coast - and in coastal drainages from the Oregon border to Baja California. It occurs in suitable habitat throughout the region in ponds, slow moving streams and rivers, irrigation ditches, and reservoirs that have abundant emergent and/or riparian vegetation. The turtle requires adjacent (i.e., within 600-1,200 feet of water) uplands for nesting and egg-laying - typically in soils with high clay or silt component on unshaded, south-facing slopes.

Suitable aquatic habitat for this species occurs in the Sacramento and American Rivers within the DSP area, with associated upland habitat occurring along the river banks. The northwestern pond turtle is a California Species of Special Concern and known to occur in the Sacramento and

54 California Department of Fish and Wildlife, 2017. California Natural Diversity Database RareFind 5 personal computer program. Available: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed April 12, 2017. Data set expires October 1, 2017.
55 *Ibid*.
56 City of Sacramento, 2007. Railyards Specific Plan Environmental Impact Report. Certified December 11, 2007.
57 California Department of Transportation, 2016. I Street Bridge Replacement Project Natural Environment Study. Sacramento and Yolo Counties, Federal Project No.: BRLS 5002(164). February 2016.

American Rivers. However, there are no CNDDB occurrences within five miles of the DSP area.[58]

Plants

Special-Status Plants

Special-status plant species with the potential to occur within the DSP area include woolly rose-mallow (*Hibiscus lasiocarpos* var. *occidentalis*, CRPR 1B.2), Northern California black walnut (*Juglans hindsii*, CRPR 1B.1), Mason's lilaeopsis (*Lilaeopsis masonii*, state rare species and CRPR 1B.1), and Sanford's arrowhead (*Sagittaria sanfordii*, CRPR 1B.2). These species are associated with freshwater and riparian habitats similar to those found along the Sacramento and American Rivers in the DSP area. There is a single CNDDB occurrence for woolly rose-mallow and nine occurrences for Sanford's arrowhead within five miles of the DSP area, although none are within the DSP boundary.

Sensitive Habitats

Sensitive habitats can be defined as any area in which plant or animal life or their habitats are either rare or especially valuable and any area which meets one of the following criteria: (1) habitats containing or supporting "rare and endangered" species as defined by the State Fish and Game Commission, (2) all perennial and intermittent streams and their tributaries, (3) coastal tide lands and marshes, (4) coastal and offshore areas containing breeding or nesting sites and coastal areas used by migratory and resident water-associated birds for resting areas and feeding, (5) areas used for scientific study and research concerning fish and wildlife, (6) lakes and ponds and adjacent shore habitat, (7) existing game and wildlife refuges and reserves, and (8) sand dunes.

One sensitive vegetation community was identified within the DSP area: Great Valley valley oak riparian forest. This habitat type occurs along the American and Sacramento rivers.

Wildlife Movement Corridors

Terms such as habitat corridors, linkages, crossings, and travel routes are used to describe physical connections that allow wildlife to move between patches of suitable habitat in undisturbed landscapes, as well as environments fragmented by urban development. Wildlife movement corridors are considered an important ecological resource by various agencies (CDFW and USFWS) and under CEQA. Movement corridors may provide favorable locations for wildlife to travel between different habitat areas such as foraging sites, breeding sites, cover areas, and preferred summer and winter range locations. They may also function as dispersal corridors allowing animals to move between various locations within their range. Areas of human disturbance or urban development can fragment wildlife habitats and impede wildlife movement between areas of suitable habitat. This fragmentation creates isolated "islands" of vegetation that

[58] California Department of Fish and Wildlife, 2017. California Natural Diversity Database RareFind 5 personal computer program. Available: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed April 12, 2017. Data set expires October 1, 2017.

may not provide sufficient area to accommodate sustainable populations, and can adversely affect genetic and species diversity.

Although the majority of the DSP area is urbanized and is highly fragmented, suitable wildlife movement corridors have been identified within the DSP area. The Sacramento and American rivers and associated valley foothill riparian habitat provide movement corridors for a variety of wildlife, including fish, amphibians, reptiles, birds and mammal species. Riparian habitats typically function as migration corridors because they provide food, water, and cover for a wide variety of wildlife species, and often link other habitats. However, due to the narrowness of the riparian corridor and high levels of human disturbance, the quality of the riparian habitat to be used as a migration corridor is low. As discussed above, the Sacramento and American rivers are a regional wildlife corridor for fish including steelhead, Chinook salmon, green sturgeon, and white sturgeon, nonnative striped bass, and American shad.

4.3.2 Regulatory Setting

Federal

Federal Endangered Species Act

FESA protects threatened and endangered plants and animals and their critical habitat. Candidate species are those proposed for listing; these species are usually treated by resource agencies as if they were actually listed during the environmental review process. Procedures for addressing impacts to federally listed species follow two principal pathways, both of which require consultation with the USFWS, which administers the FESA for all terrestrial species. The first pathway, Section 10(a) incidental take permit, applies to situations where a non-federal government entity must resolve potential adverse impacts to species protected under the FESA. The second pathway, Section 7 consultation, applies to projects directly undertaken by a federal agency or private projects requiring a federal permit or approval.

Migratory Bird Treaty Act

The MBTA enacts the provisions of treaties between the U.S., Great Britain, Mexico, Japan, and the Soviet Union and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs. Most actions that result in a taking or in permanent or temporary possession of a protected species constitute violations of the MBTA. Examples of permitted actions that do not violate the MBTA are the possession of a hunting license to pursue specific game birds, legitimate research activities, display in zoological gardens, bird banding, and other similar activities. USFWS is responsible for overseeing compliance with the MBTA.

Clean Water Act

The federal Clean Water Act (CWA) was enacted as an amendment to the federal Water Pollution Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to

waters of the U.S. The CWA serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands.

Section 404

CWA Section 404 regulates the discharge of dredged and fill materials into waters of the U.S. Waters of the U.S. refers to oceans, bays, rivers, streams, lakes, ponds, and wetlands. Applicants must obtain a permit from the U.S. Army Corps of Engineers (USACE) for all discharges of dredged or fill material into waters of the U.S., including wetlands, before proceeding with a proposed activity. Waters of the U.S. are under the jurisdiction of the USACE and the Environmental Protection Agency (EPA).

Compliance with CWA Section 404 requires compliance with several other environmental laws and regulations. The USACE cannot issue an individual permit or verify the use of a general nationwide permit until the requirements of FESA and the National Historic Preservation Act (NHPA) have been met. In addition, the USACE cannot issue or verify any permit until a water quality certification or a waiver of certification has been issued pursuant to CWA Section 401.

Section 401

Under CWA Section 401, applicants for a federal license or permit to conduct activities which may result in the discharge of a pollutant into waters of the U.S. must obtain certification from the state in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate. Therefore, all projects that have a federal component and may affect State water quality (including projects that require federal agency approval, such as issuance of a Section 404 permit) must also comply with CWA Section 401.

State

Porter-Cologne Water Quality Control Act

The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) (together "Boards") are the principal State agencies with primary responsibility for the coordination and control of water quality. In the Porter-Cologne Water Quality Control Act (Porter-Cologne), the Legislature declared that the "state must be prepared to exercise its full power and jurisdiction to protect the quality of the waters in the state from degradation..." (California Water Code section 13000).

Porter-Cologne grants the Boards the authority to implement and enforce the water quality laws, regulations, policies and plans to protect the groundwater and surface waters of the State. Waters of the State determined to be jurisdictional would require, if impacted, waste discharge permitting and/or a CWA Section 401 certification (in the case of a required USACE permit under Section 404). The enforcement of the State's water quality requirements is not solely the purview of the

Boards and their staff. Other agencies (e.g., the CDFW under Section 5650 of the California Fish and Game Code) have the authority to enforce certain water quality provisions in State law.

California Endangered Species Act

Under CESA, CDFW has the responsibility for maintaining a list of endangered and threatened species.[59] Sections 2050 through 2098 of the California Fish and Game Code outline the protection provided to California's rare, endangered, and threatened species. Section 2080 of the California Fish and Game Code prohibits the taking of plants and animals listed under the CESA. Section 2081 established an incidental take permit program for State-listed species. CDFW maintains a list of "candidate species" which are species that CDFW formally notices as being under review for addition to the list of endangered or threatened species.

Pursuant to the requirements of CESA, an agency reviewing a Proposed Project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the project study area and determine whether the Proposed Project will have a potentially significant impact on such species. In addition, CDFW encourages informal consultation on any Proposed Project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. Under Section 86 the California Fish and Game Code "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill". "Take" of protected species incidental to otherwise lawful management activities may be authorized under California Fish and Game Code Section 206.591. Authorization from CDFW would be in the form of an Incidental Take Permit.

California Fish and Game Code

Fully Protected Species

Certain species are considered *fully protected*, meaning that the code explicitly prohibits all take of individuals of these species except for take permitted for scientific research. Section 5050 lists fully protected amphibians and reptiles, Section 5515 lists fully protected fish, Section 3511 lists fully protected birds, and Section 4700 lists fully protected mammals.

It is possible for a species to be protected under California Fish and Game Code, but not fully protected. For instance, mountain lion (*Puma concolor*) is protected under Section 4800 et seq., but is not a fully protected species.

Protection of Birds and Their Nests

Under Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the code or any regulation made pursuant thereto. Section 3503.5 of the California Fish and Game Code prohibits take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes

[59] Section 2070 of the California Fish and Game Code.

(owls), or of their nests and eggs. Migratory non-game birds are protected under Section 3800, while other specified birds are protected under CGFC Section 3505.

Stream and Lake Protection

CDFW has jurisdictional authority over streams and lakes and the wetland resources associated with these aquatic systems under California Fish and Game Code Sections 1600 et seq. through administration of lake or streambed alteration agreements. Such an agreement is not a permit, but rather a mutual accord between CDFW and a project proponent. Under Sections 1600 et seq. of the California Fish and Game Code, CDFW has the authority to regulate work that will "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river lake or stream." CDFW enters into a streambed alteration agreement with the project proponent and can impose conditions in the agreement to minimize and mitigate impacts to fish and wildlife resources. Because CDFW includes under its jurisdiction streamside habitats that may not qualify as wetlands under the federal CWA definition, CDFW jurisdiction may be broader than USACE jurisdiction.

Pursuant to the California Fish and Game Code, a project proponent must submit a notification of streambed alteration to CDFW before construction. The notification requires an application fee for a streambed alteration agreement, with a specific fee schedule to be determined by CDFW. CDFW can enter into programmatic agreements that cover recurring operation and maintenance activities and regional plans. These agreements are sometimes referred to as Master Streambed Alteration Agreements (MSAAs).

Under Fish and Game Code Section 1602 (Streambed Alteration Agreements), CDFW takes jurisdiction over the stream zone which is defined top of bank or outside extent of riparian vegetation, whichever is the greatest. Within the stream zone, waters of the State of California are typically delineated to include the streambed to the top of the bank and adjacent areas that would meet any one of the three wetland parameters in the USACE definition (vegetation, hydrology, and/or soils). Whereas federal jurisdiction requires meeting all three parameters, in practice meeting one parameter, or even the presence (rather than dominance) of wetland plants in an area associated with a jurisdictional streambed would qualify an area as waters of the State of California. CDFW jurisdiction is not limited to navigable waters or tributaries to navigable waters, however, isolated wetlands and wetlands not associated with a streambed are not subject to CDFW jurisdiction.

Native Plant Protection Act

State listing of plant species began in 1977 with the passage of the California NPPA, which directed the CDFW to carry out the legislature's intent to "preserve, protect, and enhance endangered plants in this state." The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare and to require permits for collecting, transporting, or selling such plants. CESA expanded on the original NPPA and enhanced legal

protection for plants. CESA established threatened and endangered species categories, and grandfathered all rare animals—but not rare plants—into the act as threatened species. Thus, three listing categories for plants are employed in California: rare, threatened, and endangered.

California Rare Plant Ranking System

CDFW works in collaboration with the CNPS to maintain a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. These species are categorized by rarity in the CRPR. This information is published in the Inventory of Rare and Endangered Vascular Plants of California.[60] Potential impacts to populations of CRPR species may receive consideration under CEQA review. The following identifies the definitions of the CRPR:

Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere.

Rank 1B: Plants Rare, Threatened, or Endangered in California and elsewhere.

Rank 2A: Plants presumed extirpated in California, but more common elsewhere.

Rank 2B: Plants Rare, Threatened, or Endangered in California, but more common elsewhere.

Rank 3: Plants about which more information is needed - A Review List.

Rank 4: Plants of limited distribution - A Watch List.

Local

City of Sacramento 2035 General Plan

The following goals and policies from the 2035 General Plan are relevant to biological resources. These policies guide the location, design, and quality of development to protect biological resources such as wildlife habitat, open space corridors, and ecosystems.

Goal ER 2.1 Natural and Open Space Protection. Protect and enhance open space, natural areas, and significant wildlife and vegetation in the City as integral parts of a sustainable environment within a larger regional ecosystem.

Policies

ER 2.1.1 **Resource Preservation.** The City shall encourage new development to preserve on-site natural elements that contribute to the community's native plant and wildlife species value and to its aesthetic character.

ER 2.1.2 **Conservation of Open Space.** The City shall continue to preserve, protect, and provide appropriate access to designated open space areas along the American and Sacramento Rivers, floodways, and undevelopable floodplains, provided access would not disturb sensitive habitats or species.

ER 2.1.3 **Natural Lands Management.** The City shall promote the preservation and restoration of contiguous areas of natural habitat throughout the city and support their integration with existing and future regional preserves.

60 California Native Plant Society, 2017. Inventory of Rare and Endangered Plants (online edition, v8-03). California Native Plant Society, Sacramento, CA. Accessed April 12, 2017.

ER 2.1.4 **Retain Habitat Areas.** The City shall retain plant and wildlife habitat areas where there are known sensitive resources (e.g., sensitive habitats, special-status, threatened, endangered, candidate species, and species of concern). Particular attention shall be focused on retaining habitat areas that are contiguous with other existing natural areas and/or wildlife movement corridors.

ER 2.1.5 **Riparian Habitat Integrity.** The City shall preserve the ecological integrity of creek corridors, canals, and drainage ditches that support riparian resources by preserving native plants and, to the extent feasible, removing invasive nonnative plants. If not feasible, adverse impacts on riparian habitat shall be mitigated by the preservation and/or restoration of this habitat in compliance with State and Federal regulations or at a minimum 1:1 ratio, in perpetuity.

ER 2.1.6 **Wetland Protection.** The City shall preserve and protect wetland resources including creeks, rivers, ponds, marshes, vernal pools, and other seasonal wetlands, to the extent feasible. If not feasible, the mitigation of all adverse impacts on wetland resources shall be required in compliance with State and Federal regulations protecting wetland resources, and if applicable, threatened or endangered species. Additionally, the City shall require either on- or off-site permanent preservation of an equivalent amount of wetland habitat to ensure no-net-loss of value and/or function.

ER 2.1.7 **Annual Grasslands.** The City shall preserve and protect grasslands and vernal pools that provide habitat for rare and endangered species. If not feasible, the mitigation of all adverse impacts on annual grasslands shall comply with State and Federal regulations protecting foraging habitat for those species known to utilize this habitat.

ER 2.1.8 **Oak Woodlands.** The City shall preserve and protect oak woodlands, heritage oaks, and/or significant stands of oak trees in the city that provide habitat for common native, and special-status wildlife species, and shall address all adverse impacts on oak woodlands in accordance with the City's Heritage Tree Ordinance.

ER 2.1.9 **Wildlife Corridors.** The City shall preserve, protect, and avoid impacts to natural, undisturbed habitats that provides movement corridors for sensitive wildlife species. If corridors are adversely affected, damaged habitat shall, be replaced with habitat of equivalent value or enhanced to enable the continued movement of species.

ER 2.1.10 **Habitat Assessments.** The City shall consider the potential impact on sensitive plants and wildlife for each project requiring discretionary approval. If site conditions are such that potential habitat for sensitive plant and/or wildlife species may be present, the City shall require habitat assessments, prepared by a qualified biologist, for sensitive plant and wildlife species. If the habitat assessment determines that suitable habitat for sensitive plant and/or wildlife species is present, then either (1) protocol-level surveys shall be conducted (where survey protocol has been established by a resource agency), or, in the absence of established survey protocol, a focused survey shall be conducted consistent with industry-recognized best practices; or (2) suitable habitat and presence of the species shall be assumed to occur within all potential habitat locations identified on the project site. Survey Reports shall be prepared and submitted to the City and the California Department of Fish and Wildlife (CDFW) or the United States Fish and Wildlife Service (USFWS) (depending on the species) for further consultation and development of avoidance and/ or mitigation measures consistent with state and federal law.

ER 2.1.11 **Natomas Basin Habitat Conservation Plan.** The City shall continue to participate in and support the policies of the Natomas Basin Habitat Conservation Plan for the protection of biological resources in the Natomas Basin.

Goal ER 3.1 Urban Forest. Manage the city's urban forest as an environmental, economic, and aesthetic resource to improve Sacramento residents' quality of life.

Policies

ER 3.1.3 **Trees of Significance.** The City shall require the retention of City trees and Heritage Trees by promoting stewardship of such trees and ensuring that the design of development projects provides for the retention of these trees wherever possible. Where tree removal cannot be avoided, the City shall require tree replacement or appropriate remediation.

The proposed DSP would be consistent with each of the 2035 General Plan goals and policies listed above. Consistent with Policy ER 2.1.1 through ER 2.1.4, the proposed DSP would preserve open space and natural resources by promoting in-fill projects in an urban area and restricting development along the American and Sacramento rivers. would not impact plant and wildlife habitat areas where there are known sensitive resources. As discussed under Impact 4.3-8, the proposed DSP would mitigate for any impacts to potentially jurisdictional wetland and/or riparian resources in compliance with State and federal regulations and, therefore, would not result in a conflict with Policy ER 2.1.5 or ER 2.1.6. Additionally, consistent with Policy ER 2.1.7 and as discussed under Impact 4.3-2, the project applicant would conduct pre-construction surveys within suitable annual grassland habitat for burrowing owl. Consistent with Policy ER 2.1.9 and as discussed under Impact 4.3-9, impacts to wildlife corridors will be mitigated for. Pre-construction surveys for special-status species are discussed under Impact 4.3-2, Impact 4.3-4, Impact 4.3-5, Impact 4.3-6, and Impact 4.3-7, thereby demonstrating consistency with Policy ER 2.1.10. The DSP area is not located within the Natomas Basin Habitat Conservation Plan area; therefore, the project would be consistent with Policy ER 2.1.11. Consistent with Policies 2.1.8 and 3.1.3, and as discussed under Impact 4.3-10, oak trees and other trees of significance shall be protected or replaced.

Tree Preservation Ordinance

The City recognizes that the planting and preservation of trees enhances the natural scenic beauty, increases life-giving oxygen, promotes ecological balance, provides natural ventilation, air filtration, and temperature, erosion, and acoustical controls, increases property values, improves the lifestyle of residents, and enhances the identity of the city. City Code Chapter 12.56[61] includes provisions to protect City street trees as well as private protected trees. All removal, trimming, pruning, cutting, or other maintenance activities on any City street tree or private protected trees requires a permit from the director of the department of transportation pursuant to City Code Section 12.56.050.

A City tree is defined as any tree the trunk of which, when measured 4.5 feet above ground, is partially or completely located in a city park, on real property the city owns in fee, or o a public right-of-way, including any street, road, sidewalk, park strip, mow strip, or alley. A private protected tree is defined as a tree that is designated by city council resolution to have special historical value, special environmental value, or significant community benefit, and is located on private property; any native Valley oak (*Quercus lobata*), blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizenii*), coast live oak (*Quercus agrifolia*), California buckeye (*Aesculus californica*), or California sycamore (*Platanus racemosa*), that has a diameter at standard height (DSH) of 24 inches or more, and is located on private property; a tree that has a DSH of 24 inches or more located on private property that is an undeveloped lot or does not include any single or

61 City of Sacramento, *Municipal Code Chapter 12.56, Tree Planting, Maintenance, and Conservation*. Available: www.qcode.us/codes/sacramento. Accessed April 12, 2017.

duplex dwellings; or a tree that has a DSH of 32 inches or more located on private property that includes any single unit or duplex dwellings.

The director may require, where appropriate, the replacement of city trees or private protected trees proposed for removal.

4.3.3 Analysis, Impacts and Mitigation

Significance Criteria

The proposed DSP would result in a significant impact on the environment if it would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Issues not Discussed in Impacts

With regard to significance criterion (6), the DSP area is not within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, there would be **no impact**, and no further analysis is required.

Methodology and Assumptions

This section assesses the potential for the proposed projects to adversely change biological resources in or around the DSP area. The impact analysis focuses on foreseeable changes to the baseline condition and compares those changes to the significance criteria. Potential impacts are analyzed using information presented above regarding habitats present in and around the DSP area, and potential occurrence of special status and protected species.

In the impact analysis, three principal factors were considered: (1) magnitude of the impact (e.g., substantial/not substantial); (2) uniqueness of the affected resource (i.e., rarity of the resource); and (3) susceptibility of the affected resource to perturbation (i.e., sensitivity of the resource). The evaluation of the significance considered the interrelationship of these three factors. For example, a relatively small magnitude impact to a State or federally listed species would be considered significant if the species is exceptionally rare or believed to be highly susceptible to disturbance. Conversely, a plant community such as annual grassland is not necessarily rare or sensitive to disturbance. Therefore, a much larger magnitude of impact would be necessary to result in a significant impact.

This analysis assumes that under the proposed DSP, the DSP area would retain the existing land use designations as described in the 2035 General Plan and depicted on Figure 2-4, General Plan Land Use Designations. As part of the proposed DSP, specific land use designations are proposed for revision to intensify land use intensities and densities and/or allow for increased building heights. The proposed DSP identifies potential infrastructure improvements necessary to accommodate the development and intensification anticipated with implementation of the DSP. Existing sanitary sewer, storm drainage, water, electrical power, telecommunications, and natural gas infrastructure capacity would be modified to adequately serve these new demands.

Impacts and Mitigation Measures

Impact 4.3-1: Development pursuant to the proposed DSP could result in the loss of potential foraging habitat for Swainson's hawk.

Habitats within the DSP area are not recognized by CDFW as significant foraging habitat for Swainson's hawk. Swainson's hawks require large, open grasslands with abundant prey in proximity to suitable nest trees. Suitable foraging areas include native grasslands or lightly grazed pastures, alfalfa, and other hay crops, and certain grain and row croplands. Although annual grassland is sometimes considered suitable foraging habitat, the annual grassland within the DSP area is comprised mainly of weedy species and is disconnected from other Swainson's hawk foraging areas. Additionally, annual grassland habitat is limited to the northeast portions of the DSP area, primarily associated with Sutter's Landing Park and is not anticipated for urban development.

Individual projects developed under the proposed DSP could result in loss of a small quantity of low quality Swainson's hawk foraging habitat, in particular for projects proposed in annual grassland habitat occurring in the northeast part of the DSP area, including areas that have not been developed adjacent to Sutter's Landing Park. No development is proposed within Sutter's Landing Park. However, extensive areas of higher quality habitat are located to the north, west, and south of the DSP area in western Sacramento, Yolo, and Sutter counties. Therefore, conversion of annual grasslands in the DSP area from vacant to urban habitat would not result in the conversion of an area recognized as significant Swainson's hawk foraging habitat by the CDFW. Impacts to Swainson's hawk foraging habitat are considered **less than significant**.

Mitigation Measure

None required.

Impact 4.3-2: Development under the proposed DSP could result in the loss of potential nesting habitat for special-status bird species and other sensitive and/or protected bird species.

Portions of the DSP area may support nesting birds, including, but not limited to, special-status species such as Swainson's hawk, Cooper's hawk, burrowing owl, white-tailed kite, song sparrow, and purple martin. The DSP area is highly urbanized in character, particularly the downtown area of the City, and provides limited and marginally suitable nesting habitat for special-status bird species. However, natural and semi-natural habitats do occur sporadically within the DSP area that provide suitable habitat for special-status bird species and other nesting birds. Landscape features within the City, such as trees, shrubs, herbaceous plants, and parklands, could serve as temporary habitats or foraging grounds for special-status birds. Undeveloped and vacant areas could contain special-status bird foraging or nesting habitat. The riparian areas of the Sacramento and American rivers and their associated river channels are locations within the DSP area known to contain suitable nesting and foraging habitat.

Construction Impacts

Construction of new development under the proposed DSP in both developed and undeveloped areas could result in the removal of mature trees which may serve as perching or nesting sites for special-status species and migratory birds, including raptors. Vegetation removal could result in the loss of potential nest sites. Additionally, human disturbances and noise from construction activities have the potential to cause nest abandonment and death of young or loss of reproductive success at active nests located near project activities. Nesting birds and raptors are protected under California Fish and Game Code Section 2080 (i.e., killing of a listed species), Sections 3503, 3503.5, and 3800 (i.e., take, possession, or destruction of birds, their nests or eggs), and Section 3513 of the MBTA (16 USC, Section 703 Supp. I 1989).

During the non-breeding season, it is anticipated that any migratory birds or raptors using mature trees as perching sites for foraging would vacate the site upon the initiation of construction activities. During the nonbreeding season, burrowing owls may occupy burrows that could be affected by projects within the DSP area. During the breeding season, it would be expected that significant increases in noise and activity levels could disturb breeding behavior.

For projects proposed under the proposed DSP, compliance with CESA, the MBTA, and CEQA, as well as implementation of the 2035 General Plan goals and policies discussed above, would reduce the potential direct and indirect impacts on special-status bird species within the DSP area. 2035 General Plan Policy ER 2.1.10 requires protocol-level surveys prior to site construction (unless the project applicant assumes a sensitive species is present) and preparation of survey reports to be submitted to the City and CDFW or USFWS.

Disturbance of active nest sites which results in nest abandonment, loss of young, or reduced health and vigor of eggs and/or nestlings (resulting in reduced survival rates), or the direct removal of vegetation that supports nesting birds which result in killing of nestlings or fledgling bird species would be considered a **potentially significant** impact.

Operational Impacts

There are no expected impacts al to special-status birds, raptors and other nesting birds from operations of the development undertaken pursuant to the proposed DSP.

Mitigation Measure

Mitigation Measure 4.3-2(a)

For projects proposed to be constructed in the DSP area that have trees onsite or trees immediately adjacent to the project site (including within a planter strip), the applicant shall conduct a nesting bird survey to determine whether there are nesting special-status birds present. Surveys shall be conducted by a qualified biologist prior to and within 14 days of construction activities. If nesting birds are present during the survey, then the applicant shall notify the City's Planning Director and proceed as follows:

1) *The applicant shall conduct any tree removal activities required for project construction outside of the migratory bird breeding season (February 1 through August 31) where feasible.*

2) *All trees slated for removal during the nesting season shall be surveyed by a qualified biologist no more than 48-hours before removal to ensure that no nesting birds are occupying the tree.*

3) *Depending on conditions specific to each nest, and the relative location and rate of construction activities, it may be feasible for construction to occur as planned without impacting the breeding season. In this case (to be determined on an individual basis), the nest(s) shall be monitored by a qualified biologist during excavation and other outdoor construction that involves the use of heavy equipment. If, in the professional opinion of the monitor, the construction activities associated with that part of construction activities would impact the nest, the monitor shall immediately inform the construction manager and the applicant shall notify the City's Planning Director. The construction manager shall stop construction activities that have the potential to adversely affect the nest until the nest is no longer active. Completion of the nesting cycle shall be determined by a qualified biologist. If construction begins outside of the migratory bird breeding season (February 1 through August 31), then the applicant is permitted to continue construction activities through the breeding season.*

4) *The applicant shall maintain a 100-ft buffer around each active purple martin nest. No construction activities are permitted within this buffer.*

5) *For other migratory birds, a no-work buffer zone shall be established around the active nest in consultation with the California Department of Fish and Wildlife. The no-work buffer may vary depending on species and site-specific conditions*

as determined in consultation with the California Department of Fish and Wildlife.

Mitigation Measure 4.3-2(b)

For projects proposed to be constructed in the DSP area that would include the use of off-road vehicles during project construction, the applicant shall conduct a survey for Swainson's hawk nests, the survey shall be of all trees within 500 feet of the project site which has a 24-inch minimum diameter at breast height. The survey distance may be decreased based on type of construction and whether heavy construction equipment would be used. The applicant may ask the California Department of Fish and Wildlife for a reduced survey distance and/or reduced buffer area. Surveys shall be conducted in accordance with the Swainson's Hawk Technical Advisory Committee's Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (2000). If active Swainson's hawk nests or other raptors' nests are found during the survey performed under Mitigation Measure 4.3-2(a), construction activities shall not be permitted on those portions of the project site within 500 feet of the active nest during the Swainson's hawk breeding season (March 1 – September 15).

Mitigation Measure 4.3-2(c)

For projects proposed within suitable habitat for burrowing owl (in particular for projects proposed in annual grassland habitat occurring in the northeast part of the DSP area as shown in Figure 4.3-1 in the EIR, and areas adjacent to Sutter's Landing Park that have not been developed), the applicant shall conduct preconstruction surveys for burrowing owls in accordance with guidance from the California Department of Fish and Wildlife.

Significance After Mitigation: Implementation of **Mitigation Measure 4.3-1(a), (b), and (c)** would reduce impacts to nesting birds by requiring preconstruction surveys to identify any nesting birds, and if found, observing no-disturbance zones around nest sites, and therefore would reduce the impact to nesting birds during construction of development under the proposed DSP to a **less-than-significant** level.

Impact 4.3-3: Projects developed under the DSP could result in impacts to special-status fish species and degradation of designated critical habitat.

In the DSP area, the Sacramento River and American River are known habitat for green sturgeon (*Acipenser medirostris*), delta smelt (*Hypomesus transpacificus*), Central Valley steelhead (*O. mykiss*), Central Valley winter-run and spring-run Chinook salmon (*Oncorhynchus tshawytscha*), and Sacramento splittail (*Pogonichthys macrolepidotus*). The Sacramento and American rivers and adjacent riparian habitats within the DSP area are also designated critical

habitat for delta smelt, steelhead, and the two runs of Chinook. Additionally, the Sacramento River is designated as Essential Fish Habitat (EFH)[62] for four runs (ESUs) of Chinook salmon.

The Sacramento and American rivers function as a regional migratory corridor for the above-mentioned species. The sections of the Sacramento and American rivers within the DSP area do not serve as spawning or juvenile rearing habitat for salmonids or sturgeon. Spawning habitat for delta smelt is thought to consist of substrates such as cattails and tules, tree roots, and submerged branches on which the adhesive eggs are attached. This habitat is absent or scattered and of low quality within the Sacramento and American rivers in the DSP area due to levee maintenance. Because the area lacks spawning habitat and deep holding pools within the sections of the Sacramento and American rivers in the DSP area, adult salmonids, delta smelt, and sturgeon residence time in this reach of the river would be expected to be transient and relatively brief.

Construction Impacts

Development under the proposed DSP could result in land-disturbing activities such as grading, excavation, and trenching for utility and infrastructure installation. When portions of the DSP area are excavated or otherwise disturbed by construction activities, the potential for soil erosion and sedimentation to be discharged in runoff from a construction site would substantially increase during a rainstorm. In addition, construction equipment would have the potential to leak polluting materials, including oil and gasoline. Improper use of fuels, oils, and other construction-related hazardous materials such as concrete or pipe sealant may also pose a threat to water quality. Through stormwater runoff, these sediments and contaminants may be transported to the Sacramento and American rivers and their downstream drainages and water bodies.

Although activities associated with construction under the proposed DSP would be temporary, on- or offsite soil erosion, siltation, discharges of construction-related hazardous materials could degrade downstream surface waters. Compliance with existing regulations, including development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) and best management practices (BMPs) would ensure that construction of projects under the proposed DSP would not substantially degrade water quality.

In addition, compliance with the CWA and Rivers and Harbors Act permits from the USACE would be required for proposed improvements within the channels of the Sacramento or American rivers. To achieve the goals of the CWA and the Endangered Species Act, Section 7 of the Endangered Species Act directs all federal agencies to use their existing authorities to conserve threatened and endangered species and, in consultation with the USFWS and/or the National Marine Fisheries Service, to ensure that their actions do not jeopardize listed species or destroy or adversely modify critical habitat. Section 7 applies to management of federal lands, as

[62] Essential Fish Habitat (EFH) was defined by the U.S. Congress in the 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act as "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity."

well as other federal actions that may affect listed species, such as federal approval of private activities through the issuance of federal permits, licenses, or other actions.

As part of the CWA permitting, the USACE would be required to consult with the USFWS and/or National Marine Fisheries Service under Section 7 to ensure that permitted actions do not jeopardize listed species or destroy or adversely modify designated critical habitat of the salmonid species in the area of the disturbance. Therefore, the impact on special-status fish species of construction activities pursuant to the proposed DSP would be **less than significant**.

Operational Impacts

The increase in impervious surfaces that would result from implementation of the proposed DSP would generate stormwater that would be discharged to the Sacramento and American rivers. Development within the DSP area may increase pollutant concentrations and sediment runoff. Extended periods of localized, high suspended sediment concentrations, and increased pollution concentrations could result in decreased water quality, including high suspended sediment concentrations and turbidity. The aforementioned conditions could cause a reduction of feeding opportunities for sight-feeding fish, increased predation opportunities, reduced growth rates, and may cause direct mortality of fish, or their prey.

The CWA mandates permits for construction activities and municipal stormwater discharges. The City of Sacramento has coverage under a MS4 General Permit. This permit requires that controls be implemented to reduce the discharge of pollutants in stormwater discharges to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and other measures as appropriate. As part of permit compliance, the City has prepared a Stormwater Quality Improvement Plan (SQIP), which outlines the requirements for municipal operations, industrial and commercial businesses, illegal discharges, construction sites, planning and land development, public education and outreach, and watershed stewardship. These requirements include multiple measures to control pollutants in stormwater discharge. Under the proposed DSP, all new development in the DSP area would be required to follow the guidance contained in the SQIP.

Development proposed in the DSP area would be subject to City of Sacramento General Plan policies U 4.1.4, ER 1.1.3, ER 1.1.4, and ER 1.1.7; the City's ordinances; the SQIP; and the Stormwater Quality Design Manual for Sacramento and South Placer Regions. Specifically, the development proposed in the DSP area would be required to comply with the following permits and plans:

- Stormwater Quality Design Manual for the Sacramento and South Placer Regions (Design Manual) BMPs, and LID measures to reduce pollutants in storm water and nonstormwater discharges to the Maximum Extent Practicable;
- City of Sacramento Stormwater Management and Discharge Control Code; and
- City of Sacramento General Plan policies related to hydrology and water quality, and the protection and preservation of natural resources.

Water quality objectives for the Sacramento and American rivers are specified in the Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin (Basin Plan) prepared by the CVRWQCB in compliance with the federal CWA and the California Water Code (section 13240). The Basin Plan contains water quality numerical and narrative standards and objectives for rivers and their tributaries within its jurisdiction that were developed to be protective of beneficial uses, including fish habitat.

Permanent onsite water quality treatment meeting the requirements specified in the Stormwater Quality Design Manual for the Sacramento and South Placer Regions will be required for any surface drainage from the DSP area. Specific BMPs are approved for use in the City for treatment control, such as stormwater planters, biorentention filters, and stormwater filters in catch basins. Other potential BMPs for use on private parcels have not been identified because the kinds of BMPs used on each site in the DSP area would differ based on design-level details. The DSP development process includes identification of BMPs that respond to the design and construction methods within each area of the DSP. The BMPs would be implemented to ensure that water quality would not be degraded and the violation of water quality or waste discharge objectives set by the State Water Board would not occur. City review would confirm that BMP implementation complies with all applicable regulations. Given that regulatory compliance would prevent the substantial degradation of water quality and associated habitat conditions in the Sacramento and American rivers, operational impacts to special-status fish species from the proposed DSP would be **less than significant**.

Mitigation Measure

None required.

Impact 4.3-4: Projects proposed under the DSP could result in removal of habitat for the valley elderberry longhorn beetle.

Construction Impacts

Elderberry shrubs within riparian habitat associated with the Sacramento and American rivers may provide suitable habitat for the VELB. The USFWS considers the removal of elderberry shrubs as having an impact on the VELB, including any construction impacts within 100 feet of the dripline an elderberry shrub. Construction activities within 100 feet of an elderberry shrub may affect VELB through ground disturbance, removal of associated vegetation, root compaction, and water quality impacts.

The 2035 General Plan contains goals and policies designed to protect biological resources and natural habitats, including riparian habitats and elderberry shrubs. The City of Sacramento has established standards that require analysis of project impacts on threatened, endangered, or special-status species. Implementation of 2035 General Plan Policy ER 2.1.10 would require habitat assessments for VELB to be conducted, and, if habitat is present, focused/protocol-level

surveys conducted (or assumed presence of species) for any project requiring discretionary approval.

Adverse impacts to elderberry shrubs, including the removal of shrubs, could result in impacts on suitable habitat for VELB. Mortality, or removal, of elderberry shrubs and the loss of VELB habitat is considered a significant impact. As such the proposed DSP would have a **potentially significant** impact on VELB.

Operational Impacts

There are no expected impacts to VELB from operations of the development undertaken pursuant to the proposed DSP.

Mitigation Measure

Mitigation Measure 4.3-4 (a)

For projects proposed within or adjacent to habitat for VELB (suitable habitat for the VELB occurs in close proximity to the Sacramento and American rivers in association with undeveloped valley foothill riparian habitat and at undeveloped areas of Sutter's Landing Park; see Figure 4.3-1 in the EIR), the applicant shall conduct surveys prior to construction for the presence of the valley elderberry longhorn beetle and its elderberry host plant by a qualified biologist in accordance with U.S. Fish and Wildlife Service protocols. If elderberry plants with stems measuring 1.0 inch or greater are not identified, no further mitigation is required.

Mitigation Measures 4.3-4 (b)

If elderberry plants with one or more stems measuring 1.0 inch or greater in diameter at ground level occur on or adjacent to and within 100 feet of ground disturbing activities (shrub's dripline is within 100 feet of construction activities or site), or are otherwise located where they may be directly or indirectly affected by the project, minimization and compensation measures, which include transplanting existing shrubs and planting replacement habitat (conservation plantings) are required (see below). Surveys are valid for a period of two years. Elderberry plants with no stems measuring 1.0 inch or greater in diameter at ground level are unlikely to be habitat for the beetle because of their small size and/or immaturity. Therefore, no minimization measures are required for removal of elderberry plants with all stems measuring 1.0 inch or less in diameter at ground level.

Mitigation Measures 4.3-4 (c)

For shrubs with stems measuring 1.0 inch or greater, the applicant shall ensure that elderberry shrubs within 100 feet of ground disturbing activities be protected and/or compensated for (if affected by construction activities) in accordance with the "U.S. Fish and Wildlife Services' (USFWS) Conservation Guidelines for the Valley Elderberry Longhorn Beetle and the Programmatic Formal Consultation Permitting Projects with Relatively Small Effects on the Valley Elderberry Longhorn Beetle Within the Jurisdiction of the Sacramento Field Office."

Significance After Mitigation: With the implementation of **Mitigation Measure 4.3-4**, elderberry shrubs would be protected and any shrubs that require removal would be compensated for. As a result, the proposed DSP would not cause a reduction in VELB habitat. Thus, impacts to VELB from implementation of the proposed DSP would be mitigated to a **less-than-significant** level.

Impact 4.3-5: Projects developed under the proposed DSP could remove habitat for the western pond turtle.

The Sacramento and American rivers within the DSP area provide suitable aquatic habitat for the western pond turtle. Upland habitat along the Sacramento River within the DSP area is unlikely to support the species because the substrate of the bank is primarily broken concrete and rip-rap with compacted soil, which is not suitable for nesting. Additionally, there are high levels of human disturbance, including homeless encampments, recreational visitors to the Sacramento River, and an adjacent bike trail, which further deter western pond turtles from dispersing from the Sacramento River into the DSP area. Upland habitats along the American River adjacent to the DSP area could potentially support western pond turtle, and the species may disperse from the river into adjacent upland habitats in this area of the proposed DSP. However, no changes in land use or other development provisions would be allowed within the river corridors under the proposed DSP. Suitable habitat for western pond turtle within the DSP would not be impacted by projects constructed under the proposed DSP. Therefore, there would be **no impact**.

Mitigation Measure

None required.

Impact 4.3-6: Projects developed under the proposed DSP could result in impacts to special-status bat species.

Special-status bat species potentially present in the DSP area include pallid bat (*Antrozous pallida*), western red bat (*Lasiurus blossevillii*), hoary bat (*Lasiurus cinereus*), and Yuma myotis (*Myotis yumanensis*). As with most urbanized environments, landscape features within the city such as trees with hollows, palm trees, and parklands, could serve as temporary roosting and foraging habitat for special-status bat species. Portions of the DSP area that contain suitable roosting and foraging habitat for these species include the riparian areas of the Sacramento and American rivers, abandoned buildings, bridges with crevices, oak woodlands.

This analysis examines the potential to impact maternity roosting special-status bats and regionally occurring bat species such as the Mexican free-tailed bat (*Tadarida brasiliensis*) and the big brown bat (*Eptesicus fuscus*) as a result of development in the DSP area. Removal or disturbance (resulting in abandonment) of a roost containing a maternity colony (special-status or common) could result in loss of a large number of individuals, which is considered a significant

impact due to the magnitude of the loss. The loss of one individual special-status bat is not considered a significant impact, as these species are not covered under FESA or CESA, and the loss of one individual would not lead to local extirpation of, or reduce populations to below self-sustaining levels.

Construction Impacts

Bat tree-roosting habitat is present along within mature riparian trees along the Sacramento and American rivers. However, the quality of potential roosting habitat is low due to the narrowness of the riparian habitat along these segments of the rivers, and high levels of human disturbance near the rivers. Although the likelihood is low, it is possible that trees along the rivers could support a maternity colony of tree-roosting bats. Thus, the removal of trees along the Sacramento and American rivers, or construction-related disturbance associated with projects proposed under the proposed DSP could result in the loss of a foliage-roosting bat maternity colony.

Removal, redevelopment, or reconfiguration of buildings and structures in the DSP area that have previously been abandoned and left in a condition where bats have established roosting colonies could result in removal or construction-related disturbance to cavity-roosting bat species, including the pallid bat. Removal or construction-related disturbance associated with project construction under the proposed DSP could result in the loss of a cavity-roosting bat maternity colony.

The 2035 General Plan contains goals and policies designed to protect biological resources and natural habitats. The City of Sacramento has established standards that require analysis of project impacts on threatened, endangered, or special-status species. Implementation of 2035 General Plan Policy ER 2.1.10 would require habitat assessments for maternity roosting bats to be conducted, and, if habitat is present, focused/protocol-level surveys conducted (or assumed presence of species) for any project requiring discretionary approval.

Despite the presence of the 2035 General Plan policies discussed above, because construction of projects pursuant to the proposed DSP could impact a maternity roost site, this impact is **potentially significant**.

Operational Impacts

There are no expected impacts to maternity roosting bats from operations of the development undertaken pursuant to the proposed DSP.

Mitigation Measure

Mitigation Measure 4.3-6

If a project would result in the removal of large, mature trees within the riparian areas along the Sacramento or American rivers as shown on Figure 4.3-1 of the EIR or the removal of an unsealed, open to the elements, vacant building, and construction activities commence on the project site during the breeding season of special-status bat species (May 1 to August 31), then a field survey shall be conducted by a qualified biologist to

determine whether active roosts are present on site or within 100 feet of the project boundaries prior to the commencement of construction activities. Field surveys shall be conducted early in the breeding season before any construction activities begin, when bats are establishing maternity roosts but before pregnant females give birth (April through early May). If no roosting bats are found, then no further mitigation is required.

If roosting bats are found, then disturbance of the maternity roosts shall be avoided by halting construction until the end of the breeding season. Alternatively, a qualified bat biologist may exclude the roosting bats in consultation with the California Department of Fish and Wildlife, thereby allowing construction to continue after successful exclusion activities.

If the biologist determines that bats could potentially inhabit a building planned for demolition or alteration, and a nighttime survey is necessary, then the biologist may return for an emergence survey.

Significance After Mitigation: Implementation of Mitigation Measures 4.3-6 would minimize potential direct and indirect impacts on maternity roosting bats within the DSP area by requiring preconstruction surveys to identify any maternity roosting sites within 100 feet of project activities, and if found, observance of no-disturbance zones around those sites. This would reduce impacts to maternity colonies during construction activities to a **less-than-significant** level.

Impact 4.3-7: Projects constructed under the proposed DSP could result in impacts to special-status plant species.

Four special-status plants have a potential to occur in the DSP area, as shown in Table 4.3-1. These species are all associated with riparian and wetland habitats and may potentially occur within the riparian habitat associated with the Sacramento and American rivers. No changes in land use or other development provisions would be allowed within the river corridors under the proposed DSP. Suitable habitat for the special-status plant species potentially occurring within the DSP would not be impacted by projects constructed under the proposed DSP. Therefore, there would be **no impact**.

Mitigation Measure

None required.

Impact 4.3-8: Projects developed pursuant to the DSP could result in net reduction of sensitive habitats including protected wetland habitat as defined in Section 404 of the Clean Water Act, riparian vegetation, and state jurisdictional waters/wetlands.

Construction Impacts

Potentially jurisdictional wetlands and other waters of the U.S. occur within the DSP area and include the major waterways of the American River and the Sacramento River as well as

wetlands associated with those rivers. Due to the urban nature of the DSP area, outside of the river corridors jurisdictional waters are not known to be significant restraints to development in the DSP area. Therefore, impacts to wetlands and other waters of the U.S., riparian vegetation, and state jurisdictional waters/wetlands are unlikely throughout the majority of the DSP area and are limited to those habitats associated with the Sacramento and American rivers. Significant development along the Sacramento and American rivers is not anticipated under the DSP, but there could be some urbanization or development of infrastructure such as bike and pedestrian paths up to or along the Sacramento River levee. However, development along the rivers would not be anticipated to occur on the water side of the existing levees.

Wetlands and other waters of the U.S., riparian vegetation, and state jurisdictional waters/ wetlands could be affected by projects developed under the proposed DSP through direct removal, filling, hydrological interruption (including dewatering), alteration of bed and bank, and other construction-related activities. Such activities could result in long-term degradation of federally or state-protected aquatic features and fragmentation or isolation of an important wildlife habitat. Formal delineations of potentially jurisdictional wetlands and other waters of the U.S. and/or state within the DSP area have not been conducted.

Section 404 of the CWA requires that a permit be obtained from the USACE prior to the discharge of dredged or fill materials into any "waters of the United States," which includes wetlands. Section 404 permits generally require mitigation to offset losses of these habitat types, in accordance with Executive Order 11990, which is intended to result in no net loss of wetland values or acres. Waters of the State are defined as any surface or subsurface water and are protected by the Porter-Cologne Act.

Existing federal and state laws and regulations, including the USACE Section 404 permitting process or the Report of Waste Discharge required under the Porter-Cologne Act would apply to development in the DSP area. Additionally, implementation of the above-mentioned General Plan goals and policies and strict adherence to identified state and federal laws and regulations and the "no-net-wetland-loss" policy currently in place would reduce impacts on jurisdictional waters of the U.S. and wetlands. Implementation of 2035 General Plan Policy ER 2.1.6 would also reduce the impact on wetlands and waters of the U.S.

The potential loss of wetlands and other waters of the U.S., riparian vegetation, and state jurisdictional waters/wetlands are considered **significant impacts**.

Operational Impacts

The increase in impervious surfaces that would result from implementation of the proposed DSP would generate stormwater that would be discharged to the Sacramento and American rivers. Development within the DSP area may increase pollutant concentrations and sediment runoff. Extended periods of localized, high suspended sediment concentrations, and increased pollution concentrations could result in decreased water quality, including high suspended sediment concentrations and turbidity. The aforementioned conditions could cause indirect or direct

impacts to waters of the U.S., including the Sacramento and American rivers. However, runoff within the DSP area is directed to City stormwater storage and treatment facilities (Basin 52 or the combined sewer system (CSS)) where it is treated before discharging to the Sacramento and American rivers.

The CWA mandates permits for construction activities and municipal stormwater discharges. The City of Sacramento has coverage under a MS4 General Permit. This permit requires that controls be implemented to reduce the discharge of pollutants in stormwater discharges to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and other measures as appropriate. As part of permit compliance, the City has prepared a SQIP, which outlines the requirements for municipal operations, industrial and commercial businesses, illegal discharges, construction sites, planning and land development, public education and outreach, and watershed stewardship. These requirements include multiple measures to control pollutants in stormwater discharge. Under the proposed DSP, all new development in the DSP area would be required to follow the guidance contained in the SQIP.

Water quality objectives for the Sacramento and American rivers are specified in the Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin (Basin Plan) prepared by the CVRWQCB in compliance with the federal CWA and the California Water Code (section 13240). The Basin Plan contains water quality numerical and narrative standards and objectives for rivers and their tributaries within its jurisdiction that were developed to be protective of beneficial uses, including fish habitat.

Regulatory compliance would prevent the substantial degradation of water quality and associated habitat conditions in the Sacramento and American rivers, and operational impacts to waters of the U.S. from the DSP would be **less than significant**.

Mitigation Measure

Mitigation Measure 4.3-8 (a)

For projects proposed in areas that contain aquatic habitat which may support wetlands and other waters of the U.S., riparian vegetation, and state jurisdictional waters/wetlands (i.e., riparian or riverine areas associated with the Sacramento and American rivers as shown on Figure 4.3-1 in the EIR), the applicant shall conduct a formal aquatic resources delineation within those project sites. The aquatic resources delineation shall be submitted to the U.S. Army Corps of Engineers for verification. If jurisdictional wetlands and other waters of the U.S., riparian vegetation, and state jurisdictional waters/wetlands are not present, no further action is required.

Mitigation Measure 4.3-8 (b)

If jurisdictional wetlands and other waters of the U.S., riparian vegetation, and state jurisdictional waters/wetlands are present, the applicant shall avoid them if feasible. The applicant shall minimize disturbances and construction footprints near avoided wetlands and other waters of the U.S., riparian vegetation, and state jurisdictional waters/ wetlands to the extent feasible.

Mitigation Measure 4.3-8 (c)

If avoidance of wetlands and other waters of the U.S., riparian vegetation, and state jurisdictional waters/wetlands are not feasible, then the applicant shall demonstrate that there is no net loss of wetlands and other waters of the U.S., riparian vegetation, and state jurisdictional waters/wetlands through compliance with the Clean Water Act Section 404 requirements.

Significance After Mitigation: With the implementation of **Mitigation Measure 4.3-8**, there would be no net loss of wetlands and potential indirect impacts to wetlands and other waters of the U.S., riparian vegetation, and state jurisdictional waters/wetlands would be avoided or mitigated to the extent feasible. Thus, impacts to wetlands and other waters of the U.S., riparian vegetation, and state jurisdictional waters/wetlands from implementation of the projects developed under the proposed DSP would be mitigated to a **less-than-significant level**.

Impact 4.3-9: Implementation of the proposed DSP could result in interruption of contiguous habitat which would interfere substantially with the movement of resident or migratory fish or wildlife species, migratory corridors, or impede the use of native wildlife nursery sites.

Construction and Operational Impacts

Terrestrial Species

The majority of terrestrial habitats within the DSP area do not serve as significant wildlife corridors or linkages for special-status terrestrial species. However, the Sacramento River, American River, and associated riparian habitat serves as wildlife movement corridors, foraging habitat, breeding sites, and cover areas for a variety of terrestrial species. Raptor species such as Cooper's hawk, Swainson's hawk, and white-tailed kite may nest in trees in the riparian areas. A number of passerine and other bird species that are protected by the MBTA may also use these areas for cover and breeding. Invertebrates such as the VELB may inhabit elderberry shrubs that occur within riparian areas along the Sacramento and American rivers. Special-status bat species, reptiles and amphibians, and land mammals may also use these corridors for movement. No changes in land use or other development provisions would be allowed within the river corridors under the proposed DSP. In addition, the DSP area is situated in a highly urbanized area and any increase in lighting and noise from implementation of development undertaken pursuant to the proposed DSP adjacent to the Sacramento and American rivers would be negligible as compared to existing conditions. Therefore, impacts on movement of wildlife species associated with the proposed DSP would be **less than significant**.

Aquatic Species

The Sacramento riverfront area is already developed with commercial uses, and transportation infrastructure that increase ambient light conditions, including the I Street Bridge, the elevated section of I-5, Old Town Sacramento, and Tower Bridge. Development within the DSP area would result in increases in artificial ambient lighting conditions from landscape lighting,

nighttime vehicle traffic, and buildings in the portion of the DSP area to the west of I-5 that could spill over onto the Sacramento River. While increases in artificial ambient light could interfere with the movement of migratory fish species within the Sacramento River by creating artificial visual conditions and/or increase predation opportunities for non-native predatory fish species, the amount of light expected to be added immediately adjacent to the Sacramento River is anticipated to be nominal. Additionally, compliance with the Central City Urban Design Guidelines would limit spillover lighting and increase the amount of landscaping and other natural barriers.

No development is anticipated to occur immediately adjacent to the American River. Therefore, impacts to migratory fish from increases in light spillover onto the Sacramento River from development in the DSP area would be considered **less-than-significant**.

Mitigation Measure

None required.

Impact 4.3-10: Implementation of the proposed DSP could result in removal of protected street trees and conflict with local policies protecting trees.

Construction Impacts

Implementation of the proposed DSP would include infrastructure improvements necessary to accommodate development, including sanitary sewer, storm drainage, electrical power, telecommunications, and natural gas infrastructures. Transportation improvements called for in the proposed DSP would include roadway, pedestrian, bicycle, and transit networks improvements. The proposed DSP would allow for the development of new hotels and integration of additional housing within existing land use designations as described in the 2035 General Plan. Depending on the specific design of a project, housing and hotel development, accompanied by infrastructure and transportation improvements, could result in impacts to locally protected trees.

The loss of protected trees, including oak trees (*Quercus* species), could conflict with the City tree ordinance and would be considered a potentially significant impact. This determination was based on recognition that the DSP area supports trees protected by the City's tree ordinance (City Code Chapter 12.56),[63] and may also contain private protected trees as defined by the ordinance. Removal of trees may conflict with the City of Sacramento 2035 General Plan, Goal ER 2.1 and Policy ER 2.1.8 Oak Woodlands. Therefore, implementation of the proposed DSP has the potential to result in the disturbance and/or loss of protected trees. The loss of street trees protected by the City tree ordinance would be considered **significant**.

[63] City of Sacramento. *Municipal Code Chapter 12.56, Tree Planting, Maintenance, and Conservation*. Available: www.qcode.us/codes/sacramento. Accessed April 12, 2017.

Operational Impacts

There are no expected impacts to protected trees as a result of operation of development and infrastructure undertaken pursuant to the proposed DSP.

Mitigation Measure

Mitigation Measure 4.3-10

For any project within the DSP area that would remove protected trees as defined by City Code 12.56, the applicant shall submit a tree removal permit application for the removal of protected trees and comply with all conditions of any issued permit.

Significance After Mitigation: Implementation of **Mitigation Measure 4.3-10** would reduce this impact to a **less-than-significant** level through compliance with the City's established requirements to avoid or mitigate for the loss of protected trees.

Cumulative Impacts

Because projects developed under the proposed DSP would typically be in-fill development surrounded by largely urban land uses, the cumulative context for impacts to special-status species focuses on the Sacramento metropolitan area with additional context provided by the larger Sacramento Valley, based on species life history and extent of current habitat. Since the 1900s, development of the City of Sacramento and the larger Sacramento Valley has resulted in modifications of natural habitats, including but not limited to, the loss of wildlife habitat and open space areas due urban and agricultural development, and flood control development along the Sacramento and American rivers.

Impact 4.3-11: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to the cumulative harm to, or loss of nesting habitat, for nesting habitat for special-status bird species and other sensitive and/or protected bird species.

The cumulative context for nesting bird habitat includes Sacramento County. Historic and ongoing loss of natural habitats suitable for nesting birds, including Swainson's hawk, Cooper's hawk, burrowing owl, white-tailed kite, song sparrow, purple martin, and other sensitive and/or protected bird species, has occurred as natural habitats have been converted to urban and agricultural development. Future development within the County is expected to continue, including reasonably foreseeable projects such as the proposed North Precinct Specific Plan, Elverta Specific Plan, Mather Specific Plan, West Jackson Highway Master Plan, Jackson Township Specific Plan; the approved Metro Airpark and the Cordova Hills Special Planning Area; and other development in the unincorporated County and the cities of Elk Grove, Rancho Cordova, Citrus Heights, Folsom (including Folsom Plan Area, south of US 50). Projects within Sacramento County would be required to comply with local ordinances and policies, in addition to CESA, FESA, CWA, Fish and Game Code of California, and other relevant regulations permits and requirements. Nevertheless, the loss of natural habitats for special-status species, other raptors, and nesting birds within Sacramento County is a significant cumulative impact.

The DSP area contains habitats that have been highly modified or are of relatively low quality due to their urban nature, or proximity to urban developments. Additionally, affected habitats are mostly isolated from other areas of similar habitat due to existing urban development. However, development pursuant to the proposed DSP could directly affect special-status and protected bird species and their habitat which would result in a considerable contribution to the cumulative loss within Sacramento County; therefore, this is considered a **significant** impact.

Mitigation Measure

Mitigation Measure 4.3-11

Implement Mitigation Measure 4.3-2(a), 4.3-2(b), and 4.3-2(c).

Significance After Mitigation: With the implementation of **Mitigation Measure 4.3-11** and compliance with applicable federal, State, and local policies and regulations, the proposed DSP's contribution to the regional cumulative impact on nesting birds and their habitat would be less than considerable, and the impact would be reduced to **less than significant**.

Impact 4.3-12: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative impacts to special-status fish species and degradation of designated critical habitat.

The cumulative context for impacts for special-status fish species includes projects that would alter or otherwise affect the lower Sacramento River and lower American River, including flood control improvements under the direction of the Sacramento Area Flood Control Agency, the West Sacramento Area Flood Control Agency, USACE, as well as Regional San, the American River Flood Control District, and other agencies; and land use development under the jurisdiction of the cities of Sacramento, West Sacramento, Rancho Cordova, and Folsom; and the counties of Sacramento and Yolo.

These river segments have been substantially altered over the past 150 years as a result of legacy mining, flood protection, water management, and conversion and development of the floodplain. The effects of past activities and ongoing management are expected to continue into the foreseeable future. Additionally, riparian habitats have been reduced substantially from their native range, and probable future development within the region would continue to affect these resources.

As discussed under Impact 4.3-3 above, habitat for special-status fish species would not be directly impacted by the proposed DSP. However, water quality impacts associated with development under the proposed DSP could indirectly impact habitat for special-status fish. The proposed plan would reduce generation of water pollutants to the maximum extent practicable consistent with the goals of the State Water Board and Central Valley Water Board water quality criteria and stormwater regulations through the use of BMPs. As discussed above, development

within the DSP area would result in increases in artificial ambient lighting conditions from landscape lighting, nighttime vehicle traffic, and buildings in the portion of the DSP area to the west of I-5 that could spill over onto the Sacramento River. Increases in artificial ambient light could interfere with the movement of migratory fish species within the Sacramento River by creating artificial visual conditions and/or increase predation opportunities for non-native predatory fish species. Compliance with the Central City Urban Design Guidelines would limit spillover lighting and increase the amount of landscaping and other natural barriers. Therefore, the proposed plan's contribution to the significant cumulative impact on special-status fish would be less than considerable, and this impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.3-13: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to the cumulative loss of habitat for the Valley Elderberry Longhorn Beetle.

The cumulative context for impacts to Valley Elderberry Longhorn Beetle (VELB) includes elderberry shrubs located within Sacramento Valley, which corresponds to the range of VELB. Elderberry shrubs, habitat for VELB, are most commonly associated with riparian vegetation along waterways. As discussed in the 2035 General Plan, approximately 90 percent of riparian vegetation has been lost to development since the 1800s.[64] It is likely that future development will further continue to affect riparian areas where elderberry shrubs and VELB are located.

As discussed under Impact 4.3-4 above, projects proposed under the DSP would comply with FESA and CEQA to minimize potential direct and indirect impacts on VELB within the DSP area. However, development of projects proposed under the DSP could result in removal of elderberry shrubs, resulting in further loss of VELB habitat. Any loss of VELB or their habitat is considered to be significant. Loss of VELB habitat, in the context of significantly reduced habitat since the 1800s and continued development in the Central Valley, could have a considerable contribution to the cumulative impact of VELB, and their habitat. Thus, any contribution to the cumulative loss of VELB habitat in the Sacramento Valley is considerable and considered a significant cumulative impact. This would be a **potentially significant impact**.

Mitigation Measure

Mitigation Measure 4.3-13

Implement Mitigation Measure 4.3-4(a), 4.3-4(b), and 4.3-4(c).

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

Significance After Mitigation: With the implementation of **Mitigation Measure 4.3-13** and compliance with applicable federal, State, and local policies and regulations, the proposed DSP's contribution to the regional cumulative impact on VELB and their habitat would be less than considerable, and this impact would be **less than significant**.

Impact 4.3-14: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to the cumulative loss of habitat, or impacts to bat species.

The context for cumulative impacts to bat species is Sacramento County. Roosting habitat for bat species has been lost due to natural habitats being converted to urban uses. As discussed in the 2035 General Plan, loss of habitats with in Sacramento County is expected to continue into the reasonably foreseeable future.

As discussed in Impact 4.3-6, projects proposed under the DSP could further reduce available foliage-roosting habitat in Sacramento County by removing mature riparian trees along the Sacramento and American rivers, and renovating, or removing cavity-roosting habitat within buildings and structures in the DSP area. Removal of riparian habitat, and renovation and exclusion of bats from buildings and structures in the DSP area would be considered a considerable contribution to the cumulative impact of diminishment of roosting habitat available for bat species in Sacramento County. As a result, the loss of roosting habitat for bat species is a **significant cumulative impact**.

Mitigation Measure

Mitigation Measure 4.3-14

Implement Mitigation Measure 4.3-6.

Significance After Mitigation: With the implementation of Mitigation Measure 4.3-14, in combination with CDFW riparian vegetation mitigation requirements, the proposed projects' contribution to cumulative impact on bat species within Sacramento County would be reduced. Project-related disturbance to bat species would be less than considerable contribution to the cumulative loss of bats within Sacramento County, and this impact would be **less than significant**.

Impact 4.3-15: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to the cumulative loss of sensitive habitats including protected wetland habitat as defined in Section 404 of the Clean Water Act, riparian vegetation, and state jurisdictional waters/wetlands.

The context for cumulative impacts to wetlands is the Central Valley. As a result of human settlement, riparian forests and wetland habitats were cleared and developed for farming, lumber, flood control and riparian development and thus have been reduced substantially from their native range. As discussed in the 2035 General Plan (pages 4.3-21 to 4.3-22), since the 1800s there has

been an approximately 95 percent reduction in wetland habitats. It is likely that future development will further continue to affect these sensitive habitats. The loss of wetlands, riparian vegetation, and state jurisdictional waters/wetlands is considered a cumulative impact.

Due to the urban nature of the DSP area, jurisdictional waters are not known to be significant restraints to development in the DSP area outside of the river corridors. Therefore, impacts to wetlands and other waters of the U.S., riparian vegetation, and state jurisdictional waters/wetlands are unlikely throughout the majority of the DSP area and are limited to those habitats associated with the Sacramento and American rivers. Due to the significant decline in wetland and sensitive riparian habitat in the Central Valley, any loss of these sensitive habitat types would represent a considerable contribution to the loss of riparian and wetland habitats within the Central Valley. Therefore, this is considered a **significant cumulative impact**.

Mitigation Measure

Mitigation Measure 4.3-15

Implement Mitigation Measure 4.3-8(a), 4.3-8(b), and 4.3-8(c).

Significance After Mitigation: Implementation of Mitigation Measures 4.3-15 would mitigate impacts to wetlands, riparian vegetation, and state jurisdictional waters/wetlands within the DSP area. This would occur through a combination of restoration/ enhancement, and/or purchase of restoration credits to ensure no net loss. By ensuring that projects proposed under the DSP achieve no net loss of waters of the U.S. or riparian habitat, the contribution of the DSP to the overall cumulative impact would be less than considerable, and thus the impact would be reduced to a **less-than-significant** level.

Impact 4.3-16: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to the cumulative loss of locally protected trees.

The context for cumulative impacts to locally protected trees includes the City of Sacramento. The City of Sacramento is known as the "City of Trees" and there are 6.9 million trees within the Sacramento region.[65] The City of Sacramento 2035 General Plan includes goals and policies to promote tree planting and protection of the urban forest to increase the City's tree canopy, and implements a tree ordinance protecting street and heritage trees.

Implementation of the proposed DSP could potentially remove protected street trees in the DSP area. Because project proponents are required to comply with the City's tree ordinance and implement mitigation measures to protect retained trees in proximity to potential impactful activities, the projects would not result in a considerable contribution to the cumulative loss of locally protected trees. As a result, this impact is considered **less than significant**.

65 Sacramento Tree Foundation, 2016. Urban Forests for Clean Air. Available: www.sactree.com/pages/471. Accessed March 25, 2016.

Mitigation Measure

None required.

4.4 Cultural Resources

Cultural resources include built environment, architectural, and cultural landscape resources; historical and prehistoric archaeological resources; tribal cultural resources; and human remains. This section discusses the potential for implementation of the proposed DSP to adversely affect cultural resources.

In response to the Notice of Preparation (NOP) for this Draft EIR, written comments pertaining to cultural resources were received from Sacramento Modern (SacMod), the United Auburn Indian Community (UAIC), William Burg, Karen Jacques, and Preservation Sacramento. Comments regarding cultural resources were also received during the scoping meeting on March 2, 2017 and a Community Open House held on March 20, 2017. During these meetings concerns were raised mostly over impacts to historic districts, lot splits, and effects on individual lots and historic districts within the Central City. Potential impacts of this type are addressed below in Impact 4.4-3. Collectively, the comments received regarding cultural resources included the following topics:

- Archaeological sites associated with the Old American River confluence and Calle De Los Americans;
- Full survey of the Central City to identify potential historic districts and individual resources;
- Infill development in existing historic districts;
- Plan for identification of resources that become 50 years old for the duration of the plan; and
- Adaptive reuse.

The analysis in this section was developed based on data provided in the City of Sacramento 2035 General Plan and General Plan Master EIR; archival research, including a records search at the North Central Information Center (NCIC); field surveys of historic resources within the DSP area, and the knowledge of ESA's cultural resources staff based on past work on projects in Sacramento and the surrounding region.

The DSP area includes several vacant and underutilized sites that can provide opportunities for housing. These areas are identified in this section as Opportunity Sites. Potential impacts to known archaeological sites in the DSP area, as well as the sensitivity of specific Opportunity Sites, are discussed in this section. More detailed information about Opportunity Sites, including their locations and the results of the surveys of the sites, are included in the Cultural Resources Survey and Inventory Report (CRSIR) prepared for the DSP and included as Appendix E of this Draft EIR. The CRSIR provided as Appendix E is the non-confidential version of the report, which does not disclose the locations of archaeological sites or other sensitive cultural resources. A confidential version of the report, which includes information on archaeological sites and sensitive cultural resources, can be viewed by City staff and qualified archaeologists at the City of Sacramento Community Development Department at 300 Richards Boulevard, 3rd Floor, Sacramento, California, 95811.

4.4.1 Environmental Setting

Natural Setting

The DSP area is in the relatively flat floodplains of the American and Sacramento rivers, located in the southern portion of the Sacramento Valley within the northern portion of California's Central Valley (also referred to as the Great Valley). It is a nearly flat alluvial plain that lies between the Sierra Nevada on the east and the Coast Ranges on the west. In the Sacramento area, the Sacramento and American rivers have been confined by human-made levees since the mid-nineteenth century, such as those along the American River just north of the DSP area.

The underlying geology of the DSP area consists of deep Holocene and historic-period/modern alluvium (Great Valley stream channel, fan, and basin deposits) with some wind-blown "dune" deposits.[1,2] Soils in the DSP area consist of a variety of sandy and silty loams (alluvium) mixed with historic-period and modern fill.[3]

The Holocene environment of the region was characterized by a general warming trend that subsumed episodes of relatively cool climates. Prior to historic-period and modern development, the DSP area and vicinity would have consisted of non-tidal marshland, broad gallery forests, and open grassland.[4] Early peoples would have had access to a wide variety of flora and fauna. The arrival of Euroamericans to the area led to a dramatic decrease in the populations of the faunal species due to overhunting and habitat loss.[5,6]

Prehistoric Setting

Categorizing the prehistoric period into cultural stages allows researchers to describe a broad range of archaeological resources with similar cultural patterns and components during a given timeframe, thereby creating a regional chronology. Rosenthal et al.[7] provide a framework for the interpretation of the Central Valley prehistoric record and divided human history in the region into three basic periods: Paleo-Indian (13,550 to 10,550 years before present [BP]), Archaic (10,550 to 900 BP), and Emergent (900 to 300 BP). The Archaic period is subdivided into three sub-periods: Lower Archaic (10,550 to 7550 BP), Middle Archaic (7550 to 2550 BP), and Upper

1 California Division of Mines and Geology, *Geologic Map of California: Sacramento Sheet*, prepared by the State of California Department of Conservation, 1971.
2 Meyer, Jack, and Jeffery Rosenthal, *A Geoarchaeological Overview and Assessment of Caltrans District 3*, prepared for Caltrans District 3, Sacramento, 2008.
3 U.S. Department of Agriculture, "Natural Resources Conservation Service Web Soil Survey", Version 3.1. Available: http://websoilsurvey.sc.egov.usda.gov/app/WebSoilSurvey.aspx. Accessed June 26, 2016.
4 Meyer, Jack, and Jeffery Rosenthal, *A Geoarchaeological Overview and Assessment of Caltrans District 3*, prepared for Caltrans District 3, Sacramento, 2008. pp. 34-35.
5 Heady, H. F., "Valley Grassland", In *Terrestrial Vegetation of California*, edited by M. G. Bargbour and J. Majour, pp. 491–514, John Wiley & Sons, New York, NY, 1977.
6 Meyer, Jack, and Jeffery Rosenthal, *A Geoarchaeological Overview and Assessment of Caltrans District 3*, prepared for Caltrans District 3, Sacramento, 2008. pp. 35-36.
7 Rosenthal, Jeffrey S., Gregory G. White, and Mark Q. Sutton, "The Central Valley: A View from the Catbird's Seat", In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 147-163, AltaMira Press, Lanham, MD, 2007.

Archaic (2550 to 900 BP).[8] Economic patterns, stylistic aspects, and regional phases further subdivide cultural patterns into shorter phases. This scheme uses economic and technological types, socio-politics, trade networks, population density, and variations of artifact types to differentiate between cultural periods. The following summary of the region's prehistory is derived principally from Rosenthal et al.[9] and Moratto.[10]

Paleo-Indian Period (13,550 to 10,550 BP)

Humans first entered the Central Valley sometime prior to 13,000 years ago. At that time, Pleistocene glaciers had receded to the mountain crests, leaving conifer forests on the mid- and upper elevations of the Sierra Nevada and a nearly contiguous conifer forest on the Coast Ranges. The Central Valley was covered with extensive grasslands and riparian forests. The central California Delta had not yet developed. The Central Valley was home to a diverse community of large mammals, which soon became extinct. Human populations were likely focused on large game hunting, although evidence remains scant, as does understanding of lifeways during this period.

Lower Archaic Period (10,550 to 7,550 BP)

Climate change during the Lower Archaic led to the rapid expanse of oak woodland and grassland prairies across the Central Valley. After 10,550 BP, a significant period of soil deposition ensued in the Valley, capping older Pleistocene formations. This was followed around 7,000 BP by a second period of substantial soil deposition in the Valley.

It was during this period that the first evidence of milling stone technology appears, indicating an increased reliance on processing plants for food. Milling stones include hand stones and milling slabs and are frequently associated with a diverse tool assemblage, including cobble-based pounding, chopping, and scraping tools. Milling tools were used for processing seeds and nuts. The Lower Archaic also saw the development of well-made bifaces used for projectile points and cutting tools, commonly formed from meta-volcanic greenstone and volcanic basalts.

Middle Archaic Period (7,550 to 2,550 BP)

After about 7,550 BP, California was marked by another change in climate with warmer and drier conditions throughout the region. Oak woodland expanded upslope in the Coast Ranges and conifer forest moved into the alpine zone in the Sierra Nevada. Rising sea levels led to the formation of the Sacramento-San Joaquin Delta and associated marshlands. An initial period of upland erosion and lowland deposition was followed by a long period of stabilization of landforms. Scant evidence of human occupation from this period has been found in the Sacramento Valley or the adjacent Coast Ranges. Most evidence comes from the Sierra foothills in Calaveras and Tuolumne counties.

8 *Ibid.*
9 *Ibid.*
10 Moratto, Michael J., *California Archaeology*, 1984 [2004]. 2004 reprinted ed. Coyote Press, Salinas, CA.

Upper Archaic Period (2,550 to 900 BP)

Evidence for Upper Archaic human occupation in the Central Valley is much more extensive than for earlier periods. The development of the Holocene landscape buried older deposits, resulting in the identification of more sites from the Upper Archaic than from older periods of development. Alluvial deposition was partially interrupted by a climatic shift referred to as the Medieval Climatic Anomaly, which led to two substantial consecutive droughts throughout much of California.

Two fundamental adaptations developed concurrently during the Upper Archaic period, evidenced by a diversification in settlements patterns. Populations in the Central Valley tended towards large, high-density, permanent settlements. These villages were used as hubs from which the populace roamed to collect resources, utilizing a wide range of technologies. The populations in the foothills and mountains lived in less dense settlements, moving with the seasons to maximize resource returns. Tools tended to be expedient and multipurpose for use in a wide variety of activities. Village sites show extended occupation as evidenced by well-developed middens, frequently containing hundreds of burials, storage pits, structural remains, hearths, ash dumps, and extensive floral and faunal remains.

Emergent Period (900 to 300 BP)

A major shift in material culture occurred around 900 BP, marking the beginning of the Emergent Period. Particularly notable was the introduction of the bow and arrow. The adoption of the bow occurred at slightly different times in various parts of the Sacramento Valley, but by 750 BP it was in use in the Delta region. The bow was accompanied by the Stockton Serrated point, a seemingly local invention, distinctive from point types used by populations in other parts of California. Another key element of material culture from this period includes big-head effigy ornaments thought to be associated with the Kuksu religious movement. In areas where stone was scarce, baked clay balls are found, presumably for cooking in baskets. Other diagnostic items from this period are bone tubes, stone pipes, and ear spools. Along rivers, villages are frequently associated with fish weirs, with fishing taking on an increasing level of importance in the diet of the local populace.

Ethnographic Setting

Depopulation and relocation of Central Valley Native Americans in the nineteenth century resulted in conflicting and incomplete information about tribal locations. Although cultural descriptions of these groups in the English language are known from as early as 1849, most of our current cultural knowledge comes from various early twentieth century anthropologists.[11]

[11] Levy, Richard, "Eastern Miwok", In *California*, edited by Robert F. Heizer, pp. 398-413, Handbook of North American Indians, Vol. 8:413, William C. Sturtevant, general editor, Smithsonian Institution, Washington, DC, 1978.

However, ethnographic data indicates that the DSP area is within the lands occupied and used by the Nisenan,[12] or Southern Maidu.

Nisenan

The language of the Nisenan, which includes several dialects, is classified in the Maiduan family of the Penutian linguistic stock.[13,14] The western boundary of Nisenan territory was the western bank of the Sacramento River. The eastern boundary was "the line in the Sierra Nevada mountains where the snow lay on the ground all winter."[15]

Nisenan settlement locations depended primarily on elevation, exposure, and proximity to water and other resources. Permanent villages usually were located on low rises along major watercourses. Village size ranged from three houses to 40 or 50. Houses were domed structures covered with earth and tule or grass and measured 3.0 to 4.5 meters in diameter. Brush shelters were used in summer and at temporary camps during food-gathering rounds. Larger villages often had semi-subterranean dance houses that were covered in earth and tule or brush, with a central smoke hole at the top and an east-facing entrance. Another common village structure was a granary used for storing acorns.[16]

The Nisenan occupied permanent settlements from which specific task groups set out to harvest the seasonal bounty of flora and fauna provided by the rich valley environment. The Valley Nisenan economy involved riparian resources—in contrast to the Hill Nisenan, whose resource base consisted primarily of acorn and game procurement. The only domestic plant was native tobacco, but many wild species were cultivated. The acorn crop from the blue oak and black oak was so carefully managed that this activity served as the equivalent of agriculture. Acorns could be stored in anticipation of winter shortfalls in resource abundance. Deer, rabbit, and salmon were the chief sources of animal protein in the aboriginal diet, but many other insect and animal species were taken when available.[17]

Religion played an important role in Nisenan life. The Nisenan believe that all natural objects were endowed with supernatural powers. Two kinds of shamans existed: curing shamans and religious shamans. Curing shamans had limited contact with the spirit world and diagnosed and

12 Shipley, William F., "Native Languages of California", In *California*, edited by Robert F. Heizer, pp. 80-90, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, DC, 1978.
13 Kroeber, Alfred L., *Handbook of the Indians of California*, Bureau of American Ethnology Bulletin 78, Smithsonian Institution, Washington, D.C., 1976 reprinted ed., Dover Publications, Inc., New York, NY, 1925 [1976].
14 Shipley, William F., "Native Languages of California", In *California*, edited by Robert F. Heizer, Handbook of North American Indians, Vol. 8:80-90, William C. Sturtevant, general editor, Smithsonian Institution, Washington, DC, 1978.
15 Littlejohn, Hugh W., *Nisenan Geography*, Document 18, University of California Department of Anthropology, Berkeley, CA, 1928.
16 Wilson, Norman L., and Arlean H. Towne, 1978. "Nisenan", In *California*, edited by Robert F. Heizer, Handbook of North American Indians, Vol. 8:387-397, William C. Sturtevant, general editor, Smithsonian Institution, Washington, DC.
17 *Ibid*.

healed illnesses. Religious shamans gained control over the spirits through dreams and esoteric experiences.[18] The usual mode of burial was cremation.[19]

As with other California Native American groups, the Gold Rush of 1849 had a devastating effect on the Valley Nisenan. The flood of miners that came to the area in search of gold brought diseases with them that decimated the Nisenan population. Those who survived were subjected to violence and prejudice at the hands of the miners, and the Nisenan eventually were pushed out of their ancestral territory. Although this contact with settlers had a profound negative impact on the Nisenan population through disease and violent actions, the Nisenan people survived and maintained strong communities and action-oriented organizations.[20]

Ethnographic Villages

Ethnography is the systematic study of human cultures. Ethnographic studies document several Native American villages in or in close proximity to the DSP area. These records, however, are somewhat lacking in detail regarding specific locations. The accounts show that the Nisenan villages Sa'cum and Momol were in the DSP area,[21,22] while three other Nisenan villages (Sama, Sekumni, Pusune) were outside but in the vicinity of the DSP area.[23,24]

The Nisenan village Sa'cum is thought to have been in present-day downtown Sacramento, at Cesar Chavez Park. Momol was also a Nisenan village shown in ethnographic accounts to be located on the south side of the American River (through the present-day Railyards Specific Plan area, prior to the river's relocation in the 1860s) at its confluence with the Sacramento River, within the current DSP area. Sama was a Nisenan village documented in present-day south Sacramento, south of the DSP area. Ethnographic records depict Pusune at the confluence of the two rivers, either on the west side of the Sacramento River, in present-day West Sacramento, or along the north side of the American River; both locations are outside the DSP area. Sekumni is believed to have been along the north side of the American River, across the river from the

[18] *Ibid*.
[19] Faye, Paul-Louis, 1923. *Notes on the Southern Maidu*, University of California Publications in American Archaeology and Ethnology 20:35–53.
[20] Castillo, Edward D., "The Impact of Euro-American Exploration and Settlement", In *California*, edited by Robert F. Heizer, 1978. Handbook of North American Indians, Vol. 8:99-127, William C. Sturtevant, general editor, Smithsonian Institution, Washington, DC.
[21] Heizer, Robert F., and Thomas R. Hester, 1970. "Names and Locations of Some Ethnographic Patwin and Maidu Indian Villages", *University of California Archaeological Research Facility Contributions* 9(5):79-118, University of California Press, Berkeley, CA.
[22] Casilear, George W., and Henry Bainbridge, *View of Sacramento City as it Appeared During the Great Inundation in January 1850*, Lithograph by Sarony, New York, NY, 1850.
[23] Kroeber, Alfred L., 1925 [1976]. *Handbook of the Indians of California*, Bureau of American Ethnology Bulletin 78, Smithsonian Institution, Washington, DC, 1976 reprinted ed., Dover Publications, Inc., New York, NY.
[24] Heizer, Robert F., and Thomas R. Hester, 1970. "Names and Locations of Some Ethnographic Patwin and Maidu Indian Villages", *University of California Archaeological Research Facility Contributions* 9(5):79-118, University of California Press, Berkeley, CA.

present-day River District near the State Route 160 Bridge (12th/16th Street), outside the DSP area.[25,26,27]

Historic Setting

Europeans did not enter the Sacramento area until 1808, when Gabriel Moraga's expedition reached the junction of the Sacramento and American Rivers. By the late 1820s, English, American, and French fur trappers, attracted by the abundance of animal life, began operations throughout the Sacramento Valley. Native Americans still predominantly occupied the region, with only the occasional Spanish expedition into the interior to search for mission sites or escaped neophytes (Native Americans who had entered the mission system).[28]

Permanent non-native settlement in the Sacramento Valley began in the 1830s, when Spanish and Mexican governors issued large land grants to individuals, often in return for military or other services rendered to the government. Swiss immigrant John Augustus Sutter, Jr., upon receipt of a land grant from Mexican Governor Juan Alvarado, first settled the Sacramento area in 1839. Sutter established a fort away from the low-lying rivers area; Sutter's Fort served as an agricultural station and destination for immigrants into California until January 1848.[29,30,31,32]

City of Sacramento

Sutter's small riverside settlement quickly took on the role of bustling port as oceangoing ships and riverboats used the Sacramento River to transport goods and gold-seeking passengers to the mine fields in the slopes of the Sierra Nevada after the discovery of gold at Sutter's Mill (near present day Coloma in El Dorado County) in 1849. Sutter laid out a grid of streets extending from the waterfront and named the new town Sacramento, establishing numbered streets running north to south and lettered streets, east of Front Street along the Sacramento River, running east to west, with each block divided into eight 80-foot by 150-foot lots with four lots on either side of an east/west oriented central alley.

25 Casilear, George W., and Henry Bainbridge, *View of Sacramento City as it Appeared During the Great Inundation in January 1850*, Lithograph by Sarony, New York, NY, 1850.
26 Kroeber, Alfred L., *Handbook of the Indians of California*, Bureau of American Ethnology Bulletin 78, Smithsonian Institution, Washington, D.C., 1976 reprinted ed., Dover Publications, Inc., New York, NY, 1925 [1976].
27 Wilson, Norman L., and Arlean H. Towne, "Nisenan", In *California*, edited by Robert F. Heizer, Handbook of North American Indians, Vol. 8:387-397, William C. Sturtevant, general editor, Smithsonian Institution, Washington, DC, 1978.
28 Hoover, Mildred Brooke, Hero Eugene Rensch, Ethel Rensch, and William N. Abeloe, *Historic Spots in California*, 4th edition, revised by Douglas E. Kyle, Stanford University Press, Stanford, CA, 2002. pp. 302-304.
29 Bean, Walton, *California, an Interpretive History*, McGraw Hill, New York, NY, 1978. pp. 67-68.
30 Hoover, Mildred Brooke, Hero Eugene Rensch, and Ethel Rensch, *Historic Spots in California*, Stanford University Press, Stanford, CA, 1966. pp. 298-302.
31 Jackson, W. Turrentine, Rand F. Herbert, Stephen R. Wee, *The Old Courthouse Block: H-I-6-7 Streets, Sacramento, 1848-1983*, November 1983. p. 1.
32 Reps, John W., *Cities of the American West: A History of Frontier Urban Planning*. Princeton University Press, Princeton, NJ, 1975. p. 195.

The new town was centered on the embarcadero, or Front Street, and continued inland to the east along J Street.[33,34] Downtown Sacramento developed rapidly after 1850. The blocks fronting J Street were heavily developed, owing to the street's use as the main road leading east out of the City, with slightly less development on the parallel I and K streets. By 1851, J Street was substantially occupied from Front Street eastward beyond 10th Street, with stores, saloons, hotels, grocery stores, stables, and other enterprises vying for the business of visitors and residents.

During the mid-1800s, the City faced severe flooding issues. The majority of flooding stemmed from the American River, where, during heavy rains, segments of the river north of I Street would experience severe flooding. The flood of 1861/62 left portions of the City under 20 feet of water. To address this problem, the City dug a new mouth for the American River, rerouting it north to better regulate flow, and elevated the city streets between I Street and L Street, from Front Street to 12th Street, approximately 4 to 15 feet. The City completed this enormous undertaking in 1873, and this action has shaped the current downtown grid since that time.[35] The 13-year process resulted in gaps between the street and the business fronts. These were covered with new sidewalks leaving what are now referred to as "hollow sidewalks" below the new street grade.

With the reduction of flood risk, downtown businesses grew steadily; for the first 60 years of its existence the City of Sacramento consisted of the 4.5-square-mile grid encompassing the modern neighborhoods of Midtown and the Downtown (Central Business District). The Downtown (CBD) is defined as the area generally bounded by I Street to the north, Interstate 5 to the west, P Street to the south, and 16th Street to the east. By the 1870s, Sacramento had begun expanding east to accommodate increased need for residential development. Sacramento's Midtown neighborhood is bordered by R Street on the south, J Street on the north, 16th Street on the west and 30th Street on the east. Midtown is predominantly residential with notable commercial corridors, with tree-lined streets and buildings dating to the late nineteenth through mid-twentieth centuries. Between 1895 and 1915, the City underwent rapid development. From 1906 to 1943, Pacific Gas and Electric Company operated a streetcar line which supported expanded residential development as outlying areas became more easily accessible. The earliest annexation efforts in the late-nineteenth and early twentieth centuries pulled in the suburbs south and east of the grid. These new suburbs provided housing for residents commuting downtown, and were developed in phases spanning the first half of the twentieth century.

The Southside Park, Richmond Grove, and Newton Booth neighborhoods are examples of residential neighborhoods that developed to the east and south of the downtown core in the early twentieth century. The Southside Park neighborhood is bounded by R Street to the north, the W/X freeway to the south, I-5 to the west, and 12th Street to the east. The neighborhood was developed around the approximately 20-acre Southside Park in response to the increased need for residential

33 Brienes, M.G., J. West, and P.D. Schulz, *Overview of Cultural Resources in the Central Business District, Sacramento, California*, prepared for the Sacramento Museum and History Department, 1981. pp. 46-47.
34 Warner, W.H., 1848 [2002] *Map of Sacramento, Plan of Sacramento City, 1848*, Historic Urban Plans, Ithaca, NY.
35 City of Sacramento, *City of Sacramento 2030 General Plan Master Environmental Impact Report*, certified March 3, 2009. p. 6.4-9.

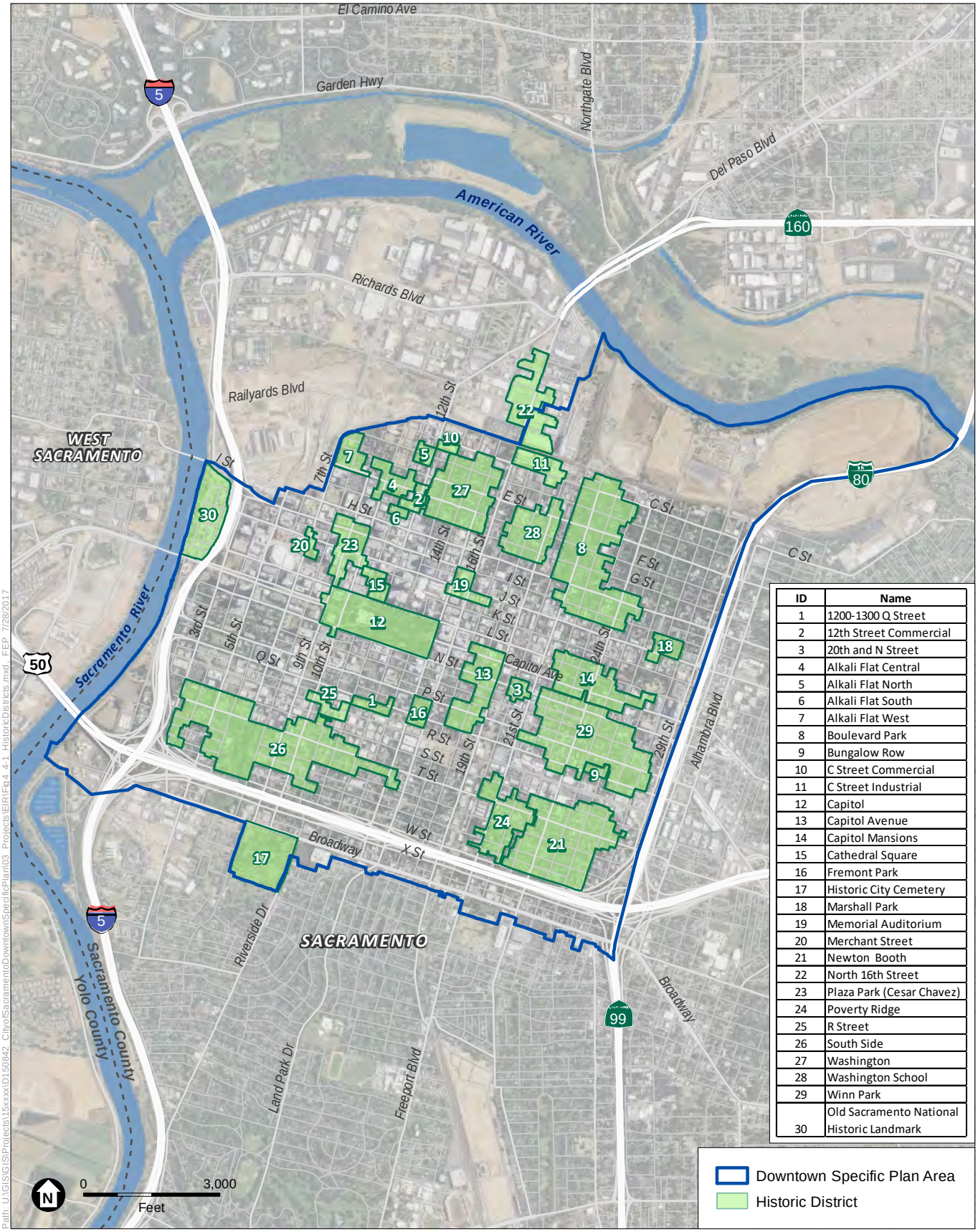
housing following the development of the R Street Corridor as a major industrial area. Immigrants and working class laborers sought homes within walking distance of R Street, creating a booming early twentieth century neighborhood along the track line. The lack of racial covenants allowed non-white persons to purchase homes in the neighborhood, one of few neighborhoods available to them at that time.[36] The Richmond Grove neighborhood is bounded by R Street to the north, the W/X freeway to the south, 12th Street to the west, and 19th Street to the east. Richmond Grove was originally a pleasure grove at 20th and Q streets, for visitors wishing to relax away from downtown. The grove was demolished by the construction of the Western Pacific Railroad (now operated by Burlington Northern Santa Fe Railway) through Midtown (between 19th and 20th streets) in 1907-1910, and the subsequent residential development provided housing for the nearby workers.[37] The Newton Booth neighborhood is bounded by R Street to the north, the W/X freeway to the south, 25th Street to the west, and 29th Street to the east. Newton Booth is primarily a residential neighborhood situated on a grid street pattern and shaded by various species of mature trees. Residential architecture in the Newton Booth neighborhood includes Craftsman, Four-Squares, Victorians, and Tudors amongst other architectural styles. The neighborhood was named for California's 11th governor and the 1915 two-story, red-brick and tile roofed Newton Booth Assembly School (now the Merryhill Elementary and Middle School) at 2600 V Street. Also within the neighborhood is the Newton Booth Historic District, developed after World War II (one of the few remaining undeveloped portions of the City at the time). Housing styles were influenced by architecture popular on the East Coast, often a composite of multiple styles.[38]

As private automobiles overtook streetcars as the primary form of transportation, the suburbs surrounding Sacramento expanded further away from downtown and the streetcar lines, which eventually fell out of use and were removed soon after the end World War II. Sacramento's downtown core had fallen into economic and physical decline by the 1950s, as suburban growth pulled residents out of downtown. Declining tax revenue and property values led to the redevelopment/urban renewal efforts in downtown Sacramento in the post-war period.

Historic Districts

The DSP area includes numerous historic districts, several of which are listed on the National Register of Historical Places (the official list of the nation's historic places that was authorized by the National Historic Preservation Act of 1966, as amended) and the Sacramento Register of Historic and Cultural Resources (Sacramento Register), which is the City's official list of historic and cultural resources, landmarks, and historic districts. Adopted historic districts within the DSP area that are listed on the National Register and/or the Sacramento Register are shown on **Figure 4.4-1** and briefly described below.

[36] Burg, William, 2007. *Sacramento's Southside Park*. Images of America: Arcadia Publishing, San Francisco CA.
[37] Burg, William, 2014. *Midtown Sacramento, Creative Soul of the City*. This History Press: Charleston, SC.
[38] SAMCC and the Historic Old Sacramento Foundation, Sacramento's Midtown. Images of America: Arcadia Publishing, San Francisco CA, 2006.



ID	Name
1	1200-1300 Q Street
2	12th Street Commercial
3	20th and N Street
4	Alkali Flat Central
5	Alkali Flat North
6	Alkali Flat South
7	Alkali Flat West
8	Boulevard Park
9	Bungalow Row
10	C Street Commercial
11	C Street Industrial
12	Capitol
13	Capitol Avenue
14	Capitol Mansions
15	Cathedral Square
16	Fremont Park
17	Historic City Cemetery
18	Marshall Park
19	Memorial Auditorium
20	Merchant Street
21	Newton Booth
22	North 16th Street
23	Plaza Park (Cesar Chavez)
24	Poverty Ridge
25	R Street
26	South Side
27	Washington
28	Washington School
29	Winn Park
30	Old Sacramento National Historic Landmark

Path: U:\GIS\GIS\Projects\15xxxx\D150842_CityofSacramentoDowntownSpecificPlan\03_Projects\EIR\Fig4_4-1_HistoricDistricts.mxd_FEP_7/28/2017

SOURCE: USDA, 2014; City of Sacramento, 2016; ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.4-1
Historic Districts

ESA

National Register Historic Districts

Alkali Flat Central, Alkali Flat North, and Alkali Flat West

Alkali Flat is a neighborhood on the south side of the American River, east of the Railyards, and north of the Capitol. The Alkali Flat neighborhood is generally bounded by the UPRR railroad tracks and embankment to the north, 7th Street to the west, G Street to the south; and 12th Street to the east. One of the first residential neighborhoods in Sacramento, Alkali Flat is characterized visually by numerous mature trees and several historic buildings, including brick or wood homes constructed in the mid-nineteenth century, Victorian homes, and historic commercial buildings.

Alkali Flat is the oldest remaining residential neighborhood in Sacramento, developing in the mid-1800s, and includes approximately 24 blocks. As early as the 1850s, some light industrial business began to appear at the northern and southern edges of the neighborhood near the American River and the downtown business district. The 1897 Sacramento City Directory indicates that the 12th Street corridor between B and H streets had become almost entirely a commercial area and included two meat markets, a retail liquor store, a steam laundry, a grocery, grain and feed store.[39] The neighborhood includes three historic districts: the Central Alkali Flat, Alkali Flat North, and Alkali Flat West historic districts.

The Central Alkali Flat Historic District is concentrated on F, 10th, and 11th Streets and has one of the largest varieties of building styles, ages and types in the area. The district contains early twentieth century Colonial Revival and Craftsman style buildings as well as late nineteenth-century Queen Anne and Eastlake cottages as the predominant architectural styles. Examples of the Second Empire, Gothic Revival and Greek Revival styles from the third quarter of the nineteenth century are also evident, as well a small number of Prairie style homes from the early twentieth century.

Alkali Flat North is a small district that focuses on residential homes centered on D Street between 11th and 12th streets. The prominent historic structure is the Maria Hastings Building. Unfortunately, many of the other buildings in the district have been demolished, thus, limiting the viability of the district.

Alkali Flat West is a small district that includes only 33 properties, and focuses on residential homes along the westernmost portion of the Alkali Flat neighborhood, centered on G Street, extending north to D Street between 7th and 9th streets. The area contains visually consistent buildings, most notably along E Street. Additional early twentieth century apartment homes exist in the area as well.

Boulevard Park

Boulevard Park is primarily a residential neighborhood situated in the familiar grid street pattern and shaded by various species of mature trees. Originally purchased by the Park Realty Company in 1905, the neighborhood was successfully developed by Wright & Kimbrough into residential

[39] Alkali Flat/Mansion Flats Strategic Neighborhood Action Plan (SNAP), August 23, 2005. p. 5.

lots.[40] Built on the former site of the California State Fair's Union Racetrack, the neighborhood was a streetcar suburb that integrated "City Beautiful" principles of urban design and landscape architecture within Sacramento's original gridiron block plan.[41] It is also recognized as part of the Boulevard Park Historic District, listed on the National Register of Historic Places.

This Boulevard Park Historic District extends north to south from the levee to I Street, with 20th Street serving as the western boundary and the eastern boundary extending from 23rd Street to 25th Street. The district is typified by Craftsman and Colonial Revival Bungalows or cubes/ American Foursquare-type homes built between 1905 and 1915. Generally, the cube homes were constructed on the north-south boulevards, while the bungalows were constructed on the east-west cross streets. The district includes a unique row of Victorian homes along the 23rd block of H Street as well as mid-block open spaces between 20th, 21st, F and H streets that are unique in Sacramento to this neighborhood. Although containing a variety of architectural styles, a majority of the buildings are linked by similar scale, height, and setbacks.

Old Sacramento National Historic Landmark District

Old Sacramento is an historic commercial district and State Park within the DSP area bounded generally by the Sacramento River to the west, I-5 to the east, I Street to the north, and Capitol Avenue to the south. Established as an historic district and national landmark in the 1960s, Old Sacramento was at one time the central transportation hub of Sacramento, with its immediate proximity to the Sacramento River and the Southern Pacific Railyard.[42] Historic resources within Old Sacramento include historic hotels, shops, restaurants, and bars, as well as Sacramento's Underground Sidewalks District.[43]

This district is significant for its association with California's early gold rush days, the first intercontinental railroad, and the Pony Express. Sacramento was founded on the Embarcadero, Front Street in the district, and developed from there into the State Capital. This area contains some of Sacramento's earliest buildings, structures and historic sites dating from the third quarter of the nineteenth century.

Sacramento Register Historic Districts

1200-1300 Q Street

This district is a two block row of high basement cottages located south of Q Street. The district is primarily residential and surrounded by incompatible uses. The buildings are similar in color, building material, texture, setback and size. The buildings were constructed between 1885 and 1895 and are complemented by mature trees lining the streets.

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40 Boghosian, Paula and Don Cox, Sacramento's Boulevard Park. Images of America: Arcadia Publishing, San Francisco CA, 2006.

41 Burg, William, *Boulevard Park Historic District, Sacramento County, CA*, National Register nomination document NR# 11000705, National Park Service, 2011.

42 The Railyards were constructed by the Central Pacific Railroad from 1861 until 1888; operated as part of the Southern Pacific Railroad from 1888 until formal merger in 1959.

43 SAMCC and the Historic Old Sacramento Foundation, Old Sacramento and Downtown. Images of America: Arcadia Publishing, San Francisco CA, 2006.

12th Street Commercial

This district is a two and a half block row along 12th Street extending south to E to G streets. The area served as a primary route to gold fields in the late nineteenth century. The building construction dates in the area range from 1895 to about 1912. The gridline remains intact, but the roads were repaved in the twentieth century to accommodate automobiles.

North 16th Street

This district contains a concentration of industrial and commercial warehouses located on North 16th Street between the railroad right of way to the south and Sproule Avenue to the north. Constructed along railroad spurs and major vehicular transportation routes, the typically brick buildings include decorative features such as cornices, parapets and blind arches. A portion of this district is located outside the DSP area.

20th and N Street

This district features simple cottages located south of Capitol Avenue to O Street, between 20th and 21st streets. It is believed that the cottages were constructed in the 1880s or 1890s and were originally intended for servants.

Alkali Flat South

This small district focuses on residential homes centered on G Street between 10th and 12th streets. The District is characterized by a row of small Italianate and Queen Anne houses that are of a similar size, scale, form, and age. The design details of the homes create a visually consistent community.

Bungalow Row

This district extends from K Street south to Q Street with 22nd Street serving as the western boundary and the eastern boundary extending from 27th to 29th streets. The district is typified by Craftsman bungalows built between 1900 and 1915. Generally, the buildings contain similar scale, height, size, design, and materials.

C Street Commercial

This one-block district contains structures built in 1920. Each building lacks distinguishing qualities on an individual level, but collectively they represent the look of the commercial buildings of the era. The buildings contain similar scale, style, and materials.

C Street Industrial

This one-block district contains structures built between 1914 and 1938. Each building varies in style but accurately reflects the industrial development of the area, particularly due to its proximity to the railroad (on the north). The buildings are primarily Vernacular and Modern, with some classical ornamentation.

Capitol Avenue

This district extends north to south from just south of L Street to Q Street, with 17th Street serving as the western boundary and 19th Street serving as the eastern boundary. The district was constructed during the 1870s and the 1890s and is home to the most Italianate structured

buildings than any other part of the city. There are also a fair number of Queen Anne and Colonial Revival homes constructed in the 1890s. The buildings are similar in color, building material, and setback and are complemented by mature trees that line the streets.

Capitol Historic

This district is anchored by the California State Capitol Building, which was constructed between 1860 and 1874 using the Classic Revival style. The site is bounded by L Street on the north, 9th Street and the Capitol Avenue on the west, N Street on the south, and 15th Street on the east. In association with the Capitol building, the district also contains Capitol Park, which contains various other government buildings with historic character, including the Insectary Building, the Library and Courts Building, Office Building No. I (the Jesse Unruh Building), and the fountain plaza located directly west of the Capitol Building. The buildings were completed in 1928.This district is surrounded by historic structures in its immediate vicinity. The district creates a symmetrical monumental group that harmoniously fits into the original scheme of Capitol Park.

Capitol Mansions

The Capitol Mansions Historic District has meandering boundaries that extend from 27th Street in the east to 21st Street in the west, from the L and K Street alleys on the north to the N Street alley on the south. The majority of the buildings are large and stately structures with a Queen Anne or Classic Box style. The buildings were originally single-family homes, but many have been converted to offices. Two church landmarks also exist in this district.

Cathedral Square

This district is anchored by the Cathedral of the Blessed Sacrament, which was constructed in 1887. The site is bounded by the alley south of J Street on the north, a meandering boundary from 10th Street to 11th Street on the west, L Street on the south, and 12th Street on the east. The height of the cathedral dominates the viewscape of the area.

Cesar Chavez/Plaza Park Central Business District

This district is located in the core of the historical and existing Downtown CBD. The majority of eligible structures still standing were built between 1910 and 1930. In addition to buildings, the J Street corridor, the intersecting arterials, and accompanying sidewalks still contain evidence of historic structure below ground level or maintain authenticity with cobblestone roads and curbstones still in place.

Fremont Park

This one-block district is anchored by Fremont Park. The buildings within the district were constructed between 1890 and 1910. The buildings contain Italianate and Craftsman architecture, which provide a variety of styles, without detracting from the history of the district. The site is bounded by the alley north of R Street on the south, 15th Street on the west, P Street on the north, and 16th Street on the east.

Marshall Park

This district extends north to south from I Street to just south of J Street, between 26th and 28th streets. The homes in the district were constructed between 1895 and 1900, with primarily

Queen Anne structures and some Colonial Revival homes. Both single-family residential and apartment homes are in the Marshall Park District. The buildings are compatible with the surrounding residential uses.

Memorial Auditorium

This district is anchored by Memorial Auditorium (15th Street and J Street) and extends down J Street to 17th Street. The surrounding buildings are mixed use commercial and residential that have been restored or rehabilitated in the last few years. The surrounding buildings complement the scale and building material of the auditorium.

Merchant Street

This district extends north to south from I Street to K Street, between 7th and 8th streets. This area served as an early twentieth century banking center and is highlighted by Pioneer Hall, which has been at its existing location since 1868. The Merchants National Bank Building was also constructed in 1921, further lending to the site's historicity. The architecture of the district shares a classic style, consistent use, and similar building materials, which include granite, cast concrete terra cotta cladding and brick construction.

Poverty Ridge

The Poverty Ridge district extends from S Street on the north to W Street on the south, bounded on the west by 20th and 21st streets, and by 23rd Street on the east. It is distinguished by its slight topographic rise above adjacent flat terrain, as well as the wide lot configurations, which led to the construction many large homes. The homes in the district are comprised of numerous large Prairie style buildings constructed at about 1915 or later as well as earlier American Foursquare/ Colonial Revival homes. During the time of construction, the Prairie Style houses were home to some of Sacramento's wealthier families. The area also contains many Craftsman Bungalow homes in the block bounded by S and T streets, and 20th and 21st Streets. Most of the southern part of the district was constructed post-1920. There are also a fair number of Queen Anne and Colonial Revival homes constructed in the 1890s.

R Street

The buildings in this district are located on R Street between 10th and 12th streets. The area was once one of the focal points for the city during the railroad era. Sited along R Street for ready access to the Central Pacific-Southern Pacific Railroad, which ran down the middle of R Street, the buildings were constructed between 1910 and 1930 and were used primarily for warehousing, distribution and light industrial. These represent important examples of local industrial architecture in Sacramento from the early twentieth century and embody notable aspects of local business and industry history.

South Side

The South Side Historic District is the largest historic district in the DSP area, extending from 3rd Street to 16th Street, bounded by S and W streets to the north and south, respectively. The district is divided by South Side Park. West of the park are simple high basement cottages and some abandoned lots. While some of the existing structures lack historic integrity individually,

collectively they provide a historic setting. The homes in this part of the district were constructed between 1895 and 1905, with Queen Anne structures being the most dominant. These structures have a consistent height, scale, spacing, setback, material composition, and texture. East of the park, the district maintains a similar character, but is often impacted by newer apartments. Also, there are larger Queen Anne and Revival-style homes, rather than the smaller cottages. As one moves farther to the east, the structures begin to change to more of a bungalow style.

Washington

The Washington District is another large historic district in the DSP area extending from C Street to G Street, bounded by 12th and 15th streets to the east and west, respectively. The structures in this district were constructed between the 1870s and the 1900s. The area had a variety of styles represented, including Italianate, Eastlake, Queen Anne, Colonial Revival, and other vernacular structures. These structures have a consistent high basement structure and are both single family and multi-family structures. The area, like Alkali Flat, has been encroached over the last few years by increased commercial development.

Washington School

The Washington School district is another large historic district in the DSP area, extending from D Street to G Street, bounded by 17th and 19th streets to the east and west, respectively. This district is a portion of the Mansion Flats, or Washington School, neighborhood that is generally bounded by 12th Street on the west, J Street on the south, 16th Street on the east, and the UPRR railroad tracks on the north. The Washington School neighborhood was named after the old Washington School, once located on 13th Street, developed along Sacramento's first streetcar line.[44] Houses in the neighborhood range from the 1860s to the present, including the Historic Governor's Mansion. "H Street became known as Merchant's Row, where families like the Ruhstallers, Hales and Gallatins made their homes. To the north, employees of the Southern Pacific Shops and other industrial workers built smaller, but beautifully decorated homes."[45] As described the district is located in a transitional area with working class cottages and a mix of larger homes and apartments. The structures in this district were constructed between the 1880s and the 1900s. The area includes a variety of styles, including Eastlakes, Queen Anne, Colonial Revival, and other vernacular structures. After 1905, additional Cube types and bungalows began appearing in the neighborhood. These residential structures are complemented by the Washington School and a large row of older trees.

Winn Park

The Winn Park District is located just south of the Capitol Mansions Historic District, extending from south of Capitol Avenue to south of Q Street. The district is bounded by 21st and 22nd streets to the west and 25th, 28th, and 29th streets to the east. Winn Park is a 3-acre park bounded by 27th Street to the north, 28th Street to the south, Q Street to the west, and P Street to the east. The buildings in this district are primarily residential ranging from the late nineteenth century to the

44 Burg, William. Mansion Flats Home Tour, September 13, 2013. Available: https://sacramentopress.com/2013/09/13/mansion-flats-home-tour/.
45 *Ibid.*

1930s and 1940s. The area has a variety of styles represented including Queen Anne, Colonial Revival, and Classic Revival.

Historic City Cemetery

The 10-acre Historic City Cemetery is located at 1000 Broadway (south from Broadway between Riverside Boulevard and Muir Way). Established in 1849 during the Gold Rush, many pioneers are buried in the cemetery, including John A. Sutter, Jr., Edwin Bryant, Margaret Crocker, and Mark Hopkins. It is considered a significant cultural landscape as a very early example of cemetery planning in the Western United States, and for its notable collection of monuments and funerary architecture.

Recorded and Known Resources within the RSP Area

The NCIC indicates that there are 1,225 previously recorded cultural resources in the DSP area, 26 of which are archaeological resources, 1,197 of which are architectural resources, one (P-34-002358) of which has both archaeological and architectural components, and one (P-34-003880) of which is the known former location of the China Slough/Sutter's Lake but does not have archaeological or architectural components. Pursuant to State CEQA Guidelines section 15120(d) details on the locations of previously recorded archaeological resources are not provided in this section.

Archaeological Resources

Of the 26 previously recorded archaeological resources, five are prehistoric, 20 are historic-period, and one has both prehistoric and historic-period components. The previously recorded resource in the DSP area with both archaeological and architectural components, P-34-002358, consists of the Sacramento Raised Streets and Hollow Sidewalks District. Three of the archaeological resources (including the one with both architectural and archaeological components) are recorded within the limits of DSP Opportunity Sites: P-34-000722, P-34-002358, and P-34-002359. In addition to the three previously recorded archaeological resources within the Opportunity Sites, 30 of the Opportunity Sites are within 200 feet of previously recorded archaeological resources.

P-34-000722

This historic-period archaeological site was recorded in 2002 by Nettles and Hamilton. The site was subsequently tested and determined to be eligible for listing on the California Register of Historical Resources. As a result, data recovery was conducted at the site. The data recovery and following construction of the building and associated facilities destroyed the site. The site consisted of artifacts and features associated with residential, commercial, and industrial activities from the early 1850s to modern 1950s. Archaeological material at the site included privies, wells, cesspools, trash pits, historic-period midden, a forge, bottle dumps, structural remains, historic-period gas well heads, and additional artifacts. It does not appear the resource was evaluated for National Register-eligibility, and it was destroyed by construction of the building and associated facilities.

P-34-002358 (Raised Streets and Hollow Sidewalks District)

This resource is an historic-period district with both archaeological and architectural components, recorded in 2010 by Downey, consisting of a vernacular landscape resulting from modifications made to downtown Sacramento between 1862 and 1878. The district encompasses a rectangular area in downtown Sacramento. District elements include the raised grade of the City streets, brick and wood sewers, duct banks, wood conduit, railroad track, cobblestone road segments, buried sidewalks, retaining walls, bulkheads, plank crosswalks, levee segments, and the Sutter Lake Sandlot. It does not appear the resource has been evaluated for National Register-eligibility.

P-34-002359

This site consists of the remains of a large pit house and several associated human burials/cremations. The site measures 400 by 550 feet (120 by 170 meters) and was located on the historic shoreline of Lake Sutter, which is now filled in. Sutter Lake was located within the boundaries of the Southern Pacific Railyards to the north of the DSP area. Identified during monitoring within the road right of way, P-34-002359 is presumed to be much larger than recorded and may extend into the adjacent blocks.

Architectural Resources

The records search identified 1,197 previously recorded architectural resources in the DSP. Survey and evaluation efforts for the DSP focused on potentially eligible resources located within Opportunity Sites. There are 259 parcels on the 88 Opportunity Sites. The Opportunity Sites that included historic-age (45 years old or older) buildings and structures were identified through survey and research. As described above, Opportunity Sites are located within four City of Sacramento historic districts: the 1200-1300 Q Street, R Street, Memorial Auditorium, and Alkali Flat West historic districts. Of the 259 parcels included in the survey 170 parcels are either vacant lots or surface parking lots. Of those 170 vacant parcels 14 are located within three historic districts; Old Sacramento, 1200-1300 Q Street, and Alkali Flat West. Additionally, there are three listed City Landmarks on three of the Opportunity Sites: the Thomas Jefferson Elementary School (1619 N Street, Opportunity Site 42), the Marshall Elementary School (2718 G Street, Opportunity Site 50), and 1026 R Street (Opportunity Site 97).

The City identified six buildings (1800 24th Street, 1800 23rd Street, 1730 14th Street, 915 R Street, 1724 10th Street, and 1720 8th Street) on four Opportunity Sites (14, 24, 28, and 31) for full evaluation of potential eligibility for the National Register, California Register, and local listing. Based on a thorough evaluation and consideration of the established criteria, ESA is recommending that the six buildings identified above on Opportunity Sites 14, 24, 28, and 31 are ineligible for listing in the National Register, California Register, and local listing. The detailed analysis and evaluation of the six buildings is located in the CRSIR (Appendix E).

Native American Consultation

On February 9, 2017, the City sent notices to the two California Native American tribes that had previously provided written requests to receive notification of projects pursuant to Public Resources Code 21080.3.1(b) (Assembly Bill [AB] 52): the UAIC and Wilton Rancheria (WR).

The notices included information about the proposed DSP and requested the tribes to inform the City of any concerns regarding potential impacts to cultural resources. Both tribes received the notices on February 13, 2017. The tribes had until March 15, 2017 (30 days after receiving notification) to request consultation.

The City received requests for consultation from the UAIC and WR. On April 24 and 25, 2017, staff from the City of Sacramento's Community Development Department met with representatives of the UAIC and WR, respectively. Both tribes indicated the DSP area is of interest as part of the area traditionally inhabited by their native communities. Both tribes also indicated that tribal cultural resources are present within the DSP area.

The UAIC expressed concerns regarding prehistoric archaeological finds and discoveries, noting that archaeological resources are often only evaluated for their scientific importance. The UAIC noted evaluating finds as tribal cultural resources can lead to different significance determinations, as archaeologists and Native Americans may have different opinions of a site's integrity.

The City described the research being undertaken for the DSP EIR and that it is intended to identify areas of cultural sensitivity and mitigation measures that can then be carried over as conditions of approval on future development projects to ensure impacts to resources are avoided or reduced in magnitude. The UAIC's interest included: requested monitoring of all excavations within the DSP area; that, if cultural resources are discovered, they be handled with proper dignity and respect in coordination with appropriate Native American tribal representatives; potential areas to be set aside for reinternment of resources; and, incorporation of Native American interpretive information throughout the area, including Native American art.

Archaeological Sensitivity Analysis

One goal of the records search, Native American consultation, and background research was to identify archaeologically sensitive areas within the DSP area. Landforms that predate the earliest estimated periods for human occupation of the region are considered to have very low sensitivity for the presence of buried archaeological sites, while those that postdate those estimated dates are considered to have a higher potential for presence of buried archaeological sites. The degree of buried site potential presence is inversely related to the estimated date range of a landform (i.e., the older the landform, the less likely of finding buried archaeological sites). Currently, archaeological research indicates that the earliest evidence for human occupation of California dates to the Late Pleistocene, which ended approximately 11,500 BP. Therefore, the potential for presence of buried archaeological deposits in landforms from or predating the Late Pleistocene is very low.[46]

[46] Meyer, Jack, and Jeffery Rosenthal, *A Geoarchaeological Overview and Assessment of Caltrans District 3*, prepared for Caltrans District 3, Sacramento, 2008. pp. 160-161.

The DSP area is underlain by deep Holocene and historic-period/modern alluvium with small areas of wind-blown "dune" deposits.[47,48] Soils in the DSP area consist of various sandy and silty loams (alluvium) mixed with historic-period and modern fill.[49] Given the Late Holocene/historic-period/modern age of the DSP area's underlying geologic formation, the potential for buried prehistoric archaeological deposits in undisturbed portions of the DSP area is high.[50] Prior to historic-period and modern development, the DSP area would have been an amenable setting for procurement of the abundant flora and fauna found in the area's marshes, river channels, and adjacent forests and grasslands. The DSP area would also have been an ideal setting for prehistoric habitation, particularly in the areas of higher ground. This is supported by the documented presence of several ethnographic villages and prehistoric archaeological sites in the vicinity of the DSP area.

Historic-period and modern development activities have heavily disturbed the majority of the DSP area, thereby reducing the potential for both the presence and significance (due to probable loss of integrity) of shallow buried and surficial prehistoric deposits. However, the depth, extent, and accuracy of records associated with these ground-disturbing activities varies throughout the DSP area. As such, while there is virtually no potential for presence of surficial archaeological resources in the DSP area, there remains a moderate to high potential for presence of buried archaeological resources. The potential for any intact significant prehistoric archaeological resources in the DSP area is unpredictable and would depend on the nature of the deposit. However, given the relative few number of well-documented prehistoric archaeological resources in downtown Sacramento, the potential significance of any such resources could be high. The archaeological sensitivity of the DSP area for surficial prehistoric deposits is low and for buried prehistoric deposits is high.

Additionally, historic-period development activities and associated use in the DSP area may have resulted in the creation of buried historic-period archaeological deposits. Therefore, there is a high potential for presence of buried historic-period archaeological resources in the DSP area. Again, predicting the potential significance of any intact historic-period archaeological resources in the DSP area, if present, is difficult. Based on the known historic-period archaeological resources previously recorded in downtown Sacramento, the potential significance of any intact historic-period archaeological resources in the DSP area is moderate. Therefore, the archaeological sensitivity of the DSP area for historic-period deposits is moderate.

In summary, in the DSP area, the presence of previously recorded archaeological resources, lack of previous systematic subsurface archaeological survey, presence of recorded ethnographic

47 California Division of Mines and Geology, *Geologic Map of California: Sacramento Sheet*, prepared by the State of California Department of Conservation, 1971.
48 Meyer, Jack, and Jeffery Rosenthal, *A Geoarchaeological Overview and Assessment of Caltrans District 3*, prepared for Caltrans District 3, Sacramento, 2008. Fig. 47, 50.
49 U.S. Department of Agriculture, "Natural Resources Conservation Service Web Soil Survey", Version 3.1, Available: http://websoilsurvey.sc.egov.usda.gov/app/WebSoilSurvey.aspx, accessed June 26, 2016.
50 Meyer, Jack, and Jeffery Rosenthal, *A Geoarchaeological Overview and Assessment of Caltrans District 3*, prepared for Caltrans District 3, Sacramento, 2008. pp. 115, 160-161.

villages in or in close proximity, and substantial historic-period use, the archaeological sensitivity is low for surficial prehistoric deposits, high for buried prehistoric deposits, and moderate for historic-period deposits.

4.4.2 Regulatory Setting

Federal

The National Historic Preservation Act of 1966 (NHPA), as amended, (16 USC section 470f) and its implementing regulations (16 USC section 470 et seq., 36 CFR section 800, 36 CFR section 60, and 36 CFR section 63) establish the federal government's policy on historic preservation and the programs, including the National Register of Historic Places (National Register), through which that policy is implemented. Under the NHPA, historic properties include "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places" (16 USC section 470w [5]).

Under NHPA, a resource is significant if it meets the National Register listing criteria at 36 CFR section 60.4, as stated below:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:
>
> A. That are associated with events that have made a significant contribution to the broad patterns of our history, or
>
> B. That are associated with the lives of persons significant in our past, or
>
> C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or
>
> D. That have yielded, or may be likely to yield, information important in prehistory or history.

Because implementation of the projects may require federal approval and/or include federal funding, and therefore require compliance with Section 106 of the National Historic Preservation Act, architectural resources in the DSP area have been evaluated for eligibility to the National Register of Historic Places (National Register).

State

California Environmental Quality Act

CEQA (Public Resources Code [PRC] section 21000 et seq.) is the principal statute governing environmental review of projects occurring in the State. CEQA requires lead agencies to determine if a project would have a significant effect on historical resources, unique archaeological resources, or tribal cultural resources.

Historical Resources

The State CEQA Guidelines establish that a historical resource includes: (1) a resource in the California Register of Historical Resources (California Register); (2) a resource included in a local register of historical resources, as defined in PRC section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC section 21084.1 and State CEQA Guidelines section 15064.5 apply. If an archaeological site does not meet the criteria for a historical resource contained in the State CEQA Guidelines, then the site may be treated in accordance with the provisions of PRC section 21083, pertaining to unique archaeological resources.

Unique Archaeological Resources

As defined in PRC section 21083.2, a "unique archaeological resource" is an archaeological artifact, object, or site, about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

State CEQA Guidelines note that if an archaeological resource is not a unique archaeological, historical resource, or tribal cultural resource, the effects of the project on those cultural resources shall not be considered a significant effect on the environment (State CEQA Guidelines section 15064.5(c)(4)).

Tribal Cultural Resources

Impacts to tribal cultural resources also are considered under CEQA (PRC section 21084.2). PRC section 21074(a) defines a tribal cultural resource as any of the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
  - included or determined to be eligible for inclusion in the California Register; or
  - included in a local register of historical resources, as defined in PRC section 5020.1(k).

- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of [PRC] section 5024.1. In applying these criteria, the lead agency would consider the significance of the resource to a California Native American tribe.

Pursuant to PRC section 21074(a)(c), a historical resource, unique archaeological resource, or non-unique archaeological resource may also be a tribal cultural resource if it is included or determined eligible for the California Register, included in a local register of historical resources, or is determined to be such by a state lead agency.

California Register of Historical Resources

The California Register of Historical Resources (California Register) is "an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC section 5024.1(a)). The criteria for eligibility for the California Register are based upon criteria for listing in the National Register (PRC section 5024.1(b)). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.

To be eligible for the California Register, a cultural resource must be significant at the local, State, and/or federal level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must be of sufficient age, and retain enough of its historic character or appearance (integrity) to convey the reason for its significance.

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally Determined Eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward; and
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5 (those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register);
- Individual historic resources;
- Historic resources contributing to historic districts; and
- Historic resources designated or listed as local landmarks, or designated under any local ordinance.

California PRC Section 5097.99

California PRC section 5097.99, as amended, states that no person shall obtain or possess any Native American artifacts or human remains which are taken from a Native American grave or cairn. Any person who knowingly or willfully obtains or possesses any such artifacts or human remains is guilty of a felony which is punishable by imprisonment. Any person who removes, without authority of law, any such items with intent to sell or dissect or with malice or wantonness is also guilty of a felony which is punishable by imprisonment.

California Native American Historic Resource Protection Act

The California Native American Historic Resources Protection Act of 2002 (PRC section 5097.995 et seq.), imposes civil penalties, including imprisonment and fines up to $50,000 per violation, for persons who unlawfully and maliciously excavates upon, removes, destroys, injures, or defaces a Native American historic, cultural, or sacred site that is listed or may be listed in the California Register.

California Health and Safety Code Sections 7050.5 and 7052

California Health and Safety Code (HSC) section 7050.5 protects human remains by prohibiting the disinterring, disturbing, or removing of human remains from any location other than a dedicated cemetery. PRC section 5097.98 (and reiterated in State CEQA Guidelines section 15064.5(e)) also identifies steps to follow in the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery. HSC section 7052 states that the disturbance of Native American, or any other, human remains is a felony, unless the disturbance has been lawfully authorized.

Assembly Bill 52

In September of 2014, the California Legislature passed AB 52, which added provisions to the PRC regarding consultation requirements with California Native American tribes and the evaluation of impacts on tribal cultural resources under CEQA. AB 52 requires lead agencies to engage in consultation with California Native American tribes to identify any known tribal cultural resources (PRC sections 21080.3.1, 21080.3.2, 21082.3).In addition, as discussed above, AB 52 requires lead agencies to analyze project impacts on tribal cultural resources, separately from archaeological resources (PRC sections 21074 and 21083.09), in recognition that

archaeological resources have cultural values beyond their ability to yield data important to prehistory or history. AB 52 defines "tribal cultural resources" in a new section of the PRC section 21074 (see tribal cultural resources discussion, above).

Senate Bill 18

Senate Bill (SB) 18 of 2004 requires cities and counties to notify and consult with California Native American tribes about proposed local land use planning decisions for the preservation of, or the mitigation of impacts to, specified Native American places, features, and objects. SB 18 applies only to the adoption or substantial amendment of general plans and specific plans, and requires that the lead CEQA agency consult with California Native American tribes that are on the NAHC contact list and have traditional lands located within the agency's jurisdiction. Though predating AB 52, the requirements of SB 18 can be seen as similar to those of AB 52, in that they aim to allow California Native American tribes the opportunity to consult on potential project impacts to tribal cultural resources.

Local

City of Sacramento 2035 General Plan

The City's 2035 General Plan's Historic and Cultural Resources Element and Public Awareness and Appreciation Element include goals and policies relating to the identification and preservation of its cultural resources. The following goals and policies from the 2035 General Plan are relevant to cultural resources.

Goal HCR 2.1 Identification and Preservation of Historic and Cultural Resources. Identify and preserve the city's historic and cultural resources to enrich our sense of place and our understanding of the city's prehistory and history.

Policies

HCR 2.1.1 **Identification.** The City shall identify historic and cultural resources, including individual properties, districts, and sites (e.g., archaeological sites) to ensure adequate protection of these resources. (PSR)

HCR 2.1.2 **Applicable Laws and Regulations.** The City shall ensure compliance with City, State, and Federal historic preservation laws, regulations, and codes to protect and assist in the preservation of historic and archaeological resources, including the use of the California Historical Building Code as applicable. Unless listed in the Sacramento, California, or National registers, the City shall require discretionary projects involving resources 50 years and older to evaluate their eligibility for inclusion on the California or Sacramento registers for compliance with the California Environmental Quality Act. (RDR)

HCR 2.1.3 **Consultation.** The City shall consult with appropriate organizations and individuals (e.g., [CHRIS] Information Centers, the Native American Heritage Commission (NAHC), the CA Office of Planning and Research (OPR) "Tribal Consultation Guidelines", etc.) and shall establish a public outreach policy to minimize potential impacts to historic and cultural resources. (IGC/JP)

HCR 2.1.5 **National, California, and Sacramento Registers.** The City shall support efforts to pursue eligibility and listing for qualified resources including historic districts and individual resources under the appropriate National, California, or Sacramento registers. (RDR/IGC/JP)

HCR 2.1.6 **Planning.** The City shall take historical and cultural resources into consideration in the development of planning studies. (MPSP/PSR)

HCR 2.1.10 **Early Project Consultation.** The City shall minimize potential impacts to historic and cultural resources by consulting with property owners, land developers, and the building industry early in the development review process. (RDR/JP/PI)

HCR 2.1.11 **Compatibility with Historic Context.** The City shall review proposed new development, alterations, and rehabilitation/remodels for compatibility with the surrounding historic context. The City shall pay special attention to the scale, massing, and relationship of proposed new development to surrounding historic resources. (RDR)

HCR 2.1.12 **Contextual Features.** The City shall promote the preservation, rehabilitation, restoration, and/or reconstruction, as appropriate, of contextual features (e.g., structures, landscapes, street lamps, signs) related to historic resources. (RDR)

HCR 2.1.15 **Demolition.** The City shall consider demolition of historic resources as a last resort, to be permitted only if rehabilitation of the resource is not feasible, demolition is necessary to protect the health, safety, and welfare of its residents, or the public benefits outweigh the loss of the historic resource. (RDR)

HCR 2.1.16 **Archaeological & Cultural Resources.** The City shall develop or ensure compliance with protocols that protect or mitigate impacts to archaeological and cultural resources including prehistoric resources. (RDR)

HCR 2.1.17 **Preservation Project Review.** The City shall review and evaluate proposed development projects to minimize impacts on identified historic and cultural resources, including projects on Landmark parcels and parcels within Historic Districts, based on applicable adopted criteria and standards. (RDR)

Goal HCR 3.1 Public Awareness and Appreciation. Foster public awareness and appreciation of Sacramento's historic and cultural resources.

Policies

HCR 3.1.2 **Coordination with Other Entities.** The City shall coordinate with and support quasi-public, and private (e.g., SHRA, CADA, Native American Tribes), entities in their preservation programs and efforts. (IGC/JP)

HCR 3.1.4 **Education.** The City shall act as a conduit for and provide information to the public on Sacramento's historic and cultural resources and preservation programs through the region's cultural resources survey repository at the North Central Information Center, educational institutions, the City's Center for Sacramento History, and the City's website in order to promote the appreciation, maintenance, rehabilitation, and preservation of Sacramento's historic and cultural resources. (PI)

The City's Historic and Cultural Resources Implementation Programs for its 2035 General Plan provide further details on specific implementation steps for the above listed policies and goals. These programs, numbered 1 to 14, address each of the 2035 General Plan's cultural resources-related policies. As discussed below and in Impacts 4.4-1 through 4.4-3, the proposed DSP would be required to comply with City standards for the protection cultural resources. This analysis included archival review through consultation with the CHRIS and NAHC, coordinated consultation between Native American groups and the City (the lead agency for the DSP), and review of compatibility with the Historic Districts located within the DSP Area. With implementation of standards pursuant to City Preservation oversight and mitigation identified below, the DSP would be consistent with the General Plan goals and policies.

City of Sacramento Historic Preservation Program

The City's historic preservation program began in 1975 with the enactment of the City's first historic preservation ordinance. Amendments to the original preservation ordinance, under Ordinance No. 2006-063, were enacted in October 2006, amending Chapter 17.134 of Title 17 of the Sacramento City Code. On September 30, 2013, these sections of the Code were included in a comprehensive update of Title 17. Under the new Title 17, the substance of the preservation sections was not materially changed, and changes related to procedures were also relatively minor. Title 17, section 17.604.210 relates to eligibility criteria for historic resources. Other preservation related matters are found under Chapter 17.604 or other sections of Title 17.

The City Code provides for the compilation of the ordinances, adopting designations and deletions of Landmarks, Contributing Resources, and Historic Districts into the Sacramento Register.

Landmark Eligibility Criteria (17.604.210(A))

A nominated resource shall be listed on the Sacramento Register as a landmark if the city council finds, after holding the hearing required by this chapter, that all of the requirements set forth below are satisfied:

1. Requirements.
    a. The nominated resource meets one or more of the following criteria:
        i. It is associated with events that have made a significant contribution to the broad patterns of the history of the city, the region, the state or the nation;
        ii. It is associated with the lives of persons significant in the city's past;
        iii. It embodies the distinctive characteristics of a type, period or method of construction;
        iv. It represents the work of an important creative individual or master;
        v. It possesses high artistic values; or
        vi. It has yielded, or may be likely to yield, information important in the prehistory or history of the city, the region, the state or the nation;
    b. The nominated resource has integrity of location, design, setting, materials, workmanship and association. Integrity shall be judged with reference to the particular criterion or criteria specified in subsection A.1.a of this section;
    c. The nominated resource has significant historic or architectural worth, and its designation as a landmark is reasonable, appropriate and necessary to promote, protect and further the goals and purposes of this chapter.
2. Factors to be considered. In determining whether to list a nominated resource on the Sacramento Register as a landmark, the factors below shall be considered.

a. A structure removed from its original location is eligible if it is significant primarily for its architectural value or it is the most important surviving structure associated with a historic person or event.

b. A birthplace or grave is eligible if it is that of a historical figure of outstanding importance and there is no other appropriate site or structure directly associated with his or her productive life.

c. A reconstructed building is eligible if the reconstruction is historically accurate, if the structure is presented in a dignified manner as part of a restoration master plan, and if no other original structure survives that has the same association.

d. Properties that are primarily commemorative in intent are eligible if design, age, tradition, or symbolic value invests such properties with their own historical significance.

e. Properties achieving significance within the past 50 years are eligible if such properties are of exceptional importance.

4.4.3 Analysis, Impacts and Mitigation

Analysis Methodology and Assumptions

Archival Review

Archival research and field surveys were used to identify cultural resources in the DSP area. Several records searches conducted at the NCIC were compiled to provide full coverage of the DSP area plus a 200-foot buffer for archaeological resources. The NCIC, at California State University, Sacramento, maintains the official CHRIS records of previous cultural resources studies and recorded cultural resources that include the DSP area. This effort is detailed in the CRSIR included as Appendix E. As detailed in that report, and discussed above, the results from the NCIC indicate that there are 1,225 previously recorded cultural resources in the DSP Area, 26 of which are archaeological resources, 1,197 of which are architectural resources, one (P-34-002358) of which has both archaeological and architectural components, and one (P-34-003880) of which is the former location of the China Slough/Sutter's Lake but does not have archaeological or architectural components.

The DSP is a policy document, and it does not include details on specific future projects. Given the large number of known resources, lack of project specifics, and the varying levels of study that have been done for the known resources, where mitigation measures are identified, they are presented in a tiered approach. The level of analysis and mitigation strategy for individual future projects will depend on the amount of existing information available for that area and the characteristics of the project site.

Significance Criteria

The proposed DSP would result in a significant effect on cultural resources if it would:

- Cause a substantial adverse change in the significance of historical or archaeological resources, as defined in State CEQA Guidelines section 15064.5; or
- Cause a substantial adverse change in the significance of tribal cultural resources, as defined in PRC section 21074(a).

These significance criteria do not specifically call out impacts of discovery of human remains. Rather, discussion of human remains as archaeological resources and as tribal cultural resources are included in the discussions of archaeological resources and as tribal cultural resources below, as they would be considered eligible as both archaeological resources and tribal cultural resources.

For the purposes of the impact discussion, "historical resource" is used to describe built-environment historic-period resources. Archaeological resources (both prehistoric and historic-period), which may qualify as "historical resources" pursuant to CEQA, are analyzed separately from built-environment historical resources.

Issues not Discussed in Impacts

All significance criteria are discussed below; none have been eliminated from further analysis.

Impacts and Mitigation Measures

Impact 4.4-1: New construction in the proposed DSP area could cause a substantial adverse change in the significance of an archaeological resource, including human remains.

As described above under Environmental Setting, portions of the DSP area contain archaeological resources. Archaeological resources present in the DSP area could be affected by construction involving earth-moving activities such as pile driving, grading, soil remediation, subsurface construction (such as basements and underground utilities). This construction could adversely affect the physical integrity of the archaeological resource, its ability to yield important archaeological data, and/or expose Native American human remains. Potential impacts include: physical destruction of all or a portion of a resource, alteration of conditions such that the resource's future integrity is at risk, through activities such as erosion or looting., resulting in adverse effects to those physical characteristics that convey a resource's historical significance and justify its eligibility for inclusion in the California Register.

Sacramento 2035 General Plan policies and the City's site plan and design review process seek to ensure compliance with protocols that protect or mitigate impacts to archaeological and cultural resources. However, because the policies focus on accidental discovery mitigation, they do not address the identification of potential archaeological resources in sensitive areas prior to grading or specify the steps to be taken to ensure that archaeological resources are protected. Accordingly,

additional previously unidentified resources could be discovered, damaged, or destroyed during construction of projects under the DSP.

In addition, although unlikely due to the level of prior disturbance, it is possible that archaeological resources could be present in areas that are outside of the archaeologically sensitive areas. Therefore, construction within the DSP area could result in impacts to archaeological resources. Destruction or loss of integrity in these eligible resources would result in a **potentially significant impact**.

Mitigation Measure

Mitigation Measure 4.4-1(a)

Unanticipated Discovery Protocol for Archaeological Resources and Human Remains

If prehistoric or historic-period archaeological resources are encountered during any stage of construction for any project in the DSP area, all ground disturbing activities shall halt within the project property up to 100 feet from the location of the discovery and the City shall be notified. Prehistoric archaeological materials include, for example, obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (midden) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Any tribal cultural resources discovered during project work shall be immediately disclosed to the City and treated in consultation with the Native American monitor on site, if applicable, or with Native American representatives, with the goal of preserving in place with proper treatment. Historic-period materials may include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. A qualified archaeologist, defined as one meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology, shall inspect the findings within 24 hours of discovery. If the City determines that an archaeological resource qualifies as a historical resource, unique archaeological resource, or tribal cultural resource (as defined pursuant to CEQA Guidelines) and that the project has potential to damage or destroy the resource, the following shall be implemented:

1) *If the resource has an association with Native Americans, the City shall consult with appropriate Native American Tribal Representatives and a qualified archaeologist to determine the appropriate mitigation. If preservation in place is feasible, this may be accomplished through one of the following means: (1) modifying the construction plan to avoid the resource; (2) incorporating the resource within open space; (3) capping and covering the resource before building appropriate facilities on the resource site; or (4) deeding resource site into a permanent conservation easement. Consultation between the City, Native American Tribal Representatives, and a qualified archaeologist may result in alternative means of preservation for archaeological resources and/or tribal cultural resources associated with Native Americans.*

2) *If the resource does not have an association with Native Americans, mitigation shall be implemented in accordance with PRC Section 21083.2 and CEQA Guidelines Section 15126.4. Consistent with CEQA Guidelines Section*

15126.4(b)(3), mitigation shall be accomplished through either preservation in place or, if preservation in place is not feasible, data recovery through excavation. If preservation in place is feasible, this may be accomplished through one of the following means: (1) modifying the construction plan to avoid the resource; (2) incorporating the resource within open space; (3) capping and covering the resource before building appropriate facilities on the resource site; or (4) deeding resource site into a permanent conservation easement. If avoidance or preservation in place is not feasible, a qualified archaeologist shall prepare and implement a detailed treatment plan to recover the scientifically consequential information from and about the resource, which shall be reviewed and approved by the City prior to any excavation at the resource site. Treatment of unique archaeological resources shall follow the applicable requirements of PRC Section 21083.2. Treatment for most resources would consist of (but would not be not limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the Project. The treatment plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and state repositories, libraries, and interested professionals.

3) *In the event of discovery or recognition of any human remains during project implementation, project construction activities within 100 feet of the find shall cease until the Sacramento County Coroner has been contacted to determine that no investigation of the cause of death is required. The City shall comply with requirements identified by the NAHC for the appropriate means of treating the human remains and any associated funerary objects (CEQA Guidelines Section 15064.5[d]).*

Mitigation Measure 4.4-1(b)

Identification of Sensitive Areas

The City, based on input from Native American consultation, shall prepare a map of the DSP area identifying previously recorded archaeological resources and potential locations of tribal cultural resources—these areas to be collectively known as "sensitive areas"—for use by the City, applicant, archaeologist and Native American monitor. The map shall be subject to California law regarding confidentiality of such materials.

Mitigation Measure 4.4-1(c)

Worker Training of and Archaeological Monitoring of Project Ground-Disturbing Activities in Sensitive Areas

The provisions of this mitigation measure shall not be required for projects in sensitive areas that consist of: 1) replacement of existing facilities (road signs, sidewalks, pipes, etc.) where ground disturbance would occur principally in previously disturbed sediment, or 2) minor levels of ground disturbance (e.g., to no more than 18 inches below surface). For all other projects in the DSP area that are within sensitive areas:

1. *Construction worker cultural resources awareness training shall be conducted for construction personnel involved with excavation activities where ground*

disturbance would be greater than 18 inches below the ground surface. The training shall consist of a preconstruction training session conducted by or under the supervision of a qualified archaeologist, defined as one meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology, and shall be held for all construction personnel and staff involved with excavation activities. The training may be delivered to applicable construction personnel via an electronic format (DVD or video file, for example). Training content will cover procedures to be followed and appropriate conduct to be adhered to if archaeological materials, including tribal cultural resources, are encountered during the project work. Training will include:

a) Purpose of archaeological monitoring;

b) Identifying archaeological resources; and

c) Maintaining proper discovery protocols during construction.

2. *Excavation work within the areas identified as sensitive areas shall be undertaken in a manner that is responsive to the potential for discovery of resources. The applicant, archaeologist, and tribal monitor shall coordinate in implementing construction techniques. In the event of dispute, the City's Director of Community Development shall be consulted and shall determine the appropriate procedures at the site.*

3. *An archaeologist meeting, or supervised by an archaeologist meeting, the Secretary of the Interior's Professional Qualification Standards for Archeology, shall monitor all project ground-disturbing activities within the sensitive areas agreed upon by the City and Native American Tribal Representatives. Information regarding the location of ground disturbing activities and any resource finds shall be kept on file at the City. Such monitoring and reporting shall be conducted at the applicant's expense.*

4. *A Native American monitor shall be employed at the applicant's expense to conduct monitoring of project construction activities for sensitive areas. The conduct and work of any Native American monitor shall be consistent with the California Native American Heritage Commission (NAHC) Guidelines for Native American Monitors/Consultants.*

5. *Potential tribal cultural resources discovered during project work shall be treated in consultation with the Native American monitor on site.*

6. *If discovery is made of items of potential archaeological resources, including tribal cultural resources, the procedures set forth in Mitigation Measure 4.4-1(a) shall be followed.*

Significance After Mitigation: Mitigation Measures 4.4-1(a) through 4.4-1(c) address the training of construction crew, archaeological construction monitoring, and discovery of unanticipated archaeological resources, and would apply to all future proposed projects within the DSP area. Implementation of the mitigation measures would lessen potential project impacts to prehistoric and historic-period archaeological resources by increasing the likelihood that previously unidentified archaeological resources and human remains

are protected. However, because the presence of potentially significant archaeological resources, including human remains, may not be known until the resource is disturbed during project-related ground-disturbing activities, damage may occur prior to the discovery of such resources; such damage could potentially cause a substantial adverse change in the significance of an archaeological resource, including human remains, and would be considered a significant impact. Therefore, the impact would remain **significant and unavoidable**.

Impact 4.4-2: New construction in the DSP area could cause a substantial adverse change in the significance of a tribal cultural resource.

A tribal cultural resource is defined in Public Resources Code section 21074 as a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe.

To date, five prehistoric archeological sites have been identified in the DSP area. Although none have specifically been identified as potential tribal cultural resources, the legal definition of tribal cultural resources is relatively new and local tribal representatives, if given the opportunity, may view them as such. The potential for additional tribal cultural resources has been identified through consultation with the UAIC and WR. Potential impacts to tribal cultural resources (as with other archeological resources) would be only knowable once a specific project has been proposed because the impacts would be highly dependent on both the individual project site conditions, the nature of the resource, and the characteristics of the proposed ground-disturbing activity. If not discovered prior to development, such resources could be damaged or destroyed through earthwork, ground stabilization, or other subsurface construction activities associated with development in the DSP area. This potential exists for future individual development projects allowed under the proposed DSP. Damage to or loss of tribal cultural resources would be a **potentially significant impact**.

Mitigation Measure

Mitigation Measure 4.4-2

Implement Mitigation Measure 4.4-1(a) through 4.4-1(c).

Significance After Mitigation: Mitigation Measure 4.4-2, which refers to Mitigation Measures 4.4-1(a) through 4.4-1(c), addresses the training of construction crew, archaeological construction monitoring, and discovery of unanticipated archaeological resources, and would apply to all future proposed projects within the DSP area. Implementation of the mitigation measures would lessen potential project impacts to tribal cultural resources that may be archaeological resources by increasing the likelihood that previously unidentified archaeological resources and human remains are protected. However, because the presence of buried archaeological resources, including human remains, that may be tribal cultural resources may not be known until the resource is disturbed during project-related ground-disturbing activities, damage may occur prior to the discovery of such resources; such damage could potentially cause a substantial

adverse change in the significance of a tribal cultural resource and would be considered a significant impact. Therefore, the impact would remain **significant and unavoidable**.

Impact 4.4-3: The proposed DSP could cause a substantial adverse change in the significance of historical resources as defined in CEQA Guidelines section 15064.5.

There are 259 parcels on the 89 Opportunity Sites in the DSP area. Preliminary survey and research was undertaken to identify those Opportunity Sites that included historic-age (45 years old or older) buildings and structures. The Opportunity Sites are located in a variety of urban environments and include both vacant parcels as well as many different building types. The CRSIR provided as Appendix E provides additional information, identified by parcel number (since many Opportunity Sites include multiple parcels), including the acreage, address, and year built.

Many of the parcels are either vacant lots or surface parking lots; however, there are three listed City Landmarks on three of the DSP Opportunity Sites: the Thomas Jefferson Elementary School (1619 N Street, Opportunity Site 42), the Marshall Elementary School (2718 G Street, Opportunity Site 50) and 1026 R Street (Opportunity Site 97).

Opportunity Sites are also located within four City of Sacramento historic districts; the 1200-1300 Q Street, R Street, Memorial Auditorium, and Alkali Flat West historic districts. The City then identified six buildings (1800 24th Street, 1800 23rd Street, 1730 14th Street, 915 R Street, 1724 10th Street, and 1720 8th Street) on four Opportunity Sites (14, 24, 28, and 31) for full evaluation for the National Register, California Register, and local listing. Based on the results of the CRSIR, the six buildings identified above on Opportunity Sites 14, 24, 28, and 31 are ineligible for listing in the National Register, California Register, and local listing. The detailed analyses and evaluations of the six buildings are located in the CRSIR.

While currently unanticipated for the majority of development proposed as part of the DSP, the range of potential types of impacts to historical resources resulting from development within the Opportunity Sites could include significant physical changes to the resources themselves (including the unlikely possibility of demolition) and the potential introduction of significant changes to the historic setting of the resource. The physical change to the building or district would result in potential direct impacts to the physical integrity of the building, while introduction of significant changes to the setting would result in potential indirect impacts to the historic setting and context of a building or district. Both these impact types would be potentially significant. However, the current design and preservation review policies of the City described in Chapter 17 of the Sacramento City Code, and the Central Core Design Guidelines and Central City Neighborhood Design Guidelines (currently undergoing updating in order to reference the DSP and to clarify design review processes related to it) are expected to ensure that new DSP-related development is designed in a manner that avoids impacts to historic resources. Because such design review practices will continue to govern DSP-related development, the potential for

substantial adverse changes to individual historic resources and to historic districts would be minimized, and would be **less than significant**.

Mitigation Measure

None required

Cumulative Impacts

The cumulative setting for cultural resources includes Sacramento County for historic-period resources, with a focus on Sacramento's downtown core, and the portions of the Central Valley identified as the territory of the local Native American community for prehistoric archaeological resources. Historic resources tend to be more highly concentrated within the City limits. However, even within the City limits, the majority of these resources have not been surveyed for significance under local, state, or federal criteria.

Within the City of Sacramento and Central Valley, excavations have uncovered evidence of prehistoric Native American culture dating to 7,750 BP, and future development within city limits increases the likelihood that archaeological sites be uncovered.

Impact 4.4-4: New construction in the proposed DSP area, in combination with other cumulative development, could contribute to the cumulative loss or alteration of archaeological resources, including human remains.

Based upon previous cultural resource surveys and research, the area that comprises the City of Sacramento and surrounding area has been inhabited by prehistoric peoples for thousands of years. Prehistoric occupation was drawn towards high areas with ready access to water and floral and faunal sources of food, which the Central Valley and vicinity of the City of Sacramento provided. As described above, the City of Sacramento has several known occupation and burial sites located within the DSP area, as well as historic-period archaeological resources. Development of the Central Valley since the arrival of European Americans, and especially the increased development resulting from the twentieth century's exponential population increase, has led to the loss of many of archaeological evidence of the valley's earliest occupation. The proposed DSP, in combination with other development in the City of Sacramento and Central Valley, could contribute to the loss of significant archaeological resources. Subsurface and earth moving activities associated with construction and development of the urban core have the potential to damage or destroy known and currently undiscovered archaeological resources, including human remains.

Federal, state, and local laws can generally protect archaeological resources in most instances. Even so, it is not always feasible to entirely avoid archaeological sites or retain them in situ. Because all significant archaeological resources are unique and non-renewable members of finite classes, all adverse effects or negative impacts erode a dwindling resource base.

The DSP area is a large area and portions of it have proven to contain potentially significant archaeological resources. As a result, the future projects under the DSP have the potential to adversely affect significant archaeological resources through excavation or accidental discovery. As unique and non-renewable members of finite classes, the proposed plan's incremental contribution to the cumulative effects would itself be potentially cumulatively considerable; therefore, this is **a potentially significant cumulative impact**.

Mitigation Measure

Mitigation Measure 4.4-4

Implement Mitigation Measure 4.4-1(a) through 4.4-1(c).

Significance After Mitigation: Implementation of **Mitigation Measure 4.4-4** would ensure that existing archaeological resources are identified, evaluated and treated promptly before they can be damaged or destroyed during construction. However, as noted above, archaeological resources are finite. As such, the loss of this material record cannot be completely mitigated. Therefore, the project's potential contribution to this impact would be **significant and unavoidable**.

Impact 4.4-5: New construction in proposed DSP area, in combination with other cumulative development within Sacramento County and the City downtown core, could contribute to the cumulative loss or alteration of historic built resources.

Historic development of Sacramento County and the City of Sacramento dates back to the mid-nineteenth century and reflects the origins and ongoing development of the City and County. The DSP area includes the City of Sacramento's original historic downtown grid as well as several subsequent decades of development representing the City's economic growth and changing patterns of development through the 19th and 20th centuries.

The proposed development projects included within the DSP, including new development and adaptive reuse of historical resources, have the potential to directly and indirectly affect the historic buildings through the alteration of the resource itself or the surrounding environment/setting. Archival and field review has identified four historic districts that would be expected to see material development affected by the proposed DSP. Additionally, listed City Landmarks were identified on three of the Opportunity Sites: the Thomas Jefferson Elementary School (1619 N Street), the Marshall Elementary School (2718 G Street), and 1026 R Street. Potential development on these parcels or within these districts could include the alteration of existing significant buildings that could cause a substantial adverse change in the significance of an historical resource. If these or other currently unidentified historic resources were damaged or destroyed during development or construction, then the project contribution to cumulative loss of historic resources could be considered potentially significant.

However Federal, state, and local laws protect historical resources in most instances including the City's robust process for identifying and protecting resources (including design guidelines) as development applications are received. While this is not guaranteed to preserve 100% of the resources it should provide protection for the vast majority.

Because all historical resources are unique and non-renewable members of finite classes, all adverse effects or negative impacts erode a dwindling resource base. However, as stated above the existing regulations will protect the majority of the resources, reducing the contribution of the proposed projects to the regional loss or degradation of significant historic resources to a less-than-considerable contribution, and the impact would be less than significant.

Mitigation Measure

None required.

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4.5 Energy Demand and Conservation

This section provides a summary of existing energy utilities and service systems provided to the DSP area and vicinity, including electricity and natural gas. Pertinent regulations and requirements at the federal, State, and local level are described. Demand for energy (electricity, natural gas, fuel) as a result of implementation of the proposed DSP is calculated for construction, operations, and transportation. Potential impacts on energy utilities and service systems that could result from implementation of the proposed DSP are discussed, and, as warranted, potentially feasible mitigation measures are described in order to avoid or reduce the magnitude of potential utilities and service system-related impacts.

The analysis included in this section was developed based on data provided by the City, Pacific Gas & Electric (PG&E), Sacramento Municipal Utility District (SMUD), and the California Energy Commission (CEC). Additional data and information was gathered from the *City of Sacramento 2035 General Plan*,[1] *City of Sacramento 2035 General Plan Master Environmental Impact Report*,[2] and the *Downtown Specific Plan Utility Infrastructure Analysis*,[3] and other published technical reports, as indicated in the footnoted references.

The City received comments on the NOP related to utilities and service systems; these comments are addressed in this chapter to the extent they pertain to the impacts of the proposed DSP (see Appendix A). NOP comments relevant to this section include requests for the City to evaluate impacts related to transmission and distribution line easements, utility line routing, and energy efficiency.

4.5.1 Environmental Setting

Electricity

SMUD is responsible for the generation, transmission, and distribution of electrical power to its 900 square mile service area, which includes the DSP area. SMUD's service area includes most of Sacramento County and a small portion of Placer County. SMUD is a publicly-owned utility governed by an elected board of seven directors that make policy decisions and appoint the general manager, the individual responsible for the District's operations.

In 2015, SMUD obtained its electricity from the following sources: large hydroelectric (8 percent and natural gas (47 percent). Around 23 percent of SMUD's energy resources are from "unspecified sources of power", which means it was obtained through transactions and the specific generation source is not traceable. Approximately 22 percent of SMUD's energy

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 Report* (SCH No. 2012122006). Certified March 3, 2015.
3 NV5, 2017. Downtown Specific Plan Utility Infrastructure Analysis. March 24, 2017.

portfolio is from eligible renewable resources, including biomass and waste (11 percent), geothermal (1 percent), eligible hydroelectric (1 percent), solar (3 percent), and wind (7 percent).[4]

Power is transmitted to the DSP area by a looped underground 115 kilovolt (kV) transmission system that feeds several substations that step down the voltage to 12 kV and 21 kV distribution systems. The 115 kV loop connects SMUD Station A located at 6th and H streets, Station B located at 19th and O streets, and Station D located at 8th and R streets. This loop is also connected to the North City (north of 20th & C streets) and Mid-City (35th & R streets) substations.[5]

Natural Gas

PG&E provides electricity and natural gas distribution, electricity generation, transportation and transmission, natural gas procurement, and storage, but in Sacramento County is a supplier of only natural gas. As a regulated utility, PG&E is bound to update its systems to meet any additional demand.

Services are provided within 48 counties in California with a total service area of approximately 70,000 square miles in northern and central California. The utility provides services with 42,141 miles of natural gas distribution pipelines and 6,438 miles of transportation pipelines. PG&E serves approximately 4.3 million natural gas distribution customers. It is anticipated that natural gas distribution lines in new development will be placed underground in accordance with California Public Utilities Commission (CPUC) regulations.[6]

Natural gas is supplied to the Sacramento area through a network of high- and low-pressure distribution systems. The high-pressure natural gas distribution systems would mainly consist of 4-inch diameter pipes at a pressure of 40 pounds per square inch (PSI). The low-pressure natural gas distribution systems would mainly consist of 4-inch diameter pipes at a pressure of 40 PSI.[7]

4.5.2 Regulatory Setting

Federal

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission (FERC) is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil. FERC also reviews proposals to build liquefied natural gas (LNG) terminals and interstate natural gas pipelines as well as licensing hydropower projects. Licensing of hydroelectric facilities under the authority of FERC includes

4 Sacramento Municipal Utility District, 2015, Power Content Label. Available: https://www.smud.org/assets/documents/pdf/Power-Content-Label-full.pdf. Accessed June 29, 2017.
5 City of Sacramento, 2017. Downtown Specific Plan Utility Infrastructure Analysis. March 2017.
6 Pacific Gas & Electric, 2015. Company Profile. Available: http://www.pge.com/en/about/company/profile/index.page?. Accessed June 29, 2017.
7 City of Sacramento, 2017. Downtown Specific Plan Utility Infrastructure Analysis. March 2017.

input from State and federal energy and power generation, environmental protection, fish and wildlife, and water quality agencies.[8]

National Highway Traffic Safety Administration (NHTSA) Standards

The National Highway Traffic Safety Administration (NHTSA) and the U.S. Environmental Protection Agency (US EPA) are taking coordinated steps to enable the production of clean energy vehicles with improved fuel efficiency. NHTSA sets the Corporate Average Fuel Economy (CAFE) levels, which are rapidly increasing over the next several years in order to improve energy security and reduce fuel consumption. The first phase of the CAFE standards (for model year 2017 to 2021) is projected to require, on an average industry fleet-wide basis, a range from 40.3 to 41.0 mpg in model year 2021. The second phase of the CAFE program (for model years 2022 to 2025) is projected to require, on an average industry fleet-wide basis, a range from 48.7 to 49.7 mpg in model year 2025. The second phase of standards has not been finalized due to the statutory requirement that the NHTSA set average fuel economy standards not more than five model years at a time.[9]

State

California Public Utilities Commission Requirements

TheCPUC is a State agency created by a constitutional amendment to regulate privately-owned utilities providing telecommunications, electric, natural gas, water, railroad, rail transit, and passenger transportation services, and in-State moving companies. The CPUC is responsible for assuring that California utility customers have safe, reliable utility services at reasonable rates, while protecting utility customers from fraud. The CPUC regulates the planning and approval for the physical construction of electric generation, transmission, or distribution facilities; and local distribution pipelines of natural gas.[10]

California Energy Commission

The CEC is California's primary energy policy and planning agency. Created by the California Legislature in 1974, the CEC has five major responsibilities: (1) forecasting future energy needs and keeping historical energy data; (2) licensing thermal power plants 50 MW or larger; (3) promoting energy efficiency through appliance and building standards; (4) developing energy technologies and supporting renewable energy; and (5) planning for and directing State response to energy emergencies. Under the requirements of the California Public Resources Code, the CEC in conjunction with the California Department of Conservation (DOC) Division of Oil, Gas, and

8 Federal Energy Regulatory Commission, 2017. About FERC. Available: http://www.ferc.gov/about/about.asp. Accessed June 29, 2017.
9 National Highway Traffic Safety Administration, 2017. Available: https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy. Accessed June 29, 2017.
10 California Public Utilities Commission, 2017. *California Public Utilities Commission.* Available: http://www.cpuc.ca.gov/. Accessed June 29, 2017.

Geothermal Resources is required to assess electricity and natural gas resources on an annual basis or as necessary.[11]

Title 20 and Title 24, California Code of Regulations

New buildings constructed in California must comply with the standards contained in Title 20, Energy Building Regulations, and Title 24, Energy Conservation Standards, of the California Code of Regulations (CCR). Part 11 of Title 24 is the California Green Building Standards Code (CALGreen) sets minimum and mandatory sustainability requirements, in order to reduce environmental impact through better planning, design and construction practices. CALGreen works along with the mandatory construction codes of Title 24 and is enforced at the local level.[12]

Title 20 contains standards ranging from power plant procedures and siting to energy efficiency standards for appliances to ensuring reliable energy sources are provided and diversified through energy efficiency and renewable energy resources. Title 24 (AB 970) contains energy efficiency standards for residential and nonresidential buildings based on a State mandate to reduce California's energy demand. Specifically, Title 24 addresses a number of energy efficiency measures that impact energy used for lighting, water heating, heating and air conditioning, including the energy impact of the building envelope such as windows, doors, skylights, wall/floor/ceiling assemblies, attics, and roofs.[13,14]

Any project-related construction would be required to comply with the Title 24 codes currently in place, including the CALGreen code. The existing 2016 standards became effective on July 1, 2017.[15]

Assembly Bill 1493 - Clean Car Standards (Pavley)

This bill was passed in 2002 and requires the California Air Resources Board (CARB) to develop and implement regulations to reduce automobile and light truck greenhouse gas (GHG) emissions, through mandating gradual reductions in global warming pollutants from cars and light trucks sold in California from 2009 through 2016. The average gram-per-mile reduction of GHG emissions from new California cars and light trucks is required to be about 30 percent in 2016, compared to 2004 model year vehicles. Passenger cars and light trucks sold within California are required to have a GHG reduction of 34 percent from model year 2016 through

11 California Energy Commissions, 2017. "About the California Energy Commission." Available: http://www.energy.ca.gov/commission/. Accessed June 29, 2017.
12 California Department of Housing and Community Development, 2016. *2016 Report to the Legislature: Status of the California Green Building Standards Code.* Accessed June 29, 2017.
13 California Energy Commission, 2017. Title 20 Public Utilities and Energy. Available: https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I237B3BF0D44E11DEA95CA4428EC25FA0&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default). Accessed June 29, 2017.
14 California Building Standards Commission, 2016. Title 24 California Building Standards Code. Available: http://www.bsc.ca.gov/codes.aspx. Accessed June 29, 2017.
15 California Building Standards Commission, 2017. California Building Standards Code. Available: http://www.bsc.ca.gov/. Accessed June 29, 2017.

2025. The bill requires that by 2025 there be an estimated reduction of GHG emissions from cars sold from 2008 through 2025 of approximately 51 percent.[16]

Warren-Alquist Energy Resources Conservation and Development Act

Initially passed in 1974 and amended since, the Warren-Alquist Energy Resources Conservation and Development Act (Warren-Alquist Act) created the CEC, the State's primary energy and planning agency. The seven responsibilities of the Commission are: forecasting future energy needs, promoting energy efficiency and conservation through setting standards, supporting energy related research, developing renewable energy resources, advancing alternative and renewable transportation fuels and technologies, certifying thermal power plants 50 megawatts or larger, and planning for and directing state response to energy emergencies. The State Energy Commission regulates energy resources by encouraging and coordinating research into energy supply and demand problems to reduce the rate of growth of energy consumption. Additionally, the Warren-Alquist Act acknowledges the need for renewable energy resources and encourages the Commission to explore renewable energy options that would be in line with environmental and public safety goals. (Warren-Alquist Energy Resources Conservation and Development Act Public Resources Code section 25000 et seq.).[17]

Local

City of Sacramento 2035 General Plan

The following goals and policies from the City of Sacramento 2035 General Plan are relevant to energy. It is important to note that the City's Climate Action Plan (CAP), originally adopted in 2012, has been integrated into the 2035 General Plan. The General Plan CAP policies outline strategies that can contribute to the reduction of GHG emissions as a result of energy generation and consumption, and how to adapt to expected climate change impacts.[18]

Goal U 6.1	**Adequate Level of Service. Provide for the energy needs of the city and decrease dependence on nonrenewable energy sources through energy conservation, efficiency, and renewable resource strategies.**
Policies	
U 6.1.1	**Electricity and Natural Gas Services.** The City shall continue to work closely with local utility providers to ensure that adequate electricity and natural gas services are available for existing and newly developing areas.
U 6.1.5	**Energy Consumption per Capita**. The City shall encourage residents and businesses to consume 25 percent less energy by 2030 compared to the baseline year of 2005.

16 Transportationpolicy.net, 2014. California: Light-duty: GHG. Available: http://transportpolicy.net/index.php?title=California:_Light-duty:_GHG. Last modified February 2014. Accessed June 29, 2017.

17 California Energy Commission, 2017. Warren-Alquist Act. Available: http://www.energy.ca.gov/reports/Warren-Alquist_Act/index.html. Accessed June 29, 2017.

18 City of Sacramento, 2015. *2012 Climate Action Plan: Executive Summary.* Available: http://portal.cityofsacramento.org/Community-Development/Resources/Online-Library/Sustainability. Accessed June 29, 2017.

U 6.1.6 **Renewable Energy.** The City shall encourage the installation and construction of renewable energy systems and facilities such as wind, solar, hydropower, geothermal, and biomass facilities.

U 6.1.15 **Energy Efficiency Appliances.** The City shall encourage builders to supply Energy STAR appliances and HVAC systems in all new residential developments, and shall encourage builders to install high-efficiency boilers where applicable, in all new non-residential developments.

As described in Impact 4.5-1, SMUD and PG&E would have sufficient time and resources to construction and/or improve infrastructure within the DSP area to meet future energy consumption demands, including electricity, natural gas, and fuel, for construction and operation of the proposed DSP. Therefore, the proposed DSP would be consistent with Policy U 6.1.1. Lastly, after implementation of **Mitigation Measure 4.5-1**, which insures that the proposed non-residential buildings would exceed the 2016 Title 24 energy standards by a minimum of 15 percent, the proposed DSP would be consistent with Policy U 6.1.5, Policy U 6.1.6 and Policy U 6.1.15.

4.5.3 Analysis, Impacts and Mitigation

Significance Criteria

The proposed DSP would result in a significant impact on energy demand and conservation if it would:

1. Require or result in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
2. Result in the wasteful, inefficient, or unnecessary consumption of energy for project construction or operation, including transportation energy.

Methodology and Assumptions

The analysis in this section focuses on the nature and magnitude of the change in energy resources due to construction and operation of land uses developed under the DSP.

Electricity Demand

SMUD provides electrical service to customers located within the DSP area. Power is transmitted to the DSP area by a looped underground 115 kV transmission system that feeds several substations that step down, or reduce, the voltage to 12 kV and 21 kV distribution systems. The 115 kV loop connects SMUD Station A located at 6th and H streets, Station B located at 19th and O streets, and Station D located at 8th and R streets. This loop is also connected to the North City (north of 20th and C streets) and Mid City (35th and R streets) substations.

Station D, Mid City and the North City substations steps down the 115 kV to 21 kV and Station A and Station B steps down 115 kV to 12 kV to serve the overall downtown area. The 12 kV system serves a secondary network system. The 21 kV system serves the balance of the Downtown area and will likely be used to serve new development within the DSP area.

The 12 kV network has limited capacity for expansion. It is served by Station A which has six banks (ranging from 20-25 megavolt-ampere, or MVA) and Station B which contains three 37.5 MVA transformer banks and have no further room for additional transformer banks. The 115 kV circuits utilize pressurized oil-filled cables with pumps that circulate oil through the cables. Repairs or relocations are difficult and expensive, and require importing technicians from out of state where this older technology is more common. Connections are expensive for customers, requiring large underground vaults and redundant transformers and feeds, with fire suppression and dewatering facilities.

The future 21 kV routes and switchgear locations are continually subject to change based on the sequence that sites develop, specific load requirements, other utility conflicts, availability of required space for splicing manholes, duct banks, etc. These routes would provide the 21 kV feeder system to within two blocks of the identified opportunity sites and entitled proposed project sites. Additional infrastructure (switchgear, transformers, conduit, pull boxes, etc.) to serve these sites will need to be determined with SMUD and the individual site developers.

Based on land use projections assumed under the DSP, SMUD estimates that the additional electrical load from development within the DSP area may be 70 to 90 megawatts. A majority of the load would require adding major components in the DSP area. SMUD is already working on replacing the North City substation (NCY) with Station E, a 60MVA facility. Once Station A (network) is replaced with Station G, and the Station A site is decommissioned, Station A is being planned to add 80 MVA. With the addition of 13,400 units and 3.8 million square feet of commercial development, another three 40 MVA substations would be required along the 7th Street corridor in the Railyards or River District, preferably between North B Street and Richards Boulevard.

Operational-related electricity annual consumption rates for the DSP were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.1. CalEEMod is a statewide land use emission computer model designed to estimate criteria pollutant and GHG emissions associated with both construction and operation from a variety of land use projects. In addition to estimating pollutant and GHG emissions, CalEEMod can provide annual energy (i.e., electricity and natural gas) consumption estimates for non-residential and residential developments. **Table 4.5-1** shows the estimate amount of electricity that would be consumed by all of the components of the proposed DSP. CalEEMod assumptions and modeling details can be found in Appendix C.1.

Natural Gas Demand

The PG&E supplies natural gas to the Sacramento area. In the DSP area there are both high pressure and low pressure distribution systems. High pressure system pipelines, generally 4-inch diameter and larger, carry gas at approximately 40 PSI. Low pressure system pipelines, generally 2-inch diameter, carry gas at a pressure of 7-inch water column (about 0.25 PSI). Service is generally provided from the low pressure system unless usage exceeds about 3,000 cubic feet per hour; however, in the DSP area the system is all high pressure. Regulators are used to reduce high pressure to low pressure.

TABLE 4.5-1
DSP OPERATIONAL ENERGY USE

Land Use	Amount	Units[1]	Electricity[2] Megawatt-hours/year	Natural Gas[2] Million Btu/year
Residential	13,401	DU	61,136	172,554
Restaurant	280,030	SF	11,843	49,845
Government Office Buildings	435,837	SF	6,437	5,736
General Office Buildings	3,510,892	SF	51,856	46,203
Retail/Service	2,303,044	SF	9,509	12,529
Medical Offices	643,797	SF	27,214	8,472
Total			**167,995**	**295,339**

NOTES
1. Residential is measured in dwelling units (DU) and non-residential is measured in square feet (SF)
2. Electricity and natural gas consumption estimates were generated using CalEEMod 2016.3.1. See Appendix C1 for model outputs.

SOURCE: ESA, 2017

If the user is a core (non-interruptible) customer in the service area and will accept service at 7-inch water column pressure, the company is generally obligated by CPUC regulations to provide service without additional cost for service. If the user is a non-core (interruptible) customer, or needs an elevated pressure service for large volume use, there are charges for service according to the company's new business tariffs. Whether a project is a core (non-interruptible) user or a non-core (interruptible) user dependent on the type of use for the facility or business. Projects in the DSP are most likely to be core (non-interruptible) customers.

PG&E stated has indicated they are currently making improvements to their system in accordance with a number of projects and initiatives which may negate the need for future improvements when or if the new developments are constructed. PG&E will service the new developments and infrastructure as they are constructed and require service. Upgrades to the existing system will be addressed on a case-by-case basis as additional information is received on the actual development square footage and maximum & and minimum gas loads.

Operational-related electricity annual consumption rates for the DSP were calculated using CalEEMod 2016.3.1. Table 4.5-1 estimates the amount of electricity that would be consumed by all of the components of the proposed DSP. CalEEMod assumptions and modeling details can be found in Appendix C.1.

Transportation

Transportation fuel consumption for construction and operation are a key element of project energy consumption. For construction, this includes fuel use (diesel and/or gas) associated with construction equipment and vehicles. For operations, this includes fuel use associated with on-road vehicles.

Operational Fuel Use

Operational-related fuel use was back-calculated based on GHG emissions estimated using the CalEEMod 2016.3.1 and unit volume fuel factors for gasoline and diesel provided by the U.S. Energy Information Administration.[19] **Table 4.5-2** presents estimated annual fuel use for project operations, categorized by the proposed DSP. These estimates have been calculated using CalEEMod 2016.3.1 model. CalEEMod assumptions and modeling details can be found in Appendix C.1.

TABLE 4.5-2
DSP OPERATIONAL FUEL USE

Category	Diesel Fuel (gallons)[1,2]	Gasoline (gallons)[1,2]
DSP	125,237	14,124,000

NOTES:
1 Operational fuel use based on the CalEEMod 2016.3.1 model and the methodology described above. See Appendix C1 for model outputs.
2 Unit volume fuel factors (kg CO_2/gallon) for gasoline and diesel are from the U.S. Energy Information Administration Frequently Asked Questions. Available: https://www.eia.gov/tools/faqs/faq.php?id=307&t=11.

SOURCE: ESA, 2017

Construction Fuel Use

For construction, diesel and gasoline fuel use were estimated using CalEEMod as follows. First, total GHG emissions estimated were split into diesel- and gasoline-generated emissions. This split was based on the percentage of diesel and gasoline vehicles typically operated during construction projects. These percentages are heavily weighted towards diesel vehicles. Then, diesel and gasoline GHG emissions were converted to gallons using standard conversion factors provided by the U.S. Energy Information Administration. **Table 4.5-3** estimates the fuel use for construction, categorized by the proposed DSP. These estimates have been calculated using CalEEMod 2016.3.1 model. CalEEMod assumptions and modeling details can be found in Appendix C.1.

TABLE 4.5-3
DSP CONSTRUCTION FUEL USE

Category	Diesel Fuel (gallons)[1,2]	Gasoline (gallons)[1,2]
DSP	3,141,833	188,373

NOTES:
1 Assumes worst-case construction fuel use based on the CalEEMod 2016.3.1 model and the methodology described above. See Appendix C1 for model outputs.
2 Unit volume fuel factors (kg CO_2/gallon) for gasoline and diesel are from the U.S. Energy Information Administration Frequently Asked Questions, Available: https://www.eia.gov/tools/faqs/faq.php?id=307&t=11

SOURCE: ESA, 2017

[19] U.S. Energy Information Administration, 2017. Frequently Asked Questions. Available: https://www.eia.gov/tools/faqs/faq.php?id=307&t=11. Accessed June 29, 2017.

Impacts and Mitigation Measures

Impact 4.5-1: The proposed DSP would increase demand for energy, specifically electricity and natural gas, the construction of which could cause significant environmental effects.

Electricity

As noted previously, the proposed DSP would be served by a number of connections to the SMUD's 12 kV and 21 kV distribution systems distribution network. Table 4.5-1, above, summarizes the anticipated demand from the project and estimates an electricity demand of 167,995 MWh/year. According to *DSP Infrastructure Analysis*, SMUD estimates that the additional electrical load from development within the DSP area could range from 70 to 90 megawatts.[20] The proposed DSP would require the installation of additional facilities in the DSP area, including additional pad mounted transformers, transformer vaults, network, and distribution manholes, and additional distribution lines throughout the plan area. However, SMUD has reviewed the proposed project and confirmed it would be able to serve the anticipated demand load.[21]

It is anticipated that SMUD would be able to serve the proposed DSP area without additional requirements for offsite electricity supply or conveyance facilities. In addition, the proposed DSP would be built-out incrementally over the next two or more decades, providing SMUD and City of Sacramento more than enough time to install additional facilities in the area to meet the increase in electricity demand. The physical environmental effects of adding electrical facilities within the DSP area are considered in the resource evaluations in this EIR; no additional effects would be created. This impact is considered **less than significant**.

Natural Gas

Natural gas, provided by PG&E, would be used for the primary uses of space heating and water heating in development undertaken pursuant to the proposed DSP. Table 4.5-1, above, summarizes the anticipated demand from the project and estimates a natural gas demand of 295,339 million Btu/year. According to *DSP Infrastructure Analysis*, PG&E is currently making improvements to their system in accordance with a number of projects and initiatives, which may negate the need for future improvements when or if the new developments are constructed. PG&E would service the new residential and non-residential uses developed under the proposed DSP and associated infrastructure as it is build-out over time.[22]

Development would occur under the proposed DSP based on market demand, which is expected to occur at a pace in excess of the pace of development over the recent decades. If additional infrastructure (e.g., distribution lines) is needed to support the proposed DSP development, PG&E would have sufficient time to construct new infrastructure within the DSP area to meet

[20] NV5, 2017. Downtown Specific Plan Utility Infrastructure Analysis. March 24, 2017.
[21] Shimizu, Gary, Principal Distribution System Engineer. Email communication June 6, 2017.
[22] NV5, 2017. Downtown Specific Plan Utility Infrastructure Analysis. March 24, 2017.

future natural gas demands. Therefore, potential effects on energy related facilities would be limited, and this impact is considered **less than significant**.

Operational Transportation Fuel Use

Operational transportation would require the use of fuels (primarily gasoline and diesel) for the operation of passenger vehicles and light trucks associated with new development in the DSP area. The estimated demand for operational diesel fuel and gasoline each year by uses provided for in the proposed DSP is shown in Table 4.5-2. For the operation of the proposed DSP uses, it is estimated that annually there would be approximately 14,124,000 gallons of gasoline and 125,237 gallons of diesel fuel consumed.

As discussed in Section 4.12, Transportation and Circulation, the proposed DSP land use design, roadway system, and transit-oriented network were developed in accordance with Sacramento Grid 3.0, which would result in an average vehicle miles traveled (VMT) per capita and average VMT per employee below the regional and countywide averages calculated by the Sacramento Area Council of Governments (SACOG) (see Table 4.12-10 in Section 4.12, Transportation and Circulation). Mixed-use developments, like the proposed DSP, provide an opportunity for people to live, work, shop and find recreation activities in one community. This allows people to travel shorter distances between their origins and destinations. These shorter travel distances reduce vehicle trip lengths and make walking and bicycling more viable travel options. Furthermore, the addition of retail, office, and commercial uses to the DSP area would provide services and employment opportunities close to downtown Sacramento residents, who would otherwise have to travel longer distances for these services and jobs.

The increased use of fuel as a result of the proposed DSP would not result in the requirement for additional facilities, and thus would not create new significant impacts not otherwise addressed in this EIR. Therefore, the impact is considered **less than significant**.

Construction Transportation Fuel Use

Construction of the new development anticipated under the proposed DSP would require the use of fuels (primarily gasoline and diesel) for operation of construction equipment (e.g., dozers, excavators, generators, and trenchers), construction vehicles (e.g., dump and delivery trucks), and construction worker vehicles. Direct energy use would also include the use of electricity required to power construction equipment (e.g., welding machines and electric power tools). The estimated quantity of diesel fuel and gasoline use to support construction of all development anticipated under the proposed DSP is shown in Table 4.5-3. It is estimated there would be approximately 3,141,833 gallons of diesel fuel and 188,373 gallons of gasoline consumed.

Construction activities are temporary and would not result in a long-term increase in demand for fuel, and would not be of sufficient magnitude to require new infrastructure to be constructed to supply construction activities. Therefore, the impact is considered **less than significant**.

Summary

Energy consumption, including electricity, natural gas, and fuel, for construction and operation of the proposed DSP would be accomplished without the addition of energy infrastructure that could result in adverse environmental effects. In view of the above, impacts related to energy consumption would be **less than significant**.

Mitigation Measure

None required.

Impact 4.5-2: The proposed DSP could result in the wasteful, inefficient, or unnecessary use of energy.

Electricity and Natural Gas

Buildings and infrastructure constructed pursuant to the proposed DSP would comply with the versions of California Code of Regulations Titles 20 and 24, including CALGreen, that are applicable at the time that building permits are issued. In addition, the City's 2035 General Plan and CAP include policies and programs that seek to reduce energy consumption. In particular, 2035 General Plan policy LU 2.6.6., Efficiency through Density, requires the City to increase energy efficiency through increasing average residential densities; the proposed DSP would be consistent with this policy. Further, the City's CAP requires projects to meet standards that would avoid the wasteful, inefficient or unnecessary use of energy.

More specifically, according to the City's CAP action: 3.4.1 and 3.4.2, consistency with the City's CAP requires a project to demonstrate that it can exceed the current Title 24 building standards by a minimum of 15 percent. To do this, the proposed residential and non-residential buildings developed pursuant to under the proposed DSP would have to be constructed to exceed the energy efficiency standards established by the current 2016 Title 24 energy standards by a minimum of 15 percent.

In the future, development pursuant to the proposed DSP will have to meet the requirements of increasingly ambitious goals that California has developed for energy efficiency, including a goal of zero net energy (ZNE) use in all new homes by 2020 and commercial buildings by 2030.[23] 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 needs. The 2019 Title 24 energy standards are expected to take the final step to achieve ZNE for newly constructed residential buildings throughout California. Since the proposed DSP is not scheduled to be considered for approval prior to late 2017 or early 2018, a large majority of the residential

[23] 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.

dwelling units anticipated to be built under the DSP would be built to 2019 Title 24 energy standards, which for residential units would clearly be 15 percent more efficient than units constructed to the 2016 Title 24 energy standards. Irrespective of when ZNE for non-residential buildings is implemented through Title 24, the City's CAP policies would continue to encourage, but not explicitly require, non-residential development to exceed the 2016 Title 24 energy standards by 15 percent.

The residential and commercial uses proposed under the DSP will be constructed to meet the latest Title 24 energy standards and would not result in wasteful or unnecessary use of energy. However, since it is possible that the non-residential buildings developed pursuant to the proposed DSP may not exceed the 2016 Title 24 energy standards by 15 percent, the proposed DSP may not be consistent with the CAP Actions 3.4.1 and 3.4.2 and could result in inefficient use of energy. Therefore, this impact would be considered **potentially significant**.

Operational and Construction Transportation

Based on Table 4.5-2, it is estimated that 125,237 gallons of diesel fuel and 14,124,000 gallons of gasoline would be consumed for the DSP operational uses. Transportation energy would be used efficiently due to the location, density, and mix of planned uses in the DSP area. As discussed in section 4.12, Transportation and Circulation, the proposed DSP land use design, roadway system, and mobility network were developed in accordance with Sacramento Grid 3.0, which would result in an average VMT per capita and average VMT per employee below the regional and countywide averages calculated by SACOG. Mixed-use developments, such as the proposed DSP, provide an opportunity for people to live, work, shop, and find recreation opportunities within one community. This allows people to travel shorter distances between their origins and destinations. These shorter travel distances reduce vehicle trip lengths and make walking and bicycling more viable travel options. In addition, the regionally central location of the DSP area means that trip lengths would be shorter than if the proposed land uses were developed elsewhere in the region. This reduction in trip making and trip lengths would have a commensurate reduction in transportation fuel consumption.

As explained above in Impact 4.5-1, construction of development and infrastructure pursuant to the proposed DSP would require the use of fuels for operation of construction equipment, construction vehicles, and construction worker vehicles. Direct energy use would also include the use of electricity required to power construction equipment. As shown in Table 4.5-3, for the construction of the proposed DSP, it is estimated there would be approximately 3,141,833 gallons of diesel fuel and 1188,373 gallons of gasoline consumed. Notably, construction activities are temporary and would be spread over a period of two decades or more. Since the use would be temporary, it would not result in a long-term increase in demand for fuel. Thus, construction and operation of development undertaken pursuant to the proposed DSP would not result in a wasteful or unnecessary use of energy. Therefore, this impact would be considered **less than significant**.

Summary

The proposed DSP, would be designed and operated to minimize the use of electrical, natural gas, and transportation fuel energy to the extent feasible. It is currently unknown if the 2019 Title 24 energy standards for non-residential buildings will exceed the most current 2016 Title 24 energy standards by 15 percent as required under the City's CAP Actions 3.4.1 and 3.4.2. By meeting all sustainability features required under the future 2019 24 Title 24 energy standards, it is clear that residential development would be energy efficient and consistent with the City's CAP actions, however it cannot be demonstrated that the non-residential uses proposed under the DSP would be able to exceed the current 2016 Title 24 energy standards by 15 percent as required under the City's CAP Actions 3.4.1 and 3.4.2. Therefore, the proposed DSP could result in wasteful, inefficient or unnecessary use of energy. Therefore, this impact would be considered **potentially significant**.

Mitigation Measure

Mitigation Measure 4.5-2

Implement Mitigation Measure 4.7-1.

Significance after Mitigation: Implementation of **Mitigation Measure 4.5-2** would insure that development under the proposed DSP would be consistent with CAP Actions 3.4.1 and 3.4.2 by requiring the applicant design any proposed non-residential buildings to exceed the 2016 Title 24 energy standards by a minimum of 15 percent. By demonstrating consistency with the City's CAP, the project would not result in an inefficient use of energy. Therefore, after mitigation this impact would be **less than significant**.

Cumulative Impacts

The cumulative impacts regarding the wasteful, inefficient, or unnecessary consumption of energy during construction (Impact 4.5-2) would be the same as the DSP-specific context. Energy consumption effects related to individual projects are localized and would not combine with similar effects in other locations.

Impact 4.5-3: The proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in demand for energy.

Continued growth throughout SMUD's and PG&E's service areas could contribute to ongoing increases in demand for electricity and natural gas. These anticipated increases would be countered, in part, by ongoing increases in national, statewide, and local requirements and incentives to support construction or retrofit of buildings with increased energy efficiency. For electricity supply, overall electricity supply during most conditions is adequate. However, as demand continues to increase in SMUD's service area, temporary shortfalls could occur on SMUD's system (and other portions of the statewide grid) during temporary periods of high peak

demand. SMUD is actively planning for anticipated increases in peak demand through 2050. Peak demands occur during the summer during hot weather conditions when people run their air conditioners. Although SMUD's facilities reach peak demand for only about 40 hours per year, meeting demand during peak periods is a key planning consideration for the utility.[24] SMUD is currently actively planning to offset growth in peak demands by encouraging and deploying energy efficiency and conservation measures within its service area.[25] Through a combination of increases in efficiency and deployment of power management strategies including power imports during peak periods, SMUD expects to maintain sufficient capacity to provide power to its service area, including the project, at least through 2050.

With respect to natural gas, PG&E sources natural gas from a combination of producers and suppliers located in Canada and the U.S. Southwest. The utility maintains contracts with producers and suppliers over daily, monthly, and longer term agreements. PG&E also maintains gas storage facilities and a network of conveyance and distribution pipelines within its service area. In order to address future increases in demand, PG&E maintains an active planning process to identify and deploy additional conservation measures to minimize increases in demand, to secure continued natural gas supply, and to maintain sufficient distribution system capacity within its service area. With respect to the proposed DSP and vicinity, existing and planned infrastructure is anticipated to be sufficient to maintain service to the proposed plan and other cumulative scenario projects. Therefore, cumulative scenario impact on natural gas supply would not be cumulatively considerable.[26]

Additionally, conservation policies encouraged by the City, including those set forth in the City's 2035 General Plan (electricity and natural gas services, energy consumption per capita, renewable energy, energy efficiency appliances) are expected to support increased energy conservation in new development, including that which would occur pursuant to the proposed DSP, could result in an overall increase in energy demand on suppliers, anticipated increases would be affected positively by these requirements. Cumulative impacts on energy production and transmission facilities therefore are not significant and the project's contribution is not cumulatively considerable. As such, this impact is considered **less than significant**.

Mitigation Measure

None required.

[24] Sacramento Municipal Utility District, 2017. The Challenge of Peak Demand. Available: https://www.smud.org/en/about-smud/company-information/challenge-of-peak-demand.htm. Accessed June 29, 2017.
[25] *Ibid*.
[26] Pacific Gas & Electric, 2017. Operating Data. Available: http://www.pge.com/pipeline/operations/cgt_pipeline_status.page#flows. Accessed June 29, 2017.

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4.6 Geology, Soils, and Seismicity

This section evaluates the potential for construction and operation of the proposed DSP to result in adverse impacts associated with geologic and soil constraints, such as settlement and slope instability, seismic hazards, and the loss of mineral resources.

There were no public comments related to seismicity, soils, or geology received in response to the Notice of Preparation. Comments presented by the Department of Toxic Substance Control (DTSC) or relating to soil toxins are addressed under section 4.8, Hazards and Hazardous Materials.

The analysis in this section is based on project-specific construction and operational features and investigations, geologic and geotechnical maps and reports related to the DSP Area and vicinity, data provided in the City of Sacramento 2035 General Plan and City of Sacramento 2035 General Plan Master Environmental Impact Report (MEIR); and reports published by the United States Department of Agriculture Natural Resources Conservation Service (NRCS), United States Geological Survey (USGS), National Earthquake Hazards Reduction Program, California Geological Survey (CGS), and Association of Bay Area Governments (ABAG).

4.6.1 Environmental Setting

The Environmental Setting is primarily based on Appendix C, the Background Report of the MEIR (see Section 7.1 “Geologic and Seismic Hazards” in Section 7 “Public Health and Safety” and Section 6.5 “Mineral Resources” in Section 6 “Environmental Resources”). A brief summary of the Environmental Setting is provided below. The environmental setting related to geology, soils, and seismicity has not materially changed since certification of the MEIR, and the following discussion is based on the MEIR setting and associated MEIR Appendix C, updated as appropriate to reflect current conditions.

Regional Geology

The proposed DSP is located within the Sacramento Valley and lies centrally in the Great Valley geomorphic province of California.[1] The Sacramento Valley forms the northern third of the Great Valley, which fills a northwest-trending structural depression bounded on the west by the Great Valley Fault Zone and the northern Coast Range, and to the east by the northern Sierra Nevada and the Foothills Fault Zone. Most of the surface of the Great Valley is covered with Holocene and Pleistocene-age alluvium, primarily composed of sediments from the Sierra Nevada and the Coast Ranges, which were carried by water and deposited on the valley floor. Siltstone, claystone, and sandstone are the primary types of sedimentary deposits. Older Tertiary deposits underlie the Quaternary alluvium.

[1] City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report*. Certified March 3, 2015. Appendix C, *Background Report.* p. 7-13.

Site Geology

Topography

Ground surface elevations in the DSP area are generally between about 20 feet and 40 feet above mean sea level (+20 to +40 feet msl). Most of the DSP Area is relatively flat at about 22 to 30 feet msl. The northeastern portion of the plan area, at Sutter's Landing Regional Park, has the highest elevation at over 70 feet, and the southwestern portion of plan area, near the Sacramento River at the Interstate 80 (I-80) and Interstate 5 (I-5) interchange, has the lowest at below 20 feet. Because the DSP area and much of the city is flat, slope stability, landslide, and erosion hazards do not present substantial hazards to people and property. Site-specific effects of erosion are generally limited to construction activities, when stormwater runoff can carry sediment or other pollutants into local waterways.

Soil Types

The NRCS (formerly the Soil Conservation Service) remapped Sacramento County's soils most recently in 1993.[2] The soil behavior characteristics described by the NRCS include permeability, available water capacity, runoff, erosion, and shrink-swell potential.

- **Permeability -** the ability of a soil to transmit water or air. Permeability is considered in the design and construction of soil drainage systems, where the rate of water movement under saturated conditions affects behavior.
- **Available water capacity -** the quantity of water that the soil is capable of storing for use by plants.
- **Runoff -** the amount of water that runs off the surface of the land.
- **Erosion -** the susceptibility of a soil to water and/or wind erosion.
- **Shrink-swell potential -** the potential for volume change in a soil with a loss or gain in moisture. If the shrink-swell potential is rated moderate to high, damage to buildings, roads, and other structures can occur.

Soil characteristics affect suitability for accommodating uses such as shallow excavations, dwellings with basements, small buildings, roads and streets, and lawns and landscaping. Soil limitations can include slow or very slow permeability, limited ability to support a load, high shrink-swell potential, moderate depth to hardpan, low depth to rock, and frequent flooding. The level of limitation is classified as slight, moderate, or severe.

- **Slight** if soil properties and site features generally are favorable for the indicated use and limitations are minor and easily overcome.
- **Moderate** if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or reduce the limitations.

[2] U.S. Department of Agriculture Natural Resources Conservation Service, Soil Survey of Sacramento County California, Washington DC, April 1993, pp. 83, 84, & 109, Sheets 5 & 6.

- **Severe** if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are necessary.

The NRCS mapped over ten soil units that compose the DSP area, and of these, three primary soils comprise approximately 75 percent of the makeup. These soils include Columbia-Urban Land Complex, 0 to 2 percent slopes, Cosumnes-Urban Land Complex, 0 to 2 percent slopes; and Urban Land, described further below.[3]

- **Urban Land** represents over 50 percent of the DSP area. This unit consists of areas covered up to 90 percent by impervious surfaces. The soil material under these impervious surfaces may have been altered during construction, and generally are similar to nearby soil units.

  Urban land consists of areas covered by impervious surfaces such as roads, driveways, sidewalks, buildings, and parking lots. Soil material characteristics under the impervious surfaces are similar to those of nearby soil. Primary development limitations include depth to a seasonally high water table limiting shallow excavations (such as utility trenches and below-grade parking or storage levels) and the hazards associated with compression from loading. Other limitations include inadequate drainage for deep-rooted trees and shrubs. In summer, irrigation is needed to maintain landscaping.

- **Cosumnes-Urban Land Complex**. The Cosumnes series consists of very deep somewhat poorly drained soils formed in alluvium from mixed sources. Cosumnes soils are located on low flood plains and have slopes of zero to two percent. These soils have slow permeability and very slow to slow runoff potential. Flooding commonly occurs in unprotected areas, and rare flooding occurs in protected areas during prolonged periods of rainfall in the winter and early spring. Most areas are drained due to ground water overdraft. In some areas along major rivers, a water table occurs from December through April at depths of 36 to 60 inches, due to seepage.

- **Columbia-Urban Fill Complex**. The Columbia-Urban Fill Complex is composed of sandy to clayey loam.[4] This soil unit is considered to have a low potential for expansive soils, also referred to as shrink-swell or linear extensibility. Additionally, this developed urban environment has been largely reworked and local soil conditions may vary.

Seismic Conditions

California is in the circum-Pacific earthquake zone, which is the result of the process of plate tectonics, and is the most seismically active area in the United States. The theory of plate tectonics describes the earth's crust as at least a dozen large and small rigid slabs (plates) of solid rock that move relative to each other atop the hotter, more mobile rock of the earth's mantle. The San Andreas Fault System is an elongated zone of fracturing about 40 miles wide at the junction of two such plates. The Pacific Plate, west of the zone, is moving north relative to the North American Plate, east of the zone. One of the results of this movement is the regional rock deformation that creates the general northwest-southeast trend of valleys and ridges in the Coast

[3] U.S. Department of Agriculture Natural Resources Conservation Service, 2015. Soil Map. Available: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx, accessed April 7, 2017.

[4] U.S. Department of Agriculture Natural Resources Conservation Service, Soil Survey of Sacramento County California, Washington DC, April 1993, pp. 5, 35 through 40.

Ranges, as well as the shape of the Great Valley. Another result is the seismic activity that is common through California.

No known active faults occur in or adjacent to the City of Sacramento. During the past 150 years, there has been no documented movement on faults mapped in Sacramento County. Nonetheless, the region has experienced numerous instances of groundshaking originating from faults in the San Andreas Fault Zone, west of the County, and the Foothills Fault System, east of the County.[5]

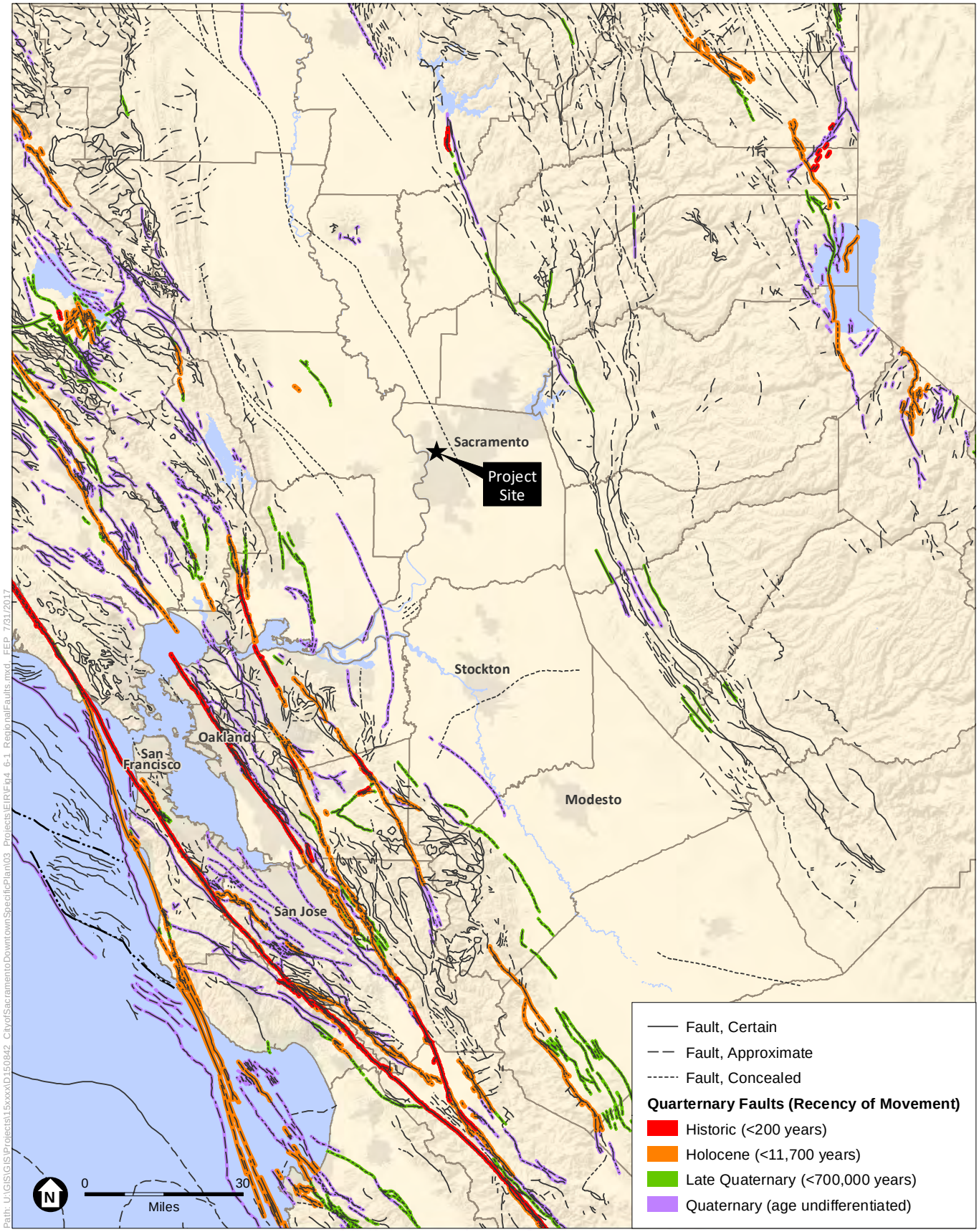
The closest known potentially active fault mapped by the CGS is the Dunnigan Hills fault (possible Holocene activity, defined by the GGS as within the last 11,000 years and by the USGS as within the last 15,000 years), about 19 miles northwest of Sacramento (see **Figure 4.6-1**). The closest branches of the seismically active San Andreas Fault System (historic activity, which is within the last 200 years) are the Green Valley-Concord Faults (45 miles southwest). The main trace of the San Andreas Fault is approximately 80 miles to the southwest. Other major faults within 100 miles of the Sacramento are included in **Table 4.6-1**.

TABLE 4.6-1
ACTIVE FAULTS WITHIN 100 MILES OF THE DSP AREA

Fault	Distance from Sacramento (miles)	Age[1]	Slip Rate (millimeters/year)[1]	Characteristic Earthquake (Moment Magnitude)[2]
West Valley Faults				
Dunnigan Hills	19	<15,000	Unknown	6.6
Foothill Fault System				
Bear Mountain	22	Unknown	Unknown	6.0
New Melones	40	Unknown	Unknown	6.0
San Andreas Fault System				
Vaca	28	<130,000	Unknown	6.1[2]
Greenville	43	<1,600,000	1.0 – 5.0	6.6
Concord	45	<150	1.0 – 5.0	6.2
Green Valley	42	<15,000	1.0 – 5.0	6.2
Healdsburg/Rogers Creek	56	<15,000	>5.0	7.1
Hayward	66	<150	>5.0	6.9 - 7.1
Calaveras	66	<15,000	>5.0	7.5
San Andreas	80	<150	>5.0	7.9

SOURCES:
1. U.S. Geological Survey, 2006. Quaternary fault and fold database for the United States, Available: http://earthquakes.usgs.gov/hazards/qfaults/. Accessed April 7, 2017.
2. Wesnouski, S.G., 1986, Earthquakes, Quaternary Faults, and Seismic Hazard in California, Journal of Geophysical Research, Vol. 91, No. B12, Table A1.
3. California Geological Survey, 2010. 2010 Fault Activity Map of California. Available: http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html#. Accessed April 7, 2017.

5 City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report*. Certified March 3, 2015. Appendix C, p. 7-2.



SOURCE: Esri, 2015; CGS, 2006; ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.6-1
Regional Faults

ESA

Peak Ground Acceleration

A common measure of ground motion at any particular location during an earthquake is the peak ground acceleration (PGA). The PGA for a given component of motion is the largest value of horizontal acceleration obtained from a seismograph. PGA is expressed as the percentage of the acceleration due to gravity (g), which is approximately 980 centimeters per second squared. In terms of automobile acceleration, one "g" of acceleration is equivalent to the motion of a car traveling 328 feet from rest in 4.5 seconds. For comparison purposes, the maximum PGA value recorded during the Loma Prieta earthquake in the vicinity of the epicenter, near Santa Cruz, was 0.64 g. Unlike measures of magnitude, which provide a single measure of earthquake energy, PGA varies from place to place and is dependent on the distance from the epicenter and the character of the underlying geology (e.g., hard bedrock, soft sediments, or artificial fills). During the maximum predicted earthquake, the anticipated PGA within the DSP area is 0.198g.[6]

Modified Mercalli Intensity Scale

The Modified Mercalli Intensity Scale assigns an intensity value based on the observed effects of groundshaking produced by an earthquake. Unlike measures of earthquake magnitude and PGA, the Modified Mercalli Intensity Scale is qualitative in nature in that it is based on actual observed effects rather than measured values. Similar to PGA, Modified Mercalli values for an earthquake at any one place can vary depending on the earthquake's magnitude, the distance from its epicenter, the focus of its energy, and the type of geologic material that underlies the location. The Modified Mercalli values for intensity range from I (earthquake not felt) to XII (damage nearly total), and intensities ranging from IV to X can cause moderate to significant structural damage. Because the Modified Mercalli scale is a measure of groundshaking effects, intensity values can be correlated to a range of average PGA values, as shown in **Table 4.6-2**.

A characteristic earthquake[7] on the entire San Andreas Fault (Mw 7.9 - Moment Magnitude)[8] is predicted to be the largest that would be felt in the DSP area. Because of the distance between the San Andreas Fault and the DSP area, the felt intensity would be about MMI VII. A similar intensity would be caused by a characteristic earthquake on the Dunnigan Hills fault (Mw 6.6) because it is much closer to the DSP area. The approximate relationships among earthquake magnitude (Moment Magnitude Scale), intensity (Modified Mercalli Intensity Scale), and PGA (percent of gravity) are shown in Table 4.6-2.

6 California Department of Conservation, 2008. Ground Motion Interpolator. Available: http://www.quake.ca.gov/gmaps/PSHA/psha_interpolator.html. Accessed April 7, 2017.

7 Characteristic earthquakes are repeat earthquakes that have the same faulting mechanism, magnitude, rupture length, location, and, in some cases, the same epicenter and direction of rupture propagation as earlier shocks.

8 A logarithmic scale used by modern seismologists to measure the total amount of energy released by an earthquake. The formula used for the Moment Magnitude (MW) scale incorporates parameters associated with the rock types at the seismic source and the area of the fault surface involved in the earthquake to provide a more accurate measure of energy release than the Richter Magnitude Scale.

TABLE 4.6-2
MODIFIED MERCALLI INTENSITY SCALE

Intensity Value	Intensity Description	Average Peak Ground Acceleration[a]
I	Not felt. Marginal and long period effects of large earthquakes.	< 0.0017 g
II	Felt by persons at rest, on upper floors, or favorably placed.	0.0017–0.014 g
III	Felt indoors. Hanging objects swing. Vibration like passing of light trucks. Duration estimated. May not be recognized as an earthquake.	0.0017–0.014 g
IV	Hanging objects swing. Vibration like passing of heavy trucks; or sensation of a jolt like a heavy ball striking the walls. Standing motor cars rock. Windows, dishes, doors rattle. Glasses clink. Crockery clashes. In the upper range of IV, wooden walls and frame creak.	0.014–0.039g
V (Light)	Felt outdoors. Sleepers wakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing, close, open. Shutters, pictures move. Pendulum clocks stop, start, change rate.	0.035–0.092 g
VI (Moderate)	Felt by all. Many frightened and run outdoors. Persons walk unsteadily. Windows, dishes, glassware broken. Knickknacks, books, etc., off shelves. Pictures off walls. Furniture moved or overturned. Weak plaster, adobe buildings, and some poorly built unreinforced masonry buildings cracked. Small bells ring (church, school). Trees, bushes shaken (visibly, or heard to rustle).	0.092–0.18 g
VII (Strong)	Difficult to stand. Noticed by drivers of motor cars. Hanging objects quiver. Furniture broken. Damage to some poorly built unreinforced masonry buildings. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stones, tiles, cornices (also unbraced parapets and architectural ornaments). Some cracks even in better built masonry buildings if not reinforced. Waves on ponds; water turbid with mud. Small slides and caving in along sand or gravel banks. Large bells ring. Concrete irrigation ditches damaged.	0.18–0.34 g
VIII (Very Strong)	Critical or extensive damage to some buildings, but well-designed buildings are largely undamaged. Steering of motor cars affected. Damage to unreinforced masonry buildings, including partial collapse. There is no damage to well-designed reinforced masonry buildings. Fall of stucco and some masonry walls. Twisting, fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses moved on foundations if not bolted down; loose panel walls thrown out. Decayed piling broken off. Branches broken from trees. Changes in flow or temperature of springs and wells. Cracks in wet ground and on steep slopes.	0.34–0.65 g
IX (Violent)	General panic. Damage to masonry buildings ranges from collapse to serious damage unless modern design. Wood frame structures, if not bolted, shifted off foundations. Frames racked. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground. In alluvial areas sand and mud ejected, earthquake fountains, sand craters.	0.65–1.24 g
X (Very Violent)	Most masonry and frame structures destroyed with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly.	> 1.24 g
XI (Very Violent)	Rails bent greatly. Underground pipelines completely out of service.	> 1.24 g
XII (Very Violent)	Damage nearly total. Large rock masses displaced. Lines of sight and level distorted. Objects thrown into the air.	> 1.24 g

NOTES:

[a] Value is expressed as a fraction of the acceleration due to gravity (g). Gravity (g) is 9.8 meters per second squared. 1.0 g of acceleration is a rate of increase in speed equivalent to a car traveling 328 feet from rest in 4.5 seconds.

SOURCES:

1. Wald et al., 1999. Relationships between Peak Ground Acceleration, Peak Ground Velocity, and Modified Mercalli Intensity in California. Earthquake Spectra 15(3):557-564.
2. Association of Bay Area Governments, 2003. Adapted from *Table - Modified Mercalli Intensity Scale* (MMI), updated 2017, Available: http://resilience.abag.ca.gov/shaking/mmi/ Accessed April 7, 2017.

Liquefaction

Liquefaction is a term that describes the loss of soil strength that can be caused by seismic forces acting on water-saturated, granular soil, leading to a "quicksand" condition resulting in various types of ground failure. Estimating the potential for liquefaction takes into account soil types, soil density, and groundwater table, and the duration and intensity of groundshaking. Liquefaction is most likely to occur within 50 feet below the ground surface in saturated uniformly fine-grained poorly consolidated sediments. The DSP area is underlain with natural levee and channel deposits (alluvium) containing silt and sand on which fill of a variety of materials has been placed. The water table fluctuates with the seasons corresponding mainly to the Sacramento River stage elevations and duration. Water table elevations can be as low as 2 feet and as high as 18 feet msl, or more depending on river conditions. Under certain conditions, some of the natural and artificial deposits could be subject to liquefaction during seismic events.

While the DSP area is not located in a currently established State of California Seismic Hazard Zone for liquefaction, based on the locally high water table and the types of soil in the Central City area, the plan area is susceptible to liquefaction hazards, typically induced by a seismic event.[9] However, because soil types can vary considerably and depth to groundwater is an important factor in liquefaction potential, site-specific geotechnical studies should be used to determine whether a specific location may be subject to liquefaction hazard. Further, for purposes of engineering design and construction, geotechnical studies are required by the California Building Code (CBC) to determine site-specific design and engineering requirements to protect against this hazard.

Settlement

Seismic settlement is the compaction of soil materials caused by groundshaking or the extraction of underground fluids (water, oil, gas). Settlement can be caused by liquefaction or densification of silts and loose sands (such as those that underlie the DSP area, especially in the vicinity of the historic China Lake and Willow Lake) as a result of seismic loading. Such settlement may range from a few inches to several feet, and be controlled in part by bedrock surfaces (which prevent settlement) and old lake, slough, swamp, or stream beds which settle readily. Static settlement can occur through increased loading of the surface or subsurface materials, such as that imposed by foundations for structures. Dewatering for excavation and foundation construction can cause settlement of the drying subsurface materials if the water formed part of the support for the surface soils. Landfill areas undergo settlement primarily through decomposition of organic landfill material that occurs over a long period of time without additional loads. In general, settlement of organic landfill is an order of magnitude greater than settlement of most natural soil.

Lateral Spreading

Lateral spreading is the horizontal movement of soil toward an open face such as a stream bank, the open side of a fill embankment, the side of a levee, or the wall of an excavation. It can be

[9] City of Sacramento. 2015. *Background Report to the 2035 Sacramento General Plan, Chapter 7, Public Health and Safety*, adopted March 3.

caused by seismic vibration, runoff or irrigation saturation, or by the removal of side-support such as occurs in deep excavations. Artificial fill areas that have not been properly engineered or that have steep, unstable banks, or unsupported walls are the most likely to be affected. Lateral spreading is likely to occur in areas of high groundwater.[10]

Mineral Resources

Minerals are naturally occurring chemical elements or compounds, or groups of elements or compounds that were not formed by organisms. Naturally occurring concentrations of minerals in the earth's crust are known as mineral deposits. Mineral resources are mineral deposits from which the economic extraction of a commodity (such as gold or copper) is currently potentially feasible. In addition to metallic minerals, materials used for construction (e.g., sand and aggregate), industrial and chemical processes (e.g., salt), and fuel (e.g., crude oil) are considered mineral resources in California.

In accordance with California's Surface Mining and Reclamation Act of 1975 (SMARA), the state geologist, through the California Department of Conservation, CGS; formerly known as the California Division of Mines and Geology (CDMG), is responsible for identifying and mapping the non-fuel mineral resources of the state. Economically significant mineral deposits are classified based on the known and inferred mineral resource potential of the land using the California Mineral Land Classification System, which includes the following four mineral resource zones (MRZs).

- MRZ-1. Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- MRZ-2. Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
- MRZ-3. Areas containing mineral deposits, the significance of which cannot be evaluated.
- MRZ-4. Areas where available information is inadequate for assignment to any other zone.

Generally, Downtown Sacramento, including the most of the plan area is located within an area that has been designated as MRZ-1 by the California Department of Conservation. These sites are not underlain by significant mineral resources. The northeastern-most and the southeastern-most portion of the plan area, around Sutter's Landing Regional Park and the I-80 and Highway 50 interchange respectively, are designated as MRZ-3.[11] The City of Sacramento has no guidance policies regulating land use overlaying MRZ-1 or MRZ-3 areas.

[10] City of Sacramento, 2005. General Plan Update Technical Background Report Chapter 7, Public Health and Safety, pp. 7.1-5 through 7.1-7.
[11] Dupras, D., 1999. Mineral Land Classification Map of PCC-Grade Aggregate Resources in Sacramento County, Plate 3, 1999.

According to the Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR), there are no producing, idle, or abandoned oil or gas wells within the DSP area.[12] Furthermore, there are no aggregate quarries located within the DSP area.[13]

Paleontological

The Society of Vertebrate Paleontology (SVP) has established guidelines for the identification, assessment, and mitigation of adverse impacts on nonrenewable paleontological resources.[14,15] Most practicing paleontologists in the United States adhere closely to the SVP's assessment, mitigation, and monitoring requirements as outlined in these guidelines, which were approved through a consensus of professional paleontologists and reflect the currently accepted standard practices. Many federal, state, county, and city agencies have either formally or informally adopted the SVP's standard guidelines for the mitigation of adverse construction-related impacts on paleontological resources. The SVP has helped define the value of paleontological resources and, in particular, indicates the following:

- Vertebrate fossils and fossiliferous (fossil-containing) deposits are considered significant nonrenewable paleontological resources and are afforded protection by federal, state, and local environmental laws and guidelines.
- A paleontological resource is considered to be older than recorded history, or 5,000 years before present, and is not to be confused with an archaeological resource.
- Invertebrate fossils are not significant paleontological resources unless they are present within an assemblage of vertebrate fossils or they provide undiscovered information on the origin and character of the plant species, past climatic conditions, or the age of the rock unit itself.
- A project paleontologist, special interest group, lead agency, or local government can designate certain plant or invertebrate fossils as significant.

In accordance with these principles, the SVP[16] outlined criteria for screening the paleontological potential of rock units and established assessment and mitigation procedures tailored to such potential. **Table 4.6-3** lists the criteria for high-potential, undetermined, and low-potential rock units.

12 California Division of Oil, Gas, and Geothermal Resources, 2016. Well Finder results for the Sacramento Area. Available: http://www.conservation.ca.gov/dog/Pages/Wellfinder.aspx. Accessed April 7, 2017.

13 U.S. Geological Survey, 2016. Mineral Resources Data System, 2016. Mineral Resources On-Line Spatial Data. Available: http://mrdata.usgs.gov/general/map.html. Accessed April 7, 2017.

14 Society of Vertebrate Paleontology, 1995. *Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources – Standard Guidelines, Society of Vertebrate Paleontology News Bulletin, Vol. 163.* pp. 22-27.

15 Society of Vertebrate Paleontology, 1996. *Conditions of receivership for paleontologic salvage collections: Society of Vertebrate Paleontology News Bulletin, Vol. 166.* pp. 31-32.

16 Society of Vertebrate Paleontology, 1995. *Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources – Standard Guidelines, Society of Vertebrate Paleontology News Bulletin, Vol. 163.*

TABLE 4.6-3
CRITERIA FOR DETERMINING PALEONTOLOGICAL POTENTIAL

Paleontological Potential	Description
High	Geologic units from which vertebrate or significant invertebrate or plant fossils have been recovered. Only invertebrate fossils that provide new information on existing flora or fauna or on the age of a rock unit would be considered significant.
Undetermined	Geologic units for which little to no information is available.
Low	Geologic units that are not known to have produced a substantial body of significant paleontological material.

SOURCE: Society of Vertebrate Paleontology, 1995 and 1996.

Per the MEIR, the City of Sacramento is not highly sensitive for paleontological resources present in fossil-bearing soils and rock formations. Most of the Downtown project site has been excavated and filled. Although not discussed in the SVP standards, artificial fills, surface soils, and high-grade metamorphic rocks do not contain paleontological resources. While such materials were originally derived from rocks, they have been altered, weathered, or reworked such that the discovery of intact fossils would be rare. Therefore, there is little potential for the project area to contain fossils.

4.6.2 Regulatory Setting

Federal

NPDES Construction General Permit

Construction associated with the proposed DSP would disturb more than one acre of land surface, potentially affecting the quality of stormwater discharges into waters of the U.S. The proposed plan would therefore be subject to the *NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002, Construction General Permit; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The Construction General Permit regulates discharges of pollutants in stormwater associated with construction activity to waters of the U.S. from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects (LUP), including installation of water pipelines and other utility lines.

The Construction General Permit requires that construction sites be assigned a Risk Level of 1 (low), 2 (medium), or 3 (high), based both on the sediment transport risk at the site and the receiving waters risk during periods of soil exposure (e.g., grading and site stabilization). The sediment risk level reflects the relative amount of sediment that could potentially be discharged to receiving water bodies and is based on the nature of the construction activities and the location of the site relative to receiving water bodies. The receiving waters risk level reflects the risk to the

receiving waters from the sediment discharge. The Construction General Permit contains requirements for Risk Levels 1, 2 and 3, and the LUP Type 1, 2, and 3 categories. If a project does not meet any one or more of the aforementioned conditions under the Type 1 LUP category, depending on its location within a sensitive watershed area or floodplain, the level of receiving water risk could be considered low, medium, or high. Depending on the Risk Level, the construction projects could be subject to the following Construction General Permit requirements:

- Effluent standards
- Good site management "housekeeping"
- Non-stormwater management
- Erosion and sediment controls
- Run-on and runoff controls
- Inspection, maintenance, and repair
- Monitoring and reporting requirements

The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific Best Management Practices (BMPs) designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving offsite into receiving waters. The SWPPP BMPs are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. In addition, the SWPPP is required to contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the Section 303(d) list for sediment.

The SWPPP must be prepared before construction begins. The SWPPP must contain a site map(s) that delineates the construction work area, existing and proposed buildings, parcel boundaries, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project area. The SWPPP must list BMPs and the placement of those BMPs that the applicant would use to protect stormwater runoff. Examples of typical construction BMPs include scheduling or limiting certain activities to dry periods, installing sediment barriers such as silt fence and fiber rolls, and maintaining equipment and vehicles used for construction. Non-stormwater management measures include installing specific discharge controls during certain activities, such as paving operations and vehicle and equipment washing and fueling. The Construction General Permit also sets post-construction standards (i.e., implementation of BMPs to reduce pollutants in stormwater discharges from the site following construction).

Occupational Safety and Health Administration Regulations

Excavation and trenching are among the most hazardous construction activities. The Occupational Safety and Health Administration's Excavation and Trenching standard, Title 29 of the Code of Federal Regulations, Part 1926.650, covers requirements for excavation and trenching operations. The Occupational Safety and Health Administration requires that all excavations in which employees could potentially be exposed to cave-ins be protected by sloping or benching the sides

of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area.

State

Alquist Priolo Earthquake Fault Zoning Act

The Alquist Priolo Earthquake Fault Zoning Act became law in California in 1972 to mitigate the hazard to structures for human occupancy of surface faulting. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazard of fault rupture and to prohibit the location of most structures for human occupancy[17] across these traces. Cities and counties must regulate certain development projects that are proposed to occur within an Alquist-Priolo Zone, which typically includes withholding permits until geologic investigations demonstrate that development sites are not threatened by future surface displacement. Surface fault rupture is not necessarily restricted within an Alquist-Priolo Zone. Each earthquake fault zone extends approximately 200 to 500 feet on either side of the mapped fault trace, because many active faults are complex and consist of more than one branch. There is the potential for ground surface rupture along any of the branches. There are no Alquist-Priolo Zones within the DSP area, although there are zones on the east and west sides of the Central Valley.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code, Chapter 7.8, Section 2690-2699.6) was adopted to reduce the threat to public safety and to minimize the loss of life and property by identifying and mitigating ground failure caused by strong earthquakes, namely liquefaction and slope failure. The Seismic Hazards Mapping Act requires the State Geologist to delineate seismic hazard zones, also known as "zones of required investigation," where regional (that is, not site-specific) information suggests that the probability of a hazard requiring mitigation is adequate to warrant a site-specific investigation. The DSP area is not located within a zone of required investigation.

The fact that a site lies outside a zone of required investigation does not necessarily mean that the site is free from seismic or other geologic hazards. Where a project—defined by the act as any structures for human occupancy or any subdivision of land that contemplates the eventual construction of structures for human occupancy—is within a zone of required investigation, lead agencies must apply minimum criteria for project approval. The most basic criteria for project approval are that the owner/developer adequately demonstrates seismic hazards at the site have been evaluated in a geotechnical investigation, that appropriate mitigation measures have been proposed, and that the lead agency has independently reviewed the adequacy of the hazard evaluation and proposed mitigation measures. Both the geotechnical report and the independent review must be performed by a certified engineering geologist or registered civil engineer. These criteria, along with seismic hazard evaluation and mitigation standards, are outlined in CGS

[17] Title 14 of the California Code of Regulations (CCR), §3601(e), defines buildings intended for human occupancy as those that would be inhabited for more than 2,000 hours per year.

Special Publication 117A, revised and re-adopted in September of 2008 by the State Mining and Geology Board.[18]

California Building Code

The CBC, which is codified in Title 24 of the California Code of Regulations, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, means of egress to facilities (entering and exiting), and general stability of buildings. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under State law, all building standards must be centralized in Title 24 or they are not enforceable. The provisions of the CBC apply to the construction, alteration, movement, replacement, location, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The 2016 edition of the CBC is based on the 2015 International Building Code (IBC) published by the International Code Council, which replaced the Uniform Building Code. The code is updated triennially, and the 2016 edition of the CBC was published by the California Building Standards Commission on July 1, 2016 and takes effect starting January 1, 2017. The 2016 CBC contains California amendments based on the American Society of Civil Engineers (ASCE) Minimum Design Standard ASCE/SEI 7-16, *Minimum Design Loads for Buildings and Other Structures*, provides requirements for general structural design and includes means for determining earthquake loads[19] as well as other loads (such as wind loads) for inclusion into building codes. Seismic design provisions of the building code generally prescribe minimum lateral forces applied statically to the structure, combined with the gravity forces of the dead and live loads of the structure, which the structure then must be designed to withstand. The prescribed lateral forces are generally smaller than the actual peak forces that would be associated with a major earthquake. Consequently, structures should be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse, but with some structural as well as nonstructural damage. Conformance to the current building code recommendations does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake. However, it is reasonable to expect that a structure designed in-accordance with the seismic requirements of the CBC should not collapse in a major earthquake.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, all of which are used to determine

[18] California Geological Survey, 2008. *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, Special Publication 117A, October 7, 2008.

[19] A load is the overall force to which a structure is subjected in supporting a weight or mass, or in resisting externally applied forces. Excess load or overloading may cause structural failure.

a seismic design category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site; SDC ranges from A (very small seismic vulnerability) to E/F (very high seismic vulnerability and near a major fault). Seismic design specifications are determined according to the SDC in accordance with Chapter 16 of the CBC. Chapter 18 of the CBC covers the requirements of geotechnical investigations (Section 1803), excavation, grading, and fills (Section 1804), load-bearing of soils (1806), as well as foundations (Section 1808), shallow foundations (Section 1809), and deep foundations (Section 1810). For Seismic Design Categories D, E, and F, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses measures to be considered in structural design, which may include ground stabilization, selecting appropriate foundation type and depths, selecting appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific PGA magnitudes and source characteristics consistent with the design earthquake ground motions.

All development under proposed DSP would be required to comply with CBC requirements, which would ensure the proposed plan is consistent with the CBC.

California Occupational Safety and Health Administration Regulations

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the work place. In California, the California Division of Occupational Safety and Health (Cal/OSHA) and the federal OSHA are the agencies responsible for ensuring worker safety in the workplace.

The OSHA Excavation and Trenching standard (29 CFR 1926.650), described above in Federal Regulations, covers requirements for excavation and trenching operations, which are among the most hazardous construction activities. OSHA requires that all excavations in which employees could potentially be exposed to cave-ins be protected by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area. Cal/OSHA is the implementing agency for both state and federal OSHA standards.

California Excavation Notification Requirements

California Code of Regulations Section 4216 requires that construction contractors report a project that involves excavation 48-hours prior to breaking ground. This program allows owners of buried installations to identify and mark the location of its facilities before any nearby excavation projects commence. Adherence to this law by project contractors reduces the potential of inadvertent pipeline or utility damage or leaks.

Road Design Standards

To safeguard life and property, the State of California has established construction standards and design criteria for roadways. Construction standards and seismic design criteria are contained in such regulatory codes as Caltrans' *Seismic Design Criteria Version 1.4* (June 2006), Highway Design Manual, Sections 110.6, *Earthquake Consideration* (September 2014), or similar codes adopted by a city for roadway corridor protection. These criteria deal with pavement and subsurface utility design (flexible joints and couplings, overpass construction, etc.), slope stability (especially slumping, settling, and liquefaction in fills), alignment modification to reduce exposure to fault rupture or intense groundshaking, and ground failures such as liquefaction. Prior to construction, geotechnical studies are required to be undertaken; recommended seismic-protection measures are required to be accommodated in the project design. The recommendations provide the required protection from the anticipated effects of seismic groundshaking or other soil and geotechnical conditions. Adherence to these standards of protection are mandatory and reduce the risk of injury or death from earthquakes or other geological or soil movement to the maximum extent technically practicable.

Local

Grading, Erosion, and Sediment Control (City Code Section 15.88)

This section regulates land disturbances, soil storage, pollution, and erosion and sedimentation resulting from construction activities within the City. Grading approval must be received from the Department of Utilities before construction. All projects are required to prepare erosion and sediment control plans which apply during and post construction. The plans include erosion control measures such as straw mulch, sediment controls such as fiber rolls, inlet protection, and housekeeping practices such as concrete management and spill prevention.

City of Sacramento 2035 General Plan

Chapter 4.5 of the Master EIR (MEIR) evaluated the potential effects related to seismic hazards, underlying soil characteristics, slope stability, erosion, existing mineral resources and paleontological resources in the City. Implementation of identified policies in the 2035 General Plan reduced all effects to a less-than-significant level.

The following goals and policies from the 2035 General Plan are relevant to geology, soils, and seismicity.

Goal PHS 3.1 Reduce Exposure to Hazardous Materials and Waste. Protect and maintain the safety of residents, businesses, and visitors by reducing, and where possible, eliminating exposure to hazardous materials and waste.

Policies

PHS 3.1.8 **Risks from Hazardous Materials Facilities.** The City shall review proposed facilities that would produce or store hazardous materials, gas, natural gas, or other fuels to identify, and require feasible mitigation for, any significant risks. The review shall consider, at a minimum, the following: presence of seismic or geologic hazards; presence of hazardous materials; proximity to residential development and areas in which substantial concentrations of people would occur; and nature and level of risk and hazard associated with the proposed project.

Goal EC 1.1 Hazards Risk Reduction. Protect lives and property from seismic and geologic hazards and adverse soil conditions.

Policies

EC 1.1.1 **Review Standards.** The City shall regularly review and enforce all seismic and geologic safety standards and require the use of best management practices (BMPs) in site design and building construction methods.

EC 1.1.2 **Geotechnical Investigations.** The City shall require geotechnical investigations to determine the potential for ground rupture, ground-shaking, and liquefaction due to seismic events, as well as expansive soils and subsidence problems on sites where these hazards are potentially present.

ER 1.1.7 **Construction Site Impacts.** The City shall minimize disturbances of natural water bodies and natural drainage systems caused by development, implement measures to protect areas from erosion and sediment loss, and continue to require construction contractors to comply with the City's erosion and sediment control ordinance and stormwater management and discharge control ordinance.

Goal ER 1.1 Water Quality Protection. Protect local watersheds, water bodies and groundwater resources, including creeks, reservoirs, the Sacramento and American Rivers, and their shorelines.

Policies

ER 1.1.7: **Construction Site Impacts.** The City shall minimize disturbances of natural water bodies and natural drainage systems caused by development, implement measures to protect areas from erosion and sediment loss, and continue to require construction contractors to comply with the City's erosion and sediment control ordinance and stormwater management and discharge control ordinance.

Goal 2.1 Identification and Preservation of Historic and Cultural Resources. Identify and preserve the city's historic and cultural resources to enrich our sense of place and our understanding of the city's prehistory and history.

Policies

HCR 2.1.16 **Archaeological & Cultural Resources.** The City shall develop or ensure compliance with protocols that protect or mitigate impacts to archaeological and cultural resources including prehistoric resources.

As discussed below and in Impacts 4.6-1 through 4.6-6, development consistent with the proposed DSP, would be required to comply with City seismic and soils-related standards. In addition, the City requires that a project-specific geotechnical investigation be submitted prior to development. Development of opportunity sites, and transit lines would further be required to comply with the requirements of the California OSHPD. With implementation of standards pursuant to City and OSHPD oversight, the proposed DSP would be consistent with the General Plan goals and policies.

Sacramento City Code

The City of Sacramento has adopted the updated CBC, with amendments, per Chapter 15.20 of the Municipal Code. This chapter mandates compliance with the CBC and all of its amendments adopted by the code. All new construction and modifications to existing structures within the city are subject to the requirements of the code.

The City of Sacramento has a grading ordinance (Chapter 15.88 of the Sacramento Municipal Code) that regulates grading on property within the City limits to safeguard life, limb, health, property, and the public welfare; to avoid pollution of watercourses with nutrients, sediments, or other materials generated or caused by surface water runoff; to comply with the City's national pollution discharge elimination system issued by the California regional water quality control board; and to ensure that the intended use of a graded site within the City limits is consistent with the 2035 General Plan, any adopted specific plans, and all applicable City ordinances and regulations. The grading ordinance is intended to control all aspects of grading operations within the city.

Department of Utilities

The City of Sacramento Department of Utilities (DOU) maintains policies, guidelines, and regulations regarding grading, erosion control, stormwater drainage design, inspection, and permitting. DOU is responsible for issuing and oversight of several types of development permits, including grading and building permits.[20]

Site-Specific Geotechnical Investigation

Prior to the commencement of any earthwork at a construction site in the DSP area, a geotechnical investigation must be prepared for that site, as required by the CBC and City codes. The geotechnical investigation must include soil borings to collect samples and laboratory testing to determine the appropriate design parameters for use for structural fill, roadbed fill, and landscaping fill, along with the fill placement requirements. The various soils may be tested for corrosivity to allow for proper infrastructure and foundation design.

A grading permit must be approved prior to grading activities. An applicant must submit, for City review and approval, Improvement and/or Grading Plans, along with a site-specific erosion and sedimentation control plan.

4.6.3 Analysis, Impacts and Mitigation

Significance Criteria

Appendix G of the CEQA Guidelines identifies potential significance criteria for the evaluation of impacts related to geology, soils, and seismicity. Those same criteria, with some minor modifications, are provided below. The criteria listed below, are also similar to the City's 2035 General Plan EIR and Initial Study Checklist.

This EIR assumes implementation of the proposed DSP would have a significant impact related to geology, soils, and seismicity if it would:

- Allow development that could result in substantial soil erosion;

[20] City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report*. Certified March 3, 2015. Appendix C, p. 7-13.

- Introduce either geologic or seismic hazards by allowing the construction of the project on a site without protection against those hazards;
- Result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state;
- Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan; or
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Methodology and Assumptions

This section assesses the potential for the proposed DSP to adversely change geologic and soil conditions or expose structures or people to unstable geologic conditions during project activities, using existing site conditions as a baseline for comparison. The potential for damage to proposed structures or increased risk of injury due to geologic hazards is analyzed using available data from site-specific investigations, and existing publications and maps completed by state and federal agencies, such as the USGS, and CGS. The severity and significance of geology and soils impacts are analyzed in the context of existing geologic and seismic hazard regulations and policies. The methods employed in this analysis are similar to those used in the General Plan MEIR.

Since certification of the MEIR, the California Supreme Court recently found that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents." In *California Building Industry Association v. Bay Area Air Quality Management District* (2015) __Cal.4th__, 2015 WL 9166120 (Case No. S213478), the Supreme Court explained that an agency is only required to analyze the potential impact of such hazards on future residents if the project would exacerbate those existing environmental hazards or conditions. Ordinary CEQA analysis is therefore concerned with a project's impact on the environment, rather than with the environment's impact on a project and its users or residents. Thus, with respect to geologic and seismic hazards, the City is not required to consider the effects of bringing a new population into an area where such hazards exist, because the project itself would not increase or otherwise affect the geologic conditions that create those risks. Nonetheless, in order to provide a complete picture of how the effects of the proposed DSP compare to the effects that were disclosed in the MEIR, these impacts are addressed below (see specifically Impacts 4.6-1 and 4.6-2).

Issues not Discussed in Impacts

The DSP area is within an area that has been identified as MRZ-1 and MRZ-3, where available geologic information indicates there is little or no likelihood for presence of significant mineral resources. The DSP area is within the urbanized area of the City of Sacramento, and unlikely to be available in the long-term for mineral extraction. Thus the implementation of the DSP would not adversely affect mineral resources. Therefore, this issue is not addressed further.

Impacts and Mitigation Measures

Impact 4.6-1: The proposed DSP could introduce either geologic or seismic hazards by allowing the construction of the project on a site without protection against those hazards.

No Alquist-Priolo Earthquake Fault Zones are present in the city of Sacramento. Therefore, no evidence exists to suggest that there is a reasonable chance of fault rupture within the DSP area. As discussed in the City of Sacramento 2035 General Plan MEIR, despite its relatively distant location from known faults and fault zones, people and structures within the city could be subject to the effects of groundshaking caused by a seismic event located miles away. The resulting vibration could cause damage to buildings, roads, and infrastructure (primary effects), and could cause ground failures such as liquefaction or settlement in loose alluvium and/or poorly compacted fill (secondary effects).[21]

Portions of the city, including the plan area, are underlain by artificial fill and alluvial deposits that, in their present states, could become unstable during seismic ground motion. To reduce the primary and secondary risks associated with seismically induced groundshaking, it is necessary to take the location and type of subsurface materials into consideration when designing foundations and structures.

As part of the construction permitting process, the City requires completed reports of soil conditions at the specific construction sites to identify potentially unsuitable soil conditions including potential exposure to potentially damaging seismic vibrations, ground failure, liquefaction, settlement, subsidence, lateral spreading, and collapse (General Plan Policies EC 1.1.1 and EC 1.1.2). The City requires that these evaluations be conducted by registered soil professionals, and measures to eliminate inappropriate soil conditions must be applied, depending on the soil conditions. The design of foundation and excavation-wall support must conform to the analysis and implementation criteria described in the CBC, Chapters 16, 18, 33, and the appendix to Chapter 33. Furthermore, the City's policy to reduce exposure to hazardous materials in the event of a seismic hazard (Policy PSH 3.1.8), would further reduce risks in the event of either a geologic or seismic hazard.

While the DSP would provide for the introduction of new population into the downtown Sacramento region, compliance with the City's construction permitting process, described above, would ensure that development of under the DSP would result in a **less-than-significant** impact related to seismic ground shaking.

Mitigation Measure

None required.

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[21] *Ibid*. Appendix C, pp. 7-2 through 7-4.

Impact 4.6-2: The proposed DSP could expose people to risk associated with unstable soil conditions, including expansive soils and subsidence.

Consistent with the MEIR analysis that the 2035 General Plan would introduce new structures to accommodate population growth, so too would the proposed plan. These structures and facilities could potentially be exposed to the effects of geological hazards associated with unstable soil conditions, such as expansive soils and subsidence, and while most of the plan area is underlain by soils with low expansion properties, this may vary from site to site.[22]

Due to the relatively flat topography of the city, landslides are not considered to be major threats to any areas within the city, including the plan area, however, subsidence or settlement may occur over smaller areas near dewatering activities. Because of the shallow water table, dewatering would be necessary during excavation and foundation support construction activities within the DSP area. Often, groundwater provides partial support for the near-surface soil materials and, when withdrawn, allows the soils to slough into the excavation. If the dewatering system draws down the water table adjacent to the excavation, there is the possibility of undermining foundations on the adjacent site, causing cracking or collapse. To avoid these conditions, dewatering system design and excavation-wall support need to be designed appropriate to the soil conditions. The required site-specific evaluation of soil conditions must contain recommendations for these systems specific to the site, and be incorporated into the construction design.

As part of the construction permitting process, the City requires completed reports of soil conditions at the specific construction sites to identify potentially unsuitable soil conditions including liquefaction, settlement, subsidence, lateral spreading, and collapse. The City requires that these evaluations be conducted by registered soil professionals, and measures to eliminate inappropriate soil conditions must be applied, depending on the soil conditions. The design of foundation and excavation-wall support must conform to the analysis and implementation criteria described in the CBC, Chapters 16, 18, 33, and the appendix to Chapter 33. In addition, implementation of Policies EC 1.1.1 and EC 1.1.2 would further ensure that the City review and enforce all applicable building codes and require site-specific geotechnical reports for all development projects, thereby reducing impacts on structures and people resulting from unstable geologic or soil conditions in the plan area.

For the reasons listed above, the proposed plan would not adversely affect the local geology or soil, or contribute to subsidence that could adversely affect nearby structures. This impact would be **less than significant**.

Mitigation Measure

None required.

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[22] City of Sacramento. 2015. *2035 Sacramento General Plan*, adopted March 3, 2015. p. 4.5-5.

Impact 4.6-3: The proposed DSP would allow development that could result in substantial soil erosion.

Impact 4.5-3 of the MEIR found that 2035 General Plan impacts related to erosion or the loss of topsoil would be less than significant, because erosion or the loss of topsoil would be managed through required regulations. This includes Chapter 15.88 of the City Code, Policy EC 1.1.2, Geotechnical Investigations, and Policy ER 1.1.7, Construction Site Impacts. The MEIR discussed this topic on pages 4.5-5 and 4.5-6.

Although the DSP area is relatively flat, like the 2035 General Plan the proposed DSP would require excavation and grading that has the potential to result in top soil loss and soil erosion by exposing bare and loosened soil to wind and rain. Compliance with the City of Sacramento's Grading Ordinance, Chapter 15.88 of the Sacramento Municipal Code, requires that prior to the commencement of grading an Erosion and Sediment Control Plan be prepared for each project within the City. An erosion control professional, landscape architect, or civil engineer specializing in erosion control must prepare the Erosion and Sediment Control Plan and during the installation of erosion and sediment control measures be on the project site to supervise implementation of the installation and maintenance of such facilities throughout the site clearing, grading and construction periods.[23]

In addition, 2035 General Plan policy EC 1.1.2 requires that projects within the City prepare a geotechnical investigation to determine site-specific seismic and soil characteristics and recommend appropriate mitigation measures to mitigate any potential impacts. Further, 2035 General Plan policy ER 1.1.7 requires that necessary erosion control measures are used during site development activities for all projects in the City.[24] As the 2035 General Plan addressed in Impact 4.5-3 of the MEIR, compliance with all state and city requirements would reduce impacts of the proposed DSP related to substantial soil erosion and loss of topsoil to a **less-than-significant** level.

Mitigation Measure

None required.

Impact 4.6-4: The proposed DSP could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

The City of Sacramento and surrounding area are not highly sensitive for paleontological resources although some discoveries have been made in the past. As with archaeological resources, the excavation and construction of the underground parking lots and the existing buildings has largely removed the historic-era ground surface and any potential traces of

[23] City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report*. Certified March 3, 2015. p. 4.5-6.
[24] *Ibid*.

paleontological resources in the plan area. Based on a review of current site plans and known disturbance, there appears to be a very low potential to uncover paleontological resources during project implementation. Nonetheless, if such resources are present, they could be damaged or destroyed during project excavation, pile driving, utilities installation and/or City and related construction activities.

Compliance with General Plan Policy HCR 2.1.16 requires that proper protocols are adhered to if paleontological resources are discovered during excavation or construction. Specifically, these procedures include protocols and criteria for qualifications of personnel, and for survey, research, testing, training, monitoring, cessation and resumption of construction, identification, evaluation, and reporting, as well as compliance with recommendations to address any significant adverse effects where determined by the City to be feasible. Therefore, the policies and implementation programs contained within the General Plan would reduce the impact of development under the DSP to **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

The geographic context for the analysis of impacts resulting from geological hazards is site-specific rather than cumulative in nature, because each development site has unique geological and soils characteristics that would be subject to site development and construction standards imposed by the State and the City of Sacramento, as described in the above impacts. These standards are applied to all construction projects within the City where geological or soils conditions could pose a risk to buildings or public safety. Therefore, the following cumulative analysis focuses on the increased number of people who would be exposed to such risks and the potential for increased erosion in the Sacramento River Watershed.

Impact 4.6-5: Implementation of the proposed DSP, in combination with other cumulative development, could contribute to cumulative increases in the number of people exposed to seismic and geologic risks.

As discussed under Methods, above, the California Supreme Court has recently held that CEQA does not require that impacts of the existing environment on the project, including future project structures, residents, or employees, be evaluated. Impact 4.5-1 of the MEIR addressed these types of impacts, wherein the project would bring a population of residents and employees into an area that has potential seismic-related hazards. Although not required by CEQA, those impacts are addressed here to provide a comparison of the cumulative effects with the proposed DSP, to the cumulative impacts disclosed in the MEIR.

Similar to the analysis presented in the MEIR, the proposed DSP, would be exposed to potential geologic hazards related to soil and subsurface conditions at individual building sites, and to

groundshaking from earthquakes along known and unknown faults in the Coast Ranges and the Sierra Nevada.

Although these effects vary in intensity and are common throughout California, their effects would be site-specific. As previously discussed, buildings and facilities for human occupancy in Sacramento are required to be sited and designed in accordance with appropriate geotechnical and seismic guidelines and recommendations consistent with the CBC, and the Sacramento Building Code. As a result of adherence to relevant plans, codes, and regulations with respect to project design and construction that require the prescribed levels of safety for the geotechnical and soils conditions at the site, the DSP would not make considerable contributions to cumulative impacts, as defined in the CEQA Guidelines, §15065(a)(3). Consequently, project-related cumulative impacts regarding geologic hazards would be **less than significant.**

Mitigation Measure

None required.

Impact 4.6-6: Implementation of the proposed DSP, in combination with other cumulative development, could contribute to cumulative increases in erosion within the Sacramento watershed.

The cumulative context for water quality related to soil erosion considers the geographic scope of the Basin Plan and, therefore, development within the larger Sacramento River watershed and the Sacramento–San Joaquin Delta (Delta). The Sacramento River watershed covers 27,000 square miles. The Delta extends for 24 miles from east to west and 48 miles from north to south where the Sacramento and San Joaquin rivers meet before discharging into the San Francisco Bay.

The alteration of topographic features can lead to increased erosion by creating unstable rock or soil surfaces, by changing the permeability or runoff characteristics of the soil, or by modifying or creating new pathways for drainage. Cumulative land development in the City of Sacramento, in addition to other development in the Sacramento River watershed and Delta, would result in an increase in such soil erosion processes if not properly mitigated. The proposed DSP would cause the modification of site conditions to accommodate development and to provide a stable and safe environment. During the construction phase, this modification could expose soil to erosion by wind or water.

To reduce the potential for cumulative erosion impacts, all projects in the watershed are required to be developed in conformance with the provisions of applicable federal, state, county, and/or city laws and ordinances. Compliance with the City of Sacramento's Grading Ordinance, Chapter 15.88 of the Sacramento Municipal Code, requires that prior to the commencement of grading an Erosion and Sediment Control Plan be prepared for each project within the City. An erosion control professional, landscape architect, or civil engineer specializing in erosion control must prepare the Erosion and Sediment Control Plan and during the installation of erosion and

sediment control measures be on the project site to supervise implementation of the installation and maintenance of such facilities throughout the site clearing, grading and construction periods.[25]

In addition, 2035 General Plan policy EC 1.1.2 requires that projects within the City prepare a geotechnical investigation to determine site-specific seismic and soil characteristics and recommend appropriate mitigation measures to mitigate any potential impacts. Further, 2035 General Plan policy ER 1.1.7 requires that necessary erosion control measures are used during site development activities for all projects in the City.[26] The individual contribution of development under the DSP to cumulative erosion impacts in the watershed would not be considerable, because the DSP would also be subject to State and City regulations as described in Impact 4.6-3. Consequently, project-related cumulative impacts regarding erosion and loss of topsoil would be **less than significant**.

Mitigation Measure

None required.

25 *Ibid*.
26 *Ibid*.

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4.7 Global Climate Change

This section evaluates the potential global climate change effects of adoption and implementation of the proposed DSP and evaluates the consistency of the design features of the proposed DSP with the City of Sacramento's Climate Action Plan and related 2035 General Plan policies.

This evaluation was developed based on specific policies and proposals included in the proposed DSP and described in Chapter 2, Project Description; on traffic information generated as part of the analysis presented in section 4.10, Transportation and Circulation; street grid systems found in the City of Sacramento to *Grid 3.0*;[1] the California Energy Commission's Building Energy Efficiency Standards;[2] and the City's *Climate Action Plan Consistency Review Checklist.*[3]

No comments related to climate change have been received on the NOP.

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.[4]

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" or GHGs. 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.

1 City of Sacramento, 2016. *Sacramento Grid 3*.0. Adopted August 16, 2016.
2 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.
3 City of Sacramento, 2015. *Climate Action Plan Consistency Review Checklist*. June 19, 2015.
4 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.

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[5] associated with agricultural practices and landfills. Other human-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, and more extreme heat days per year, high ozone days, large forest fires, and 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

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

power generation. The *Climate Change Scoping Plan* states as follows:[6] "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.

Impacts of Climate Change

Ecosystem and Biodiversity Impacts

Climate change is expected to have effects on diverse types of ecosystems.[7] 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."[8] 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.[9]

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

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

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

8 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.

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

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.[10]

Greenhouse Gas Emissions Estimates

Global Emissions

Worldwide emissions of GHGs in 2013 were approximately 35.3 billion metric tons of CO_2e per year.[11] 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.[12]

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).[13]

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 use to operate, heat, and

[10] 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.
[11] PBL Netherlands Environmental Assessment Agency, 2015. Trends in Global CO2 Emissions, 2014 Report.
[12] 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.
[13] 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.

cool 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).[14]

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 U.S. Environmental Protection Agency (US 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 US EPA to regulate GHGs as pollutants under the Clean Air Act (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 US EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:[15]

- ***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 US 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 US 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 US EPA to verify annual GHG emissions reports.

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

[15] 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/.

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.

Assembly Bill 1493

In 2002, then-Governor Gray Davis signed AB 1493. AB 1493, 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 were 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 US EPA for a waiver under the CAA; this waiver was initially denied in 2008. In 2009, however, the US EPA granted the waiver.

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

Senate Bill (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 expanded 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 SB 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 AB 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[16]) outlining measures to meet the 2020 GHG reduction goals. In order to meet these goals, California must reduce its GHG emissions by 30 percent

[16] 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.

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 SB 375 (discussed below) to implement the carbon emission reductions anticipated from land use decisions.

In May 2014, CARB published its First Update to the Scoping Plan.[17] 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 40 percent below 1990 by 2030 target required by SB32. This updated Scoping Plan is expected to be approved by the CARB in 2017.

Cap-and-Trade Program

The Scoping Plan identifies cap-and-trade as a key strategy for helping California reduce its GHG emissions.[18] 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.[19]

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

[17] California Air Resources Board, 2012. *First Update to the Climate Change Scoping Plan.* Adopted May 28, 2014.
[18] 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.
[19] *Ibid*. pp. 36-38.

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.

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 percent by 2020 and 15.6 percent by 2035, where 2005 is the baseline year for comparison.[20]

Senate Bill 350

SB 350 (Clean Energy and Pollution Reduction Act of 2015) was signed into law on October 7, 2015, establishing new goals for clean energy, clean air, and GHG reduction goals for 2030 and beyond. SB 350 requires the following:

- Increase California's renewable electricity procurement goal under the RPS from 33 percent by 2020 to 50 percent by 2030,
- Double existing building energy efficiency by 2030; and

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

- Facilitate the growth of renewable energy markets within the western U.S. by reorganizing the California Independent System Operator (CAISO).

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).[21]

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 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.

Senate Bill 32

In 2016, Governor Brown signed into legislation SB 32, which replaced Executive Order B-30-15 issued in 2015. The legislation establishes 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

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

[21] 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.

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 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.[22]

Local

Metropolitan Transportation Plan/Sustainable Communities Strategy

SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) is the long-range transportation plan for the region. The MTP/SCS designates the region using five "community types" (Center and Corridor Community, Developing Community, Established Community, Rural Residential Community, and Lands Not Identified for Development in the MTP/SCS Planning Period).

The MTP/SCS designates the entire DSP area as a Center and Corridor Community and a Transit Priority Area (TPA).[23] A Center and Corridor Community is typically:

> "…higher density and more mixed than surrounding land uses. Centers and Corridors are identified in local plans as historic downtowns, main streets, suburban or urban commercial corridors, rail station areas, central business districts, or town centers. They typically have more compact development patterns, a greater mix of uses, and a wider variety of transportation infrastructure compared to the rest of the region. Some have frequent transit service, either bus or rail, and all have pedestrian and bicycling infrastructure that is more supportive of walking and bicycling than other Community Types."[24]

The MTP/SCS also identifies "Transit Priority Areas" (TPAs). Transit Priority Areas are within one-half mile of an existing or planned major transit stop or high-quality transit corridor included in the MTP/SCS. The MTP/SCS maps the entire DSP area as a TPA, and specifically notes that in Sacramento, TPAs cover the "Capitol Corridor train station area," "a street car corridor in the central/downtown area of the City of Sacramento," and the regional job center in downtown Sacramento. The MTP/SCS recognizes that much of the growth in TPAs is expected to occur in Center and Corridor Communities, such as the DSP area. The MTP/SCS identifies that Transit Priority Areas "provide additional opportunities to realize the benefits of smart land use during the MTP/SCS planning period." [25]

22 State CEQA Guidelines section 15126.4(a).
23 Sacramento Area Council of Governments, 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy, adopted February 18, 2016, Figure 3-2, p. 28.
24 *Ibid.* pp. 26-27.
25 *Ibid.* p. 43.

According to Appendix E-3 of the MTP/SCS, the downtown Sacramento Center and Corridor Community [which includes the Railyards and the River District] "has the potential capacity to add 74,769 new jobs and 27,640 new homes" which would "more than double the amount of existing housing in the Central City today."[26] Development under the proposed DSP, when combined with development in the RSP and River District, would assist in the achievement of development intensities called for in the MTP/SCS.

The proposed DSP would facilitate development consistent with the uses and densities described for the Center and Corridor Communities in the MTP/SCS. Therefore, the project is consistent with the MTP/SCS.

City of Sacramento Climate Action Plan

In February, 2012, the City adopted a Climate Action Plan (CAP) in order to establish a policy and program framework to address the issue of climate change and related GHG emissions.[27] The intent of the CAP is to identify the nature of GHG emissions in the City and to implement policies, actions, and measures to reduce existing and future GHG emissions. The CAP includes several initiatives to reach its goals of reducing community-wide emissions by 15 percent below 2005 levels by 2020, 38 percent below 2005 levels by 2030, and 83 percent 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 CO_2e per person by 2020. This represents a 31 percent reduction from 2005 per capita emission levels (8.9 metric tons CO_2e per person).

The CAP outlines seven strategies to meet Sacramento's GHG reduction goals.[28] 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.

[26] *Ibid.* Appendix E, p. 140.
[27] City of Sacramento, 2012. *Sacramento Climate Action Plan*, adopted February 14, 2012.
[28] *Ibid*. pp. i-xiv.

- 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 that 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.[29]

To determine a project's consistency with the CAP, the City developed a Climate Action Plan Consistency Checklist.[30] This checklist provides a streamlined review process for proposed development projects subject to environmental review under CEQA.

Sacramento 2035 General Plan and Greenhouse Gas Emission Reduction Strategies

The 2035 General Plan incorporated the City's 2012 Climate Action Plan strategies, measures, and actions that reduce GHG emissions into appropriate elements of the General Plan. Appendix B of the General Plan is entitled, "Climate Action Plan Policies and Programs." Most of the listed items are "supporting," which, in this context, means that no specific GHG emission reduction estimate was developed, but that the implementation of this policy or program would *support* the City's overall efforts to reduce local sources of GHG emissions. Those policies that are relevant to the proposed DSP and for which the City has estimated the effectiveness for 2020 and 2035 emission reduction are presented and discussed below.

Policy LU 2.6.6 **Efficiency through Density.** The City shall support an overall increase in average residential densities throughout the City consistent with the adopted General Plan Land Use & Urban Form Diagram, as new housing types shift from lower-density, large lot developments to higher-density, small lot and multifamily developments as a means to increase energy efficiency, conserve water, and reduce waste.

[29] City of Sacramento, 2015. *General Plan Climate Action Plan Policies and Programs*. Appendix B pp. 1-78.
[30] City of Sacramento, 2013. *Climate Action Plan Consistency Review Checklist*. June 19, 2015. pp. 1-20.

As discussed in Chapter 2, Project Description, and Section 3.0, Land Use, Population and Housing, the proposed DSP would facilitate the development of housing in projects that would almost exclusively be multi-family and/or mixed-use projects that would tend to have densities greater than the past City and regional averages. The compact, infill, and mixed-use nature of development in the DSP area, in combination with the availability of transit, would tend to place residents within close proximity to jobs, retail, entertainment, commercial services, parks, health care, cultural uses, and other community amenities, which would facilitate non-automotive travel and would reduce the number of vehicle trips associated with growth.

Policy M 2.1.1 **Pedestrian Master Plan.** The City shall maintain and implement a Pedestrian Master Plan that carries out the goals and policies of the General Plan. All new development shall be consistent with the applicable provisions of the Pedestrian Master Plan.

Under the proposed DSP, new development would be required to comply with relevant provisions of the Pedestrian Master Plan. As discussed in more detail in Section 4.12, Transportation and Circulation, the proposed DSP would improve pedestrian connectivity in the DSP area.

According to the Sacramento Pedestrian Master Plan, the DSP area includes some of the highest ranking of Pedestrian Demand Areas in the City.[31] The DSP area is served by a comprehensive pedestrian network. The DSP area is already a highly walkable area due to built-in connectivity of its grid street network, extensive sidewalk coverage, pedestrian-friendly traffic signal timings (i.e., short cycle lengths with automatic pedestrian walk signals that do not require pedestrians to push a button to cross the street), and employment, residential, commercial, and cultural destinations within a short walking distance of one another. New and enhanced facilities called for in the proposed DSP would improve conditions for walking, improve connections between the DSP area and surrounding neighborhoods, provide new sidewalks where they do not currently exist, and provide additional sidewalk capacity in areas with high pedestrian volumes.

The proposed DSP would provide for streetscape projects that would be developed in the context of the individual street purpose and neighborhood setting. The desired outcome is a network of streets that provide safe pedestrian facilities including wider sidewalks and plazas at major activity locations and intersection crossings, enhanced crosswalk markings, new bicycle facilities as part of a comprehensive network, close integration with transit, and managed on-street parking. The streets would be designed to improve pedestrian safety and comfort by encouraging appropriate vehicle travel speeds.

The proposed DSP would also include connector street enhancement and pedestrian gap projects. Connector street enhancement projects would provide new sidewalks and intersection crossing treatments to mitigate barriers to pedestrian travel on streets that cross under the W-X freeway (Highway 50) or the Capitol City Freeway (Business 80). Pedestrian gap projects would include new connections across and adjacent to I-5, new pedestrian/bicycle only facilities along and

[31] City of Sacramento, *Pedestrian Master Plan*, 2006. Figure 5.1, Citywide Pedestrian Demand (Pedestrian Demand Score), p. 50. September 2006.

connecting to the Sacramento River, new grade-separated pedestrian/bicycle facilities connecting across the Union Pacific Railroad (consistent with the adopted Railyards Specific Plan), and pedestrian enhancements along the 29th/30th Street couplet that serves as a frontage road for Business 80.

The proposed DSP would also include activity center enhancement projects that would expand existing pedestrian facilities adjacent to major pedestrian activity centers such as Golden 1 Center, Old Sacramento, and the City Hall/Cesar Chavez Plaza Park area.

Policy M 4.3.2 **Traffic Calming Measures.** Consistent with the Roadway Network and Street Typology policies in this General Plan and Goal M 4.3, the City shall use traffic calming measures to reduce vehicle speeds and volumes while also encouraging walking and bicycling. Specific measures may include, but are not limited to, marked crosswalks, count-down signal timers, curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, roundabouts, traffic circles, on-street parking, planter strips with street trees, chicanes/ chokers, and geometric design features. (CAP Action 2.1.1)

The proposed DSP would provide for the implementation of a variety of projects that would achieve the goals of traffic calming, including 3-lane to 2-lane conversions on 10th, 16th, and J streets, a 4-lane to 2-lane conversion on Capitol Mall, a 4-lane to 3-lane conversion on North 12th Street (as part of the North 12th Street Complete Streets project), a two-way conversion on 5th Street, and a complete streets project on Broadway. All of these projects would have the effect of both reducing vehicle speeds and volumes and enhancing pedestrian and bicycling environments.

Policy M 4.4.4 **Traffic Signal Management.** To improve traffic flow and associated fuel economy of vehicles traveling on city streets, the City shall synchronize the remaining estimated 50 percent of the City's eligible traffic signals by 2035, while ensuring that signal timing considers safe and efficient travel for all modes. (CAP Action 2.6.1)

The roadway improvements that would be implemented as part of the proposed DSP, described above, would involve retiming and synchronizing of traffic signals to improve travel throughout the DSP area.

Program: 11. The City shall implement the Bikeway Master Plan by (1) increasing, or causing to be increased the amount of secure bicycle parking within the City by 50 locations annually, and (2) expanding the existing bikeway system by 5 percent annually. (CAP Action 2.3.1)

The bicycle network proposed as part of the DSP would involve re-striping existing roadways to fill gaps in the existing bicycle travel network and provide a more complete system along the Sacramento and American Rivers consistent with adopted plans, provide new buffered bike lanes, and establish a more complete low-stress bicycle network.

Bicycle facility improvements in the DSP area would support the City's goal of creating a Low Stress Bicycle Network. Low stress bicycle networks are characterized as networks that provide connectivity between destinations; provide sufficient safety elements such as dedicated bike lanes, physical barriers between bicyclists and vehicles; adequate traffic control devices such as traffic signals or all-way stops; lower roadway speed limits; or proper directional signage. Low

stress routes allow residents and visitors of all ages and abilities to complete many types of trips by bicycling, including trips to school, to work, errands, or for recreation.

Program: 14. The City shall work with Sacramento RT and community partners to increase public transit service above and beyond what is already planned in the 2035 Metropolitan Transportation Plan by 5 percent in 2020 and 10 percent in 2030. (CAP Action 2.4.1)

The projects proposed in the DSP are intended to enhance the operation of existing and future transit service in an effort to improve overall mobility in the DSP area. The project would include dedicated transit lanes on L, 8th, and 9th streets and enlarged bus stops for those stops with the highest number of boardings.

Policy U 2.1.10 **Water Conservation Standards.** The City shall achieve a 20 percent reduction in per-capita water use by 2020 consistent with the State's 20x2020 Water Conservation Plan (California Water Resources Control Board, 2010).

The proposed DSP would require future development to include energy and water conservation features, waste management techniques and materials selection, and other elements consistent with the California Green Building Code Tier 1 standards. This set of standards includes requirements related to stockpiling of soil, limitations on the percentage of landscaped area, minimum requirements for permeable paving, use of "cool roofing" materials, high efficiency lighting, advanced building efficiency performance requirements, reduction in construction waste, use of low pollutant floor covering materials, and other standards.

The project is consistent with each applicable General Plan policy and implementation program that has GHG emissions reductions calculated as a part of the 2035 General Plan and that is relevant to the proposed DSP and/or new development that would occur pursuant to the proposed DSP.

4.7.3 Analysis, Impacts, and Mitigation

Significance Criteria

GHG emissions relate to an impact that is inherently cumulative because of the globally accumulative nature of GHG and the fact that no single project can be specifically tied to a particular amount of 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.

Pursuant to section 15183.5 of the State CEQA Guidelines the Sacramento CAP qualifies 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 would be considered significant if the proposed project would conflict with the City's Climate Action Plan.

Methodology and Assumptions

The discussion of consistency with the CAP and the General Plan policies related to global climate change is provided above under Regulatory Setting. In addition to the policy language included in those two documents, 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. For the purposes of this EIR, the proposed DSP has been reviewed against the same checklist.

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.

Impacts and Mitigation Measures

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

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 consistency of the proposed DSP with each of the six checklist questions. Because the proposed DSP is a plan rather than a specific development project, the wording of the questions has been slightly revised so that they more appropriately address a plan document.

1. *Would the proposed DSP allow for development that would be 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?*

As discussed above pertaining to 2035 General Plan Policy LU 2.6.6, the proposed DSP anticipates the development of approximately 13,401 residential dwelling units, 280,030 square feet of restaurant uses, 435,837 square feet of government office building uses, 3,510,892 square feet of office uses, 2,303,044 square feet of retail/service uses and 643,797 square feet of medical office uses within the DSP area. These proposed land uses would be constructed within the Urban Neighborhood Low Density (12-36 du/ac / 0.5 – 1.5 FAR) City of Sacramento 2035 General Plan land use designation area.

Since the proposed DSP would be implemented in response to market demand and availability of development sites within the DSP area, the exact number of residential dwelling units and non-residential square footage that would be built is unknown at this time. However, all residential and non-residential uses proposed within the DSP would be constructed within the limits of the allowed densities/intensities provided in the City of Sacramento 2035 General Plan. Consequently, the proposed DSP would be consistent with the City's 2035 General Plan density and FAR requirements.

2. *Would the proposed DSP incorporate traffic calming measures (Applicable CAP Action: 2.1.1)?*

As is discussed above pertaining to 2035 General Plan Policy M 4.3.2, the proposed DSP would incorporate a number of changes in roadway networks that would result in lower vehicular traffic speeds within the DSP area:

- 16th Street 3-lane to 2-lane conversion between N Street and X Street to allow for the installation of on-street bicycle lanes;
- J Street 3-lane to 2-lane conversion between 16th Street and 30th Street to allow for the installation of on-street bicycle lanes;
- 5th Street two-way conversion between H Street and J Street, as well as between L Street and X Street, to provide a continuous two-way street extending from the Railyards to Land Park;
- Capitol Mall between 5th Street and 9th Street –lane reduction from a four-lane cross section to a two-lane cross section;
- 10th Street between I Street and L Street –lane reduction from a three-lane cross section to a two-lane cross section; and

- 10th Street between Railyards Boulevard and C Street – removed multimodal connection, consistent with recently updated Railyards Specific Plan.

The removal of one vehicle travel lanes two-way conversations would not only allow for a better experience for people who want to walk and bike, but will also promote slower vehicular traffic speeds in the DSP area. Consequently, the proposed DSP would implement traffic calming measures through the incorporation of the DSP's project design features.

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

As discussed above pertaining to 2035 General Plan Policy M 2.1.1, the proposed DSP would incorporate a number of pedestrian facilities and network connections in its project design. The DSP would include the following changes in pedestrian network that will promote the public to use public transportation:

- New sidewalks and crosswalks on the east side of 29th Street to enhance pedestrian network connectivity and access to/from destination including the Sutter Square Galleria Center Sutter General Hospital parking facilities, and the 29th Street Light Rail Station;

- Wider sidewalks and crosswalks on key streets surrounding Golden 1 Center to serve high pedestrian flows before and after events; and

- Improvements to freeway under crossings to provide more inviting gateways that better accommodate pedestrian and bicycle trips between the Grid and surrounding neighborhoods – including East Sacramento, Curtis Park, and Land Park. Freeway undercrossing improvements will consist of multiple strategies, including enhanced lighting, new/enhanced crosswalks at adjacent intersections, buffered bicycle lanes, and public art. All of these features are aimed at creating a more inviting gateway for non-automobile trips and stitching together neighborhoods separated by freeways.

The improvements to sidewalks and crosswalks listed above would promote connections to public transportation consistent with the City's Pedestrian Master Plan.

4. Would the proposed DSP 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)?

On August 16, 2016, the City of Sacramento Council approved the 2016 Bicycle Master Plan. The 2016 Bicycle Master Plan guides the development of bikeways and supports facilities like bike parking throughout the City of Sacramento.[32]

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

As discussed above pertaining to 2035 General Plan Program 11, the proposed DSP would be implemented in an area that already has a bicycle network made up of Class I trails, Class II lanes, Class III routes, and Class IV protected lanes. In addition to the existing established network, the DSP would also include the following improvements to the existing bicycle network:

- Addition of buffered bike lanes on portions of Capitol Mall, Broadway, J Street, L Street, P and Q streets, 9th and 10th streets, 15th and 16th streets, and 19th and 21st streets.
- Addition of separated bikeways on portions of 12th Street and F Street (the new section west of 7th Street) and a portion of 5th Street.
- Provision of new on-street bike lanes on portions of N Street (from 3rd to 15th streets) and S Street (from 3rd Street to Alhambra).
- Addition of new on-street bike lanes in the Railyards and River District areas as new streets are constructed and existing streets are rebuilt.
- Identification of a Low Stress Bicycle Network.

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

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

In lieu of installing on-site renewable energy systems that would generate 15 percent of the project's total energy, Sacramento's CAP checklist also considers projects as consistent if they would exceed the current Title 24 building standards by a minimum of 15 percent. To do this, the proposed residential and non-residential buildings developed pursuant to the proposed DSP would have to be constructed to exceed the energy efficiency standards established by the 2016 Title 24 energy standards by a minimum of 15 percent.

California has developed a goal of zero net energy (ZNE) use in all new homes by 2020 and commercial buildings by 2030.[33] 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 needs. The 2019 Title 24 energy standards are expected to take the final step to achieve ZNE for newly constructed residential buildings throughout California. A large majority

[33] 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.

of the proposed residential dwelling units will be built to 2019 Title 24 energy standards, which for residential units would clearly be 15 percent more efficient than the 2016 Title 24 energy standards. It is currently unknown if the 2019 Title 24 energy standards for non-residential buildings will exceed the 2016 Title 24 energy standards by 15 percent.

Since the proposed non-residential buildings may not exceed the 2016 Title 24 energy standards by 15 percent, the proposed DSP may not be consistent with the CAP Actions 3.4.1 and 3.4.2. Therefore, the impact is **potentially significant**.

Would the proposed DSP comply with minimum CALGreen Tier 1 water efficiency standards (CAP Action: 5.1.1)?

As discussed above pertaining to 2035 General Plan Policy U 2.1.10, the proposed DSP 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 water-conserving irrigation methods to reduce water waste. The proposed DSP would include a commitment to achieve, at a minimum, the CALGreen Tier 1 water efficiency standards. Consequently, the DSP would be consistent with this CAP energy efficiency and renewable energy requirement.

The proposed DSP would be consistent with five of the six applicable CAP consistency questions described above. Since it is possible that the non-residential buildings proposed under the proposed DSP would not exceed the 2016 Title 24 energy standards by 15 percent, this impact would be considered **potentially significant**.

Summary

As described above, the proposed DSP would require future development in the DSP area to be consistent with and conform to each of the applicable criteria to establish consistency with the City's CAP, except for CAP Action 3.4.1 and 3.4.2. 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 proposed DSP contribution to cumulative GHG emissions is considered **significant**.

Mitigation Measure

Mitigation Measure 4.7-1

Prior to issuance of building permits for new non-residential buildings, the applicant shall submit to the City of Sacramento Building Department building design plans demonstrating that the buildings would exceed the 2016 Title 24 energy standards by 15 percent or more.

Significance after Mitigation: Implementation of **Mitigation Measure 4.7-1** would insure that development under the proposed DSP would be consistent with CAP Action

3.4.1 and 3.4.2 by requiring the applicant design any proposed non-residential buildings to exceed the 2016 Title 24 energy standards by a minimum of 15 percent. As a result, the proposed DSP as mitigated would be consistent with CAP Action 3.4.1 and 3.4.2. Therefore, after mitigation this impact would result be **less than significant**.

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4.8 Hazards and Hazardous Materials

This section evaluates the potential for the proposed project to result in adverse impacts associated with hazards or hazardous materials. Additional analysis related to hazardous materials is presented in Section 4.9, Hydrology and Water Quality, which discusses the state Construction General Permit and the required Stormwater Pollution Prevention Plan (SWPPP) and Best Management Practices (BMPs) that would control runoff from construction sites.

As stated in Chapter 1, Introduction, on February 15, 2017, the City sent a Notice of Preparation (NOP) to responsible and trustee agencies, as well as to organizations, and individuals potentially interested in the project to identify the relevant environmental issues that should be addressed in the EIR. The City received comments on the NOP related to hazards and hazardous substances from the Central Valley Regional Water Quality Control Board (CVRWQCB), the Department of Toxics Substances Control (DTSC), the Sacramento County Environmental Management Department (EMD), and the Sacramento Regional County Sanitation District (Regional San). These regulatory agency comment letters identified regulations and permits that may apply to the DSP, identified several known hazardous materials sites within or near the DSP area, and requested consistency with the 2035 General Plan EIR and Railyards Specific Plan Update Subsequent EIR. These comments have been addressed in this section.

The analysis included in this section was developed based on information provided in the City of Sacramento 2035 General Plan and City of Sacramento 2035 General Plan Master EIR, and the Phase I Environmental Site Assessment Overview Study for the Sacramento Downtown Specific Plan (see Appendix H).

4.8.1 Environmental Setting

The study area for evaluation of hazards and hazardous materials impacts includes the DSP area shown on Figures 2-1 and 2-2, along with immediately adjacent areas. Relative to hazardous materials, the area beyond the immediately adjacent area is not considered because sites beyond the immediately adjacent area would be unlikely to be able to affect the DSP area. In addition, the vicinity up to 0.25 miles from the DSP area is considered relative to proximity to schools and up to two miles relative to proximity to airports.

Definitions

Hazardous Materials

A hazardous material is defined as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment (State Health and Safety Code Chapter 6.95, Section 25501(o)). The term “hazardous materials” refers to both hazardous substances and hazardous wastes. Under federal and state laws, any material, including wastes, may be considered hazardous if it is specifically listed by statute as such or if it is toxic (causes adverse human health effects), ignitable (has the ability to burn), corrosive

(causes severe burns or damage to materials), or reactive (causes explosions or generates toxic gases).

Hazardous wastes are hazardous substances that no longer have practical use, such as materials that have been spent, discarded, discharged, spilled, contaminated, or are being stored until they can be disposed of properly (Title 22 California Code of Regulations [CCR] Section 66261.10). Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific 22 CCR criteria (Sections 66261.20 through 66261.24). While hazardous substances are regulated by multiple agencies, as described in the Regulatory Setting below, cleanup requirements of hazardous wastes are determined on a case-by-case basis according to the agency with lead jurisdiction over the project.

Hazardous Building Materials Associated with Demolition and Renovation

Because of the age of some buildings and structures within the DSP area, the potential exists for the structures to contain hazardous building materials. Older buildings and structures can contain building materials that include hazardous components such as lead-based paint (LBP), asbestos-containing materials (ACMs), mercury, polychlorinated biphenyls (PCBs), and termiticides.

Among its numerous uses and sources, lead can be found in paint, water pipes, solder in plumbing systems, and in soils around buildings and structures painted with LBP. Old peeling paint can contaminate near surface soil, and exposure to residual lead can have adverse health effects especially in children. LBP was phased out in the United States beginning with the passage of the Lead-Based Paint Poisoning Prevention Act in 1971. Prior to the U.S. Environmental Protection Agency (US EPA) ban in 1978, LBP was commonly used on interior and exterior surfaces of buildings. Structures built prior to 1978 may have LBP and some paints manufactured after 1978 for industrial or marine uses legally contain more than 0.06 percent lead. Exposure to lead can result in the accumulation of lead in the blood, soft tissues, and bones. Children are particularly susceptible to potential lead-related health problems because it is easily absorbed into developing systems and organs.

Asbestos, a naturally-occurring fibrous material, was used as a fireproofing and insulating agent in building construction before such uses were terminated due to liability concerns in the late 1970s. From 1973 through 1990, several laws were passed banning the manufacture and use of ACM.[1] Some materials are still allowed to contain asbestos. The demolition of structures with ACM can result in airborne fibers. Inhalation of the tiny asbestos fibers can lead to lung disease. Structures that predate 1981 and structural materials installed before 1981 are presumed to potentially contain asbestos. Because it was widely used prior to the discovery of its health effects, asbestos can be found in a variety of building materials and components such as insulation, walls and ceilings, floor tiles, and pipe insulation. Friable (easily crumbled) materials are particularly hazardous because inhalation of airborne fibers is the primary mode of asbestos

[1] U.S. Environmental Protection Agency, 2016 *Federal Bans on Asbestos*. Available: https://www.epa.gov/sbestos/s-federal-bans-asbestos. Last Updated December 19, 2016. Accessed July 7, 2017.

entry into the body. Nonfriable asbestos is generally bound to other materials such that it does not become airborne under normal conditions. Non-friable asbestos and encapsulated friable asbestos do not pose substantial health risks. Asbestos exposure is a human respiratory hazard. Asbestos-related health problems include lung cancer and asbestosis. Any activity that involves cutting, grinding, or drilling during building renovation or demolition or relocation of underground utilities could release friable asbestos fibers unless proper precautions are taken. Inhalation of airborne fibers is the primary mode of asbestos entry into the body, making friable materials the greatest potential health risk.

Spent fluorescent light tubes commonly contain mercury vapors. In February 2004, regulations took effect in California that classified all fluorescent lamps and tubes as hazardous waste. When these lamps or tubes are broken, mercury is released to the environment. Mercury can be absorbed through the lungs into the bloodstream, and can be washed by rain water into waterways. Mercury switches may also be present in some buildings. A mercury switch (also known as a mercury tilt switch) is a switch which opens and closes an electrical circuit through a small amount of liquid mercury.

PCBs are organic oils that were formerly used primarily as insulators in many types of electrical equipment such as transformers and capacitors. After PCBs were determined to be carcinogenic in the mid-to-late 1970s, the US EPA banned PCB use in most new equipment and began a program to phase out certain existing PCB-containing equipment. Fluorescent lighting ballasts manufactured after January 1, 1978, do not contain PCBs and are required to have a label clearly stating that PCBs are not present in the unit. PCBs are highly persistent in the environment, and exposure to PCBs has been demonstrated to cause cancer, as well as a variety of other adverse health effects on the immune system, reproductive system, nervous system, and endocrine system.

Chlordane was a primary component of pesticides used to control termites from 1948 until 1988 when the US EPA banned the manufacture and use of chlordane.[2] The health risk from chlordane is derived through ingestion and inhalation. The acute (short-term) effects of chlordane in humans consist of gastrointestinal distress and neurological symptoms, such as tremors and convulsions. Chronic (long-term) inhalation exposure of humans to chlordane results in adverse effects on the nervous system. Chlordane is persistent in soil and is slow to degrade.

General Historical and Present Land Uses

The DSP area and the immediately surrounding area were originally lowlands adjacent to the Sacramento and American Rivers. Development in the area began in 1839 and the DSP area was largely entirely developed by 1851, as discussed in Section 4.4, Cultural Resources. The DSP area has a long history of mixed commercial, industrial, and residential use that has continued to the present. Various past and current land uses have included with the use, generation, or disposal of hazardous materials.

2 U.S. Environmental Protection Agency, 2000, *Chlordane*, January.

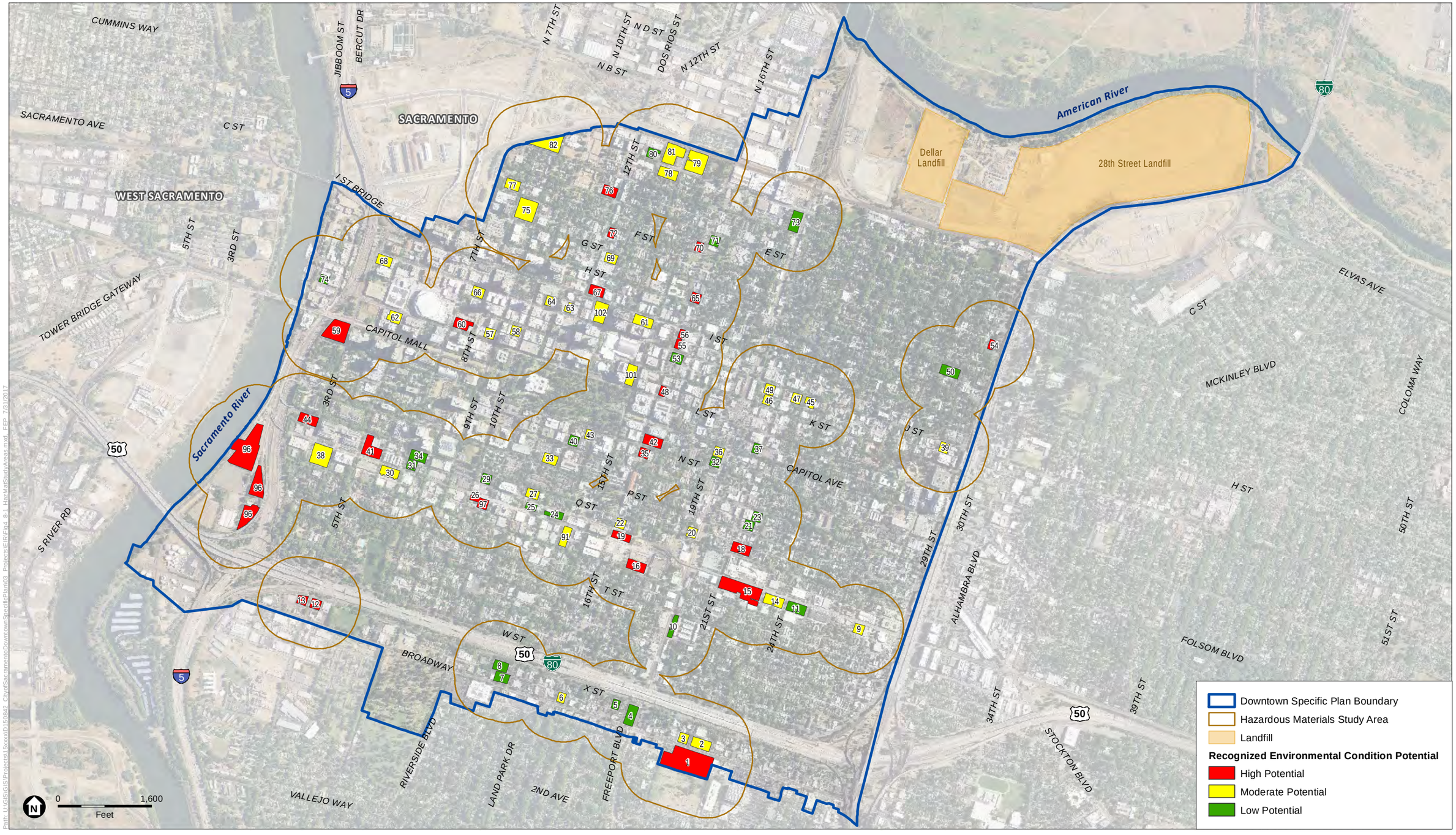
The Railyards Specific Plan (RSP) area, located adjacent and northwest of the DSP area, had a long history of heavy industrial and rail use. Industrial activities are no longer performed on the site; however, these historic activities involved on-site disposals, spills, and other releases of hazardous chemical products and items containing hazardous substances that resulted in soil and groundwater contamination. Cleanup activities are largely complete in the RSP area and the remaining hazardous materials issues are largely limited to localized land use restrictions that are unlikely to affect the DSP Area.

Opportunity Sites within the DSP Area

A Phase I ESA Overview Study was prepared for select properties in the DSP area. The Phase I ESA Overview Study (see Appendix H) identifies evidence or indications of recognized environmental conditions (RCM) as defined by the American Society for Testing and Materials (ATSM). An RCM is "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment." The Phase I ESA Overview Study evaluated the current hazardous materials status for 85 selected opportunity sites along with the adjacent areas up to 1/8-mile around each individual opportunity site within the DSP area.[3] The findings of the Phase I ESA Overview Study were summarized in a project master spreadsheet that ranked each Tier 1 site, assigning it a low, medium, or high potential for the particular site to have a Recognized Environmental Condition (REC). Of the 85 sites researched and evaluated, 27 of the sites have a high potential of an REC (impacts exist on the site), 36 have a moderate potential (impacts may exist on the site), and 22 have a low potential to have an REC (impacts are not likely to exist on the site).[4] The rankings for each of the sites, along with the definition of the three rankings, are summarized in **Table 4.8-1**. The locations of the sites, as well as areas checked for active hazardous materials sites within 1/8 mile of the opportunity sites, are shown on **Figure 4.8-1**.

It is important to note that the Phase I ESA Overview Study evaluated conditions as of June 2017 and the identified active hazardous materials sites will continue to undergo investigation and cleanup as required by regulatory agencies. Opportunity sites, like the rest of the DSP area, are anticipated to be developed or redeveloped over time, and as a result, conditions could be different in the future with some sites even completing remediation requirements. In addition, other hazardous materials releases may occur between now and then at other properties. The investigation and cleanup responsibilities for each hazardous materials property lies with the property's responsible party, as designated by the overseeing regulatory agency.

[3] Geocon Consultants, 2017. Phase I Environmental Site Assessment Overview Study, Sacramento Downtown Specific Plan, Tier 1 Opportunity Sites, Sacramento, California, January 27, revised June 9, 2017.
[4] *Ibid*. p. 3.



Path: U:\GIS\GIS\Projects\15xxxx\D150842_CityofSacramentoDowntownSpecificPlan\03_Projects\EIR\Fig4_8-1_HazMatStudyAreas.mxd, FEP 7/31/2017

SOURCE: USDA, 2016; City of Sacramento, 2017; Geocon, 2017; ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.8-1
Tier 1 Opportunity Sites
Recognized Environmental Condition Potential

ESA

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TABLE 4.8-1
SUMMARY OF TIER 1 REC RANKINGS

Tier 1 Opportunity Sites	REC Potential	Ranking Definition
1, 6, 12, 13, 15, 16, 18, 19, 26, 35, 41, 42, 44, 48, 54, 55, 56, 59, 60, 65, 67, 70, 72, 76, 96, 97, and 115	High	Known release exists on the site from an onsite or nearby offsite release (a)
2, 3, 9, 14, 20, 22, 27, 30, 33, 36, 38, 39, 43, 45, 46, 47, 49, 57, 58, 61, 62, 63, 64, 66, 68, 69, 75, 77, 78, 79, 81, 82, 91, 101, 102, and 116	Moderate	Soil, soil vapor, and/or groundwater may be affected from an onsite or nearby offsite release
4, 5, 7, 8, 10, 11, 21, 23, 24, 25, 29, 31, 32, 34, 37, 40, 50, 53, 71, 73, 74, and 80	Low	Unlikely to encounter releases in soil, soil vapor, or groundwater

NOTES:
Tier 1 Opportunity Sites are keyed to Figure 4.8-1
REC = Recognized Environmental Condition as per guidance from ASTM 1527-13.
(a) = Release refers to an unauthorized release of a petroleum product or hazardous substance to the environment - i.e., the ground surface, soil, soil vapor, groundwater, or surface water on a property.

SOURCE: Geocon Consultants, 2017. Phase I Environmental Site Assessment Overview Study, Sacramento Downtown Specific Plan, Tier 1 Opportunity Sites, Sacramento, California, January 27, revised June 9, 2017. p. 3.

In addition, the Phase 1 assessment concluded that because of the long history of development, there are ubiquitous environmental issues that may exist throughout the DSP area. These environmental issues may warrant individual assessment prior to redeveloping a given property to assess hazardous building materials and/or soil that may require removal or to determine reuse and disposal options. These ubiquitous environmental issues include: lead and/or asbestos in, on, and around existing structures, or in soil from deteriorated building materials that include LBP and/or ACM; mercury from old light tubes, thermostats, and other electrical equipment; PCBs from old electrical equipment; and pesticides (e.g., chlordane) in soil from application of termiticides around structures.

Other Hazardous Materials Sites within the DSP Area

In addition to the results of the Phase 1 assessment discussed above, the SWRCB GeoTracker database and the DTSC EnviroStor database were checked for the presence of former or current landfills. Two closed landfills are located within the northeastern portion of the DSP area as discussed below.

28th Street Landfill

The 28th Street Landfill is a closed Class III landfill that consisted of two waste management units and other unlined fill areas.[5] Class III landfills are not permitted to accept hazardous or liquid waste. This landfill was located in the northeast area of the DSP area as shown on Figure 4.8-1. The 172-acre landfill accepted waste from the 1960's until closure beginning in 1994 and

5 Central Valley Regional Water Quality Control Board, 2016. Conditional Approval of Updated Evaluation Monitoring Work Plan, 28th Street Landfill, Sacramento County, January 19, 2016.

completed in 1997.[6] Groundwater beneath the landfill has been contaminated with volatile organic compounds (VOCs) and inorganic constituents affecting groundwater south of the landfill. The CVRWQCB issued Cleanup and Abatement Order R5-2015-0739 requiring additional investigation to characterize the nature and extent of the contaminants. The depths to groundwater ranged from 16.5 to 42.5 feet below ground surface (bgs) during the four groundwater monitoring events conducted during 2016. The results of the December 2016 groundwater sampling event indicated that some VOCs and inorganic constituents attributed to the 28th Street Landfill extend as far south as E Street. As a part of the post-closure requirements, this landfill is under a landfill gas monitoring program due to the generation of landfill gas, mostly methane, within the footprint of the landfill.

Dellar Landfill

The Dellar Landfill, located at 2401 A Street, is in the northeast portion of the DSP area and adjacent to and on the west side of the above-discussed 28th Street Landfill, as shown on Figure 4.8-1. The Dellar Landfill was an unclassified landfill that is regulated by Waste Discharge Requirements Order R5-2015-0051.[7] This 29-acre landfill was used to dispose of trash and operated from 1959 to 1963.[8] The depths to groundwater ranged from 16.5 to 40.8 feet bgs during the four groundwater monitoring events conducted during 2016.The results of the December 2016 groundwater sampling event indicated that some VOCs and inorganic constituents attributed to the Dellar Street landfill extend as far south as E Street. As a part of the post-closure requirements, this landfill is under a landfill gas monitoring program due to the generation of landfill gas, mostly methane, within the footprint of the landfill.

Airports

There are no public or private airports located within 2 miles of the DSP area. The California Highway Patrol Academy Airport is located about 3.3 miles to the west. Sacramento International Airport is located about 7.5 miles to the northwest. The Sacramento Executive Airport is located about 3 miles to the south.

Schools

The following public and private schools are located within the DSP:

- Adroit Sacramento School of Architecture, 315 12th St, Sacramento, CA 95814
- Courtyard Elementary School, 205 24th St, Sacramento, CA 95816
- Discovery Tree School, 450 N St, Sacramento, CA 95814

6 SCS Engineers, 2017. Second Semi-Annual and Annual 2016 Monitoring Report, 28th Street Landfill, Sacramento, California, January 31, 2017.
7 Central Valley Regional Water Quality Control Board, 2016, Revised Final Closure and Postclosure Maintenance Plan, Dellar Trust Property, Sacramento County, January 27, 2016.
8 SCS Engineers, 2017, Second Semi-Annual and Annual 2016 Monitoring Report, Dellar Landfill, Sacramento, California, February 1, 2017.

- Discovery Tree Schools (I Street), 1001 I St, Sacramento, CA 95814
- Discovery Tree Schools (H St), 1235 H St, Sacramento, CA 95814
- Discovery Tree Schools (P St), 1025 P St, Sacramento, CA 95814
- Merryhill Elementary & Middle School, 2600 V St, Sacramento, CA 95818
- Met Sacramento High School, 810 V Street, Sacramento, CA 95818
- Mustard Seed School, 1321 C St, Sacramento, CA 95811
- Phoenix Schools Private Preschool, I Street, 600 I St, Sacramento, CA 95814
- Sacramento Montessori School, 1123 D St, Sacramento, CA 95814
- St. Francis of Assisi Elementary School, 2500 K St, Sacramento, CA 95816
- Washington Elementary School, 520 18th St, Sacramento, CA 95811
- West Ed High School, 1000 G St, Sacramento, CA 95814
- William Land Elementary School, 2120 12th St, Sacramento, CA 95818

The following schools are located outside of the DSP but within ¼-mile of the DSP area:

- Sutter Middle School, 3150 I St, Sacramento, CA 95816
- Phoenix Schools Private Preschool, Farmer's Market, 1820 Alhambra Blvd Suite 130, Sacramento, CA 95816

Wildfire Hazards

California Department of Forestry and Fire Protection (CAL FIRE) maps identify fire hazard severity zones in state and local responsibility areas for fire protection. The DSP area is not located within or near a very high or high fire hazard severity zone for either state or local responsibility areas.[9,10]

4.8.2 Regulatory Setting

Federal

The primary federal agencies with responsibility for hazardous materials management include the US EPA, U.S. Department of Labor Occupational Safety and Health Administration (Fed/OSHA), and the U.S. Department of Transportation (DOT). Federal laws, regulations, and responsible agencies are summarized in **Table 4.8-2**.

9 CAL FIRE, 2007. Fire Hazard Severity Zones in SRA, Sacramento County, November 7, 2007.
10 CAL FIRE, 2008. Very High Fire Hazard Severity Zones in LRA, Sacramento County, July 30, 2008.

TABLE 4.8-2
FEDERAL LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT

Classification	Law or Responsible Federal Agency	Description
Hazardous Materials Management	Community Right-to-Know Act of 1986 (also known as Title III of the Superfund Amendments and Reauthorization Act (SARA)	Imposes requirements to ensure that hazardous materials are properly handled, used, stored, and disposed of and to prevent or mitigate injury to human health or the environment in the event that such materials are accidentally released.
Hazardous Waste Handling	Resource Conservation and Recovery Act of 1976 (RCRA)	Under RCRA, the US EPA regulates the generation, transportation, treatment, storage, and disposal of hazardous waste from "cradle to grave."
	Hazardous and Solid Waste Act	Amended RCRA in 1984, affirming and extending the "cradle to grave" system of regulating hazardous wastes. The amendments specifically prohibit the use of certain techniques for the disposal of some hazardous wastes.
Hazardous Materials Transportation	U.S. Department of Transportation (DOT)	DOT has the regulatory responsibility for the safe transportation of hazardous materials. The DOT regulations govern all means of transportation except packages shipped by mail (49 CFR).
	U.S. Postal Service (USPS)	USPS regulations govern the transportation of hazardous materials shipped by mail.
Occupational Safety	Occupational Safety and Health Act of 1970	Fed/OSHA sets standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries (29 CFR).
Structural and Building Components (Lead-based paint, polychlorinated biphenyls, and asbestos)	Toxic Substances Control Act	Regulates the use and management of polychlorinated biphenyls in electrical equipment, and sets forth detailed safeguards to be followed during the disposal of such items.
	US EPA	The US EPA monitors and regulates hazardous materials used in structural and building components and their effects on human health.

SOURCE: ESA, 2016. *Sacramento Railyards Specific Plan Update, KP Medical Center, MLS Stadium, & Stormwater Outfall, Draft Subsequent Environmental Impact Report*, June 2016.

State and local agencies often have either parallel or more stringent rules than federal agencies. In most cases, state law mirrors or overlaps federal law and enforcement of these laws is the responsibility of the state or of a local agency to which enforcement powers are delegated. For these reasons, the requirements of the law and its enforcement are discussed under either the state or local agency section.

State

The primary State agencies with responsibility for hazardous materials management include the Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (RWQCB) departments within the California Environmental Protection Agency (Cal EPA), California Occupational Safety and Health Administration (Cal/OSHA), California Department of Health Services (CDHS), California Highway Patrol and the California Department of Transportation (Caltrans). State laws, regulations, and responsible agencies are summarized in **Table 4.8-3**.

TABLE 4.8-3
STATE LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT

Classification	Law or Responsible State Agency	Description
Hazardous Materials Management	Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program); CUPA	In January 1996, Cal EPA adopted regulations, which implemented a Unified Program. The plan is implemented at the local level and the agency responsible for implementation of the Unified Program is called the Certified Unified Program Agency (CUPA), which for the City and County of Sacramento, is the Hazardous Materials Division of the Sacramento County Environmental Management Department (EMD).
	State Hazardous Waste and Substances List (Cortese List); DTSC, RWQCB, EMD	The DSP area includes a number of hazardous materials sites on the "Cortese List" compiled pursuant to Government Code section 65962.5 and referenced in Public Resources Code 21092.6. The oversight of hazardous materials sites often involves several different agencies that may have overlapping authority and jurisdiction. DTSC is the lead agency coordinating with the RWQCB, EMD, and other agencies regarding issues pertaining to hazardous materials.
Hazardous Waste Handling	California Hazardous Materials Release Response Plan and Inventory Law of 1985; CUPA	The California Hazardous Materials Release Response Plan and Inventory Law of 1985 (Business Plan Act) requires that businesses that store hazardous materials onsite prepare a Hazardous Materials Business Plan (HMBP) and submit it to the local CUPA.
	California Hazardous Waste Control Act; DTSC	Under the California Hazardous Waste Control Act, California Health and Safety Code, Division 20, Chapter 6.5, Article 2, Section 25100, et seq., DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste in California. The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; dictate the management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills. DTSC is also the administering agency for the California Hazardous Substance Account Act. California Health and Safety Code, Division 20, Chapter 6.8, Sections 25300 et seq., also known as the State Superfund law, providing for the investigation and remediation of hazardous substances pursuant to State law.
	Part 9 of the California Building Standards Code; Fire Departments	Part 9 the California Fire Code regulates the operation, placement, and use of emergency generators.
Hazardous Materials Transportation	Title 26 of the California Code of Regulations	Regulates the transportation of hazardous waste originating in the state and passing through the state (26 CCR).
	California Highway Patrol and the California Department of Transportation (Caltrans)	These two state agencies are primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies.
Occupational Safety	Cal/OSHA	Cal/OSHA has primary responsibility for developing and enforcing workplace safety regulations in California. Because California has a federally approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in Title 29 of the Code of Federal Regulations (CFR). Cal/OSHA standards are generally more stringent than federal regulations.
	Cal/OSHA regulations (8 CCR)	Concerning the use of hazardous materials in the workplace require employee safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation.

TABLE 4.8-3
STATE LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT

Classification	Law or Responsible State Agency	Description
Occupational Safety (cont.)	California Office of Statewide Health Planning and Development	The Office of Statewide Health Planning and Development serves as the regulatory building agency for all hospitals and nursing homes in California. Its primary goal in this regard is to ensure that patients in these facilities are safe in the event of an earthquake or other disaster, and to ensure that the facilities remain functional after such an event in order to meet the needs of the community affected by the disaster.
Construction Storm Water General Permit (Construction General Permit; Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ)	RWQCB	Dischargers whose project disturbs one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one of more acres, are required to obtain coverage under the *NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit; Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). Construction activity subject to this permit includes clearing, grading, grubbing, and other disturbances to the ground such as excavation and stockpiling, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of a facility. The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific Best Management Practices (BMPs) designed to prevent sediment and pollutants from contacting stormwater from moving offsite into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management and good housekeeping, and are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area.
Municipal Separate Storm Sewer System (MS4) Permit NPDES No. CAS082597 and Order No. R5-2008-0142	RWQCB	The MS4 permit requires permittees (in this case, the City of Sacramento and other municipalities) to reduce pollutants and runoff flows from new development and redevelopment using BMPs to the maximum extent practical. The MS4 permittee has also has its own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification element. The MS4 permit requires specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.
Industrial Storm Water General Permit Order No. 2014-0057-DWQ	RWQCB	Strom water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ (IGP). The IGP regulates discharges associated with certain defined categories of industrial activities including manufacturing facilities; hazardous waste treatment, storage, or disposal facilities; landfills, land application sites, and open dumps; cement manufacturing; fertilizer manufacturing; petroleum refining; phosphate manufacturing; recycling facilities; steam electric power generating facilities; transportation facilities; and sewage or wastewater treatment works. The IGP requires the implementation of BMPs, a site-specific SWPPP, and monitoring plan. The IGP also includes criteria for demonstrating no exposure of industrial activities or materials to storm water, and no discharges to waters of the United States

TABLE 4.8-3
STATE LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT

Classification	Law or Responsible State Agency	Description
Dewatering Permit	RWQCB	If a proposed project includes construction of groundwater dewatering o be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Risk General Order) No. 2003-0003 or the Central Valley RWQCB Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver) R5-2013-0145. Small temporary construction projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley RWQCB prior to beginning discharge.
Medical Waste	Medical Waste Management Act	Within the regulatory framework of the Medical Waste Management Act, the Medical Waste Management Program of the CDHS ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste offsite treatment facilities and transfer stations throughout the state. The CDHS also oversees all medical waste transporters.
Underground Infrastructure	California Government Code Section 4216-4216.9	Section 4216-4216.9 "Protection of Underground Infrastructure" requires an excavator to contact a regional notification center (e.g., Underground Services Alert or Dig Alert) at least two days prior to excavation of any subsurface installations. Any utility provider seeking to begin a project that could damage underground infrastructure can call Underground Service Alert, the regional notification center for southern California. Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities are then notified and are required to mark the specific location of their facilities within the work area prior to the start of project activities in the area.

SOURCE: ESA. 2016, *Sacramento Railyards Specific Plan Update, KP Medical Center, MLS Stadium, & Stormwater Outfall, Draft Subsequent Environmental Impact Report*, June 2016.

Within the above-listed regulations, citations to specific hazardous materials relevant to disposal and renovations of existing structures are listed below.

- ACM: 8 CCR 1529 and 5208
- LBP: 8 CCR 1532.1
- PCBs: RCRA: 4 CFR 761; TSCA: 15 USC 2695; California: 22 CCR 66261.24
- Mercury and/or PCBs in light tubes and switches: 22 CCR 66262.11; 66273 et seq.; and 67426.1 through 67428.1

Local

Sacramento County Environmental Management Department, Hazardous Materials Division

The Hazardous Materials Division of the Sacramento County EMD is the designated Certified United Program Agency (CUPA) for the City of Sacramento and Sacramento County and is

responsible for implementing six statewide environmental programs for Sacramento County, including:

- Underground storage of hazardous substances (USTs);
- Hazardous Materials Business Plan (HMBP) requirements;
- Hazardous Waste Generator requirements;
- California Accidental Release Prevention program;
- Uniform Fire Code hazardous materials management plan; and
- Above Ground Storage Tanks (Spill Prevention Control and Countermeasures Plan).

City of Sacramento 2035 General Plan

The following goals and policies from the 2035 General Plan are relevant to Hazards and Hazardous Substances.

Goal PHS 3.1 Reduce Exposure to Hazardous Materials and Waste. Protect and maintain the safety of residents, businesses, and visitors by reducing, and where possible, eliminating exposure to hazardous materials and waste.

Policies

PHS 3.1.1 **Investigate Sites for Contamination.** The City shall ensure buildings and sites are investigated for the presence of hazardous materials and/or waste contamination before development for which City discretionary approval is required. The City shall ensure appropriate measures are taken to protect the health and safety of all possible users and adjacent properties.

PHS 3.1.2 **Hazardous Material Contamination Management Plan.** The City shall require that property owners of known contaminated sites work with Sacramento County, the State, and/or Federal agencies to develop and implement a plan to investigate and manage sites that contain or have the potential to contain hazardous materials contamination that may present an adverse human health or environmental risk.

PHS 3.1.4 **Transportation Routes.** The City shall restrict transport of hazardous materials within Sacramento to designated routes.

PHS 3.1.6 **Compatibility with Hazardous Materials Facilities**. The City shall ensure that future development of treatment, storage, or disposal facilities is consistent with the County's Hazardous Waste Management Plan, and that land uses near these facilities, or proposed sites for the storage or use of hazardous materials, are compatible with their operation.

PHS 3.1.8 **Risks from Hazardous Materials Facilities.** The City shall review proposed facilities that would produce or store hazardous materials, gas, natural gas, or other fuels to identify, and require feasible mitigation for, any significant risks. The review shall consider, at a minimum, the following: presence of seismic or geologic hazards; presence of hazardous materials; proximity to residential development and areas in which substantial concentrations of people would occur; and nature and level of risk and hazard associated with the proposed project.

Goal LU 7.2 Industrial Development. Maintain industrial districts that provide for the manufacturing of goods, flex space, and research and development that are attractive, compatible with adjoining nonindustrial uses, and well-maintained.

Policies

LU 7.2.8 **Hazardous Industries.** The City shall require industrial uses that use solvents and/or other toxic or hazardous materials to be sited in concentrated locations away from existing or planned residential,

commercial, or employment uses and require the preparation of Hazardous Substance Management Plans to limit the possibility of contamination.

As discussed in the Environmental Setting, select opportunity sites in the DSP area, along with a 1/8-mile area surrounding each of those sites, have been researched to identify areas with possible hazardous materials contamination to ensure the safety of people in the vicinity of these areas. As discussed below in the impacts analyses, the DSP would be managed in a way that would reduce the potential for adverse impacts on human or environmental health. Therefore, the DSP would be consistent with the General Plan goals and policies.

The proposed DSP is consistent with the 2035 General Plan because there are numerous laws and regulations summarized in this Regulatory Setting requiring the appropriate management, handling, storage, transportation, and disposal of hazardous materials. For example, as previously discussed, all businesses that handle hazardous materials or generate hazardous waste would be required to prepare and implement a HMBP for their operations. This would be required of companies conducting construction activities (e.g., contractors handling paint, solvents, thinners, welding chemicals and gases) and operations (e.g., manufacturers using hazardous materials, dry cleaners, vehicle service and repair stations).

Emergency Response

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local government and private agencies. Responding to hazardous materials incidents is one part of this plan. Sacramento County has adopted the Area Plan for Emergency Response to Hazardous Materials Incidences in Sacramento County, which is administered by the EMD.[11] The Area Plan outlines the procedures that County regulatory and response agencies will use to coordinate management, monitoring, containment, and removal of hazardous materials in the event of an accidental release. The Area Plan also provides guidance for coordinating the responses of other agencies, including the DTSC, CHP, California Department of Fish and Wildlife (CDFW), RWQCB, and local fire departments.

Sacramento County Well Ordinance

Chapter 6.28 of the Sacramento County Code is intended to protect the health safety and general welfare of the people by ensuring that the groundwater of the County is not polluted or contaminated by improper well construction, modification, repair, or abandonment. The ordinance prohibits digging, boring, drilling, deepening, modifying, repairing or destroying a well without receiving a permit to do so from the EMD.

[11] Sacramento County Environmental Management Department, 2012. Area Plan for Emergency Response to Hazardous Materials Incidents in Sacramento County, September 2012.

Railyards Project Soil and Groundwater Management Plan

The RSP Area is adjacent to and northwest of the DSP. Ongoing cleanup activities may overlap the northwestern portion of the DSP (e.g., groundwater). In the event that contaminated groundwater originating from the RSP Area is encountered during projects in the DSP Area, the requirements of the Railyards Projects Soil and Groundwater Management Plan or SGMP, approved by DTSC in 2015, would apply.[12] The SGMP was prepared for use with each development project to be constructed within the RSP Area that requires special handling of soil and/or groundwater to ensure compliance with regulatory requirements and other obligations set forth in the SGMP. In particular, projects within the DSP Area are not permitted to interfere with ongoing cleanup activities within the RSP Area.

4.8.3 Analysis, Impacts and Mitigation

Significance Criteria

Criteria used to determine the significance of impacts related to hazards and hazardous materials are based on Appendix G of the *CEQA Guidelines*. The project would result in a significant impact if it would:

- Expose people (e.g., residents, pedestrians, construction workers) to contaminated soil during construction activities;
- Expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials, or other hazardous materials or situations during construction activities;
- Expose people (e.g., residents, pedestrians, construction workers) to contaminated groundwater during construction or dewatering activities;
- Substantially increase the risk of exposure of site occupants to inadvertent or accidental releases of hazardous substances transported on adjacent roadways or rail lines within or near the DSP area;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;
- Interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

[12] Stantec, 2015. *Railyards Projects Soil and Groundwater Management Plan, Sacramento Railyards, Sacramento, California*, December.

Methodology and Assumptions

Existing land uses, the Phase I ESA overview study, and publicly available environmental database resources were reviewed to identify known contaminated soil and/or groundwater sites in the DSP area. This information was used to determine if construction activities in the DSP area could encounter known subsurface contamination. Note that the status of the hazardous materials sites currently under investigation and cleanup may change over time when future redevelopment projects occur. The analysis also considers the range and nature of foreseeable hazardous materials use, storage, and disposal resulting from development pursuant to the proposed DSP and identifies the primary ways that these hazardous materials could expose individuals or the environment to health and safety risks. The specific types of businesses that could locate within the DSP area are unknown at this time, but the general types of businesses and the range and types of uses (e.g., commercial, industrial, and residential) that are expected to be located in the DSP area would be regulated by the various laws, regulations, and policies summarized in the Regulatory Setting and limited by zoning requirements. Compliance with applicable federal, state, and local health and safety laws and regulations by residents and businesses in the DSP area is assumed in this analysis, and local and state agencies would be expected to continue to enforce applicable requirements to the extent that they do so now.

The California Supreme Court recently found that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents." In *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4th 369, the Supreme Court explained that an agency is only required to analyze the potential impact of such hazards on future residents if the project would exacerbate those existing environmental hazards or conditions. CEQA analysis is therefore concerned with a project's impact on the environment, rather than with the environment's impact on a project and its users or residents. Thus, the City is not required to consider the effects of bringing a new population into an area where there are already hazardous materials or hazardous materials already transported on adjacent roadways or rail lines. However, in the interest of disclosure, this EIR discusses potential effects of the environment on people in the DSP area, including hazardous materials exposure.

Issues not Discussed in Impacts

As discussed in the Environmental Setting, there are no airports within 2 miles of the DSP area and the DSP area is not located within a very high or high fire hazard severity zone. Therefore, there would be **no impacts** relative to proximity to public airports, private airports, or areas within a wildfire hazard zone, and the impacts are not analyzed further.

Impacts and Mitigation Measures

Impact 4.8-1: Development pursuant to the proposed DSP could expose people to contaminated soil during construction activities.

Exposure to contaminated soil materials (both soil vapor and soil) would only occur during construction. Once a particular project has been constructed, there would be no further exposure during operations. Therefore, only construction impacts are analyzed below.

Construction

As described in Subsection 4.8.1, the DSP area was developed beginning in the 1800s and has evolved over the years to include, at various times, a wide range of commercial, industrial, and residential uses, including manufacturing, fueling stations and vehicle repair, dry cleaning, and landfills. As identified in the Phase I ESA Overview Study and summarized in the environmental setting, within the DSP area, 26 sites are currently considered to have a high potential for RECs (impacts or hazardous materials exist on the site) and 35 have a moderate potential (impacts or hazardous materials may exist on the site). Because of the long history of development, ubiquitous environmental issues may exist throughout the DSP area. In addition to the specific issues identified in the Phase I ESA Overview Study for individual sites, these ubiquitous environmental issues may include lead in soil from deteriorated LCP on existing or former structures and pesticides in soil around structures.

In addition, the closed landfills located in the northeast portion of the DSP area would present risks if construction were to occur there. Although the landfills were not permitted to accept liquid or hazardous waste, the decomposition of the solid waste can result in the generation of hazardous materials, as evidenced by the detection of contaminants in groundwater beneath and south of the landfills and the generation of methane gas within the waste footprints.

Note that the Phase I ESA Overview Study evaluated conditions as of June 2017 and the identified active hazardous materials sites will continue to undergo investigation and cleanup as required by regulatory agencies. At the future time when a given particular property is redeveloped, conditions would be different by then and the particular property may or may not have been cleaned up. In addition, unknown hazardous materials may be present in soil or other hazardous materials releases may occur between now and then at other properties. The investigation and cleanup responsibilities for each hazardous materials property would be with the property's responsible party, as designated by the overseeing regulatory agency, but may be incomplete at the time of redevelopment. Consequently, the excavation of contaminated soils during construction could expose people to associated health risks. This is considered a **potentially significant** impact.

Mitigation Measure

Mitigation Measure 4.8-1

If a development site is listed in the Phase I ESA Overview Study as being of moderate or high potential to have a Recognized Environmental Condition (REC), the applicant shall conduct a site specific Phase I Environmental Site Assessment during the entitlement process in general accordance with the current version of ASTM 1527 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process prior to construction and comply with the recommendations in the report.

This requirement does not apply to projects in which excavation would extend no deeper than 18 inches, including projects that are limited to installation of a fence, deck, single-family residence, garage or addition to an existing residence (e.g., room addition), shallow landscaping with or without irrigation lines, or other minor site improvements, or replacement of existing facilities (road signs, sidewalks, pipes, etc.) where ground disturbance would occur principally in previously disturbed sediment.

Significance after Mitigation: With the implementation of **Mitigation Measure 4.8-1** listed above, this impact would be reduced to a **less-than-significant** level because the Phase I assessment would identify the presence of potential or actual hazardous materials, which, if identified, would then require further investigation and cleanup in compliance with applicable regulations, if needed.

Impact 4.8-2: Development pursuant to the proposed DSP could expose people to asbestos-containing materials, lead-containing paint, PCBs, or other hazardous building materials or situations during demolition or renovation activities.

Exposure to ACM, LBP, or other hazardous materials in structures would only occur during demolition or renovation of existing structures during construction activities. Once the structures on a property under redevelopment have been removed or renovated, there would be no further exposure during operations. Therefore, only construction impacts are analyzed below.

Construction

As identified in the Phase I ESA Overview Study and summarized in the environmental setting, structures throughout the DSP area may include ACM, LBP, or other hazardous building materials. Removal or renovation of structures with hazardous materials could expose workers and the public to hazardous materials.

Various existing regulations require that demolition or renovation activities that may disturb or require the removal of materials that consist of, contain, or are coated with ACM, LBP, PCBs, mercury, and other hazardous materials must be inspected and/or tested for the presence of hazardous materials. The hazardous materials must be managed and disposed of in accordance with laws and regulations.

In the case of ACM and LBP, the identification, removal, and disposal is regulated under 8 CCR 1529 and 5208 for ACM and 8 CCR 1532.1 for LBP. All work must be conducted by a State-certified professional. If ACM and/or LBP is determined to exist onsite, a site-specific hazard control plan must be prepared detailing removal methods and specific instructions for providing protective clothing and equipment for abatement personnel. If necessary, a State-certified LBP and an asbestos removal contractor would be retained to conduct the appropriate abatement measures as required by the plan. Wastes from abatement and demolition activities would be disposed of at a landfill(s) licensed to accept such waste. Once all abatement measures have been implemented, the contractor would conduct a clearance examination and provide written documentation to the City that testing and abatement have been completed in accordance with all federal, state, and local laws and regulations.

In the case of PCBs, the identification, removal, and disposal is regulated under RCRA (4 CFR 7610, TSCA (15 USC 2695) and California regulations (22 CCR 66261.24). Electrical transformers and older fluorescent light ballasts not previously tested and verified to not contain PCBs must be tested. If PCBs are detected above action levels, the materials must be disposed of at a licensed facility permitted to accept the materials.

In the case of mercury in fluorescent light tubes and switches, the identification, removal, and disposal is regulated under 22 CCR 67426.1 – 67428.1 and 66261.50. Under these regulations, the light tubes must be removed without breakage and disposed of at a licensed facility permitted to accept the materials.

Compliance with all applicable laws and regulations at the federal, State, and local levels would prevent the exposure of individuals and the environment to the hazards by ensuring that all abatement regulations are carried out prior to and during demolition. Therefore, exposure to asbestos containing materials, LBP and/or other hazardous building materials would be **less than significant**.

Mitigation Measure

None required.

Impact 4.8-3: Development pursuant to the proposed DSP could expose people to contaminated groundwater during construction or dewatering activities.

Exposure to contaminated groundwater (the liquid groundwater or vapors volatilizing from the groundwater) could occur during dewatering excavations during construction activities and dewatering of subsurface building levels deep enough to encounter groundwater during operations. Construction and operations impacts are analyzed below.

Construction

As identified in the Phase I ESA Overview Study and summarized in the environmental setting above, groundwater beneath the former landfills and some identified opportunity sites have been contaminated by past uses and practices. As discussed above, groundwater underlying the former landfills in the northeastern portion of the DSP area was reported at depths ranging from approximately16 to 42 feet bgs, which is consistent with the DSP area. Groundwater monitoring has identified contaminants of concern beneath the landfills in the northeast portion of the DSP, as well as under various opportunity sites, and under the adjacent RSP Area to the northwest. These plumes are routinely monitored for various contaminants of concern, which include VOCs, petroleum hydrocarbons, and metals. These sites are in varying stages of investigation, monitoring, and remediation, and depending on timing of future redevelopment projects as part of the proposed DSP, the plumes may or may not have achieved case closure by the overseeing agency.

Temporary dewatering in areas of shallow groundwater is sometimes necessary during excavation activities to construct foundation systems, utility corridors, or installation of deep pilings. In the case of projects constructed within the DSP area, the depths of construction would have to be about 16 feet or deeper to encounter groundwater; shallower construction projects would be unlikely to require dewatering. If necessary, construction dewatering activities could extract groundwater that contains elevated level of contaminants potentially exposing the environment, construction workers, and/or the public to adverse effects. The dewatering of contaminated groundwater could therefore present risks to public health and safety, and the environment, if the contaminated dewatered groundwater is not handled properly.

Dewatered groundwater discharges to the City’s sewer system would be regulated and monitored by the City's Utilities Department pursuant to Department of Utilities Engineering Services Policy No. 0001, adopted as Resolution No. 92-439. Groundwater discharges to the City's sewer system are defined as construction dewatering discharges, foundation or basement dewatering discharges, treated or untreated contaminated groundwater cleanup, discharges, and uncontaminated groundwater discharges. Groundwater extracted during construction would be discharged into the City’s combined sewer system and routed to the Regional San Wastewater Treatment Plant for treatment. The treatment plant provides regional wastewater treatment services to commercial, residential, and industrial end users. See Section 4.13 Utilities for a discussion of sewer and drainage infrastructure and infrastructure capacity.

The City requires that any short-term discharge be permitted, or an approved memorandum of understanding (MOU) for long-term discharges be established, between the discharger and the City. Short-term limited discharges of seven days duration or less must be approved through the City Department of Utilities by acceptance letter. Long-term discharges of greater duration than seven days must be approved through the City Department of Utilities and the Director of the Department of Utilities through a MOU process. The MOU must specify the type of groundwater discharge, flow rates, discharge system design, a City-approved contaminant assessment of the proposed groundwater discharge indicating tested levels of constituents, and a City-approved effluent monitoring plan to ensure contaminant levels remain in compliance with State standards

or Regional San and Regional Water Board-approved levels. All groundwater discharges to the sewer must be granted a Regional San discharge permit. As a standard precautionary action, the Regional Water Board would be notified prior to beginning any site preparation or grading and the applicant would adhere to all requests and recommendations from the Regional Water Board. Prior to discharge, a National Pollutant Discharge Elimination System (NPDES) permit would be required that would specify standards for testing, monitoring, and reporting, receiving water limitations, and discharge prohibitions. In addition, groundwater dewatering in locations adjacent to the RSP Area could pump contaminated groundwater and interfere with ongoing RSP groundwater cleanup activities. As specified in the Railyards Projects - Soil & Groundwater Management Plan, groundwater may not be extracted, treated or discharged in any way without an approved plan submitted to DTSC, RWQCB, property owner(s), and project proponent.

Compliance with all applicable laws and regulations at the federal, State, and local levels would prevent the exposure of individuals and the environment to hazards associated with contaminated groundwater by ensuring that contaminated groundwater is routed to the Regional San treatment system and that dewatering activities do not interfere with ongoing groundwater cleanup in the RSP Area, if any. Therefore, exposure to contaminated groundwater would be **less than significant**.

Operations

Only future structures with underground basements, parking levels, and utilities deeper than 16 feet could be deep enough to encounter groundwater. Buildings constructed with waterproof foundations and no basement levels would not require permanent dewatering and associated risk of exposure to contaminated groundwater. Those future buildings and structures that would be deep enough to encounter groundwater and also require permanent dewatering would be required to acquire the long-term discharge MOU discussed above in the Construction section, which would route the groundwater to the Regional San treatment system. In addition, permanent dewatering in locations adjacent to the RSP Area would be required to acquire approval from the DTSC and RWQCB, as discussed above under Construction.

Compliance with all applicable laws and regulations at the federal, State, and local levels would prevent the exposure of individuals and the environment to hazards associated with contaminated groundwater by ensuring that contaminated groundwater is routed to the Regional San treatment system. Therefore, exposure to contaminated groundwater would be **less than significant**.

Mitigation Measure

None required.

Impact 4.8-4: The proposed DSP could increase the risk of exposure of site occupants to inadvertent or accidental releases of hazardous substances transported on adjacent roadways or rail lines near the site.

Although the City is not required to consider the effects of bringing a new population into an area where there are already hazardous materials or hazardous materials already transported on adjacent roadways or rail lines. However, in the interest of disclosure, this EIR discusses potential effects of the environment on people in the DSP area, including hazardous materials exposure.

Construction

Construction activities would likely require the use of limited quantities of hazardous materials such as fuels, oils, and lubricants for construction equipment; paints and thinners; and solvents and cleaners. These materials would be transported to and from the DSP area. The improper handling and transport of hazardous materials could result in accidental release of hazardous materials, thereby exposing site occupants to hazardous materials contamination.

As discussed in the Regulatory Setting, transportation of hazardous materials is regulated by the DOT and Caltrans. Together, federal and State agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release. In addition, businesses that use hazardous materials, including construction companies, are required to prepare and implement HMBPs describing procedures for the handling, transportation, generation, and disposal of hazardous materials. Because numerous laws and regulations govern the transportation and management of hazardous materials to reduce the potential hazards, this impact would be **less than significant**.

Operation

Operation of facilities within the DSP area would involve the use of small quantities of common hazardous materials including paints and thinners, cleaning solvents, and fuels, oils, and lubricants. As previously discussed, transportation of hazardous materials is regulated by the DOT and Caltrans, which together determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release. In addition, the preparation and implementation of facility-specific HMBPs would be required of all businesses that handle, generate, and dispose of hazardous materials. Because numerous laws and regulations govern the transportation and management of hazardous materials to reduce the potential hazards, this impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.8-5: Development pursuant to the proposed DSP could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Construction

Construction activities would likely require use of limited quantities of hazardous materials such as fuels for construction equipment, oils, and lubricants; paints and thinners; and solvents and cleaners. These materials would be transported to and from the DSP area and could pass near schools, or a future site that uses hazardous materials during construction may be located within one-quarter mile of a school. The improper handling and transport of hazardous materials could result in accidental release of hazardous materials near schools, thereby exposing school occupants to hazardous materials.

As discussed in the Regulatory Setting, transportation of hazardous materials is regulated by the DOT and Caltrans. Together, federal and State agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release. In addition, businesses that use hazardous materials, including construction companies, are required to prepare and implement HMBPs describing procedures for the handling, transportation, generation, and disposal of hazardous materials. Finally, construction on sites larger than one acre would be required to comply with the Construction General Permit and implement a SWPPP and its associated BMPs to control runoff from the given site. Because numerous laws and regulations govern the transportation and management of hazardous materials to reduce the potential hazards, this impact would be **less than significant**.

Operation

Operation of facilities near schools within the DSP would involve the use of small quantities of common hazardous materials including paints and thinners, cleaning solvents, and fuels, oils, and lubricants. As previously discussed, transportation of hazardous materials is regulated by the DOT and Caltrans, which together determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release. In addition, and as discussed in the Regulatory Setting, the preparation and implementation of facility-specific HMBPs would be required of all businesses that handle, generate, and dispose of hazardous materials. Because numerous laws and regulations govern the transportation and management of hazardous materials to reduce the potential hazards, this impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.8-6: Development pursuant to the proposed DSP could interfere with an adopted emergency response plan or emergency evacuation plan.

Construction

Depending on the nature of a future project within the DSP area, a future project could require temporary road closures that could restrict the movement of vehicular traffic. The duration and extent of closures would depend on the duration of construction, number of trucks, truck routing, and a variety of other construction-related activities that are unknown at this time. However, any lane restrictions or temporary closures would be on a case-by-case basis which would be coordinated with the City prior to issuance of building permits. Each construction traffic management plan would be subject to review and approval by the City Department of Public Works, in consultation with Caltrans, affected transit providers, and local emergency service providers including the City of Sacramento Fire and Police departments. The plan would ensure that acceptable operating conditions on local roadways and freeway facilities are maintained. A copy of each construction traffic management plan shall be submitted to local emergency response agencies and transit providers, and these agencies shall be notified at least 30 days before the commencement of construction that would partially or fully obstruct roadways. Compliance with the required traffic control plan would minimize impacts to emergency response or emergency evacuation plans and would be **less than significant**.

Operation

Upon completion of a given future project, that future project would no longer require lane closures and the existing road network would continue to allow for emergency response or evacuation. New construction would be required to ensure that adequate site egress and emergency access is provided in accordance with building code requirements. Therefore, impacts relative to an adopted emergency response plan or emergency evacuation plan would be **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

This section presents an analysis of the cumulative effects of the proposed DSP in combination with other past, present, and reasonably foreseeable future projects within the DSP area that could cause cumulatively considerable impacts.

The geographic area affected by the proposed DSP and its potential to contribute to cumulative impacts varies based on the environmental resource under consideration. The geographic scope of analysis for cumulative hazardous materials impacts encompasses and is limited to the DSP area. Impacts relative to hazardous materials are generally site-specific and depend on the nature and extent of the hazardous materials release, and existing and future soil and groundwater conditions. For example, hazardous materials incidents tend to be limited to a smaller more

localized area surrounding the immediate location and extent of the release, and could only be cumulative if two or more hazardous materials releases spatially overlapped.

The timeframe during which the proposed DSP could contribute to cumulative hazards and hazardous materials effects includes the construction and operations phases. Similar to the geographic limitations discussed above, it should be noted that impacts relative to hazardous materials are generally time-specific. Hazardous materials events could only be cumulative if two or more hazardous materials releases occurred at the same time, as well as overlapping the same location.

Impact 4.8-7: Implementation of the proposed DSP, in combination with other cumulative development, could contribute to cumulative impacts by exposing people to contaminated soil during construction activities.

In general, impacts associated with hazardous materials tend to be site specific and occur as isolated events. Cumulative impacts could only occur in the unlikely event that two or more projects encountered previously unknown contaminated soil at the same time and in adjacent or overlapping areas. For example, two adjacent sites under redevelopment where grading is occurring may both encounter previously unknown contaminated soil at the same time. Given the wide range of land uses and long history of chemical use described in the Environmental Setting, ubiquitous environmental issues may exist throughout the DSP area and multiple cumulative projects could encounter contaminated soil at the same time, and the DSP's contribution would be cumulatively considerable. Therefore, the impact would be **cumulatively significant**.

Mitigation Measure

Mitigation Measure 4.8-7

Implement Mitigation Measure 4.8-1.

Significance After Mitigation: With the implementation of **Mitigation Measure 4.8-7**, the Phase I assessment would identify the presence of potential or actual contaminated soil, which if identified, would then require further investigation and cleanup in compliance with applicable regulations. Implementation of Mitigation Measure 4.8-7 would reduce the cumulative impacts to **less than significant**.

Impact 4.8-8: Implementation of the proposed DSP, in combination with other cumulative development, could contribute to cumulative impacts by exposing people to asbestos-containing materials, lead-containing paint, PCBs, or other hazardous materials or situations during demolition or renovation activities.

In general, impacts associated with hazardous materials during demolition or renovation activities tend to be site specific and occur as isolated events. Cumulative impacts could only occur in the unlikely event that two or more hazardous materials incidents happened at the same time and in

close proximity to each other in a manner that could combine to create adverse effects. For people to be exposed to hazardous building materials (e.g., ACM, LBP, PCBs, or other hazardous materials) during demolition or renovation activities, two projects would have to occur at the same time and in close enough proximity to have the exposures overlap and become cumulatively considerable. If not appropriately and safely managed, workers and the public could be exposed to the hazardous materials form both sites simultaneously.

As previously discussed in Impact 4.8-2, various existing regulations require that demolition or renovation activities that may disturb or require the removal of hazardous materials that consist of, contain, or are coated with ACM, LBP, PCBs, mercury, and other hazardous materials must be inspected and/or tested for the presence of hazardous materials. The hazardous materials must be managed and disposed of in accordance with laws and regulations.

Compliance with all applicable laws and regulations at the federal, State, and local levels would prevent the exposure of individuals and the environment to the hazards by ensuring that all abatement regulations are carried out prior to and during demolition. Each current and future cumulative project would be required to comply with the same regulations. Therefore, exposure to hazardous building materials would be **less than significant**.

Mitigation Measure

None required.

Impact 4.8-9: Implementation of the proposed DSP, in combination with other cumulative development, could expose people to contaminated groundwater during construction or dewatering activities.

As discussed above in the Environmental Setting and Impact 4.8-3, contaminated groundwater is currently present in a number of areas within the DSP and may be present in the future during construction or dewatering activities, and during construction or operation phases. Dewatering activities could extract groundwater that contains elevated level of contaminants. If dewatered groundwater is inadvertently released into the environment or improperly disposed of, such a release could expose the environment, construction workers, and/or the public to contaminants. The dewatering of contaminated groundwater could therefore present risks to public health and safety, and the environment, if the contaminated dewatered groundwater is not handled properly. If multiple cumulative projects occur at the same time, the volume of contaminated water would be larger than for just one project and could become cumulatively considerable.

As discussed in Impact 4.8-3, short-term and long-term dewatering groundwater discharges to the City's sewer system would be regulated and monitored by the City's Utilities Department pursuant to Department of Utilities Engineering Services Policy No. 0001, adopted as Resolution No. 92-439, discharged into the City's combined sewer system, and routed to the Regional San Wastewater Treatment Plant for treatment.

The City requires that any short-term discharge be permitted, or an approved MOU for long-term discharges be established, between the discharger and the City. Under this approval process, the City and Regional San would compare the proposed volume, level of contamination, time, and duration of contaminated groundwater to be discharged with the total volume of water being accepted at the treatment facility at that time. In the event that the cumulative volume exceeds the available capacity of the treatment facility, the City and Regional San would reject the permit or MOU, and one or more cumulative projects would be delayed until sufficient capacity becomes available. In addition, Regional San may require onsite treatment prior to disposal depending on the type and concentration of the contaminants. Consequently, the available capacity would not be exceeded and exposure to contaminated groundwater would be **less than significant**.

Mitigation Measure

None required.

Impact 4.8-10: Implementation of the proposed DSP, in combination with other cumulative development, could increase the risk of exposure of site occupants to inadvertent or accidental releases of hazardous substances transported on adjacent roadways or rail lines near the site.

As discussed above in the Regulatory Setting and Impact 4.8-4, construction and operations activities would likely require the use of limited quantities of hazardous materials such as fuels, oils, and lubricants for construction and operations equipment; paints and thinners; and solvents and cleaners. These materials would be transported to and from the DSP area. The improper handling and transport of hazardous materials could result in accidental release of hazardous materials, thereby exposing site occupants to hazardous materials contamination. In the event that two or more projects experience a release at the same time and in close proximity, the exposure could be cumulatively considerable.

As discussed in the Regulatory Setting, transportation of hazardous materials is regulated by the DOT and Caltrans. Together, federal and State agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release. In addition, and as discussed in the Regulatory Setting, businesses that use hazardous materials, including construction companies (short-term construction) and operating businesses and facilities (long-term operations), are required to prepare and implement HMBPs describing procedures for the handling, transportation, generation, and disposal of hazardous materials. All cumulative projects and operations would be required to comply with the same regulations. Because numerous laws and regulations govern the transportation and management of hazardous materials to reduce the potential hazards, this impact would be less than significant.

Mitigation Measure

None required.

Impact 4.8-11: Implementation of the proposed DSP, in combination with other cumulative development, could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

As discussed above in the Regulatory Setting and Impact 4.8-5, construction and operations activities would likely require the use of limited quantities of hazardous materials such as fuels, oils, and lubricants for construction and operations equipment; paints and thinners; and solvents and cleaners. These materials would be transported to and from the DSP area near schools. The improper handling and transport of hazardous materials could result in accidental release of hazardous materials, thereby exposing school occupants to hazardous materials. In the event that two or more emissions incidents occur at the same time and within ¼-mile of a school, the emissions could be cumulatively considerable.

As discussed in the Regulatory Setting, transportation of hazardous materials is regulated by the DOT and Caltrans. Together, federal and State agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release. In addition, and as discussed in the Regulatory Setting, businesses that use hazardous materials, including construction companies (short-term construction) and operating businesses and facilities (long-term operations), are required to prepare and implement HMBPs describing procedures for the handling, transportation, generation, and disposal of hazardous materials. All cumulative projects and operations would be required to comply with the same regulations. Because numerous laws and regulations govern the transportation and management of hazardous materials to reduce the potential hazards, this impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.8-12: Implementation of the proposed DSP, in combination with other cumulative development, could interfere with an adopted emergency response plan or emergency evacuation plan.

Lane closures and restrictions would only occur during construction. Upon completion of a future cumulative project, that future project would no longer require lane closures and the impact relative to an adopted emergency response plan or emergency evacuation plan would be no impact. A cumulative impact could result if multiple development projects within a proximate geographical area are implementing construction management plans concurrently. However, each construction traffic management plan would be subject to review and approval by the City Department of Public Works, in consultation with Caltrans, affected transit providers, and local emergency service providers including the City of Sacramento Fire and Police departments. Each plan would ensure that acceptable operating conditions on local roadways and freeway facilities

are maintained. Should cumulative projects occur over overlapping time periods within a close geographic area, the City Department of Public Works would require adjustments to the schedules in the Construction Traffic Management Plans to reduce adverse lane restrictions or closures. Compliance with the required traffic control plans would minimize impacts to emergency response or emergency evacuation plans and would be **less than significant**.

Mitigation Measure

None required.

4.9 Hydrology and Water Quality

This section of the EIR addresses potential effects to hydrologic resources in the Downtown Specific Plan (DSP) area, including water quality, groundwater resources, flooding, and drainage. Site characteristics such as regional and local drainage, flooding conditions, and water quality are described. The potential of the proposed plan to degrade water quality, adversely affect groundwater resources and/or expose people and structures to flooding is evaluated.

Issues related to the generation of wastewater and urban storm drainage, the capacity of the Combined Sewer System (CSS) and Storm Drainage Basin 52 to handle flows generated by the proposed plan, and impacts on stormwater conveyance facilities are addressed in Section 4.13, Utilities. Groundwater contamination is addressed in Section 4.8, Hazards and Hazardous Materials.

The City received comments on the NOP related to hydrology and water quality from the Central Valley Regional Water Quality Control Board (CVRWQCB), the City of Sacramento Community Development Department, and the Sacramento Regional County Sanitation District (Regional San). Comment letters received from the CVRWQCB, the Community Development Department, and the Regional San included the need for a basin plan that must contain water quality objectives to ensure the reasonable protection of beneficial uses, appropriate permits, and regulatory compliance for commercially irrigated agriculture. The letters also expressed concerns regarding development leading to fewer landscaped areas where water can drain into the ground and requested mitigation measures to include removal of cement from parkway strips where possible, and included the need for sewer studies to assess the potential to increase flow demands and the evaluation of onsite and offsite impacts associated with constructing sanitary sewer facilities to provide service to the proposed area.

The analysis included in this section was developed based on project information included in the DSP, data provided by the City of Sacramento and in the City of Sacramento 2035 General Plan Master EIR (MEIR), and other published technical reports, as indicated in the footnoted references.

4.9.1 Environmental Setting

Regional Surface Water Resources

The City of Sacramento is located at the confluence of two major rivers, the Sacramento River and American River. The DSP area lies very close to the confluence of the Sacramento River located to the west and the American river to the north of the DSP area. The total length of the Sacramento River is approximately 327 miles. Its drainage area encompasses approximately 27,200 square miles, and is bounded by the Sierra Nevada to the east, the Coast Ranges to the west, and the Cascade Range and Trinity Mountains to the north, and the Delta-Central Sierra area to the south. The Sacramento River is the principal stream in the basin. Its major tributaries are the Pit and McCloud Rivers, which join the Sacramento River from the north, and the Feather and American Rivers, which are tributaries from the east. Numerous tributary creeks flow from the east and west.

The average runoff from the Sacramento River basin is estimated to be 22 million acre-feet per year. The melting snow pack in the Sierra Nevada maintains stream flow during most of the summer. The Sacramento River system experiences variations in water levels during different parts of the year and during different parts of the month. Two factors affecting the water level are the amount of runoff entering the system from the rivers' watersheds and the amount of water being released from dams upriver. The system is also subject to tidal action from the Sacramento-San Joaquin Delta (Delta). Finally, the river channel is confined by a levee system on each bank of the river. During periods of high flows, primarily in the winter, a system of bypass channels allows water to leave the river channel and bypass the urbanized areas of the valley, thus reducing potential flood hazard. Chief of these in the project vicinity is the Yolo Bypass, which is located north and west of the confluence with the American River.

The Sacramento River, beginning at the "I" Street Bridge and including all portions downstream, is considered part of the Delta. Flooding has historically been a problem for Sacramento, prompting the City to build levees beginning in the 1860's. The DSP area is downstream of the I Street Bridge, to the east of the river.

The American River drains the central portion of the Sierra Nevada from the crest near Lake Tahoe to the reservoir at Folsom Lake, and the secondary reservoir below it at Nimbus Dam. The American River basin drains an area of roughly 1,875 square miles. An average of 2.2 million acre-feet drains from the basin annually. The Lower American River comprises the 24-mile stretch of river below Nimbus Dam to the confluence. Flows in the Lower American River are controlled by releases from Folsom Dam and Nimbus Dam.[1]

Surface Water Quality

The Sacramento River has been classified by the CVRWQCB as having numerous beneficial uses, including providing a municipal, agricultural, and recreational water supply. Other beneficial uses include freshwater habitat, spawning grounds, wildlife habitat, and navigation on the Sacramento River. The Sacramento River Basin covers approximately 27,210 square miles and includes the entire area drained by the Sacramento River. For planning purposes, this includes all watersheds tributary to the Sacramento River that are north of Cosumnes River watershed. It also includes the closed basin of Goose Lake and drainage sub-basins of Cache and Putah Creeks. The principal streams are the Sacramento River and its larger tributaries: the Pit, Feather, Yuba, Bear, and American Rivers to the east; and Cottonwood, Stony, Cache, and Putah Creeks to the west. Major reservoirs and lakes include Shasta, Oroville, Folsom, Clear Lake, and Lake Berryessa.[2]

[1] City of Sacramento, 2014. *Sacramento 2035 General Plan Draft Master Environmental Impact Report (SCH No. 2012122006).* pp. 4.7-1 – 4.7-18.

[2] Central Valley Regional Water Quality Control Board, 2015. Water Quality Control Plan for the Sacramento and San Joaquin River Basins. Revised Pages, pp. I-1.00. June 2015.

Reaches of the Sacramento River flow through the Sacramento urban area that are considered impaired and listed on the Clean Water Act (CWA) Section 303(d) list of impaired and threatened waters for California. Section 303(d) establishes the total maximum daily load (TMDL) process to assist in guiding the application of state water quality standards, requiring the states to identify streams in which water quality is impaired (affected by the presence of pollutants or contaminants) and to establish the TMDL or the maximum quantity of a particular contaminant that a water body can assimilate without experiencing adverse effects. The 303(d) list breaks up the Sacramento River into four sections, Keswick Dam to Cottonwood Creek, Cottonwood Creek to Red Bluff, Red Bluff to Knights Landing, and Knights Landing to the Delta. All sections of the Sacramento River are listed on the 303(d) list for unknown toxicity, and Red Bluff to the Delta is also listed for mercury. Mercury is primarily a legacy of gold mining.[3]

Ambient water quality in the Sacramento and American rivers is influenced by numerous natural and artificial sources, including soil erosion, discharges from industrial and residential wastewater plants, stormwater runoff, agriculture, recreation activities, mining, and timber harvesting.

Urban Runoff Water Quality

Constituents found in urban runoff vary as a result of differences in rainfall intensity and occurrence, geographic features, land use in the City, as well as vehicle traffic and percent of impervious surface. In the Sacramento area, there is a natural weather pattern of a long dry period from May to October. During this seasonal dry period, pollutants contributed by vehicle exhaust, vehicle and tire wear, crankcase drippings, spills, and atmospheric fallout accumulates within the urban watershed. Precipitation during the early portion of the wet season (November to April) washes these pollutants into the stormwater runoff, which can result in elevated pollutant concentrations in the initial wet weather runoff. This initial runoff with peak pollutant levels is referred to as the "first flush" of a storm event or events.

Stormwater discharge monitoring data have been collected from the Sacramento urban area monitoring stations since 1990. From this monitoring, the following six pollutants have been identified as "target pollutants:" mercury, diazinon, chlorpyrifos, lead, copper, and fecal coliform. These pollutants were determined based on their toxicity, potential of exceeding water quality criteria, ability to accumulate in humans and animals, or if listed as a pollutant impairing water bodies by the State Water Resources Control Board.

Groundwater Use

The City of Sacramento has historically relied on groundwater to satisfy a portion of its demand. The City overlies two subbasins of the Sacramento Valley Groundwater Basin (the North American and South American subbasins). The two subbasins are separated from one another,

[3] U.S. Environmental Protection Agency, 2017. Impaired Waters and TMDLs: Impaired Waters and Mercury. May 2017.

and recharged from the American River. The City is one of many water purveyors that use groundwater from the subbasins. The City operates 20 active municipal supply wells and five irrigation wells north of the American River (American River subbasin), and operates two active municipal supply wells and nine irrigation wells south of the American River (South American subbasin).[4] Although the City pumps groundwater from both subbasins, more than 90 percent of the amount pumped by the City is pumped from the North American subbasin between 2011 and 2015.[5]

Groundwater Quality

This section is focused on the South American subbasin, because groundwater quality within this subbasin is separated from that of the North American subbasin, except at much greater depths. The South American subbasin covers approximately 248,000 acres (388 square miles) and lies within the southernmost extent of the Sacramento Valley Basin, extending into northern portions of the Delta. Except for areas of localized groundwater contamination (see Section 4.8, Hazards and Hazardous Materials), groundwater underlying the City's service area generally meets primary and secondary drinking water standards for municipal water use, and is described as being calcium magnesium-bicarbonate type water, with minor fractions of sodium-magnesium bicarbonate. Due to high concentrations of iron and manganese in the lower aquifer system, the upper aquifer system is usually the preferred source of groundwater. The lower aquifer system also contains higher concentrations of total dissolved solids (TDS) than the upper aquifer.

Flooding

The DSP area is protected from the 200-year flood event. Historical flooding in the project vicinity generally occurred along the Sacramento and American rivers. Improvements to the levees along these rivers have reduced the risk of flooding in the City. As shown in **Figure 4.9-1**, a majority of the DSP area is classified as Zone X, or "areas determined to be outside the 500-year flood floodplain."

In addition to levees along the Sacramento and American Rivers, flood protection is provided by coordinated operation of upstream reservoirs and dams, including Shasta Dam and Folsom Dam, respectively. The DSP area is mapped within the dam inundation zone in the event of failure at Folsom Dam.

4 West Yost Associates. 2016. City of Sacramento 2015 Urban Water Management Plan. June 2016. p. 6-4.
5 *Ibid.* p. 6-5, Table 6-1.

Path: U:\GIS\GIS\Projects\15xxxx\D150842_CityofSacramentoDowntownSpecificPlan\03_Projects\EIR\Fig4_9-1_FEMA_floodplain.mxd_FEP_7/28/2017

SOURCE: USDA, 2014; City of Sacramento, 2016; FEMA, 2016; ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.9-1
FEMA Flood Zone Designations

ESA

4.9.2 Regulatory Setting

Federal

Clean Water Act and Associated Environmental Compliance

Several sections of the CWA pertain to regulating impacts on waters of the United States. The discharge of dredged or fill material into waters of the United States is subject to permitting specified under Title IV (Permits and Licenses) of the CWA and specifically under Section 404 (Discharges of Dredge or Fill Material) of the act. Section 401 (Certification) specifies additional requirements for permit review, particularly at the state level.

Section 303

The State of California adopts water quality standards to protect beneficial uses of state waters as required by Section 303 of the CWA and the Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne). Section 303(d) of the CWA established the TMDL process to guide the application of state water quality standards (see discussion of state water quality standards below). To identify candidate water bodies for TMDL analysis, a list of water quality–limited streams was generated. These streams are impaired by the presence of pollutants, including sediment, and are more sensitive to disturbance. Section 303(d) listing associated with water bodies in the RSPU has been described in the environmental setting above.

Section 401

Section 401 of the CWA requires that an applicant pursuing a federal permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States obtain a water quality certification (or waiver). Water quality certifications are issued by the State Water Boards in California. Under the CWA, the state RWQCB must issue or waive Section 401 water quality certification for the project to be permitted under Section 404. Water quality certification requires the evaluation of water quality considerations associated with dredging or placement of fill materials into waters of the United States and imposes project-specific conditions on development. A Section 401 waiver establishes conditions that apply to any project that qualifies for a waiver.

Section 402

The 1972 amendments to the Federal Water Pollution Control Act established the NPDES permit program to control discharges of pollutants from point sources (Section 402). The 1987 amendments to the CWA created a new section of the CWA devoted to stormwater permitting (Section 402[p]). The U.S. Environmental Protection Agency (US EPA) has granted the State of California (the State Water Board) primacy in administering and enforcing the provisions of CWA and NPDES. NPDES is the primary federal program that regulates point-source and non-point-source discharges to waters of the United States.

The State Water Board issues both general and individual permits for discharges to surface waters, including for both point-source and non-point-source discharges. In response to the 1987 amendments, the US EPA developed the Phase I NPDES Storm Water Program for cities with

populations larger than 100,000, and Phase II for smaller cities. In California, the State Water Board has drafted the General Permit for Discharges of Storm Water from Municipal Separate Storm Sewer Systems (MS4 General Permit). The City of Sacramento has coverage under the MS4 General Permit, which is discussed in more detail below.

Section 404

Dredging and placement of fill materials into the waters of the United States is regulated by Section 404 of CWA, which is administered by the Corps.

Section 408

Section 408 regulates the use of or alteration to levees or other improvements along rivers, unless otherwise permitted by the Corps through state or local agencies.

National Pollutant Discharge Elimination System (NPDES) Permit

The NPDES permit system was established in the CWA to regulate municipal and industrial point discharges to surface waters of the U.S. Each NPDES permit for point discharges contains limits on allowable concentrations of pollutants contained in discharges. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that the US EPA must consider in setting effluent limits for priority pollutants.

The CWA was amended in 1987 to require NPDES permits for non-point source (i.e., stormwater) pollutants in discharges. Stormwater sources are diffuse and originate over a wide area rather than from a definable point. The goal of NPDES stormwater regulations is to improve the quality of stormwater discharged to receiving waters to the "maximum extent practicable" through the use of structural and non-structural Best Management Practices (BMPs). BMPs can include the development and implementation of various practices including educational measures (workshops informing public of what impacts results when household chemicals are dumped into storm drains), regulatory measures (local authority of drainage facility design), public policy measures, and structural measures (filter strips, grass swales and detention ponds). The NPDES permits that apply to activities in the City of Sacramento are described under local regulations below.

Rivers and Harbors Act and Associated Environmental Compliance

The Rivers and Harbors Act regulates placement of fill and structures in navigable waterways. The permit program, regulated under Section 10 of the Act, is administered by the Corps. In practice, permitting is combined with CWA Section 404 permitting. A Section 404/10 permit would be required for construction of the proposed marina.

Floodplain Development

The Federal Emergency Management Agency (FEMA) is responsible for determining flood elevations and floodplain boundaries based on hydrologic and hydraulic studies. FEMA is also responsible for distributing the Flood Insurance Rate Maps (FIRMs), which are used in the

National Flood Insurance Program (NFIP). These maps identify the locations of special flood hazard areas, including the 100-year floodplain.

Federal regulations governing development in a floodplain are set forth in Title 44, Part 60 of the Code of Federal Regulations (CFR).[6] FEMA imposes building regulations on development within flood hazard areas depending upon the potential for flooding within each area. Building regulations are incorporated into the municipal code of jurisdictions participating in the NFIP. Section 15.104, Floodplain Management Regulations, of the Sacramento City Code includes requirements for compliance with Title 44, Part 60 of the CFR.

Surface Water Quality

Water quality objectives for all waters of the United States are established under applicable provisions of section 303 of the federal CWA. The CWA prohibits the discharge of pollutants to navigable waters from a point source unless authorized by a NPDES permit. Because implementation of these regulations has been delegated to the State, additional information regarding this permit is discussed under the "State" subheading, below.

Standards for a total of 81 individual constituents have been established under the Safe Drinking Water Act, as amended in 1996. The US EPA may add additional constituents in the future. Please see section 4.11, Utilities and Service Systems, for an analysis of effects related to potable water supply.

State

Porter-Cologne Water Quality Control Act Overview

Porter-Cologne, passed in 1969, articulates with the federal CWA (see "Clean Water Act" above). It established the State Water Board and divided the state into nine regions, each overseen by a regional Water Board. The State Water Board is the primary state agency responsible for protecting the quality of the state's surface and groundwater supplies, but much of its daily implementation authority is delegated to the nine regional Water Boards, which are responsible for implementing CWA Sections 402, and 303(d). In general, the State Water Board manages both water rights and statewide regulation of water quality, while the regional Water Boards focus exclusively on water quality in their regions. The Sacramento River basin is under the jurisdiction of the CVRWQCB. Construction activities are regulated under the NPDES General Permit for Discharges of Storm Water Runoff associated with Construction Activity (General Construction Permit CVRWQCB Order No. 2012-0006-DWQ, NPDES No. CAS000002), provided that the total amount of ground disturbance during construction is one acre or more. The CVRWQCB enforces the General Construction Permit within the City of Sacramento. Coverage under a General Construction Permit requires the preparation and implementation of a stormwater pollution prevention plan (SWPPP) and notice of intent (NOI). The SWPPP includes pollution

6 Code of Federal Regulations, 2002. *Title 44, Emergency Management and Assistance, Part 60, Criteria for Land Management and Use*. October 1, 2002.

prevention measures (erosion and sediment control measures and measures to control non-stormwater discharges and hazardous spills), demonstration of compliance with all applicable local and regional erosion and sediment control standards, identification of responsible parties, a detailed construction timeline, and a BMP monitoring and maintenance schedule. The NOI includes site specific information and the certification of compliance with the terms of the General Construction Permit.

Dewatering Activities

Where groundwater levels tend to be shallow, dewatering during construction is sometimes necessary to keep trenches or excavations free of standing water when improvements or foundations/footings are installed. Clean or relatively pollutant-free water that poses little or no risk to water quality may be discharged directly to surface water under certain conditions. The CVRWQCB has adopted a general NPDES permit for short-term discharges of small volumes of wastewater from certain construction-related activities (General Dewatering Permit). Permit conditions for the discharge of these types of wastewaters to surface waters are specified in "General Order for Dewatering and Other Low-Threat Discharges to Surface Waters" (Order No. R5-2013-0074, NPDES No. CAG995001). Discharges may be covered by the General Dewatering Permit provided they are (1) either four months or less in duration or (2) the average dry weather discharge does not exceed 0.25 million gallons per day and meet the effluent limitations provided in the order for pH, turbidity, total suspended solids, and biological oxygen demand. Construction dewatering, well development water, pump/well testing, and miscellaneous dewatering/low-threat discharges are among the types of discharges that may be covered by the General Dewatering Permit. The General Dewatering Permit also specifies standards for testing, monitoring, and reporting, receiving water limitations, and discharge prohibitions. When project construction would exceed four months in duration or 0.25 million gallons per day, a project-specific permit from the CVRWQCB is required. Impacts associated with construction dewatering are addressed entirely within section 4.8, Hazards and Hazardous Materials.

Stormwater Discharges

The CWA mandates permits for municipal stormwater discharges. The City of Sacramento has coverage under a MS4 General Permit (Order No. R5-2016-0040, NPDES No. CAS0085324). This permit requires that controls be implemented to reduce the discharge of pollutants in stormwater discharges to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and other measures as appropriate. As part of permit compliance, the City has prepared a Stormwater Quality Improvement Plan (SQIP), which outlines the requirements for municipal operations, industrial and commercial businesses, illegal discharges, construction sites, planning and land development, public education and outreach, and watershed stewardship. These requirements include multiple measures to control pollutants in stormwater discharge and are reflected in City ordinances and design criteria. New development and redevelopment projects under the proposed plan would be required to follow the guidance contained in the latest edition of the Stormwater Quality Design Manual for the Sacramento Region.

Water quality objectives for the Sacramento River are specified in the Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin (Basin Plan) prepared by the CVRWQCB in compliance with the federal CWA and the California Water Code (section 13240). The Basin Plan contains water quality numerical and narrative standards and objectives for rivers and their tributaries within its jurisdiction. In cases where the Basin Plan does not contain a standard for a particular pollutant, other criteria, such as US EPA water quality criteria developed under Section 304(a) of the CWA, apply.

Central Valley Flood Management

The Central Valley Flood Management Planning Program was launched by DWR in 2008 and is managed by the Division of Flood Management's Central Valley Flood Planning Office. The Central Valley Flood Protection Plan (CVFPP) sets forth a plan for sustainable flood management and investment to improve flood risk management in the Central Valley through use of the State Plan of Flood Control facilities. Following adoption of the CVFPP in 2012, DWR began refinement of the CVFPP recommendations via the Basin-Wide Feasibility Studies, the Regional Flood Management Planning, and the Central Valley Flood System Conservation Strategy. The next update of the CVFPP is scheduled for completion in 2017. Implementation of certain CVFPP actions has already begun and will be expanded after the 2017 Update.

Surface Water Quality

The State Water Boards are delegated authority from US EPA to implement portions of the CWA, and the State's water quality law, the Porter-Cologne Act. These agencies have established water quality standards that are required by section 303 of the CWA and the Porter-Cologne Act. The Porter-Cologne Act states that basin plans will consist of beneficial uses, water quality objectives, and a program of implementation for achieving water quality objectives. A Water Quality Control Plan, or Basin Plan, prepared by the CVRWQCB, establishes water quality numerical and narrative standards and objectives for rivers and their tributaries within the area subject to the Basin Plan. In cases where the Basin Plan does not contain a standard for a particular pollutant, other criteria apply such as US EPA water quality criteria developed under section 304(a) of the CWA.

Water quality objectives for the Sacramento River are specified in the Basin Plan prepared by the CVRWQCB in compliance with the federal CWA and the California Water Code (section 13240). The Basin Plan establishes water quality objectives and implementation programs to meet stated objectives and to protect the beneficial uses of water in the Sacramento-San Joaquin River Basin. Because the City of Sacramento and the project site are located within the Sacramento River Basin, all discharges to surface water or groundwater fall under the CVRWQCB's jurisdiction and are subject to the Basin Plan requirements. The requirements outlined in the NPDES permits (CVRWQCB Order No. R5-2016-0040, NPDES No. CAS0085324) that regulate development within the City are based on the Basin Plan requirements.

Construction Dewatering

Where groundwater levels tend to be shallow, dewatering during construction is sometimes necessary to keep trenches or excavations free of standing water when improvements or foundations/footings are installed. Clean or relatively pollutant-free water that poses little or no risk to water quality may be discharged directly to surface water under certain conditions. The CVRWQCB has adopted a general NPDES permit for short-term discharges of small volumes of wastewater from certain construction-related activities (General Dewatering Permit). Permit conditions for the discharge of these types of wastewaters to surface waters are specified in "General Order for Dewatering and Other Low-Threat Discharges to Surface Waters" (Order No. 5-00-175, NPDES No. CAG995001). Discharges may be covered by the General Dewatering Permit provided they are (1) either four months or less in duration or (2) the average dry weather discharge does not exceed 0.25 million gallons per day. Construction dewatering, well development water, pump/well testing, and miscellaneous dewatering/low-threat discharges are among the types of discharges that may be covered by the General Dewatering Permit. The General Dewatering Permit also specifies standards for testing, monitoring, and reporting, receiving water limitations, and discharge prohibitions. When project construction would exceed four months in duration or 0.25 million gallons per day, a project-specific permit from the CVRWQCB is required. Construction activities at the project site would include dewatering of 1 million gallons per day for up to 15 months. Therefore, a project-specific permit would be required.

Construction Site Runoff Management

In accordance with NPDES regulations, to minimize the potential effects of construction runoff on receiving water quality, the state requires that any construction activity affecting one acre or more obtain coverage under a General Construction Activity Stormwater Permit (General Construction Permit). The current General Construction Permit is the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ (as amended by CVRWQCB Order Nos. 2010-0014-DWQ and 2012-0006-DWQ), NPDES No. CAS000002, effective July 1, 2010. General Construction Permit applicants are required to prepare and implement a SWPPP which includes implementing BMPs to reduce construction effects on receiving water quality by implementing erosion and sediment control measures and reducing or eliminating non stormwater discharges. Examples of typical construction BMPs included in SWPPPs include, but are not limited to: using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment so as to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; and installing sediment control devices such as gravel bags, inlet filters, fiber rolls, or silt fences to reduce or eliminate sediment and other pollutants from discharging to the City drainage system or receiving waters.

Construction activity that results in soil disturbances of less than one acre is subject to the General Construction Permit if there is potential for significant water quality impairment resulting

from the activity as determined by the CVRWQCB. The City review process in terms of construction management and water quality for projects on sites less than one acre mirrors the process for sites larger than one acre. The City of Sacramento requires an erosion and sediment control plan and standard construction BMPs for other pollutants are required for construction sites less than one acre.

Local

City of Sacramento 2035 General Plan

The City of Sacramento 2035 General Plan adopted the following goals and policy measures that pertain to the impacts evaluated in this section (urban runoff water quality, construction dewatering, and wastewater discharges).

The following goals and policies from the 2035 General Plan are relevant to hydrology and water quality.

Goal ER 1.1 Water Quality Protection. Protect local watersheds, water bodies and groundwater resources, including creeks, reservoirs, the Sacramento and American Rivers, and their shorelines.

Policies

ER 1.1.2 **Regional Planning.** The City shall continue to work with local, State, and Federal agencies and private watershed organizations to improve water quality.

ER 1.1.3 **Stormwater Quality.** The City shall control sources of pollutants and improve and maintain urban runoff water quality through storm water protection measures consistent with the City's National Pollution Discharge Elimination System (NPDES) Permit.

ER 1.1.4 **New Development.** The City shall require new development to protect the quality of water bodies and natural drainage systems through site design (e.g., cluster development), source controls, storm water treatment, runoff reduction measures, best management practices (BMPs) and Low Impact Development (LID), and hydromodification strategies consistent with the city's NPDES Permit.

ER 1.1.5 **Limit Stormwater Peak Flows.** The City shall require all new development to contribute no net increase in stormwater runoff peak flows over existing conditions associated with a 100-year storm event.

ER 1.1.6 **Post-Development Runoff.** The City shall impose requirements to control the volume, frequency, duration, and peak flow rates and velocities of runoff from development projects to prevent or reduce downstream erosion and protect stream habitat.

ER 1.1.7 **Construction Site Impacts.** The City shall minimize disturbances of natural water bodies and natural drainage systems caused by development, implement measures to protect areas from erosion and sediment loss, and continue to require construction contractors to comply with the City's erosion and sediment control ordinance and stormwater management and discharge control ordinance.

The DSP would encourage development to include LID design, with particular encouragement for permeable surfaces, where applicable, to allow natural drainage of parcels. Projects within the DSP area that discharge to the separated stormwater drainage system would be required to incorporate LID measures, as detailed in the City's Stormwater Quality Design Manual, effective April 1, 2018. This would reduce peak flows and stormwater runoff potential, keeping

contaminants out of the storm drainage system and surface water bodies. The proposed plan would be consistent with each of the 2035 General Plan goals and policies listed above.

Stormwater Quality/Urban Runoff Management

The County of Sacramento and the cities of Sacramento, Folsom, Citrus Heights, Elk Grove, Rancho Cordova, and Galt have coverage under the *National Pollutant Discharge Elimination System Permit and Waste Discharge Requirements General Permit for Municipal Separate Storm Sewer Systems* (MS4 Permit) (CVRWQCB Order No. R5-2016-0040, NPDES Permit No. CAS0085324) that was adopted on June 30, 2016. Collectively, these jurisdictions are referred to as the Sacramento Stormwater Quality Partnership. The MS4 Permit is intended to implement the Basin Plan through the effective implementation of BMPs to reduce pollutants in stormwater discharges to the maximum extent practicable. The permittees listed under the joint permit have the authority to develop, administer, implement, and enforce storm water management programs within their own jurisdiction.

Urban storm water runoff is defined in the MS4 Permit as including stormwater and dry weather flows from a drainage area that reaches a receiving water body or subsurface. The permit regulates the discharge of all wet and dry weather urban storm water runoff within the City of Sacramento and requires the City to implement a stormwater management program to reduce pollutants in stormwater to the maximum extent practicable. In response, the City of Sacramento and the other Permittees created the SQIP to address the MS4 permit requirements and reduce the pollution carried by stormwater into local creeks and rivers. The program includes pollution reduction activities for construction sites, industrial sites, illegal discharges and illicit connections, new development, and municipal operations. The program also includes an extensive public education effort, target pollutant reduction strategy and monitoring program. The SQIP also outlines the priorities, key elements, strategies, and evaluation methods of the program.[7]

The specific BMPs that are appropriate for a project to meet the requirement of reducing the discharge of pollutants to the maximum extent practicable are site specific. During the design process, the appropriate required measures and Low Impact Development (LID)[8] strategies are selected and incorporated into project plans. The County of Sacramento and the cities of Sacramento, Folsom, Citrus Heights, Elk Grove, Rancho Cordova, Galt, and Roseville collaboratively published the Stormwater Quality Design Manual for the Sacramento Region (May 2014, to be finalized in 2018) to meet MS4 Permit requirements and to provide clear guidance for project applicants on how to incorporate BMPs that achieve permit compliance.[9]

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7 County of Sacramento and the Cities of Sacramento, Citrus Heights, Elk Grove, Folsom, Galt, and Rancho Cordova, 2009. *Stormwater Quality Improvement Plan.* April 2009. pp. 1-1 to 1-16.

8 Low Impact Development uses site design and stormwater management to maintain pre-development runoff rates and volumes through the use of decentralized design techniques that infiltrate, filter, store, evaporate, and detain runoff.

9 Cities of Citrus Heights, Elk Grove, Folsom, Galt, Rancho Cordova, Roseville, Sacramento and the Sacramento County, 2014. *Stormwater Quality Design Manual for the Sacramento Region.* May 2014.

The manual provides locally-adapted information for design and selection of several categories of stormwater quality control measures: source control, hydromodification management, LID, and treatment control. The following are required items for each of the local permitting agencies as specified in the new development element provisions of the MS4 permit:

- the types of projects subject to the development and redevelopment standards and thresholds for determining what types of control measures apply to the project;
- maintenance agreements or covenants are required for selected control measures; and
- sizing methodology for water quality flow (WQF) -based measures (e.g., vegetated swale) and water quality volume WQF-based measures (e.g., water quality detention basin), and LID measures.

The Sacramento Stormwater Quality Partnership Hydromodification Management Plan (HMP) was released in July 2011 to provide an additional resource for stormwater management strategies. The HMP was subsequently revised in February 2013 to address CVRWQCB comments and is expected to be final in early 2018. The HMP includes hydromodification management exemption criteria that apply to the DSP area, but hydromodification management requirements for each project within the DSP area will be assessed on a project by project basis.

In addition, the State Water Board has adopted an Amendment to the State's Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries that added Part 1 Trash Provisions (the "Trash Amendment"). (See http://www.waterboards.ca.gov/water_issues/programs/trash_control/.) The City's stormwater collection system (MS4) is subject to the requirements set forth in the Trash Amendment. A key central element of the Trash Amendments is a land-use based compliance approach that targets high trash generating areas, such as high density residential (10 units/acre or greater), industrial, commercial, mixed urban, and public transportation land uses (referred to in the Trash Amendment as "Priority Land Uses"). Projects that include Priority Land Uses will be required to comply with the Trash Amendments by implementing appropriate measures and/or controls as determined by the City's Director of Utilities or designee, which must be included in projects' approved improvement plans.

Dewatering

All new groundwater discharges to the CSS or separated sewer system are regulated and monitored by the City's Utilities Department pursuant to Department of Utilities Engineering Services Policy No. 0001, adopted as Resolution No. 92-439 by the Sacramento City Council. Groundwater discharges to the City's sewer system are defined as construction dewatering discharges, foundation or basement dewatering discharges, treated or untreated contaminated groundwater cleanup, discharges, and uncontaminated groundwater discharges.

The City requires that any short-term discharge be permitted, or an approved Memorandum of Understanding (MOU) for long-term discharges be established, between the discharger and the City. Short-term limited discharges of seven days duration or less must be approved through the City Department of Utilities by acceptance letter. Long-term discharges of greater duration than

seven days must be approved through the City Department of Utilities and the Director of the Department of Utilities through a MOU process. The MOU must specify the type of groundwater discharge, flow rates, discharge system design, a City-approved contaminant assessment of the proposed groundwater discharge indicating tested levels of constituents, and a City-approved effluent monitoring plan to ensure contaminant levels remain in compliance with State standards or the Sacramento County Regional Sanitation District (Regional San) and CVRWQCB-approved levels. All groundwater discharges to the sewer must be granted a RegionalSan discharge permit. If the discharge is part of a groundwater cleanup or contains excessive contaminants, CVRWQCB approval is also required. Impacts associated with construction dewatering and contaminated groundwater are addressed in section 4.8, Hazards and Hazardous Materials.

Wastewater Discharges

Chapter 13.08 of the Sacramento City Code prohibits the discharge of any substances, materials, waters, or waste if the discharge would violate any sewer use ordinance enacted by Regional San. Section 13.08.040 of the Sacramento City Code identifies specific waters, wastes, and substances that may not be discharged to the sewer.

Any discharge into the CSS must have a Sewer Use Questionnaire on file with the Regional San, which would apply to the Specific Plan project. The Regional San has adopted a Sewer Use Ordinance that regulates the use of public sewers connected to the SRWTP. The wastewater discharged from the SRWTP to Sacramento River is regulated under a NPDES permit issued by the RWQCB. Discharge limitations are specified in the permit to limit water quality impacts in the Sacramento River. Categorical Pretreatment Standards have also been established for the pretreatment of certain classes of industrial wastes discharged to publicly owned treatment works, such as the SRWTP. The purpose of these standards is to protect the SRWTP and the environment by regulating potentially harmful discharges to the sewer from industrial and commercial business. Impacts associated with capacity of the CSS and the RegionalSan are addressed in section 4.13, Utilities.

Construction Site Runoff Management

In accordance with NPDES regulations, to minimize the potential effects of construction runoff on receiving water quality, the state requires that any construction activity affecting one acre or more obtain coverage under a General Construction Permit. The current General Construction Permit is the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ (as amended by CVRWQCB Order Nos. 2010-0014-DWQ and 2012-0006-DWQ), NPDES No. CAS000002, effective July 1, 2010. General Construction Permit applicants are required to prepare and implement a SWPPP which includes implementing BMPs to reduce construction effects on receiving water quality by implementing erosion and sediment control measures and reducing or eliminating non-stormwater discharges. Examples of typical construction BMPs included in SWPPPs include, but are not limited to: using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment so as to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and

cleanup plan; and installing sediment control devices such as gravel bags, inlet filters, fiber rolls, or silt fences to reduce or eliminate sediment and other pollutants from discharging to the City drainage system or receiving waters.

Construction activity that results in soil disturbances of less than one acre is subject to the General Construction Permit if there is potential for significant water quality impairment resulting from the activity as determined by the CVRWQCB. The City review process in terms of construction management and water quality for projects on sites less than one acre mirrors the process for sites larger than one acre. The City of Sacramento requires an erosion and sediment control plan and standard construction BMPs required for construction sites less than one acre.

City of Sacramento Construction Site Stormwater Controls

The City's Grading, Erosion and Sediment Control Ordinance requires project applicants to prepare erosion, sediment and pollution control plans for both during and after construction of a project, and grading plans. The Ordinance applies to projects where 50 cubic yards or more of soil is excavated and/or disposed and requires BMPs that must be approved of by the City's Department of Utilities. In addition, the City's Stormwater Management and Discharge Control Ordinance minimizes or eliminates sediment and pollutants in construction site stormwater discharges.

Sacramento Area Flood Control Agency

The Sacramento Area Flood Control Agency (SAFCA) was formed to address the Sacramento area's vulnerability to catastrophic flooding. This vulnerability was exposed during the record flood of 1986 when Folsom Dam exceeded its normal flood control storage capacity and several area levees nearly collapsed under the strain of the storm. In response, the City of Sacramento, the County of Sacramento, the County of Sutter, the American River Flood Control District and Reclamation District 1000 created SAFCA through a Joint Exercise of Powers Agreement to provide the Sacramento region with increased flood protection along the American and Sacramento Rivers. SAFCA's mission is to provide the region with at least a 100-year level of flood protection as quickly as possible while seeking a 200-year or greater level of protection over time. Under the SAFCA Act of 1990, the California Legislature has given SAFCA broad authority to finance flood control projects and has directed SAFCA to carry out its flood control responsibilities in ways that provide optimum protection to the natural environment.

4.9.3 Analysis, Impacts and Mitigation

Significance Criteria

The following significance criteria are used in this analysis. These criteria are also similar to the City's 2035 General Plan EIR and Initial Study Checklist.

This EIR assumes implementation of the DSP would have a significant impact related to hydrology and water quality if it would:

- Substantially degrade water quality and violate any water quality objectives set by the State Water Resources Control Board, due to increases in sediments and other contaminants generated by construction and/or development of the project;
- Substantially increase the exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood;
- Expose people or property to flood hazards; or
- Substantially deplete groundwater supplies to interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

Methodology and Assumptions

Analysis of potential hydrology and water quality impacts is based on review of the DSP design and intended uses, as well as information developed by the applicant's engineer to establish existing conditions and to identify potential environmental effects, based on the standards of significance presented in this section.

Impacts on surface and groundwater quality were analyzed by reviewing existing groundwater and surface water quality reports that pertain to the DSP area, identifying existing onsite ground and surface waters, including the depth to groundwater, and evaluating existing and potential sources of water quality pollutants based on the types of land uses and operational activities in the DSP area. Additionally, the applicability of federal and state regulations, ordinances, and/or standards to surface and groundwater quality of the DSP area and subsequent receiving waters were assessed. Potential impacts from implementation of the proposed plan were determined evaluating whether development of the DSP land uses would exceed the thresholds of significance outlined above.

Impacts on water quality are assessed as a function of potential pollutant types, concentrations, and load (effect of flow quantity changes). These are evaluated qualitatively because specific design characteristics and land uses could affect the amount, type, and susceptibility to runoff of potential pollutants.

The California Supreme Court recently found that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents." In *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4th 369, the Supreme Court explained that an agency is only required to analyze the potential impact of such hazards on future residents if the project would exacerbate those existing environmental hazards or conditions. CEQA analysis is therefore concerned with a project's impact on the environment, rather than with the environment's impact on a project and its users or residents. Thus, the City is not required to consider the effects of bringing a new population into an area where flooding exists. However, in the interest of disclosure, this EIR discusses potential effects of the environment on people in the DSP area, including flooding.

Issues not Discussed in Impacts

For the purposes of this analysis, there would be no environmental effects related to seiche, tsunami, or mudflow. The DSP area is located far from the Pacific Ocean and other large bodies of water and historically has not been affected by tsunamis. In addition, the topography is flat and mudflows are unlikely. A seiche in the Sacramento River is theoretically possible. However, the risk of this event is considered very low because the river channel is not completely enclosed. Therefore, these issues are not discussed further in the EIR.

Impacts and Mitigation Measures

Impact 4.9-1: The proposed DSP could degrade water quality during construction.

Construction in the DSP area would result in land-disturbing activities such as grading, excavation, and trenching for utility and infrastructure installation. When portions of the plan area are excavated or otherwise disturbed by construction activities, the potential for soil erosion and sedimentation in runoff could substantially increase during a rainstorm.

The use of construction equipment and other vehicles could result in spills or leaks of oil, grease, gasoline, brake fluid, antifreeze, or other vehicle-related fluids and pollutants. Improper handling, storage, or disposal of fuels and materials or improper cleaning of machinery could result in accidental spills or discharges that could degrade surface water and groundwater quality. Regarding construction dewatering, sediment impairment of receiving waters could result if dewatering discharge is sediment laden. Through stormwater runoff, these sediments and contaminants may be transported to the Sacramento River and its downstream drainages and water bodies. The effects of construction dewatering in areas of contaminated groundwater are addressed in section 4.6, Hazards and Hazardous Materials.

Although earth-disturbing activities associated with construction of the DSP area would be temporary, on- or offsite soil erosion, siltation, discharges of construction-related hazardous materials could degrade downstream surface waters. As discussed in detail below, compliance with existing regulations would ensure that these activities would not substantially degrade water quality.

As discussed in the Regulatory Setting above, the proposed plan is required to comply with a number of regulations designed to reduce or eliminate construction-related water quality effects, including the NPDES General Construction Permit; SQIP; Grading, Erosion and Sediment Control Ordinance; and project-specific dewatering discharge permit. Before the onset of any construction activities, an application for coverage under the General Construction Permit (only applies to areas of disturbance of one acre or more) and an erosion and sediment control plan must be submitted to the City. Before construction may begin, a SWPPP would be developed and an NOI filed with the CVRWQCB. After approvals of coverage under the General Construction Permit, the erosion and sediment control plan, and the SWPPP are obtained, construction would commence and include all BMPs outlined in the erosion and sediment control plan and SWPPP. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater and

other non-point source runoff. The City would complete inspections to verify that the erosion and sediment control plan and SWPPP are implemented correctly.

The City would also require erosion and sediment control plans to include BMPs to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. Implementation of these measures would comply with state and federal water quality regulations. The federal reportable spill quantity for petroleum products, as defined in 40 CFR 110, is any oil spill that:

- Violates applicable water quality standards;
- Causes a film or sheen on, or discoloration of, the water surface or adjoining shoreline; or
- Causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines.

If a spill occurs, the contractor's superintendent would notify the City, and the contractor would take action to contact the appropriate safety and clean-up crews to ensure that a Spill Prevention and Control Program is followed. In addition, the City would respond and investigate any spills reported. A written description of reportable releases would be submitted to the CVRWQCB and the Department of Toxic Substances Control (DTSC) by the contractor or land owner. If an appreciable spill occurs and results determine that construction activities have adversely affected surface water or groundwater quality, a detailed analysis would be performed to the specifications of DTSC to identify the likely cause of contamination. This analysis would include recommendations for reducing or eliminating the source or mechanisms of contamination.

Based on this analysis, contractors would select and implement measures to control contamination, with a performance standard that surface and/or groundwater quality must be returned to baseline conditions. These measures would be subject to approval by the City and/or the CVRWQCB.

Prior to discharge of dewatered effluent, the contractor would be required to obtain a project-specific permit from the CVRWQCB that includes specific requirements and establishes discharge limits. A project-specific permit is required because the DSP area is located above areas of contaminated groundwater. Impacts associated with construction dewatering and contaminated groundwater are addressed entirely within section 4.8, Hazards and Hazardous Materials.

In light of the existing combination of developed and undeveloped conditions, compliance with the Grading, Erosion, and Sediment Control Ordinance, SQIP, NPDES General Construction Permit, and project-specific dewatering permit would prevent the substantial degradation of water quality during project construction. These regulatory instruments are designed to ensure that construction projects result in water quality discharges that are not in violation of the State Water Board's objectives.

For the above reasons, adherence to applicable regulations and standards would reduce water quality impacts to a **less-than-significant level**.

Mitigation Measure

None required.

Impact 4.9-2: Operation of the proposed DSP could generate new sources of polluted runoff.

During operation, runoff from the DSP area would contain pollutants common in urban runoff including metals, oils and grease, pesticides, herbicides, nutrients, pet waste, and trash. Without BMPs to remove these pollutants, stormwater leaving the DSP area could degrade the quality of receiving waters. The City of Sacramento currently implements the SQIP, which is designed to reduce stormwater pollution to the maximum extent practicable and eliminate prohibited non-stormwater discharges through a NPDES municipal stormwater discharge permit. The City of Sacramento also provides direction on post-construction BMPs in the Stormwater Quality Design Manual for the Sacramento Region. The proposed projects would be subject to City of Sacramento General Plan policies U 4.1.4, ER 1.1.3, ER 1.1.4, and ER 1.1.7; the City's ordinances; the SQIP; and the Stormwater Quality Design Manual for the Sacramento Region. Specifically, the project would be required to comply with the following permits and plans:

- Stormwater Quality Design Manual for the Sacramento Region BMPs, and LID measures to reduce pollutants in stormwater and non-stormwater discharges to the Maximum Extent Practicable;
- City of Sacramento Stormwater Management and Discharge Control Code; and
- City of Sacramento General Plan policies related to hydrology and water quality, and the protection and preservation of natural resources.

Permanent onsite water quality treatment meeting the requirements specified in the Stormwater Quality Design Manual for the Sacramento Region will be required for any applicable project (land use and threshold) with surface drainage in the DSP area. Specific BMPs are approved for use in the City for treatment control, such as stormwater planters, vegetated swales, and media filters in catch basins. Other potential BMPs for use on private parcels have not been identified because plan design is in an early phase and the kinds of BMPs used on each site would differ based on design-level details and site conditions. The plan development process includes identification of BMPs that respond to the design and construction methods within each area of the DSP. The BMPs would be implemented to ensure that water quality would not be degraded and the violation of water quality or waste discharge objectives set by the State Water Board would not occur. City review would confirm that BMP implementation complies with all applicable regulations. Given that regulations are in place to ensure that the project would not result in an impact to water quality, this impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.9-3: The proposed DSP could expose people or property to an increased risk of flood hazards.

Construction

The DSP area is located within FEMA Flood Zone X, which applies to areas of minimal flood hazard outside of the 100-year flood hazard zone. Therefore, the DSP would not expose people or property to the risk of loss, injury, damage, or death in the event of the 100-year flood nor would it place structures that could impede or redirect flood flows within the 100-year floodplain during construction. Pursuant to the requirements of state law, in the future, flood protection in downtown Sacramento will be increased to a minimum of 200-year protection (exposure to no greater than the 0.5 percent flood). Studies done by regulatory agencies such as DWR, SAFCA, and the Corps examined levee stability along the Sacramento and American Rivers to enhance flood protection to a 200-year level flood event, and found that construction in the plan area was not considered an impact on the flood damage reduction provided by the levees along the rivers.[10] Additionally, construction of the project would not involve activities that would affect levee maintenance or regional flood management planning, nor would ongoing flood planning and maintenance efforts conflict with the construction within the DSP area. This impact would be **less than significant**.

Operation

As described above, the DSP area is located within FEMA Flood Zone X, which applies to areas of minimal flood hazard outside of the 100-year flood hazard zone. During operation, the DSP would not expose people or property to the risk of loss, injury, damage, or death in the event of the 100-year flood nor would it place structures that could impede or redirect flood flows within the 100-year floodplain during construction. This impact would be **less than significant**.

Mitigation Measure

None required.

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[10] City of Sacramento. 2016. *Railyards Specific Plan Update, KP Medical Center, MLS Stadium, & Stormwater Outfall Subsequent EIR*. Certified November 10, 2016.

Impact 4.9-4: The proposed DSP could adversely affect groundwater supplies, groundwater quality, and/or interfere with groundwater recharge.

Although the DSP area would not use groundwater as a supply, the plan would increase the amount of impervious surfaces and hence would reduce the ability for precipitation to percolate to the aquifer, thereby reducing groundwater recharge. However, this reduction is not considered a concern because the DSP area is not identified as a primary groundwater recharge area, the presence of shallow groundwater results in the reduced ability for use of groundwater for potable uses, and aquifer recharge in the area is driven primarily by deep percolation from local waterways. The DSP would not adversely affect groundwater recharge because the main sources for groundwater recharge in the groundwater basin are the Sacramento and American Rivers.

Implementation of the City's Standard Specification for Dewatering, the CVRWQCB's General Dewatering Permit, and NPDES General Construction Permit BMPs would prevent impacts to groundwater quality during construction. Once construction is complete, no dewatering or use of groundwater would occur within the DSP area. Compliance with the same regulations discussed above in impact 4.9-2 would also result in implementation of BMPs for source control and for source treatment to prevent contamination in stormwater runoff. Issues regarding soil foundation conditions can be found in Section 4.6, Seismicity, Soils, Geology, and Mineral Resources; issues related to dewatering and hazardous materials can be found in Section 4.8, Hazards and Hazardous Materials.

For the above reasons, the proposed plan would result in a **less-than-significant impact** on groundwater quality, supplies, or recharge.

Mitigation Measure

None required.

Cumulative Impacts

Proposed plan effects on water quality and hydrology must be considered in light of other past, present, and future projects that could create cumulative effects. These effects may be contributed to by development within the Sacramento River watershed, which extends well beyond the City of Sacramento limits. The cumulative context for water quality considers the geographic scope of the Basin Plan and, therefore, development within the larger Sacramento River watershed and the Delta. The Sacramento River watershed covers 27,000 square miles. The Delta extends for 24 miles from east to west and 48 miles from north to south where the Sacramento and San Joaquin rivers meet before discharging into the San Francisco Bay. With respect to groundwater, the cumulative context is the Central Sacramento County Groundwater Basin and North American Subbasin of the Sacramento Valley Groundwater Basin. Because impacts to stormwater infrastructure are more local in nature, the cumulative setting for impacts to stormwater conveyance is the City of Sacramento. Finally, the cumulative context for all impacts analyzed below assumes full buildout of the DSP.

Impact 4.9-5: The proposed DSP could contribute to the cumulative degradation of water quality.

Non-point source water pollution from the combination of past, present, and future projects in the Sacramento River watershed and the Delta, including residential, commercial, and industrial land use and development, agriculture, parks, transit, infrastructure, and other land uses, could result in the degradation of water quality in the Sacramento River watershed and the Delta. Cumulative land development in the City of Sacramento, in addition to other development in the Sacramento River watershed, would result in an increase in impervious surfaces and an associated increase in urban runoff and water pollutants, if not properly mitigated. Older land development that was constructed without BMPs to control the transport of water pollutants continues to represent a non-point source of polluted stormwater runoff. While agricultural runoff is regulated, it is a major non-point source of a variety of water pollutants. While new development is less likely to significantly degrade water quality because of existing regulations, older development, agriculture, and other non-point sources would continue to impair receiving water quality. This is considered a significant cumulative impact.

The City of Sacramento currently implements the SQIP, which is designed to reduce stormwater pollution to the maximum extent practicable and eliminate prohibited non-stormwater discharges through its NPDES MS4 permit. The City of Sacramento also provides direction on post-construction BMPs in the Stormwater Quality Design Manual for the Sacramento Region. Development of the DSP area would be required to meet the following: City of Sacramento General Plan Policies U 4.1.4, ER 1.1.3, ER 1.1.4, and ER 1.1.7; the City's ordinances; the SQIP; the Stormwater Quality Design Manual for Sacramento Region; the NPDES General Construction Permit; CVRWQCB General Dewatering Permit; the City's MS4 Permit. As discussed under Impact 4.9-1 above, through compliance with these permits and plans, the proposed plan would reduce generation of water pollutants to the maximum extent practicable consistent with the goals of the State Water Board and CVRWQCB water quality criteria and stormwater regulations through the use of structural and non-structural BMPs. Therefore, the proposed plan's contribution to the significant cumulative impact would be less than considerable, and this impact would be less than significant.

Mitigation Measure

None required.

Impact 4.9-6: The proposed DSP could contribute to cumulative increases in the risk of flooding.

Cumulative development within the City of Sacramento could substantially increase the exposure of people and/or property to flood risk, particularly if development is located within a FEMA flood hazard zone or the 200-year floodplain. The 2035 MEIR identified growth within the City

and region would increase population in the future.[11] This growth would likely increase exposure to flood risk. This is considered a significant cumulative impact.

As described above, the DSP area is located within an area designated by FEMA to be protected from the 500-year flood primarily by levees. During operation, the proposed plan would not expose people or property to the risk of loss, injury, damage, or death in the event of a flood nor would it place structures that could impede or redirect flood flows within the floodplain during construction. Further, as described previously, policies proposed under the Sacramento 2035 General Plan include levee requirements, new development evaluations, and regional flood management planning efforts (Policies EC 2.1.2 through 2.1.21). Development projects would not be approved unless flood risk is consistent with plans that are aimed to provide a 200-year flood protection standard for the entire city (Policy EC 2.1.11) and would be consistent with on-going planning associated with the CVFPB. Therefore, the project would have a less-than-considerable contribution and this impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.9-7: The proposed DSP could contribute to cumulative impact on groundwater supplies, quality, and recharge.

The Central Sacramento County Groundwater Management Plan includes groundwater supply and demand projections through 2030. The comparison of supply and demand shows that supplies should be sufficient to meet demands through 2030. The plan acknowledges that there are more factors than just supply and demand that determine whether a groundwater basin is managed sustainably, and groundwater management objectives are identified in the plan.[12] Because the groundwater basin would be managed sustainably according to the plan, and to meet SGMA regulations, groundwater use would not exceed the calculated long-term average annual sustainable yield of 273,000 acre-feet per year. The City uses the groundwater basin and it is managed, but the proposed plan would not pump groundwater. Likewise, because groundwater recharge in the basin includes natural processes through percolation and hydraulic connectivity with the Sacramento and American River, and with conjunctive use or aquifer storage and recovery operations, groundwater would be managed to obtain sustainable levels in the basin. However, while new development is less likely to significantly degrade groundwater quality because of existing regulations, older development, agriculture, and other non-point sources would continue to impair groundwater quality. This is considered a significant cumulative impact. The proposed plan would not withdraw groundwater for water supply, or interfere with

[11] City of Sacramento, 2014. Sacramento 2035 General Plan Master Environmental Impact Report (SCH *No.2012122006).* Certified March 2015.

[12] Water Forum, Sacramento County Water Agency, and MWH, 2006. *Central Sacramento County Groundwater Management Plan*. February 2006. pp. 2-22 – 2-23.

groundwater recharge. Development within the DSP Area would be required to meet the water quality regulations listed in the regulatory setting and Impact 4.9-5 to prevent degradation of groundwater quality. Therefore, the proposed plan would have a less-than-considerable contribution and the impact would be **less than significant**.

Mitigation Measure

None required.

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4.10 Noise and Vibration

This section describes the existing noise environment in the vicinity of the DSP area, and evaluates the potential for construction and operation of development facilitated under the proposed DSP to result in significant impacts associated with noise and vibration.

No comments were received on the NOP related to noise and vibration.

The analysis included in this section was developed based on data provided in the City of Sacramento 2035 General Plan,[1] the City of Sacramento 2035 General Plan Master Environmental Impact Report,[2] the Federal Transit Administration's (FTA's) Transit Noise and Vibration Impact Assessment,[3] and the Federal Highway Administration's (FHWA's) *Traffic Noise Model Technical Manual*[4] and vehicle trip and distribution data provided by Fehr & Peers and reported in section 4.12, Transportation and Circulation.

4.10.1 Environmental Setting

Fundamentals of Environmental Sound and Noise

Sound can be described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the intensity of the pressure vibrations that make up a sound. The pitch of the sound is correlated to the frequency of the sound's pressure vibration. Because humans are not equally sensitive to a given sound level at all frequencies, a special scale has been devised that specifically relates noise to human sensitivity. The dBA does this by placing more emphasis on frequencies that are more noticeable to the human ear.

The term 'noise' is typically used to denote unwanted sound. Typically, noise in any environment consists of a base of steady "background" noise made up of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These sources can vary from an occasional aircraft or train passing by to virtually continuous noise from traffic on a major highway. **Table 4.10-1** lists the A-weighted average sound levels commonly encountered in various environmental situations.

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 Report* (SCH No. 2012122006). Certified March 3, 2015.
3 Federal Transit Administration, 2006. *Transit Noise and Vibration Impact Assessment*. May 2006.
4 Federal Highway Administration, 1998. FWHA Traffic Noise Model Technical manual. February 1998.

TABLE 4.10-1
REPRESENTATIVE ENVIRONMENTAL SOUND LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet Fly-over at 100 feet	105	
	100	
Gas Lawnmower at 3 feet	95	
	90	
	85	Food Blender at 3 feet
Diesel Truck going 50 mph at 50 feet	80	Garbage Disposal at 3 feet
Noisy Urban Area during Daytime	75	
Gas Lawnmower at 100 feet	70	Vacuum Cleaner at 3 feet
Commercial Area	65	Normal Speech at 3 feet
Heavy Traffic at 300 feet	60	
	55	Large Business Office
Quiet Urban Area during Daytime	50	Dishwasher in Next Room
	45	
Quiet Urban Area during Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Area during Nighttime	35	
	30	Library
Quiet Rural Area during Nighttime	25	Bedroom at Night, Concert Hall (background)
	20	
	15	Broadcast/Recording Studio
	10	
	5	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

SOURCE: Caltrans, 2013. **Technical Noise Supplement**. September, 2013.

Several metrics have been developed to analyze the adverse effect of noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise upon people is largely dependent upon the volume of the noise, as well as the time of day when the noise occurs. Those that are applicable to this analysis are as follows:

- L_{eq}, the equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

- L_{dn}, the Day Night Average Level is a 24-hour average L_{eq} with a 10 dB "weighting" added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the nighttime.

- The Community Noise Equivalent Level (CNEL) is an L_{dn} with an additional 5 dB "penalty" added for the evening hours between 7:00 pm and 10:00 pm.

- The Single Event Noise Level (SEL) is the constant noise level that would deliver the same acoustic energy to the ear of a listener during a one-second exposure as the real and variable noise would deliver over its entire time of occurrence.

Community noise exposures from continuous sources such as motor vehicle traffic, trains, etc. are usually represented by descriptors of 24-hour average noise levels, such as L_{dn} or CNEL. Measurements of peak-daytime hourly noise levels (one-hour and shorter-periods), such as L_{eq}, are useful to characterize noise generated by short term activities, such as the operation of construction equipment. The SEL is commonly used to quantify the impacts of repetitive, reasonably discrete noise events, such as train pass-by events and aircraft flyovers. In outdoor environments where the dominant noise sources are transportation-related (e.g., on-road motor vehicles, aircraft), there are fairly strong relationships among the first three of the above-mentioned descriptors: L_{dn} can be about 2 dB less than peak-daytime hourly L_{eq},[5] while L_{dn} and CNEL typically vary by less than 1 dB and are often used interchangeably.[6]

Fundamentals of Ground-borne Noise and Vibration

Ground-borne vibration is sound radiated through the ground and is measured in the United States as vibration decibels (VdB) or peak particle velocity (PPV). The PPV is most frequently used to describe vibration impacts to buildings, while the VdB is frequently used to measure human response.

In contrast to air-borne noise, ground-borne vibration is not a phenomenon that most people experience every day. The background vibration velocity level in residential areas is usually 50 VdB or lower, well below the threshold of perception for humans, which is around 65 VdB.[7] Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If the roadway is smooth, the vibration from traffic is rarely perceptible.

Common vibration sources and the human and structural response to ground-borne vibration are illustrated in **Table 4.10-2**. The range of interest is from approximately 50 VdB to 100 VdB. Background vibration is usually well below the threshold of human perception and is of concern only when the vibration affects very sensitive manufacturing or research equipment, such as electron microscopes and high resolution photo lithography equipment.[8]

5 Federal Transit Administration, Transit Noise and Vibration Impact Assessment, April 1995, Appendix D.
6 California Department of Transportation, 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September 2013.
7 U.S. Department of Transportation Federal Railroad Administration, 2005. High-Speed Ground Transportation Noise and Vibration Impact Assessment. October 2005.
8 *Ibid*., p. 6-5.

TABLE 4.10-2
TYPICAL LEVELS OF GROUND-BORNE VIBRATION

Human/Structural Response	Velocity Level (VdB)	Typical Sources (50 feet from Source)
Threshold, minor cosmetic damage fragile buildings	100	Blast from construction projects
	95	Bulldozer and other heavy tracked construction equipment
Difficulty with tasks such as reading a Video Display Terminal (VDT) screen	90	
	85	High Speed Rail, upper range
Residential annoyance infrequent events (e.g., commuter rail)	80	Rapid transit, upper range
	75	High Speed Rail, typical
Residential annoyance frequent events (e.g., rapid transit)		Bus or truck over bump
	70	
Limit for vibration sensitive equipment. Approx. threshold for human perception of vibration	65	Bus or truck, typical
	60	
	55	
	50	Typical background vibration

SOURCE: U.S. Department of Transportation Federal Railroad Administration, High-Speed Ground Transportation Noise and Vibration Impact Assessment. October 2005. pp. 6-6.

Accurate estimates of ground-borne vibration are complicated due to the many factors that influence vibration levels at potential receivers. Typical factors that can have significant effects on levels of ground-borne vibration are:

Guideway and Operational Factors of Railway Systems: The type and condition of the rails, the type of guideway, the rail support system, the mass and stiffness of the guideway structure, and all of the parameters that relate to the vehicle and operation of the trains can all influence the level of ground-borne vibration. For instance, worn rail and wheel impacts at special track work can substantially increase ground-borne vibration.

Geology: Soil conditions are known to have a strong influence on the levels of ground-borne vibration. Among the most important factors are the stiffness and internal damping of the soil and the depth to bedrock. Experience has shown that vibration propagation is more efficient in clay soils as well as areas with shallow bedrock. The latter condition seems to channel or concentrate the vibration energy close to the surface, resulting in ground-borne vibration problems at large distances from the source. Factors such as layering of the soil and depth to water table can also have significant effects on the propagation of ground-borne vibration.

Receiving Building: Ground-borne vibration problems occur almost exclusively inside buildings. Therefore, the characteristics of the receiving building are a key component in the evaluation of ground-borne vibration. Vibration may be perceptible to people who are outdoors, but it is very rare for outdoor vibration to cause complaints. The vibration levels inside a building depend on the vibration energy that reaches the building foundation, the coupling of the building foundation to the soil, and the propagation of the vibration through the building structure. The general guideline is that the more massive a building is, the lower its response to incident vibration energy in the ground.[9]

The human response to different levels of ground-borne noise and vibration is described in **Table 4.10-3**. The first column lists vibration velocity levels, and the subsequent two columns list the corresponding noise levels assuming that the vibration spectrum peaks at either 30 hertz or 60 hertz. A hertz (Hz) is a measurement for the frequency of any periodic (repeating) event meaning "one per second." For instance, the ticking of a clock could be expressed as 1 Hz or one tick per second. Similarly, the human heart can be said to beat at 1.2 Hz or 1.2 beats per second. Generally, the A-weighted noise level will be approximately 40 dB less than the vibration velocity level if the spectrum peak is around 30 Hz, and 25 dB lower if the spectrum peak is around 60 Hz. Achieving either the acceptable vibration or acceptable noise levels does not guarantee that the other will be acceptable. For example, the noise caused by vibrating structural components may be very annoying even though the vibration cannot be felt.[10]

TABLE 4.10-3
HUMAN RESPONSE TO DIFFERENT LEVELS OF GROUND-BORNE NOISE AND VIBRATION

Vibration Level	Noise Level		Human Response
	Low-Frequency[1]	Mid-Frequency[2]	
65 VdB	25 dBA	40 dBA	Approximate threshold of perception for many humans. Low frequency sound usually inaudible, mid-frequency sound excessive for quiet sleeping areas.
75 VdB	35 dBA	50 dBA	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find vibration at this level unacceptable. Low-frequency noise acceptable for sleeping areas, mid-frequency noise annoying in most quiet occupied areas.
85 VdB	45 dBA	60 dBA	Vibration acceptable only if there are an infrequent number of events per day. Low-frequency noise unacceptable for sleeping areas, mid-frequency noise unacceptable even for infrequent events with institutional land uses such as schools and churches.

NOTES:
1. Approximate noise level when vibration spectrum peak is near 30 Hz.
2. Approximate noise level when vibration spectrum peak is near 60 Hz.

SOURCE: Federal Railroad Administration, 2005. **High-Speed Ground Transportation Noise and Vibration Impact Assessment**. October 2005, p. 6-8.

9 *Ibid*., p. 6-7.
10 *Ibid*., p. 6-8.

Physiological Effects of Noise

Hearing Impairment/Loss

Prolonged exposure to high levels of noise can cause hearing impairment, though most cases of hearing impairment tend to be related to occupational, rather than environmental, noise exposure. Outside of occupational noise exposure, deterioration of the hearing capability is caused by diseases, head trauma, hereditary factors, and aging.

Sleep Disturbance

It is estimated that only 10 to 20 percent of the reported cases of sleep disturbance are for reasons relating to transportation noise. Sleep disturbance studies tend to focus on investigating possible secondary effects of sleep disturbance, including reduced perceived sleep quality, increased fatigue, depressed mood or well-being, and decreased performance.[11,12,13,14] Although no specific long-term health effects have been clearly linked with sleep disturbance, sleep disturbance is recognized as intrinsically undesirable and, thus, is considered an adverse noise impact. Sleep disturbance studies have become the basis for predictive models of awakenings caused by transportation noise sources. Predicted awakening percentages as a function of indoor SEL levels are shown in **Table 4.10-4**.

TABLE 4.10-4
SLEEP DISTURBANCE AS A FUNCTION OF SINGLE-EVENT NOISE EXPOSURE

Indoor SEL	Average Percent Awakened[1]
45 dBA	0.8%
50 dBA	1.0%
55 dBA	1.2%
60 dBA	1.5%
65 dBA	1.8%
70 dBA	2.2%
75 dBA	2.8%
80 dBA	3.4%
85 dBA	4.2%

NOTES:
1. Finegold and Bartholomew, A Predictive Model of Noise Induced Awakenings from Transportation Noise Sources, Noise Control Engineering Journal, 2001.

SOURCE: Finegold and Bartholomeq, A predictive Model of Noise induce Awakenings form Transportation Noise Sources, Noise Control Engineering Journal, 2001.

11 Carter, N.L., 1996. Transportation Noise, Sleep, and Possible After-Effects, Environmental International 22, 1996, pp. 105-116.
12 Federal Railroad Administration. 2005. *High-Speed Ground Transportation Noise and Vibration Impact Assessment*. Final report. October 2005.
13 Passchier-Vermeer, W., 1993. Noise and Health. Publication No. A93/02E, Leiden, Netherlands: Health Council of the Netherlands, TNO Institute of Preventative Health Care, 1993.
14 Pearsons, K.S., D.S. Barber, B.G. Tabachnick, S. Fidell, 1995. Predicting Noise-Induced Sleep Disturbance, Journal of the Acoustical Society of America 97, pp. 331-338, 1995.

Existing Traffic Noise

The primary contributor to the ambient noise environment within the DSP area is vehicular traffic along Interstate-5 (I-5), Business 80, Highway 50 and arterial roadways within the specific plan area such as Q Street, J Street and N Street. To evaluate the existing traffic noise levels along arterial roadways in and around the DSP area, a traffic noise assessment was conducted using traffic noise prediction equations developed by the FHWA and traffic volumes from the DSP EIR transportation analysis (presented in section 4.12, Transportation and Circulation). The results of this analysis documenting existing traffic noise levels can be found in **Table 4.10-5**, which shows the predicted traffic noise levels in terms of L_{dn} at a standardized distance of 50 feet from the centerlines of the existing roadways segments and distances to existing traffic noise contours. These contours include distances to the 70, 65 and 60 dBA L_{dn}.

TABLE 4.10-5
EXISTING TRAFFIC NOISE LEVELS AND DISTANCES TO ROADWAY CONTOURS

Roadway Segment	L_{dn} @ 50 ft.[1]	Distance to L_{dn} Contours (feet)[2]		
		70 dBA	65 dBA	60 dBA
G Street				
8th Street to 12th Street	62	10	25	80
12th Street to 15th Street	62	10	25	80
H Street				
8th Street to 16th Street	66	20	65	200
I Street				
8th Street to 16th Street	68	30	100	315
J Street				
3rd Street to 5th Street	71	65	200	630
5th Street to 6th Street	70	50	160	500
6th Street to 7th Street	70	50	160	500
7th Street to 8th Street	69	40	125	395
8th Street to 15th Street	69	40	125	395
15th Street to 16th Street	68	30	100	315
16th Street to 29th Street	68	30	100	315
L Street				
5th Street to 7th Street	67	25	80	250
7th Street to 8th Street	67	25	80	250
8th Street to 9th Street	67	25	80	250
9th Street to 10th Street	68	30	100	315
N Street				
5th Street to 9th Street	65	15	50	160
9th Street to 10th Street	65	15	50	160
10th Street to 15th Street	66	20	65	200
15th Street to 16th Street	66	20	65	200
16th Street to 19th Street	65	15	50	160
19th Street to 21st Street	64	15	40	125

TABLE 4.10-5
EXISTING TRAFFIC NOISE LEVELS AND DISTANCES TO ROADWAY CONTOURS

Roadway Segment	L_{dn} @ 50 ft.[1]	Distance to L_{dn} Contours (feet)[2]		
		70 dBA	65 dBA	60 dBA
P Street				
3rd Street to 5th Street	69	40	125	395
5th Street to 9th Street	67	25	80	250
9th Street to 10th Street	66	20	65	200
10th Street to 15th Street	66	20	65	200
15th Street to 48th Street	66	20	65	200
Q Street				
3rd Street to 5th Street	70	50	160	500
5th Street to 9th Street	68	30	100	315
9th Street to 10th Street	67	25	80	250
10th Street to 15th Street	66	20	65	200
W Street				
5th Street to 15th Street	65	15	50	160
15th Street to 16th Street	67	25	80	250
16th Street to 19th Street	66	20	65	200
X Street				
5th Street to 15th Street	65	15	50	160
15th Street to 16th Street	69	40	125	395
16th Street to 19th Street	66	20	65	200
19th Street to 21st Street	67	25	80	250
Broadway				
15th Street to 16th Street	69	40	125	395
16th Street to 19th Street	68	30	100	315
19th Street to Highway 99	68	30	100	315
3rd Street				
Q Street to P Street	64	15	40	125
P Street to Capitol Mall	68	30	100	315
Capitol Mall to J Street	68	30	100	315
5th Street				
W Street to Q Street	64	15	40	125
Q Street to P Street	65	15	50	160
P Street to N Street	66	20	65	200
N Street to Capitol Mall	64	15	40	125
Capitol Mall to L Street	65	15	50	160
L Street to J Street	65	15	50	160

TABLE 4.10-5
EXISTING TRAFFIC NOISE LEVELS AND DISTANCES TO ROADWAY CONTOURS

Roadway Segment	L_{dn} @ 50 ft.[1]	Distance to L_{dn} Contours (feet)[2]		
		70 dBA	65 dBA	60 dBA
8th Street				
L Street to J Street	63	10	30	100
J Street to I Street	64	15	40	125
I Street to H Street	63	10	30	100
H Street to G Street	63	10	30	100
9th Street				
Q Street to P Street	66	20	65	200
P Street to N Street	66	20	65	200
N Street to L Street	66	20	65	200
10th Street				
Q Street to P Street	67	25	80	250
P Street to N Street	67	25	80	250
N Street to L Street	65	15	50	160
15th Street				
W Street to Q Street	67	25	80	250
Q Street to P Street	67	25	80	250
P Street to N Street	67	25	80	250
N Street to J Street	67	25	80	250
J Street to G Street	63	10	30	100
16th Street				
W Street to N Street	68	30	100	315
N Street to J Street	68	30	100	315
J Street to I Street	69	40	125	395
I Street to H Street	69	40	125	395
19th Street				
W Street to N Street	66	20	65	200
21st Street				
X Street to N Street	66	20	65	200
29th Street				
P Street to J Street	66	20	65	200

NOTES:
1. Noise levels were determine using methodology described in FHWA Traffic Noise Model Technical Manual.
2. Distance to traffic noise contours are measured in feet from the centerlines of the roadways.

SOURCE: ESA 2017.

Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others, due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the populations that would be exposed, and the types of activities typically involved. Residences, motels and hotels, schools, libraries, churches, hospitals, and nursing homes are land uses with users that are generally more sensitive to noise than are the users of commercial (other than lodging facilities), industrial, and other non-residential land uses. The proposed DSP includes land that is currently occupied by urban residential, transient lodging, institutional and hospital land uses. Historic age buildings, eligible historic structures, listed historic structures may be sensitive receptors to vibration impacts.

4.10.2 Regulatory Framework

Federal

Truck Operations

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under 40 CFR, Part 205, Subpart B. The federal truck pass-by noise standard is 80 dBA at 15 meters (approximately 50 feet) from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration (OSHA) aims to ensure worker safety and health in the United States by working with employers and employees to create better working environments. With regard to noise exposure and workers, OSHA regulations set forth accepted criteria to protect the hearing of workers exposed to occupational noise. Noise exposure regulations are listed in 29 CFR Section 1910.95. Most applicable to this project, 1910.95(c)(1) states that an employer shall administer a hearing conservation program whenever noise exposure levels equal or exceed an 8-hour time-weighted average sound level of 85 dBA.

Federal Transit Administration

The Federal Transit Administration (FTA) has guidance on how to assess noise and vibration impacts of proposed mass transit projects, which can be found in the *Transit Noise and Vibration Impact Assessment* manual.[15] This guidance is used by project sponsors seeking funding from FTA to evaluate these impacts during the environmental review process. All types of bus and rail projects are covered. The guidance contains procedures for assessing impacts at different stages of project development, from early planning before mode and alignment have been selected through preliminary engineering and final design. The focus is on noise and vibration impacts

[15] Federal Transit Administration, 2006. Transit Noise and Vibration Impact Assessment. May 2006.

during operations, but construction impacts are also covered. The guidance describes a range of measures for controlling excessive noise and vibration.

State

Department of Industrial Relations

The Division of Occupational Safety and Health (DOSH) protect workers and the public from safety hazards through its California Division of Occupational Safety and Health (Cal/OSHA) program. The Cal/OSHA Program is responsible for enforcing California laws and regulations pertaining to workplace safety and health and for providing assistance to employers and workers about workplace safety and health issues. DOSH enforces noise standards in the workplace in conjunction with OSHA through the CAL/OSHA program.

Local

City of Sacramento 2035 General Plan

The following noise and vibration-related goals and policies identified in the Environmental Constraints Element of the **City of Sacramento 2035 General Plan**[16] are relevant to the proposed DSP.

Goal EC 3.1 Noise Reduction. Minimize noise impacts on human activity to ensure the health and safety of the community.

Policies

EC 3.1.1 **Exterior Noise Standards.** The City shall require noise mitigation for all development where the projected exterior noise levels exceed those shown in **Table 4.10-6** (Table EC 1 in the General Plan), to the extent feasible.

TABLE 4.10-6
EXTERIOR NOISE COMPATIBILITY STANDARDS FOR VARIOUS LAND USES

Land Use Type	Highest Level of Noise Exposure that is Regarded as "Normally Acceptable"[a] (L_{dn}[b] or CNEL[c])
Residential—Low Density Single Family, Duplex, Mobile Homes	60 dBA[d,e]
Residential—Multi-family	65 dBA
Urban Residential Infill[f] and Mixed-Use Projects[g]	70 dBA
Transient Lodging—Motels, Hotels	65 dBA
Schools, Libraries, Churches, Hospitals, Nursing Homes	70 dBA
Auditoriums, Concert Halls, Amphitheaters	Mitigation based on site-specific study
Sports Arena, Outdoor Spectator Sports	Mitigation based on site-specific study
Playgrounds, Neighborhood Parks	70 dBA
Golf Courses, Riding Stables, Water Recreation, Cemeteries	75 dBA
Office Buildings—Business, Commercial and Professional	70 dBA
Industrial, Manufacturing, Utilities, Agriculture	75 dBA

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

TABLE 4.10-6
EXTERIOR NOISE COMPATIBILITY STANDARDS FOR VARIOUS LAND USES

Land Use Type	Highest Level of Noise Exposure that is Regarded as "Normally Acceptable"[a] (L_{dn}[b] or CNEL[c])

NOTES:

a. As defined in the **State of California General Plan Guidelines**, "Normally Acceptable" means that the "specified land use is satisfactory, based upon the assumption that any building involved is of normal conventional construction, without any special noise insulation requirements."

b. L_{dn} or Day Night Average Level is an average 24-hour noise measurement that factors in day and night noise levels.

c. CNEL or Community Noise Equivalent Level measurements are a weighted average of sound levels gathered throughout a 24-hour period.

d. dBA or A-weighted decibel scale is a measurement of noise levels.

e. The exterior noise standard for the residential area west of McClellan Airport known as McClellan Heights/Parker Homes is 65 dBA.

f. With land use designations of Central Business District, Urban Neighborhood (Low, Medium, or High) Urban Center (Low or High), Urban Corridor (Low or High).

g. All mixed-use projects located anywhere in the City of Sacramento.

SOURCE: City of Sacramento, 2015. **City of Sacramento 2035 General Plan.** Adopted March 3, 2015. Page 2-350.

EC 3.1.2 **Exterior Incremental Noise Standards.** The City shall require noise mitigation for all development that increases existing noise levels by more than the allowable increment shown in **Table 4.10-7** (Table EC 2 in the General Plan), to the extent feasible.

TABLE 4.10-7
EXTERIOR INCREMENTAL NOISE IMPACT STANDARDS FOR NOISE-SENSITIVE USES (DBA)

Residences and Buildings where People Normally Sleep[a]		Institutional Land Uses with Primarily Daytime and Evening Uses[b]	
Existing L_{dn}	Allowable Noise Increment	Existing Peak Hour L_{eq}	Allowable Noise Increment
45	8	45	12
50	5	50	9
55	3	55	6
60	2	60	5
65	1	65	3
70	1	70	3
75	0	75	1
80	0	80	0

NOTES:

a. This category includes homes, hospitals, and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance.

b. This category includes schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material.

SOURCE: City of Sacramento, 2015. **City of Sacramento 2035 General Plan.** Adopted March 3, 2015. Page 2-351.

EC 3.1.3 **Interior Noise Standards.** The City shall require new development to include noise mitigation to assure acceptable interior noise levels appropriate to the land use type: 45 dBA L_{dn} for residential, transient lodgings, hospitals, nursing homes, and other uses where people normally sleep; and 45 dBA L_{eq} (peak hour) for office buildings and similar uses.

EC 3.1.4 **Interior Noise Review for Multiple, Loud Short-Term Events.** In cases where new development is proposed in areas subject to frequent, high-noise events (such as aircraft over-flights, or train and truck pass-by events), the City shall evaluate noise impacts on any sensitive receptors from such events when considering whether to approve the development proposal, taking into account potential for sleep disturbance, undue annoyance, and interruption in conversation, to ensure that the proposed development is compatible within the context of its surroundings.

EC 3.1.5 **Interior Vibration Standards.** The City shall require construction projects anticipated to generate a significant amount of vibration to ensure acceptable interior vibration levels at nearby residential and commercial uses based on the current City or Federal Transit Administration (FTA) criteria.

EC 3.1.6 **Effects of Vibration.** The City shall consider potential effects of vibration when reviewing new residential and commercial projects that are proposed in the vicinity of rail lines or light rail lines.

EC 3.1.7 **Vibration.** The City shall require an assessment of the damage potential of vibration-induced construction activities, highways, and rail lines in close proximity to historic buildings and archaeological sites and require all feasible measures be implemented to ensure no damage would occur.

EC 3.1.8 **Operational Noise.** The City shall require mixed-use, commercial, and industrial projects to mitigate operational noise impacts to adjoining sensitive uses when operational noise thresholds are exceeded.

EC 3.1.9 **Compatibility with Park and Recreation Uses.** The City shall limit the hours of operation for parks and active recreation areas in residential areas to minimize disturbance to residences.

EC 3.1.10 **Construction Noise.** The City shall require development projects subject to discretionary approval to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on these uses, to the extent feasible.

Although the proposed DSP would generate noise and vibration during short-term construction activities and long-term operations, and would locate sensitive residential land uses in an urban environment subject to noise (primarily from on-road transportation), the proposed DSP would be consistent with the goals and policies of the 2035 General Plan related to noise. Consistent with Policy EC 3.1.1 and as discussed below under Impact 4.10-2, on-road traffic noise associated with the DSP would result in noise levels that would not exceed the normally acceptable L_{dn} for Urban Residential Infill and Mixed-Use Projects. And although the projected noise levels of the existing plus project traffic would exceed the allowable incremental noise levels of Policy EC 3.1.2, all feasible mitigation measures to reduce this impact would be required. Consistent with policies EC 3.1.3 and EC 3.1.4, new development under the proposed DSP would be designed to meet the City interior standards, and interior noise from multiple loud, short-term events was analyzed. Construction vibration impacts were assessed in Impacts 4.10-4 and were determined to be consistent with policies EC 3.1.5, EC 3.1.6, and EC 3.1.7, after mitigation. Operational noise of the proposed DSP, including heating, ventilation and air conditioning units (HVAC) and loading dock activities, were assessed and mitigated in Impact 4.10-2. The proposed DSP would be consistent with policies EC 3.1.8 and EC 3.1.9. Consistent with EC 3.1.10, construction noise of the proposed DSP was analyzed and mitigated to the extent feasible in Impact 4.10-1.

Sacramento Central City Community Plan

The City's **Central City Community Plan**[17] does not contain goals and policies specific to noise.

City of Sacramento Municipal Code (Noise Control Ordinance)

The Sacramento Municipal Code includes noise regulations in Title 8 – Health and Safety, Chapter 8.68 – Noise Control (referred to generally as the Noise Control Ordinance). Of the regulations in Chapter 8.68, the following regulations would be applicable to the proposed Project:

- Section 8.68.080 exempts certain activities from Chapter 8.68, including "noise sources due to the erection (including excavation), demolition, alteration, or repair of any building or structure" as long as these activities are limited to between the hours of 7:00 am and 6:00 pm Monday through Saturday, and between the hours of 9:00 am and 6:00 pm on Sunday. The use of exhaust and intake silencers for internal combustion engines is also required. Construction work can occur outside of the designated hours if the work is of urgent necessity and in the interest of public health and welfare for a period not to exceed 3 days. Section 8.68.080 also exempts noise from any mechanical device, apparatus, or equipment related to or connected with emergency activities or emergency work from Chapter 8.68 requirements.

- Section 8.68.060 sets standards for cumulative exterior noise levels at residential and agricultural properties, including exterior noise standards of 55 dBA from 7:00 am to 10:00 pm, and 50 dBA from 10:00 pm to 7:00 am. Per Section 8.68.060(b), the allowable decibel increase above the exterior noise standards in any one hour are:

  1. 0 dB for cumulative period of 30 minutes per hour;
  2. 5 dB for cumulative period of 15 minutes per hour;
  3. 10 dB for cumulative period of 5 minutes per hour;
  4. 15 dB for cumulative period of 1 minutes per hour; or
  5. 20 dB not to be exceeded for any time per hour.

  In addition, per Section 8.68.060(c), each of the noise limits above shall be reduced by 5 dB for impulsive or simple tone noises, or for noises consisting of speech or music. If the ambient noise level exceeds that permitted by any of the first four noise limit categories specified in subsection (b) above, the allowable noise limit shall be increased in 5 dB increments in each category to encompass the ambient noise level. If the ambient noise level exceeds the fifth noise level category, the maximum ambient noise level shall be the noise limit for that category.

- Section 8.6.130 sets noise standards for waste disposal vehicles. According to Section 8.68.130, "it is unlawful for any person authorized to engage in waste disposal service or garbage collection to operate any truck-mounted waste or garbage loading and/or composting equipment or similar mechanical device in any manner so as to create any noise exceeding

[17] City of Sacramento, 2015. *Central City Community Plan*. Adopted March 3, 2015.

the following level, when measured at a distance of fifty (50) feet from the equipment or any agricultural or residential property."

A. New equipment purchased or leased on or after a date six months from the effective date of this chapter shall not exceed a noise level of eighty (80) dBA.

B. New equipment purchased or leased on or after forty-two (42) months from the effective date of this chapter shall not exceed a noise level of seventy-five (75) dBA.

C. Present equipment shall not exceed a noise level of eighty (80) dBA on or after five years from the effective date of this chapter.

4.10.3 Analysis, Impacts, and Mitigation

Significance Criteria

Appendix G of the CEQA Guidelines identifies potential significance criteria for the evaluation of impacts related to noise and vibration. The proposed DSP would have a significant impact related to noise and vibration if future development would:

- Result in a substantial permanent increase in ambient exterior noise levels in the project vicinity that exceed standards in the City's General Plan or Noise Control Ordinance;
- Result in construction noise levels that exceed the standards in the City of Sacramento Noise Control Ordinance;
- Permit existing and/or planned buildings (and persons within) to be exposed to significant vibration due to project construction; or

Methods and Assumptions

Construction Noise

Construction noise impacts are assessed relative to the increase in noise levels that could result from the operation of specified construction equipment compared to existing noise level conditions. Analysis of the proposed DSP temporary construction noise effects is based on construction equipment typically used in residential and urban development projects. Analysis of temporary construction noise effects of specific development scenarios are based on typical construction phases and equipment noise levels. In all cases, the analyses accounted for attenuation of those noise levels due to distances between the construction activity and the sensitive land uses in the site vicinity. Construction noise levels at nearby sensitive land uses that would be associated with the proposed DSP are estimated using the FHWA's *Roadway Construction Noise Model* (RCNM).[18]

[18] Federal Highway Administration, 2006. *FHWA Roadway Construction Noise Model User's Guide*. January 2006.

Ground-borne Vibration

For the purposes of this assessment, the methodology described in the Caltrans' **Transportation and Construction Vibration Guidance Manual** was used to evaluate project-related vibration effects to nearby sensitive land uses.[19] This Caltrans guidance manual focuses entirely on addressing vibration from construction activities. Impact pile driving may occur during the construction of high-rise buildings under the proposed DSP. Impact pile driving is considered a continuous/frequent intermittent source.[20] The building damage threshold for historic and some older buildings is 0.25 PPV (in/sec) and the vibration threshold where vibration level increases are considered distinctly perceptible is 0.04 PPV (in/sec) for continuous/frequent intermittent sources. On- and off-site sensitive receptors exposed to construction vibration levels that would exceed the later of these thresholds would be considered to result in a significant impact. Buildings that would be exposed to construction vibration levels that would exceed the former of these thresholds would also be considered to result in a significant impact.

Operational Noise

The California Supreme Court recently found that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents." In *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4th 369, the Supreme Court explained that an agency is only required to analyze the potential impact of such hazards on future residents if the project would exacerbate those existing environmental hazards or conditions. CEQA analysis is therefore concerned with a project's impact on the environment, rather than with the environment's impact on a project and its users or residents. Thus, with respect to noise and vibration impacts from existing freight and transport rail pass-by events along the Union Pacific Rail Road (UPRR), BNSF Railway, and Sacramento Regional Transit (Sac RT) rail lines, the City is not required to consider the effects of bringing a new population into an area where such noise and vibration levels exist, because the proposed DSP would not increase or otherwise affect the number of freight and passenger train trips on the existing rail lines that could result in an increase in vibration levels. Therefore, future noise and vibration affects as a result of the existing UPRR, BNSF, and Sac RT operations is not assessed in this EIR.

Roadway Traffic Noise Levels

Roadside noise levels were calculated for the same roadways analyzed in Section 4.12, **Transportation and Circulation**. The street segments selected for analysis are those expected to be most directly impacted by project-related traffic, which, for the purpose of this analysis, are the streets that are within the DSP area that experience the highest traffic volumes. These streets are forecast to experience the greatest percentage increase in traffic generated by the proposed DSP. The noise levels are calculated using the FHWA's traffic noise prediction equations and

[19] California Department of Transportation, 2013. *Transportation and Construction Vibration Guidance manual.* September 2013.
[20] *Ibid.*

traffic volumes identified in the transportation and circulation study conducted for this EIR. Future traffic noise levels that are found to exceed the allowed City of Sacramento's exterior incremental noise impact standards or exterior noise compatibility standards would result in a significant impact.

Impacts and Mitigation Measures

Impact 4.10-1: Construction of development allowed under the proposed DSP could generate noise that would conflict with City standards or result in substantial temporary or periodic increase in ambient noise levels.

Noise levels from construction activity at nearby sensitive receptors would fluctuate depending on the nature of the construction project and the particular type, number, and duration of use of various pieces of construction equipment. Construction-related material haul trips would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. In addition, certain types of construction equipment generate impulsive noises (such as impact pile driving), which can be disruptive. **Table 4.10-8** shows typical noise levels produced by the types of construction equipment that would likely be used during construction of the 13,401 residential dwelling units, 280,030 square feet of restaurant uses, 435,837 square feet of government office building uses, 3,510,892 square feet of office uses, 2,303,044 square feet of retail/service uses and 643,797 square feet of medical office uses anticipated under the proposed DSP.

TABLE 4.10-8
REFERENCE CONSTRUCTION EQUIPMENT NOISE LEVELS
(50 FEET FROM SOURCE)

Type of Equipment	L_{max}, dBA	Hourly L_{eq}, dBA/% Use[1]
Backhoe	80	76/40%
Grader	85	81/40%
Concrete Mixer Truck	85	81/40%
Loader	80	76/40%
Pneumatic Tools	85	82/50%
Air Compressor	80	76/40%
Impact Pile Driver	95	88/20%
Auger Drill Rig	85	78/20%
Excavator	85	81/40%

NOTES:
1. Percent used during the given time period (usually an hour – hourly L_{eq}) were obtained from the FHWA Roadway Construction Noise Model User's Guide.

SOURCE: Federal Highway Administration, 2006. **FHWA Roadway Construction Noise Model**. January 2006.

As previously discussed above, City Municipal Code Section 8.68.080 exempts construction activities from noise standards as long as these activities are limited to between the hours of

7:00 am and 6:00 pm Monday through Saturday, and between the hours of 9:00 am and 6:00 pm on Sunday. Construction activities that occur outside of the City of Sacramento construction exempt hours must comply with Municipal Code Section 8.68.060, which allows for a maximum noise level of 75 dBA from 7:00 am to 10:00 pm, and 70 dBA from 10:00 pm to 7:00 am.

Construction of the proposed residential and non-residential uses would require site grading, excavation for infrastructure and building foundations, building construction, and paving and landscaping installation. All of these construction activities would require onsite staging areas to store off-road equipment and to temporarily hold building materials and infill soil. Construction of proposed residential and commercial uses pursuant to the proposed DSP is assumed to begin in late 2017 and last at least approximately one decade. For the purposes of analysis and in order to present a conservative analysis, this EIR has assumed construction over a period of approximately 10 years, with buildout completed in 2027, but the actual period of construction would depend on market conditions.

The operation of each piece of off-road equipment within the DSP area would not be constant throughout the day, as equipment would be turned off when not in use. Most of the time over a typical work day, the equipment would be operating at different locations within the DSP area and would not likely be operating concurrently. However, for a more conservative approximation of construction noise levels to which the nearest sensitive receptor would be exposed, it is assumed for this analysis that two of the loudest pieces of construction equipment would be operating at the same time and located within the DSP area nearest to an offsite sensitive receptor. The exact locations of the proposed residential and commercial uses are unknown. However, construction equipment would operate on property parcels that would be immediately adjacent to existing sensitive receptors. Therefore, it is conservatively assumed that the DSP-related construction equipment would operate within 20 feet of the nearest existing sensitive receptors within the DSP area. Using the reference noise levels provided in Table 4.10-8 and a 7.5 dB per doubling of distance drop-off, a backhoe and grader running at the same time and location could generate a maximum noise level of 98 dBA from a distance of 20 feet. It is important to note that this maximum noise level may be conservative as some construction activities could occur near commercial areas where no sensitive uses exist. Therefore, for this analysis, it is assumed that the nearest sensitive receptors located near construction areas could be exposed to a maximum noise level of 98 dBA during DSP construction. Noise levels in the C-2 zone could be slightly different since there are no minimum side yard setbacks, potentially placing construction equipment immediately adjacent to occupied buildings.

The proposed DSP could result in the construction of high-rise buildings. If high-rise buildings are constructed, the use of impact pile drivers could be required to construct the deep foundations for these structures. Using the reference noise levels provided in Table 4.10-8, an impact pile driver could generate a maximum noise level of 95 dBA from a distance of 50 feet. Therefore, the nearest sensitive receptors located near where high-rise building construction sites could be exposed to a maximum noise level of 95 dBA during project construction.

All construction activities proposed under the proposed DSP would comply with Section 4.10.3 of the Municipal Code by restricting construction hours to within the City's noise exempt hours (between the hours of 7:00 am and 6:00 pm Monday through Saturday and between the hours of 9:00 am and 6:00 pm on Sunday). Although construction activities would comply with the City's construction exempt hours and would not conflict with the City's noise standards, construction of new development pursuant to the proposed DSP, especially if impact pile driving activities were required, could expose nearby sensitive land uses to noise levels that would be considered a substantial temporary noise increase over the existing ambient levels. Therefore, noise generated during the construction of the DSP could result in a **potentially significant impact**.

Summary

The proposed DSP would require the use of construction equipment and could require the use of impact pile drivers during the construction of high-rise buildings. Although, construction activities are reasonably assumed to occur within the City of Sacramento's construction exempt hours, depending on location relative to sensitive receptors construction noise levels generated during building construction and potential impact pile driving could, expose nearby sensitive land uses to noise levels that would be considered a substantial temporary increase over the existing ambient noise levels, resulting in a **potentially significant impact**.

Mitigation Measure

Mitigation Measure 4.10-1

For all projects in the DSP area that require a building permit, the City shall require that the contractor implement the following measures during all phases of construction:

a) All heavy construction equipment and all stationary noise sources (such as diesel generators) shall have manufacturer-installed mufflers.

b) Auger displacement shall be used for installation of foundation piles, if feasible. If impact pile driving is required, sonic pile drivers shall be used, unless engineering studies are submitted to the City that show this is not feasible, based on geotechnical considerations.

Significance after Mitigation: Implementation of **Mitigation Measure 4.10-1** would reduce construction noise within the DSP area to the extent feasible. Restricting heavy-duty equipment operations in close proximity to buildings would substantially reduce exterior and interior noise at adjacent buildings. Use of auger displacement would reduce noise levels of pile installation to be comparable to the existing noise levels of passing trains. If auger displacement is not feasible, use of sonic pile drivers would reduce noise levels by about 5 dB compared to impact pile drivers. These measures would minimize interior noise and associated sleep disturbance and any potential hearing loss effects at nearby receptors during excavation, and construction. After implementation of **Mitigation Measure 4.10-1**, this impact would be reduced in magnitude, but because site conditions may make it infeasible to implement all measures identified above, this impact is considered **significant and unavoidable.**

Impact 4.10-2: Operations of development allowed under the proposed DSP could result in a substantial permanent increase in ambient exterior noise levels.

On-Road Transportation

Most of the long-term noise that would result due to the implementation of the proposed DSP would primarily be traffic-generated. The proposed DSP would contribute to an increase in local traffic volumes, resulting in higher traffic noise levels along local roadways. Using algorithms from the FHWA's *Traffic Noise Model Technical Manual* and the traffic volumes for the proposed DSP provided by the 2017 Fehr & Peers traffic study (Appendix G of this EIR), traffic noise levels were estimated for roadway segments within the DSP area under Existing and Existing plus DSP conditions. The segments analyzed and the associated results of the modeling are shown in **Table 4.10-9**.

TABLE 4.10-9
EXISTING AND PROJECTED L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS IN THE DSP AREA

	Traffic Noise Level from a distance of 50 feet from Center of Roadway, dBA, Ldn[1]					
Roadway Segment	**Existing**	**Existing plus Project**	**Incremental Increase**	**Incremental Increase Significance Threshold[2]**	**Significant? (Yes or No)[2]**	**Exceed 70 $dBAL_{dn}$?[3]**
G Street						
8th Street to 12th Street	62	63	1	2	No	No
12th Street to 15th Street	62	65	3	2	**Yes**	No
H Street						
8th street to 16th Street	66	66	0	1	No	No
I Street						
8th street to 16th Street	68	68	0	1	No	No
J Street						
3rd Street to 5th Street	71	71	0	1	No	**Yes[4]**
5th Street to 6th Street	70	69	-1	1	No	No
6th Street to 7th Street	70	69	-1	1	No	No
7th Street to 8th Street	69	68	-1	1	No	No
8th Street to 15th Street	69	68	-1	1	No	No
15th Street to 16th Street	68	68	0	1	No	No
16th Street to 29th Street	68	67	-1	1	No	No

TABLE 4.10-9
EXISTING AND PROJECTED L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS IN THE DSP AREA

	Traffic Noise Level from a distance of 50 feet from Center of Roadway, dBA, Ldn[1]					
Roadway Segment	**Existing**	**Existing plus Project**	**Incremental Increase**	**Incremental Increase Significance Threshold[2]**	**Significant? (Yes or No)[2]**	**Exceed 70 $dBAL_{dn}$?[3]**
L Street						
5th Street to 7th Street	67	67	0	1	No	No
7th Street to 8th Street	67	66	-1	1	No	No
8th Street to 9th Street	67	66	-1	1	No	No
9th Street to 10th Street	68	68	0	1	No	No
N Street						
5th Street to 9th Street	65	64	-1	1	No	No
9th Street to 10th Street	65	65	0	1	No	No
10th Street to 15th Street	66	65	-1	1	No	No
15th Street to 16th Street	66	64	-2	1	No	No
16th Street to 19th Street	65	64	-1	1	No	No
19th Street to 21st Street	64	64	0	2	No	No
P Street						
3rd Street to 5th Street	69	69	0	1	No	No
5th Street to 9th Street	67	67	0	1	No	No
9th Street to 10th Street	66	66	0	1	No	No
10th Street to 15th Street	66	66	0	1	No	No
15th Street to 48th Street	66	66	0	1	No	No
Q Street						
3rd Street to 5th Street	70	70	0	1	No	No
5th Street to 9th Street	68	69	1	1	No	No
9th Street to 10th Street	67	68	1	1	No	No
10th Street to 15th Street	66	67	1	1	No	No
W Street						
5th Street to 15th Street	65	64	-1	1	No	No
15th Street to 16th Street	67	70	3	1	**Yes**	No
16th Street to 19th Street	66	67	1	1	No	No

TABLE 4.10-9
EXISTING AND PROJECTED L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS IN THE DSP AREA

	Traffic Noise Level from a distance of 50 feet from Center of Roadway, dBA, Ldn[1]					
Roadway Segment	**Existing**	**Existing plus Project**	**Incremental Increase**	**Incremental Increase Significance Threshold[2]**	**Significant? (Yes or No)[2]**	**Exceed 70 $dBAL_{dn}$?[3]**
X Street						
5th Street to 15th Street	65	66	1	1	**Yes**	No
15th Street to 16th Street	69	69	0	1	No	No
16th Street to 19th Street	66	67	1	1	**Yes**	No
19th Street to 21st Street	67	67	0	1	No	No
Broadway						
15th Street to 16th Street	69	68	-1	1	No	No
16th Street to 19th Street	68	67	-1	1	No	No
19th Street to Hwy 99	68	68	0	1	No	No
3rd Street						
Q Street to P Street	64	64	0	2	No	No
P Street to Capitol Mall	68	68	0	1	No	No
Capitol Mall to J Street	68	68	0	1	No	No
5th Street						
W Street to Q Street	64	65	1	2	No	No
Q Street to P Street	65	66	1	1	No	No
P Street to N Street	66	66	0	1	No	No
N Street to Capitol Mall	64	66	2	2	No	No
Capitol Mall to L Street	65	67	2	1	**Yes**	No
L Street to J Street	65	67	2	1	**Yes**	No
8th Street						
L Street to J Street	63	65	2	2	No	No
J Street to I Street	64	65	1	2	No	No
I Street to H Street	63	63	0	2	No	No
H Street to G Street	63	62	-1	2	No	No
9th Street						
Q Street to P Street	66	66	0	1	No	No
P Street to N Street	66	65	-1	1	No	No
N Street to L Street	66	66	0	NA	NA	NA

TABLE 4.10-9
EXISTING AND PROJECTED L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS IN THE DSP AREA

	Traffic Noise Level from a distance of 50 feet from Center of Roadway, dBA, Ldn[1]					
Roadway Segment	**Existing**	**Existing plus Project**	**Incremental Increase**	**Incremental Increase Significance Threshold[2]**	**Significant? (Yes or No)[2]**	**Exceed 70 $dBAL_{dn}$?[3]**
10th Street						
Q Street to P Street	67	67	0	1	No	No
P Street to N Street	67	67	0	1	No	No
N Street to L Street	65	65	0	1	No	No
15th Street						
W Street to Q Street	67	69	2	1	**Yes**	No
Q Street to P Street	67	66	-1	1	No	No
P Street to N Street	67	66	-1	1	No	No
N Street to J Street	67	67	0	1	No	No
J Street to G Street	63	66	3	2	**Yes**	No
16th Street						
W Street to N Street	68	67	-1	1	No	No
N Street to J Street	68.	69	1	1	No	No
J Street to I Street	69	70	1	NA	NA	NA
I Street to H Street	69	69	0	1	No	No
19th Street						
W Street to N Street	66	66	0	1	No	No
21st Street						
X Street to N Street	66	67	1	1	No	No
29th Street						
P Street to J Street	66	65	-1	1.0	No	No

NOTES:

1. Noise levels were determined using algorithms from the FHWA's *Traffic Noise Model Technical Manual*
2. Traffic noise increases at an existing sensitive use exceed the allowed incremental noise increase provided in Table 4.10-7 would result in a significant impact.
3. Future residences that are exposed to future traffic noise above the allowed City of Sacramento of 70 dBA L_{dn} for an infill site would result in a significant impact.
4. Although traffic noise levels currently exceed the 70 dBA Ldn threshold, the additional traffic volumes as a result of the DSP (small as they may be, less than 1 dB increase) would contribute to this impact.

NA = There is no allowable exterior noise increment for non-sensitive uses. For these roadway segments, there are no adjacent residences or buildings where people sleep.

SOURCE: ESA, 2017

As shown in Table 4.10-9, the only roadway segment analyzed where traffic noise levels would exceed the normally acceptable L_{dn} threshold for Urban Residential Infill and Mixed-Use Projects would be along J Street, between 3rd Street and 5th Street. There is one existing multi-family residential land use (Wong Center) adjacent to J Street, between 3rd Street and 5th Street. However, the Wong Center is located approximately 60 feet from the centerline of J Street. Assuming a drop-off rate of 3 dB per doubling of distance, the residences at the Wong Center would be exposed to traffic noise of 70 dBA L_{dn}, which would not exceed the City's exterior noise standard.

Although the on-road traffic noise associated with the proposed DSP would not result in noise levels that would exceed the normally acceptable L_{dn} for Urban Residential Infill and Mixed-Use Projects listed in Table 4.10-9, the DSP would result in daily L_{dn} noise exposure that would exceed the allowable incremental noise increases detailed in Table 4.10-7 at existing residential uses. The roadway segments predicted to exceed the allowable traffic noise increases are shown in Table 4.10-9 are G Street, W Street, 5th Street and 15th Street. Of these intersections, the roadway segments that would be adjacent to an existing noise sensitive land uses are G Street, W Street and 15th Street.

Although the on-road traffic noise associated with the proposed DSP would not result in noise levels that would exceed the normally acceptable L_{dn} for Urban Residential Infill and Mixed-Use Projects listed in Table 4.10-9, the proposed DSP would increase daily L_{dn} noise exposures in increments that would exceed the allowable noise incremental increases detailed in Table 4.10-9 at residential uses. This would result in a **significant impact**.

Non-Transportation Noise Sources

Heating, Ventilation, and Air-Conditioning Systems

The HVAC systems for maintaining comfortable temperatures buildings developed under the proposed DSP would consist largely of packaged air conditioning systems. The precise locations of HVAC systems are unknown at this time. Possible HVAC system locations would include street level and rooftops. HVAC units can generate noise levels of approximately 51 dBA L_{eq} at a reference distance of 100 feet from the operating units during maximum heating or air conditioning operations.[21]

Assuming a 7.5 dB per doubling of distance drop-off rate and a reference noise level of 51 dBA L_{eq} at a distance of 100 feet, sensitive land uses located within approximately 110 feet of HVAC units could be exposed to noise levels above the City of Sacramento's nighttime noise standard of 50 dBA L_{eq}. The proposed commercial, retail, and office buildings could have HVAC units that could possibly be as close as 110 feet from the nearest existing or proposed sensitive land use. At this distance, existing and proposed sensitive land uses could be exposed to noise levels above the applied City of Sacramento's nighttime noise standard. Therefore, operation of HVAC units at

[21] Puron, 2005. *48PG03-28 Product Data*. p. 10 – 11.

the proposed commercial buildings could expose nearby sensitive land uses to noise levels that could result in a **potentially significant impact**.

Loading Docks

Future residential and non-residential uses proposed within the DSP area could require loading docks. Truck deliveries at loading docks generate noise as a result of truck arrivals and departures from the unloading area, trucks backing into the docks (including backup beepers), air brakes, and other truck unloading-related noise. These activities would be a source of elevated noise levels at nearby sensitive receptors. Noise levels of 80 dBA L_{max} and 60 dBA L_{eq} at a distance of 50 feet can be generated during loading dock activities.[22]

Assuming a 7.5 dB per doubling of distance drop-off rate and a reference noise level of 60 dBA L_{eq} at a distance of 50 feet, sensitive land uses located within approximately 120 feet of a loading dock could be exposed to noise levels above the applied City of Sacramento's nighttime noise standard of 50 dBA L_{eq}. The loading docks at commercial buildings within the DSP area could be placed within 120 feet of an existing sensitive land use. At this distance, sensitive land uses within the DSP area could be exposed to levels above the City of Sacramento's nighttime noise standard. Therefore, operation of loading docks at the proposed commercial buildings could expose nearby sensitive land uses to noise levels that could result in a **potentially significant impact**.

Garbage Collection Services

The future residential and non-residential uses proposed within the DSP would be exposed to noise associated with garbage collection along city streets. Noise associated with garbage collection activities includes air-brake release, engine rumble, operation of hydraulic bin lifts, compression of garbage in the truck bed and reversing beepers. Noise from garbage collection is limited by City's Noise Ordinance, which mandates that noise produced by vehicles used for garbage collection is less than 75 dBA L_{max} at 50 feet from the vehicle, and enforced by city police department. It is assumed that enforcement by City's police department would ensure that garbage trucks servicing the Sacramento downtown area, as well as the proposed DSP, would comply with the Noise Ordinance. Therefore, this impact would result in a **less than significant impact.**

Summary

Future traffic increases associated with the development of the proposed DSP would result in noise increases along roadway segments within the DSP area that would expose existing sensitive receptors to substantial noise increases over existing conditions. The proposed commercial, retail, and office buildings proposed under the DSP could be located near existing and proposed sensitive land uses. These sensitive receptors could be exposed to loading dock and HVAC noise that could exceed the City's nighttime noise standard. Therefore, operation of the proposed DSP

[22] ESA, 2008. *Fresh & Easy Distribution Truck Noise Study*. November 2008.

could result in a substantial permanent increase in ambient exterior noise levels in the DSP area that would result in a **significant impact**.

Mitigation Measure

Mitigation Measure 4.10-2

For development of new commercial or mixed-use buildings within the DSP area, the applicant shall demonstrate that noise levels from HVAC and/or loading docks would not exceed the stationary noise standards established in the City's Code. To demonstrate that a proposed development will meet the City's stationary noise standards, the developer must implement the following measures:

a) Prior to the issuance of building permits, the applicant shall submit engineering and acoustical specification for project mechanical HVAC equipment and the proposed locations of onsite loading docks to the Planning Director demonstrating that the HVAC equipment and loading dock design (types, location, enclosure, specification) will control noise from the equipment to at least 10 dB below existing ambient levels at nearby residential and other noise-sensitive land uses.

b) Noise-generating stationary equipment associated with proposed commercial and/or office uses, including portable generators, compressors, and compactors shall be enclosed or acoustically shielded to reduce noise-related impacts to noise-sensitive residential uses.

Significance after Mitigation: No feasible mitigation strategies have been identified to reduce the on-road transportation noise impacts to less than significant. Alternative modes of transportation (i.e., walking, biking, and transit) are already accounted for in the above traffic noise estimates. The reduction in roadway traffic volumes needed to mitigate these roadway noise impacts is not feasible for the proposed DSP. In addition, typical measures to reduce roadway noise impacts, such as noise walls, setbacks, and rubberized asphalt, are not considered feasible mitigation for development in the urban core of the City. This impact would be considered **significant and unavoidable**.

Impacts of non-transportation noise sources (i.e., HVAC units and loading docks), with implementation of **Mitigation Measure 4.10-2**, would be reduced to less-than-significant levels. As a result, impacts associated with HVAC and loading dock noise would be reduced to a **less-than-significant level**.

Impact 4.10-3: The operation of development allowed under the proposed DSP could result in residential interior noise levels of 45 dBA L_{dn} or greater.

Table 4.10-9 shows the future traffic noise levels along roadways segments within the DSP area. An exterior day-night noise exposure of 70 dBA L_{dn} or greater would result in potentially incompatible interior noise for new sensitive receptors. The multi-family residences to be developed pursuant to the proposed DSP would be required to comply with the most current version of Title 24 of the California Code of Regulations, which requires an interior noise

standard of 45 dBA L_{dn} in any habitable room. To meet the City and State interior noise requirement of 45 dBA L_{dn}, in habitable rooms of residential dwellings, the residential buildings developed pursuant to the proposed DSP would be designed to reduce sound transmission (i.e., exterior-to-interior noise).

Operation of the proposed DSP would result in noise exposure of residential receptors in the project vicinity, as described above in Impact 4.10-2. For on-road transportation sources, the total roadway noise from existing and DSP-related traffic would not exceed the 70 dBA L_{dn} standard at existing or proposed residential uses. None of the roadway segments analyzed would expose adjacent sensitive land uses to noise levels that would exceed the City of Sacramento exterior noise standards. It is unlikely that interior noise levels at existing residential uses adjacent to these roadway segments would increase above 45 dBA $L_{dn,}$ even for buildings that are older and not constructed pursuant to Title 24 standards. Therefore, the proposed DSP would not result in residential interior noise levels of 45 dBA L_{dn} or greater caused by noise level increases due to DSP operation and result in **less-than-significant impact**.

Summary

In summary, future (new) residential units within the DSP area would be required to meet the latest Title 24 of the California Code of Regulations, which requires an interior noise standard of 45 dBA L_{dn} in any habitable room. This would result in a **less-than-significant impact**.

Mitigation Measures

None required.

Impact 4.10-4: Construction of buildings pursuant to the proposed DSP could expose existing and/or planned buildings, and persons within, to vibration that could disturb people or damage buildings.

Construction of the structures that would be developed under the proposed DSP could require the use of equipment or vehicles that could expose nearby sensitive receptors to vibrations levels that may result in an annoyance or building damage. Because construction activities within the DSP area are anticipated to take place on a frequent basis over the next 10 or more years, these activities would be considered a continuous/frequent intermittent vibration source, even though active construction activities are likely to be infrequent at any particular location or use in the DSP area.

According to the Caltrans' *Transportation and Construction Vibration Guidance Manual*, the building damage threshold for historic and some older buildings is 0.25 PPV (in/sec) and the vibration threshold where vibration level increases are considered distinctly perceptible is

0.04 PPV (in/sec) for continuous/frequent intermittent sources.[23] There are numerous historic buildings and resources in the within the DSP area that could be particularly sensitive to damage during project construction, including historic residential homes, and numerous landmark non-residential buildings, including the California State Capitol and Sutter's Fort.

Ground-borne vibration from grading, excavation, building construction, and/or impact pile driving activities within the DSP area could produce substantial vibration at nearby sensitive receptors, including structures themselves. The extent to which these land uses would be affected depends largely on soil conditions, building design and materials, construction techniques employed, distance from the construction site to the affected structure, the age and condition of the structure, and a receptor's location in the building.

Building Damage

Typical reference vibration levels for various pieces of equipment are listed below in **Table 4.10-10**. During grading and building construction, the highest vibration levels would be generated by large bulldozers which could cause vibration-related building damage if operated within 13 feet of historic and some older buildings; vibration from bulldozer operations further than 13 feet away would be unlikely to cause damage.[24] During foundation pile installation, the highest vibration levels could be generated by impact pile drivers where building damage to historic and some older buildings could occur within 47 feet; pile driving at distances greater than 47 feet would be unlikely to cause vibration damage.[25]

TABLE 4.10-10
VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT

Equipment/Activity	PPV at 25 ft (inches/second)[a]
Large Bulldozer	0.089
Hoe Ram	0.089
Loaded Trucks	0.076
Pile Driver (Impact)	0.644
Pile Driver (Sonic)	0.170
Caisson Drilling (represents Auger Drilling Pile Installation)[d]	0.089

SOURCE: Federal Transit Administration, 2006. Transit Noise and Vibration Impact Assessment. May 2006 (Table 12-2, p. 12-12).

Since development pursuant to the proposed DSP would be constructed over time based on market demand, construction schedules and durations cannot not be currently predicted. However, it is reasonable to assume that is possible that grading and building construction

[23] California Department of Transportation, 2013. *Transportation and Construction Vibration Guidance manual.* September 2013.
[24] Federal Transit Administration, 2006. *Transit Noise and Vibration Impact Assessment*. May 2006.
[25] *Ibid*.

activities could occur within 13 feet of an historic structure, and impact pile driving could take place within 47 feet of such structures.

Human Disturbance

Sensitive human receptors located within 40 feet of grading or 148 feet of impact pile driving activities would be exposed to construction vibration levels that could result in an annoyance. Since development pursuant to the proposed DSP would be constructed over an extended period of time based on market demand, construction plans and schedules are not currently available. Given the type of development allowed under the proposed DSP and the locations of potential development sites, it is likely that grading and building construction activities at some locations would occur within 40 feet of existing or proposed sensitive land uses, or that impact pile driving would occur within 148 feet of such sensitive land uses; thus construction activities pursuant to the proposed DSP could result in an annoyance to nearby people.

While construction-related vibration would be limited to the duration of the construction schedule, due to the close proximity of existing sensitive land uses and historic structures to construction activities, vibration levels could exceed the building damage and human annoyance thresholds. This would be a **short-term potentially significant impact**.

Summary

The construction activities that would be associated with the proposed DSP may require the use of bulldozers, impact pile drivers and other large construction equipment that could result in vibration effects. Construction activities, including impact pile driving, would be temporary and intermittent at any particular location and use in the DSP area. Due to the close proximity of existing sensitive land uses to potential DSP-related construction areas, vibration levels generated during impact pile driving could exceed the applied vibration thresholds for human annoyance and/or building damage at nearby existing sensitive receptors and existing historic structures. This would result in a **short-term potentially significant impact**.

Mitigation Measures

Mitigation Measure 4.10-4(a)

Implement Mitigation Measure 4.10-1.

Mitigation Measure 4.10-4(b)

For all projects in the DSP area that require the use of graders or impact pile drivers:

> *Prior to the issuance of any demolition, grading, or building permit, the applicant shall develop and submit a Vibration Reduction Plan to the City Chief Building Official for approval. The Plan shall include measures that will reduce vibration at surrounding buildings to less than 80 VdB and 83 VdB where people sleep and work, respectively, and less than 0.25 PPV for historic buildings. Measures and controls*

shall be identified based on project-specific final design plans, and may include, but are not limited to, some or all of the following:

1) Inclusion of buffers and selection of equipment to minimize vibration impacts during construction at nearby receptors in order to meet the specified standards.

2) Implementation of a vibration, crack, and line and grade monitoring program at existing Nationally registered, State listed, and locally recognized historic buildings located within 47 feet of construction activities. The following elements shall be included in this program:

i. Prior to start of construction:

1. The applicant or construction contractor shall install crack gauges on proximate historic structures.

ii. During building construction:

1. The construction contractor shall regularly inspect and photograph crack gauges, maintaining records of these inspections to be included in post-construction reporting. Gauges shall be inspected every two weeks, or more frequently during periods of active project actions in close proximity to crack gauges.

2. The construction contractor shall collect vibration data from receptors and report vibration levels to the City Chief Building Official on a monthly basis. The reports shall include annotations regarding project activities as necessary to explain changes in vibration levels, along with proposed corrective actions to avoid vibration levels approaching or exceeding the established threshold.

3. If vibration levels exceed the threshold and monitoring or inspection indicates that the project is damaging the historic structure, additional protection or stabilization shall be implemented. If necessary and with approval by the City Chief Building Official, the construction contractor shall install temporary shoring or stabilization to help avoid permanent impacts. Stabilization may involve structural reinforcement or corrections for deterioration that would minimize or avoid potential structural failures or avoid accelerating damage to the historic structure. Stabilization shall be conducted following the Secretary of Interior Standards Treatment of Preservation. This treatment shall ensure retention of the historical resource's character-defining features. Stabilization may temporarily impair the historic integrity of the building's design, material, or setting, and as such, the stabilization must be conducted in a manner that will not permanently impair a building's ability to convey its significance. Measures to shore or stabilize the building shall be installed in a manner that avoids damage to the historic integrity of the building, including integrity of material.

iii. Post-construction:

1. *At the conclusion of vibration generating construction activities, the applicant shall submit a crack and vibration monitoring report to the City Chief Building Official. The report shall include: a narrative summary of the monitoring activities and their findings; photographs illustrating the post-construction state of cracks and material conditions that were presented in the pre-construction assessment report; annotated analysis of vibration data related to project activities; a summary of measures undertaken to avoid vibration impacts; a post-construction line and grade survey; and photographs of other relevant conditions showing the impact, or lack of impact, of project activities. The photographs shall be of sufficient detail to illustrate damage, if any, caused by the project and/or show how the project did not cause physical damage to the historic and non-historic buildings.*

2. *The applicant shall be responsible for repairs from damage to historic and non-historic buildings if damage is caused by vibration or movement during the demolition and/or construction activities. Repairs may be necessary to address, for example, cracks that expanded as a result of the project, physical damage visible in post-construction assessment, or holes or connection points that were needed for shoring or stabilization. Repairs shall be limited to project impacts and do not apply to general rehabilitation or restoration activities of the buildings. If necessary for historic structures, repairs shall be conducted in compliance with the Secretary of Interior Standards Treatment of Preservation. The applicant shall provide a work plan for the repairs and a completion report to ensure compliance with the SOI Standards to the City Chief Building Official and City Preservation Director for review and comment.*

Significance after Mitigation: Implementation of **Mitigation Measure 4.10-4** would ensure that construction activities within the DSP area would not result in building damage at the nearest historic building structures, and would reduce human disturbance to the extent feasible. Therefore, implementation of **Migration Measure 4.10-4(a)** and **Mitigation Measure 4.10(b)** would reduce this impact to a **less-than-significant level.**

Cumulative Impacts

The geographic context for changes in the noise environment due to development of the proposed DSP would be localized in the urban area of the City of Sacramento where other development could contribute to noise generated by development pursuant to the DSP, as well as along roadways that would serve the DSP. Increases in vehicle trips due to proposed project developments would combine with other adjacent development projects in the City of Sacramento and would result in a cumulative increase in traffic along area roadways as evaluated as part of the transportation and circulation for this project (and presented in Section 4.12, Transportation and Circulation, of this EIR), thus affecting noise levels within the City. In order to contribute to a cumulative construction noise or vibration impacts, another project in close proximity would have to be constructed at the same time as the DSP. There are numerous development projects in several locations near and within the DSP, currently in the planning stages that could be

constructed and operational in the foreseeable future. The largest projects near the proposed DSP area are the Updated Railyards Specific Plan, I Street Bridge Replacement project and the Powerhouse Science Center, Vanir Tower (6th/J Street), the Creamery at Alkali Flat, Township 9 (later phases), and other potential future development at Downtown Commons.

Impact 4.10-5: Implementation of the proposed DSP would result in exposure of people to cumulative increases in construction noise levels.

As previously discussed in Impact 4.10-1, construction activities could adversely affect both existing and future proposed sensitive land uses if located within close proximity to where DSP-related construction would occur. If DSP-related construction were to coincide with other construction projects, such as construction of the Streetcar project, building within the Railyards Specific Plan area, later phases of the Creamery at Alkali Flat project, or other approved projects in the DSP area, the combined effect could result in the exposure of existing and future planed noise sensitive land uses to construction noise over a longer period of time, or higher noise levels than what was predicted under the DSP. Although there is no certainty regarding the construction schedules for development projects approved under the proposed DSP as well as those of cumulative projects, construction noise associated with those projects in combination with the construction pursuant to the proposed DSP would be considered a temporary **significant cumulative impact** and the contribution of the DSP would be cumulatively considerable.

Mitigation Measures

Mitigation Measure 4.10-5

Implement Mitigation Measure 4.10-1.

Significance after Mitigation: Implementation of **Mitigation Measure 4.10-5** would reduce the contribution of the DSP to cumulative construction noise levels at the existing and future planed noise sensitive land uses located within the DSP area. With the implementation of **Mitigation Measure 4.10-5** listed above, the contribution of the DSP to this cumulative impact would be reduced in magnitude, but because site conditions make it infeasible to implement all measures identified in Mitigation Measure 4.10-1, the contribution of the proposed DSP could remain considerable, and the impact is considered **significant and unavoidable**.

Impact 4.10-6: Operations of development allowed under the proposed DSP would contribute to cumulative increases in ambient exterior noise levels.

On-road traffic associated with the proposed DSP would be the primary source that would contribute to the cumulative noise environment. Noise projections for those road segments that would experience the greatest increase in traffic volume and that would pass by sensitive receptors were made using traffic noise prediction equations found in the FHWA's *Traffic Noise Model Technical Manual* for cumulative roadway volumes provided by Fehr & Peers (and presented in Section 4.12, Transportation and Circulation). The segments analyzed and results of the modeling in daily L_{dn} are shown in **Table 4.10-11**.

TABLE 4.10-11
CUMULATIVE L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS IN THE PROJECT VICINITY

Roadway Segment	Traffic Noise Level 50 feet from Center of Roadway, dBA, L_{dn}[1,2]								
	Existing	Cumulative without Project	Cumulative with Project	Cumulative without Project incremental increase above Existing Conditions	Cumulative with Project incremental increase above Cumulative without Project Conditions	Cumulative without Project Incremental Increase Significance Threshold[2]	Cumulative with Project Incremental Increase Significance Threshold[2]	Cumulatively Significant? (Yes or No)[b]	Project's Contribution Significant? (Yes or No?)[3]
G Street									
8th Street to 12th Street	62	61	65	3	4	2	2	**Yes**	**Yes**
12th Street to 15th Street	62	61	66	4	5	2	2	**Yes**	**Yes**
H Street									
8th Street to 16th Street	66	66	66	0	0	1	1	No	No
I Street				0					
8th Street to 16th Street	68	68	68	0	0	1	1	No	No
J Street									
3rd Street to 5th Street	71	71	71	0	0	1	1	No	No
5th Street to 6th Street	70	70	69	-1	-1	1	1	No	No
6th Street to 7th Street	70	70	68	-2	-2	1	1	No	No
7th Street to 8th Street	69	69	68	-1	-1	1	1	No	No
8th Street to 15th Street	69	69	68	-1	-1	1	1	No	No
15th Street to 16th Street	68	68	68	0	0	1	1	No	No
16th Street to 29th Street	68	68	68	0	0	1	1	No	No
L Street									
5th Street to 7th Street	67	69	67	0	-2	1	1	No	No
7th Street to 8th Street	67	67	67	0	0	1	1	No	No
8th Street to 9th Street	67	68	67	0	-1	1	1	No	No
9th Street to 10th Street	68	69	68	0	-1	1	1	No	No
N Street									
5th Street to 9th Street	65	66	65	0	-1	1	1	No	No
9th Street to 10th Street	65	66	64	-1	-2	1	1	No	No
10th Street to 15th Street	66	66	64	-2	-2	1	1	No	No
15th Street to 16th Street	66	66	65	-1	-1	1	1	No	No
16th Street to 19th Street	65	65	65	0	0	1	1	No	No
19th Street to 21st Street	64	65	65	1	0	2	1	No	No

TABLE 4.10-11
CUMULATIVE L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS IN THE PROJECT VICINITY

Roadway Segment	Traffic Noise Level 50 feet from Center of Roadway, dBA, L_{dn}[1,2]								
	Existing	Cumulative without Project	Cumulative with Project	Cumulative without Project incremental increase above Existing Conditions	Cumulative with Project incremental increase above Cumulative without Project Conditions	Cumulative without Project Incremental Increase Significance Threshold[2]	Cumulative with Project Incremental Increase Significance Threshold[2]	Cumulatively Significant? (Yes or No)[b]	Project's Contribution Significant? (Yes or No?)[3]
P Street									
3rd Street to 5th Street	69	69	69	0	0	1	1	No	No
5th Street to 9th Street	67	68	68	1	0	1	1	No	No
9th Street to 10th Street	66	67	66	0	-1	1	1	No	No
10th Street to 15th Street	66	67	66	0	-1	1	1	No	No
15th Street to 48th Street	66	66	67	1	1	1	1	No	No
Q Street									
3rd Street to 5th Street	70	70	70	0	0	1	1	No	No
5th Street to 9th Street	68	69	69	1	0	1	1	No	No
9th Street to 10th Street	67	68	68	1	0	1	1	No	No
10th Street to 15th Street	66	67	67	1	0	1	1	No	No
W Street									
5th Street to 15th Street	65	67	67	2	0	1	1	**Yes**	No
15th Street to 16th Street	67	69	69	2	0	1	1	**Yes**	No
16th Street to 19th Street	66	67	68	2	1	1	1	**Yes**	No
X Street									
5th Street to 15th Street	65	67	68	3	1	1	1	**Yes**	No
15th Street to 16th Street	69	70	70	1	0	1	1	No	No
16th Street to 19th Street	66	68	68	2	0	1	1	**Yes**	No
19th Street to 21st Street	67	68	68	1	0	1	1	No	No
Broadway									
15th Street to 16th Street	69	69	69	0	0	1	1	No	No
16th Street to 19th Street	68	69	68	0	-1	1	1	No	No
19th Street to Highway 99	68	69	68	0	-1	1	1	No	No
3rd Street									
Q Street to P Street	64	65	65	1	0	2	1	No	No
P Street to Capitol Mall	68	69	68	0	-1	1	1	No	No
Capitol Mall to J Street	68	69	69	1	0	1	1	No	No

TABLE 4.10-11
CUMULATIVE L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS IN THE PROJECT VICINITY

Roadway Segment	Traffic Noise Level 50 feet from Center of Roadway, dBA, L_{dn}[1,2]								
	Existing	Cumulative without Project	Cumulative with Project	Cumulative without Project incremental increase above Existing Conditions	Cumulative with Project incremental increase above Cumulative without Project Conditions	Cumulative without Project Incremental Increase Significance Threshold[2]	Cumulative with Project Incremental Increase Significance Threshold[2]	Cumulatively Significant? (Yes or No)[b]	Project's Contribution Significant? (Yes or No?)[3]
5th Street									
W Street to Q Street	64	65	66	2	1	2	1	No	No
Q Street to P Street	65	65	66	1	1	1	1	No	No
P Street to N Street	66	66	66	0	0	1	1	No	No
N Street to Capitol Mall	64	65	67	3	2	2	1	**Yes**	**Yes**
Capitol Mall to L Street	65	65	68	3	3	1	1	**Yes**	**Yes**
L Street to J Street	65	65	68	3	3	1	1	**Yes**	**Yes**
8th Street									
L Street to J Street	63	65	66	3	1	2	1	**Yes**	No
J Street to I Street	64	66	66	2	0	2	1	No	No
I Street to H Street	63	65	65	2	0	2	1	No	No
H Street to G Street	63	64	63	0	-1	2	2	No	No
9th Street									
Q Street to P Street	66	66	65	-1	-1	1	1	No	No
P Street to N Street	66	66	65	-1	-1	1	1	No	No
N Street to L Street	66	66	66	0	0	NA	NA	NA	NA
10th Street									
Q Street to P Street	67	66	67	0	1	1	1	No	No
P Street to N Street	67	66	67	0	1	1	1	No	No
N Street to L Street	65	65	65	0	0	1	1	No	No
15th Street									
W Street to Q Street	67	68	67	0	-1	1	1	No	No
Q Street to P Street	67	67	66	-1	-1	1	1	No	No
P Street to N Street	67	68	66	-1	-2	1	1	No	No
N Street to J Street	67	67	67	0	0	1	1	No	No
J Street to G Street	63	64	66	3	2	2	2	**Yes**	No

TABLE 4.10-11
CUMULATIVE L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS IN THE PROJECT VICINITY

Roadway Segment	Traffic Noise Level 50 feet from Center of Roadway, dBA, L_{dn}[1,2]								
	Existing	Cumulative without Project	Cumulative with Project	Cumulative without Project incremental increase above Existing Conditions	Cumulative with Project incremental increase above Cumulative without Project Conditions	Cumulative without Project Incremental Increase Significance Threshold[2]	Cumulative with Project Incremental Increase Significance Threshold[2]	Cumulatively Significant? (Yes or No)[b]	Project's Contribution Significant? (Yes or No?)[3]
16th Street									
W Street to N Street	68	68	67	-1	-1	1	1	No	No
N Street to J Street	68	69	70	2	1	1	1	**Yes**	No
J Street to I Street	69	69	70	1	1	NA	NA	NA	NA
I Street to H Street	69	69	69	0	0	1	1	No	No
19th Street									
W Street to N Street	66	67	67	1	0	1	1	No	No
21st Street									
X Street to N Street	66	67	67	1	0	1	1	No	No
29th Street									
P Street to J Street	66	66	65	-1	-1	1	1	No	No

NOTES:
1. Noise levels were determined using algorithms from the FHWA's *Traffic Noise Model Technical Manual*
2. Traffic noise increases at an existing sensitive use exceed the allowed incremental noise increase provided in Table 4.10-7 would result in a significant impact.
3. Future residences that are exposed to future traffic noise above the allowed City of Sacramento of 70 dBA L_{dn} for an infill site would result in a significant impact.

NA = There is no allowable exterior noise increment for non-sensitive uses. For these roadway segments, there are no adjacent residences or buildings where people sleep.

SOURCE: ESA, 2017

As shown in Table 4.10-11, cumulative (without DSP) traffic noise impacts would occur along G Street, W Street, X Street, 5th Street, 8th Street, 15th Street and 16th Street, where traffic noise levels would increase as high as 4 dB over existing conditions. Sensitive land uses located along these roadway segments would be exposed to cumulative (without DSP) traffic noise that would exceed the City's traffic noise increase thresholds.

In addition to cumulative increases in traffic volumes, development pursuant to the proposed DSP would add traffic volumes to local roadways. As shown in Table 4.10-11, the proposed DSP would be a major contributor to future cumulative traffic noise levels along G Street, and 5th Street where implementation of the proposed DSP would increase traffic noise levels as much as 5 dB over future cumulative no DSP conditions. Consequently, these roadway segments would

result in a significant increase in traffic noise from the proposed DSP combined with cumulative traffic, and the proposed DSP would have a cumulatively considerable contribution to the overall significant impact. Therefore, the proposed DSP, in conjunction with other cumulative development, would have a **significant cumulative impact** associated with cumulative traffic noise and the DSP's contribution would be considerable.

Non-Transportation Noise Sources

Heating, Ventilation, and Air-Conditioning Systems

HVAC systems would be installed for new development throughout the City, and could result in many HVAC systems operating within close proximity to each other. Possible HVAC system locations would include street level and rooftops. The precise locations of new buildings and new HVAC systems are unknown at this time. Commercial, retail, and office buildings developed throughout the City could have HVAC units that could possibly be as close as 110 feet from the nearest existing or proposed sensitive land use. At this distance, existing and proposed sensitive land uses could be exposed to noise levels above the applied City of Sacramento's nighttime noise standard. Therefore, operation of HVAC units at the proposed commercial buildings could expose nearby sensitive land uses to noise levels that could result in a **potentially significant impact** and the DSP's contribution would be considerable.

Loading Docks

Future non-residential uses within the City could include loading docks. Activities at loading docks would be a source of elevated noise levels at nearby sensitive receptors. The loading docks at commercial buildings within the City could be placed within 120 feet of an existing sensitive land use. At this distance, sensitive land uses within the City could be exposed to levels above the City of Sacramento's nighttime noise standard. Therefore, operation of loading docks at the proposed commercial buildings could expose nearby sensitive land uses to noise levels that could result in a **potentially significant impact**.

Garbage Collection Services

The future residential and non-residential uses proposed within the DSP would be exposed to noise associated with garbage collection activities includes air-brake release, engine rumble, operation of hydraulic bin lifts, compression of garbage in the truck bed and reversing beepers. Noise from garbage collection is limited by City's Noise Ordinance, which mandates that noise produced by vehicles used for garbage collection is less than 75 dBA L_{max} at 50 feet from the vehicle, and enforced by city police department. It is assumed that enforcement by City's police department would ensure that garbage trucks servicing the Sacramento downtown area, as well as the proposed DSP, would comply with the Noise Ordinance. Therefore, this impact would result in a **less than significant impact.**

Mitigation Measures

Mitigation Measure 4.10-6

Implement Mitigation Measure 4.10-2.

Significance after Mitigation: No feasible mitigation strategies have been identified to reduce the on-road transportation noise impacts to less than significant. Alternative modes of transportation (i.e., walking, biking, and transit) are already accounted for in the above traffic noise estimates. The reduction in vehicular use needed to mitigate these roadway noise impacts is not feasible for the DSP. In addition, typical measures to reduce roadway noise impacts, such as noise walls, setbacks, and rubberized asphalt, are not considered feasible mitigation for development in the urban core of the City. Implementation of **Mitigation Measure 4.10-6** would reduce noise impacts related to HVAC equipment and loading docks by requiring HVAC equipment and loading dock design to reduce noise to a less-than-significant level. However, because no feasible mitigation exists to lessen the impact of on-road transportation noise, the impact would be considered **significant and unavoidable**.

Impact 4.10-7: Implementation of the proposed DSP would contribute to cumulative increases in residential interior noise levels of 45 dBA L_{dn} or greater.

On-road traffic associated with the proposed DSP would be the primary source that would contribute to the cumulative exterior, and thus interior, noise environment of existing and future residences. An exterior noise exposure of 70 dBA L_{dn} or greater would result in potentially incompatible interior noise for new urban infill sensitive receptors. The residential units proposed under the proposed DSP would be subject to Title 24 of the California Code of Regulations, sound-rated assemblies would be required at the exterior facades of proposed project buildings.

Cumulative traffic would also result in noise exposure of existing residential receptors in the DSP vicinity, as described above in Impact 4.10-6. For on-road transportation sources, the total roadway noise from cumulative and cumulative plus DSP traffic would exceed the City's exterior noise standard of 70 dBA L_{dn} along J Street, between 3rd and 5th Street. There is one existing multi-family residential land use (Wong Center) adjacent to J Street, between 3rd Street and 5th Street. However, the Wong Center is located approximately 60 feet from the centerline of J Street. Assuming a drop-off rate of 3 dB per doubling of distance, the residences at the Wong Center would be exposed to traffic noise of 70 dBA L_{dn}, which would not exceed the City's exterior noise standard. Therefore, the proposed DSP would not result in residential interior noise levels of 45 dBA L_{dn} or greater caused by noise level increases due to DSP operation and result in **less-than-significant impact**.

Mitigation Measures

None required.

Impact 4.10-8: Construction of buildings pursuant to the proposed DSP would contribute to cumulative construction that could expose existing and/or planned buildings, and persons within, to significant vibration.

As previously discussed under Impact 4.10-4, the construction of new development under the DSP may require the use of impact pile drivers during foundation pile installation or other vibration-inducing activity such as demolition, grading, etc. Impact pile driving and other such vibration-inducing construction would be temporary and intermittent.

Due to the number of existing and future planned vibration-sensitive land uses in the DSP area, vibration levels generated during construction could exceed the applied vibration threshold for human annoyance and building damage at nearby sensitive land uses and historic structures. If DSP-related construction activities were to coincide with another construction project in close physical proximity (within approximately 150 feet), the combined effect could result in the exposure of sensitive land uses or historic structures to higher vibration levels than what was predicted for an individual project developed under the proposed DSP. Although considerable uncertainty exists regarding the location and construction schedules for projects constructed pursuant to the proposed DSP, as well as about the location and timing of other cumulative projects in the DSP area, construction vibration associated with cumulative projects in combination with the DSP would be considered a temporary **significant cumulative impact** and the proposed project's contribution would be cumulatively considerable.

Mitigation Measures

Mitigation Measure 4.10-8

Implement Mitigation Measure 4.10-4(a) and (b).

Significance after Mitigation: Implementation of **Mitigation Measure 4.10-4(a)** and **Mitigation Measure 4.10-4(b)** would ensure that construction activities within the DSP area would not result in building damage at the nearest historic and non-historic building structures, and would reduce human disturbance to the extent feasible. While implementation of the mitigation measures described above would avoid vibration-caused building damage and would reduce vibration impacts to surrounding receptors, it is reasonable to assume that the combined cumulative construction activities could still adversely affect surrounding sensitive land uses. With the implementation of **Mitigation Measure 4.10-8** listed above, the contribution of the DSP to this cumulative impact would remain considerable, and the impact would remain **significant and unavoidable**.

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4.11 Public Services

This section of the EIR discusses existing public services available in the vicinity of the DSP area and analyzes the effects of implementation of the proposed DSP on those services. The services evaluated in this section include police protection, fire protection, public schools, and parks and open space facilities.

Two comments were received during the Notice of Preparation (NOP) comment period that addressed issues related to parks and open space. One comment highlighted the role of the proposed DSP in the preservation of greenspaces, parks, and the urban forest. The other comment discussed the possible loss of open space as a result of new development occurring on the back of existing residential lots along public alleys within the DSP area. These issues are addressed within subsection 4.11.4, Parks and Open Space. No comments were received regarding police protection, fire protection, or schools.

4.11.1 Police Protection

Introduction

This section describes the provision of police protection services in the DSP area. Potential impacts to police protection services as a result of the proposed plan are evaluated based on analyses of service levels and project data.

Information for this section was obtained from the proposed DSP, the City of Sacramento 2035 General Plan, the City of Sacramento 2035 General Plan Master Environmental Impact Report (MEIR), the Central City Community Plan (CCCP), the Sacramento Police Department (Sacramento PD) 2016 Annual Report, communication with Sacramento PD staff, and other environmental documentation for the DSP area.

No comments relating to police protection services were received during the NOP comment period for the EIR.

Environmental Setting

Sacramento Police Department

Sacramento PD currently provides the DSP area with law enforcement services, and would continue to serve the DSP area upon implementation of the proposed DSP. Sacramento PD is staffed by approximately 669 sworn police officers and 280 civilian staff[1] and received 738,231 calls for service in 2016,[2] with 351,472 of those calls resulting in officers dispatched to respond to the call.[3]

1 Sacramento Police Department, 2017. 2016 Annual Report. p. 11.
2 *Ibid*. p. 23.
3 *Ibid*. p. 24.

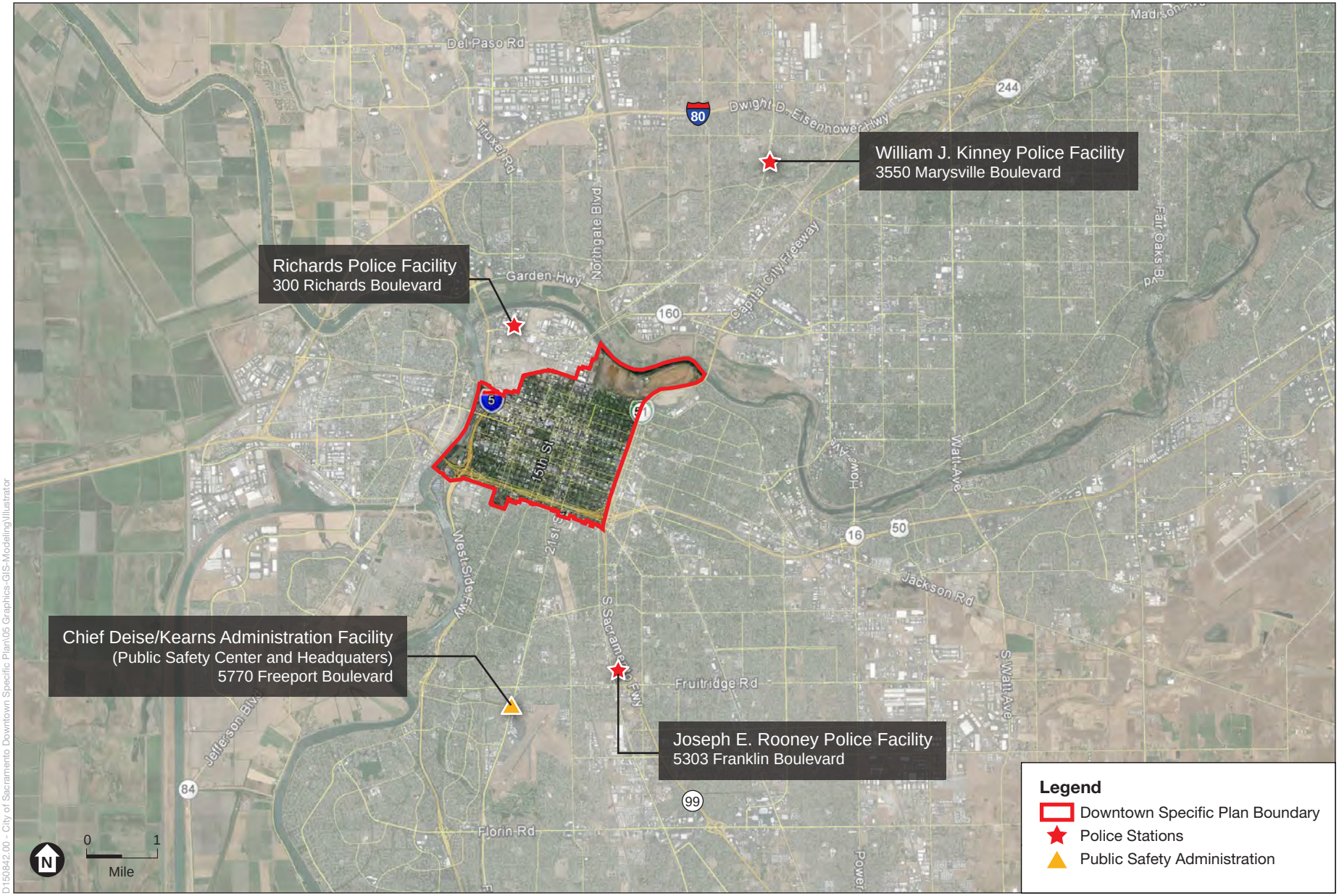
Sacramento PD's main headquarters is located at the Public Safety Center and Headquarters located at 5770 Freeport Boulevard. An Evidence and Property facility is located at 555 Sequoia Pacific Boulevard. Sacramento PD has three substations from which patrol divisions operate for four command areas. The substation that currently serves the majority of the DSP area is the Richards Police Facility, which is located about 0.6 miles directly to the northwest of the DSP area at 300 Richards Boulevard in the River District. This substation also serves the East Command, which includes many portions of East and Southeast Sacramento located to the east of the Capital City Freeway (Business 80) and Highway 99 and south of the American River. The Joseph E. Rooney Police Facility at 5303 Franklin Boulevard serves as the main substation for areas within the DSP area located to the south of US 50 (i.e., the Broadway Corridor), as well as more broadly serving the South Command (Southwest District 4 and Southeast District 5). The William J. Kinney Police Facility at 3550 Marysville Boulevard serves the North Command (Northwest District 1 and Northeast District 2), which generally contains portions of the City located to the north of the American River. **Figure 4.11-1** provides an illustration of these facilities.

The Central Command and District 3 cover all of the DSP area other than the Broadway corridor. District 3 is bounded by the American River to the north, Business 80 to the east, US 50 to the south, and the Sacramento River to the west. District 3 comprises three beats—A, B, and M—and the DSP area encompasses large portions of all three of these beats. Central Command has a staff of 1 police captain, 2 police lieutenants, 10 sergeants (operating across all assignments within the command), 37 officers, 1 community service officer, 4 officers serving the Problem Oriented Policing Team, 5 officers assigned to the Mounted Unit, and 15 officers assigned to the Bike Unit.[4] Central Command is co-located with the Eastern Command at the Richards Police Facility. Nineteen officers serve Beat A within District 3, 18 officers serve Beat B within District 3, and 3 sergeants and 20 officers serve Beat M within District 3.[5] Mounted and bike units are specifically assigned only to Beat 3M.[6]

The Broadway corridor is served by South Command. South Command contains two districts, Districts 4 and 5, which serve all areas within the City of Sacramento located both south of US 50 and west of State Route 99 (SR 99), in addition to a small portion of the City that extends along Mack Road to Stockton Boulevard, just east of SR 99.

District 4 and Beat A, generally bounded by US 50 to the north, SR 99 to the east, portions of 22nd Avenue and Seamas Avenue to the south, and the Sacramento River to the west, serve the Broadway corridor. South Command has a staff of 1 police captain, 4 police lieutenants, 12 sergeants (operating across all assignments within the command), 76 officers, 1 community service officer, 3 officers serving the Problem Oriented Policing Team, and 8 officers serving the Gang Enforcement Team. South Command is located at the Joseph E. Rooney Police Facility.[7]

4 Lee, Rachel, Deputy City Clerk, Office of the City Clerk, City of Sacramento. Personal communication with Matthew Pruter, ESA, March 30, 2017.
5 *Ibid.*
6 *Ibid.*
7 *Ibid.*



D150842.00 - City of Sacramento Downtown Specific Plan\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Google Earth Pro, 2017; ESA 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.11-1
Sacramento Police Department Stations

ESA

Five sergeants, 37 officers, and 1 community service officer serve District 4.[8] Fourteen officers serve Beat A within District 4.[9]

California Highway Patrol

California Highway Patrol is responsible for law enforcement along the highways that run through the plan area, which includes Interstate 5 (I-5), US 50, Business 80, and SR 99. Following a merger in 1995, California Highway Patrol also protects State property, such as the State Capitol, as well as State employees, the Governor, and other dignitaries.

Sacramento Regional Transit

Sacramento PD maintains mutual aid agreements as part of a statewide emergency response system. On a local level, Sacramento PD maintains memoranda of understanding (MOUs) for the provision of services with RT Police and school districts. Sacramento PD has specialized staff to work with Regional Transit and in City high schools.

For the existing and proposed portions of the RT light rail lines (Blue, Gold, and Green Lines) that fall within the DSP area, RT Police would provide police protection services for RT, although the Sacramento PD has primary law enforcement duties at and around transit stations. There are a total of 18 light rail stations within the plan area. RT Police patrol the RT system by car, on foot, and via light rail trains.[10] While their role is focused at RT stations, RT Police work closely with Sacramento PD in identifying and responding to crime issues system wide.

Regulatory Setting

Federal

There are no federal regulations regarding police protection services that pertain to the proposed DSP.

State

Essential Services Building Act

The Essential Services Building Act of 1986, found in Chapter 2, Section 16000 of the California Health and Safety Code, applies to fire stations, police stations and other public facilities that respond to emergencies. It is intended to ensure that essential services buildings are capable of providing essential services to the public after a disaster, are designed and constructed to minimize fire hazards and are capable of resisting, insofar as practical, the forces generated by earthquakes, gravity, and winds. In addition, nonstructural components vital to the operation of essential services buildings must be able to resist, insofar as practical, the forces created by earthquakes, gravity, fire, and wind.

8 *Ibid.*
9 *Ibid.*
10 Sacramento Regional Transit, 2015. Sacramento Regional Transit District – Police Services. Available: http://www.sacrt.com/police/index.stm. Accessed March 16, 2017.

Local

City of Sacramento 2035 General Plan

The following goals and policies from the 2035 General Plan are relevant to police protection.

Goal PHS 1.1 Crime and Law Enforcement. Work cooperatively with the community, regional law enforcement agencies, local government and other entities to provide quality police service that protects the long-term health, safety, and well-being of our city, reduces current and future criminal activity, and incorporates design strategies into new development.

Policies

PHS 1.1.1 **Police Master Plan.** The City shall maintain and implement a Police Master Plan to address staffing and facility needs, service goals, and deployment strategies.

PHS 1.1.2 **Response Time Standards.** The City shall strive to achieve and maintain optimal response times for all call priority levels to provide adequate police services for the safety of all city residents and visitors.

PHS 1.1.3 **Staffing Standards.** The City shall maintain optimum staffing levels for both sworn police officers and civilian support staff in order to provide quality police services to the community.

PHS 1.1.4 **Timing of Services.** The City shall ensure that development of police facilities and delivery of services keeps pace with development and growth in the city.

PHS 1.1.5 **Distribution of Facilities.** The City shall expand the distribution of police substation type facilities to allow deployment from several smaller facilities located strategically throughout the city and provide facilities in underserved and new growth areas in order to provide optimum response to all city residents.

PHS 1.1.6 **Co-Location of Facilities.** The City shall seek to co-locate police facilities with other City facilities, such as fire stations, to promote efficient use of space and provision of police protection services within dense, urban portions of the city.

PHS 1.1.7 **Development Review.** The City shall continue to include the Police Department in the review of development proposals to ensure that projects adequately address crime and safety, and promote the implementation of Crime Prevention through Environmental Design principles.

PHS 1.1.8 **Development Fees for Facilities and Services.** The City shall require development projects to contribute fees for police facilities.

PHS 1.1.12 **Cooperative Delivery of Services.** The City shall work with local, State, and Federal criminal justice agencies to promote regional cooperation in the delivery of services.

Goal PHS 4.1 Response to Natural and Human-Made Disasters. Promote public safety through planning, preparedness, and emergency response to natural and human-made disasters.

Policies

PHS 4.1.5 **Mutual Aid Agreements.** The City shall continue to participate in mutual aid agreements to ensure adequate resources, facilities, and other support for emergency response.

The proposed DSP would be consistent with each of the General Plan goals and policies listed above. Consistent with Policy PHS 1.1.7, each project within the DSP area would be subject to design review and consistency with Crime Prevention through Environmental Design (CPTED) principles. Also, consistent with Policy PHS 1.1.8, proposed projects within the DSP area would pay all required development impact fees in order to fund the expansion of police services. Payment of impact fees would also ensure that development of police facilities and delivery of

services keeps pace with development and growth in the city, consistent with policies PHS 1.1.3 and PHS 1.1.4. Adequate placement of police facilities and adequate staffing and equipment would help the Sacramento PD achieve optimal response times for all call priority levels to provide adequate police services for the safety of all city residents and visitors, consistent with policy PHS 1.1.2.

The Sacramento 2035 General Plan MEIR uses a goal of 2.0 to 2.5 sworn police officers per 1,000 residents and one civilian support staff per two sworn officers.[11]

Analysis, Impacts, and Mitigation

Significance Criteria

Implementation of the proposed DSP would have a significant impact related to police protection services if it would:

- Require, or result in, the construction of new or expanded facilities related to the provision of police protection, such that a substantial physical adverse environmental impact could result.

Methodology and Assumptions

The impact analysis for the provision of police protection services examines whether the proposed DSP would require new or expanded police protection facilities for either additional staffing or equipment, of which such construction would result in physical environmental effects. Increases in development have the potential to create the need for additional staff and/or police facilities. Maintaining adequate staffing levels ensures appropriate service levels and response times for police protection.

This analysis uses a ratio of two sworn officers for every 1,000 residents and a ratio of one civilian support staff for every two sworn officers to determine staffing needs to serve the plan area. This ratio was also used in the 2035 General Plan MEIR. This EIR uses the 2035 General Plan MEIR ratio of 2.0 officers per 1,000 residents. Applying the ratio of 2.0 officers per 1,000 residents into the 2035 General Plan's projected population of 640,000 residents by 2035 would result in a demand for 1,280 police. Additionally, 640 civilian support staff would be needed to accommodate the 2035 projected population, based on the aforementioned ratio of one civilian support staff for every two sworn officers.

In addition to residential development, the proposed DSP would facilitate non-residential development, including such employment-generating uses as food, retail, offices, government facilities, and medical facilities. While the mixture of food, retail, office, government, and medical uses may present policing needs that differ from residential uses, this EIR uses the one ratio, based on the number of residents, to determine police staffing needs. This reasoning is based on the view expressed in the MEIR, which uses a single ratio to capture all police demand.

[11] City of Sacramento, 2015. City of Sacramento 2035 General Plan Master Environmental Impact Report. Certified March 3, 2015. p. 4.10-2.

The impact analysis below provides a qualitative discussion regarding the ways in which non-residential uses could affect policing. **Table 4.11-1** provides estimates for the number of sworn officers and non-sworn staff that would be needed to accommodate the proposed DSP.

TABLE 4.11-1
DOWNTOWN SPECIFIC PLAN POLICE ESTIMATES

DSP Population (Residents)[a]	Sworn Officers / 1,000 Residents	Officers	Non-sworn Staff / Officers	Non-sworn Staff
21,710	2/1,000	44	0.5	22

NOTES:
a DSP population determined by using a factor of 1.62 persons per household, which was multiplied by 13,401 dwelling units projected for the proposed DSP.

SOURCES: City of Sacramento, 2014. Draft Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update. August 2014. p. 4.10-2.

Impacts and Mitigation Measures

Impact 4.11-1: The proposed DSP would increase demand for police protection services within the City of Sacramento.

As discussed earlier, Sacramento PD would be responsible for police protection services throughout the DSP area. The proposed DSP would allow for up to approximately 13,401 housing units and 21,710 residents. This increase in housing units and population would create an additional demand for police protection services within the DSP area. Based on this projected growth, the proposed DSP would require 44 additional sworn police officers and 22 non-sworn staff. The proposed DSP has been designed to provide residential and non-residential growth that would be consistent with the growth anticipated in the 2035 General Plan. This growth would not exceed the demand of police officers already anticipated within the 2035 General Plan. In accordance with 2035 General Plan policy PHS 1.1.8, all future projects within the DSP area would be required to pay the appropriate taxes and fees to finance the City's General Fund. The General Fund would provide the necessary funding for the sworn and non-sworn police staffing increases described above.

A variety of non-residential, employment-generating land uses are also envisioned for the proposed DSP, and are projected to generate approximately 22,750 employees. These non-residential uses would also increase the need for police protection services within the DSP area. While no additional non-residential calculation is included within the residentially-derived calculations for police demand above, the ratio used in this analysis, per the MEIR, is used to capture all police demand within the City.

The proposed DSP is located within two commands, Central Command for most of the DSP area and South Command for the Broadway corridor and all parcels located to the south of US 50; these commands deploy patrol units and specialized teams from the Richards Police Facility and Joseph E. Rooney Police Facility as substations, respectively. As development within the DSP area occurs over time, additional facilities, equipment, and staffing would be needed for both

commands. A new police substation is proposed to be built within the RSP area, and may be co-located with a fire station[12] at either the southeast corner of Railyards Boulevard and 7th Street or the northeast corner of Railyards Boulevard and 10th Street.[13] In addition to serving the increased need for future residential and non-residential growth within the RSP area, this station would assist in providing police protection services for the DSP area. Following discussion with Sacramento PD, no additional police facilities would be needed to serve the proposed DSP as police services could be accommodated within existing facilities.[14] Funding for law enforcement facilities and services would come from a variety of sources. The City's General Fund currently provides funding for police operations and is generated through a combination of property taxes, sales taxes, and additional taxes. All new projects within the DSP area would contribute sales and property taxes into the General Fund to assist with funding law enforcement services. Although the City's General Plan provides a policy (PHS 1.1.8) that requires the City to assign additional fees for development projects, it has not yet created an implementation program for this policy. In addition, the DSP Financing Plan provides for additional funding mechanisms. Because no additional police facilities would be need to be constructed to serve the DSP area, no physical environmental impacts would be triggered. Therefore, the impact would be **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

The geographic context for the cumulative analysis of police protection impacts is based on the boundaries of Sacramento PD, which is coterminous with the boundaries of the City of Sacramento. This cumulative analysis places particular emphasis on the broader Central City area of Sacramento, an area that includes the proposed DSP area, RSP area, and River District. Together, these portions within the Central City feature a range of similar densities and land uses relative to the proposed DSP. The cumulative analysis for police protection services in this EIR assumes development under the 2035 General Plan consistent with that which is described in the 2035 General Plan MEIR.

Impact 4.11-2: Implementation of the proposed DSP, in combination with other cumulative development in the City of Sacramento, would contribute to cumulative increase in the demand for police protection services.

The proposed DSP would facilitate up to approximately 13,401 new housing units and yield 21,710 new residents, in addition to 22,750 new employees, in the DSP area. The 2013-2021 Housing Element stated that the Central City area, including the DSP area, would grow the most

12 City of Sacramento, 2016. Sacramento Railyards Specific Plan Update, KP Medical Center, MLS Stadium, & Stormwater Outfall Subsequent Environmental Impact Report. Certified November 16, 2016. SCH No. 2006032058. p. 4.11-8.
13 *Ibid*. p. 4.11-21.
14 Justin Eklund. Captain. City of Sacramento Police Department. Personal Communication with Christina Erwin, ESA. June 29, 2017.

among other communities within the City through 2035.[15] The 2035 General Plan assumes a 2035 population for the entire City of Sacramento of 640,381 residents, an increase of 147,356 from the 2017 count of 493,025 residents.[16]

There are three essential services facilities in the City. Increased development within the City would result in an increased need for sworn and non-sworn officers, as well as a need for increased facility square footage to accommodate more officers and equipment. Increased facility space could come in the form of remodeling existing facilities to provide increased efficiency and use of existing space, expanding existing facilities, leasing additional space in existing buildings, or constructing new facilities. The 2035 General Plan MEIR identifies three additional essential services stations and one expanded property warehouse as subsequent projects.[17] However, the timing for development of those facilities is not known.

As the Sacramento PD develops its Police Master Plan, consistent with General Plan policy PHS 1.1.1, additional strategies will be developed to address staffing needs, facility needs, deployment strategies, and service goals. The Master Plan would be the guiding document for police services in the City. If new or expanded police protection facilities are determined to be necessary, they would be developed on property identified in the General Plan and evaluated in the General Plan MEIR for urban development. Because the proposed DSP, combined with other development, would not result in physical environmental impacts, the impact would be **less than significant**.

Mitigation Measure

None required.

4.11.2 Fire Protection

Introduction

This section describes existing fire protection services in the DSP area, and presents existing fire protection plans and policies associated with implementation of the proposed DSP. Potential impacts to fire protection services are evaluated based on the examination of service levels and data pertaining to the proposed DSP.

Information for this section was obtained from the City of Sacramento General Plan, the CCCP, the Sacramento Fire Department (SFD) website, the 2016 SFD Annual Report, communication with SFD staff, and other environmental documentation within the DSP area.

No comments received during the NOP comment period addressed issues related to fire protection services.

15 City of Sacramento, 2015. City of Sacramento 2035 General Plan. Adopted March 3, 2015. p. H 3-3.
16 California Department of Finance. 2017. E-1 Population Estimates for Cities, Counties, and the State, January 1, 2016 and 2017. Released May 1, 2017.
17 City of Sacramento, 2015. City of Sacramento 2035 General Plan Master Environmental Impact Report. Certified March 3, 2015. p. 2-37, Table 2-2.

Environmental Setting

Sacramento Fire Department

SFD provides fire protection services within the City of Sacramento, which covers approximately 99 square miles within the City boundaries. Based on 2010 census data, SFD serves approximately 466,500 residents within the city. In addition, SFD is contracted by Pacific/ Fruitridge Fire Protection District (FPD) and Natomas FPD to provide fire protection service to an additional 50,000 residents across approximately 47.1 square miles of unincorporated Sacramento County.[18]

Currently, SFD Operations is divided into three divisions: Suppression, Emergency Medical Services (EMS), and Special Operations.[19]

Fire suppression involves the act of extinguishing fires and preventing fire expansion; i.e., firefighting. The structure of fire suppression services within SFD involves the collaboration of several leaders within SFD. The Shift Assistant Chief oversees daily line personnel activity within SFD. Currently, SFD's Fire Suppression Division operates 24 fire engines, 9 ladder trucks, and one heavy rescue at a total of 24 fire stations.[20] The stations are organized into three battalions, with each battalion led by a battalion chief that coordinates operations at emergency scenes.

The EMS Division collaborates with a variety of agencies, including the Sacramento County EMS Authority, local hospitals, and community organizations, to participate in emergency pre-hospital care operations.[21] The EMS Division delivers Basic Life Support (BLS) and Advanced Life Support (ALS) first responder and ambulance transportation services. All SFD Engine and Truck Companies are used as EMS first responders and staffed with Firefighter-Emergency Medical Technicians (EMTs) and/or Firefighter-Paramedics, with at least (BLS) capabilities. SFD currently deploys fifteen 24-hour ALS ambulances and up to three flex ALS ambulances when additional staffing and equipment are available. Each ambulance is staffed by two Firefighters, with at least one also being a licensed Paramedic.

The Special Operations Division provides a multi-pronged approach for a variety of programs, which include: Hazardous Materials, Domestic Preparedness, Technical Rescue and Urban Search and Rescue.[22] The last of these programs is funded by a grant from the Department of Homeland Security. In addition, this division also manages boat and heavy rescue programs.

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18 Sacramento Local Agency Formation Commission, 2014. Final Municipal Service Review and Sphere of Influence Update: Natomas Fire Protection District Contract with the City of Sacramento for Fires and Emergency Medical Services. June 4, 2014. p. 12.

19 Sacramento Fire Department, 2017. Office of Operations. Available: http://portal.cityofsacramento.org/Fire/Operations. Accessed March 17, 2017.

20 Sacramento Fire Department, 2017. Fire Suppression. Available: http://www.cityofsacramento.org/Fire/Operations/Fire-Suppression. Accessed March 17, 2017.

21 Sacramento Fire Department, 2017. Emergency Medical Services. Available: http://www.cityofsacramento.org/Fire/Operations/Emergency-Medical-Services. Accessed March 17, 2017.

22 Sacramento Fire Department, 2017. Special Operations. Available: http://www.cityofsacramento.org/Fire/Operations/Special-Operations. Accessed March 17, 2017.

SFD Staffing

In the 2017-2018 fiscal year, SFD was budgeted with 678 full time equivalent (FTE) positions, comprising the following staffing levels: four staff in the Human Resources Division, three staff in the Office of the Fire Chief Division, 507 staff in the Operations Division, 13 staff in the Resource Management Division, 141 staff in the Risk Reduction Division, two staff in the Special Projects Division, and eight staff in the Support Services Division.[23]

SFD Mutual Aid

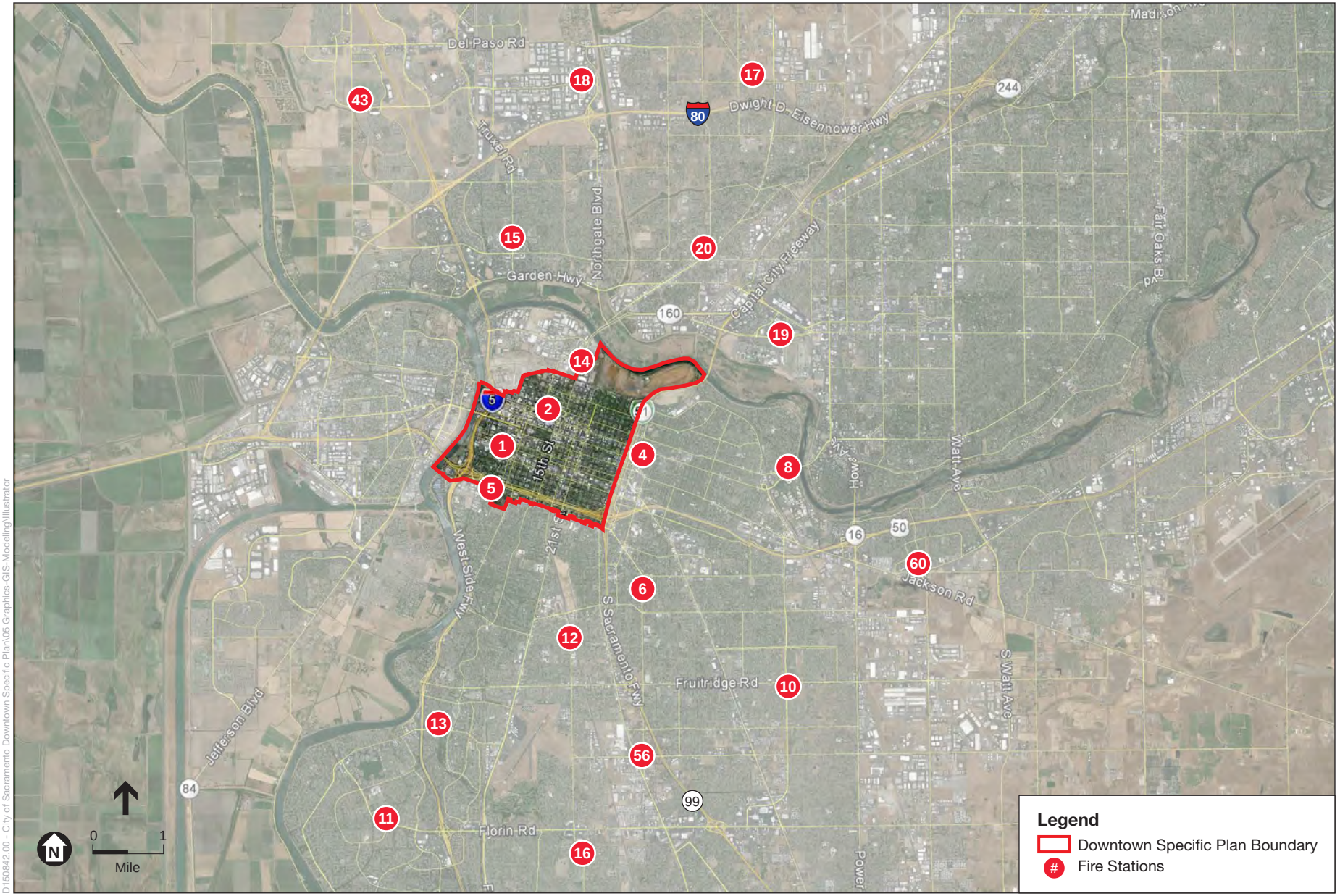
SFD has automatic, or mutual, aid agreements with all the fire departments and fire protection districts that receive dispatch services from the Sacramento Regional Fire/EMS Communications Center (SRFECC). The SRFECC is a Joint Powers Authority comprised of SFD, Cosumnes Community Services District, Courtland Fire Department, Folsom Fire Department, Herald Fire Protection District, Sacramento Metropolitan Fire District, Walnut Grove Fire Protection District, and Wilton Fire Protection District.[24] In 2016, SFD responded to more than 88,242 calls for service, with 8,235 of the calls occurring as mutual aid efforts.[25] The average response time for all SFD engine companies in 2016 was five minutes and 15 seconds.[26]

SFD in the DSP Area

The DSP area is currently served by multiple stations within or near downtown Sacramento (see **Figure 4.11-2**). Within the DSP area, Station 1 is located at 624 Q Street. The units assigned to Station 1 experienced a call volume of approximately 8,412 combined dispatches in 2016, and do not have capacity to provide additional emergency response.[27] Station 2 is located at 1229 I Street. The units assigned to Station 2 experienced a call volume of approximately 14,771 combined dispatches in 2016, and do not have capacity to provide additional emergency response.[28] Station 5 is located at 731 Broadway. The units assigned to Station 5 experienced a call volume of approximately 4,105 combined dispatches in 2016, and do not have capacity to provide additional emergency response.[29]

There are two additional stations that are proximate to but just outside the boundaries of the DSP area: Stations 4 and 14. Station 4 is located at 3145 Granada Way, in East Sacramento. The units assigned to Station 4 experienced a call volume of approximately 4,704 dispatches per year, and do not have capacity to provide additional emergency response.[30] Station 14 is located at 1341 North C Street, in the River District. The units assigned to Station 14 experienced a call volume

[23] City of Sacramento, 2017. Proposed City of Sacramento Fiscal Year 2017/18 Budget. p. 176: "Staffing Levels."
[24] Sacramento Regional Fire/EMS Communications Center, 2017. The JPA. Available: https://www.srfecc.ca.gov/the-jpa/. Accessed March 17, 2017.
[25] Sacramento Fire Department, 2017. Sacramento Fire Department Annual Report 2016. p. 9.
[26] Basurto, Michelle. Program Specialist, Sacramento Fire Department. Personal communication with Matthew Pruter, ESA, April 14, 2017.
[27] Sacramento Fire Department, 2017. Sacramento Fire Department Annual Report 2016. pp. 10-11.
[28] *Ibid.*
[29] *Ibid.*
[30] *Ibid.*



SOURCE: Google Earth Pro, 2017; ESA 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.11-2
Sacramento Fire Department Stations

ESA

of approximately 3,800 dispatches per year, and do not have capacity to provide additional emergency response.[31]

Regulatory Setting

Federal

There are no federal regulations regarding fire protection services that pertain to the proposed DSP.

State

California Occupational Safety and Health Administration

In accordance with the California Code of Regulations, Title 8, Sections 1270 ("Fire Prevention") and 6773 ("Fire Protection and Fire Equipment"), California Occupational Safety and Health Administration (OSHA) has established minimum standards for fire suppression and EMS. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, requirements for the sizing of fire hoses, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

Essential Services Building Act

The Essential Services Building Act of 1986, found in Chapter 2, Section 16000 of the California Health and Safety Code, applies to fire stations, police stations and other public facilities that respond to emergencies. It is intended to ensure that essential services buildings are capable of providing essential services to the public after a disaster, are designed and constructed to minimize fire hazards and to resist, insofar as practical, the forces generated by earthquakes, gravity and winds. In addition, nonstructural components vital to the operation of essential services buildings must be able to resist, insofar as practical, the forces created by earthquakes, gravity, fire and wind.

California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which includes regulations for building standards (as set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise building, childcare facility standards, and fire suppression training.

Uniform Fire Code

The Uniform Fire Code (UFC) provides regulations involving construction, maintenance, and the use of buildings, and is the primary fire code throughout the United States. This code is used in the development of the California Fire Code as well. Topics addressed in the UFC include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and

[31] *Ibid.*

assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The UFC contains specialized technical regulations related to fire and life safety. Sprinkler system standards and requirements for different types of buildings, including hospitals, are provided in the UFC.

California Fire Code

CFC Section 5306 requires the storage of medical gas systems to occur within dedicated areas that involve no other uses or storage. Section 1103 provides fire safety requirements for existing buildings and Section 1103.7.3.1 additionally states that hospital facilities that do not have an automatic sprinkler system must provide automatic fire alarm system that responds to the products of combustion other than heat. All buildings are also now required to provide automatic sprinkler systems.

Local

City of Sacramento 2035 General Plan

The following goals and policies from the 2035 General Plan are relevant to fire protection.

Goal PHS 2.1 Fire Protection and Emergency Medical Services. Provide coordinated fire protection and emergency medical services that address the needs of Sacramento residents and businesses and maintain a safe and healthy community.

Policies

PHS 2.1.1 **Fire Department Strategic Plan.** The City shall maintain and implement a Fire Department Strategic Plan.

PHS 2.1.2 **Response Time Standards.** The City shall strive to maintain emergency response times that provide optimal fire protection and emergency medical services to the community.

PHS 2.1.3 **Staffing Standards.** The City shall maintain optimum staffing levels for sworn, civilian, and support staff, in order to provide quality fire protection and emergency medical services to the community.

PHS 2.1.4 **Response Units and Facilities.** The City shall provide additional response units, staffing, and related capital improvements, including constructing new fire stations, as necessary, in areas where a fire company experiences call volumes exceeding 3,500 in a year to prevent compromising emergency response and ensure optimum service to the community.

PHS 2.1.5 **Timing of Services.** The City shall ensure that the development of fire facilities and delivery of services keeps pace with development and growth of the city.

PHS 2.1.6 **Locations of New Stations.** The City shall ensure that new fire station facilities are located strategically throughout the city to provide optimum response times to all areas.

PHS 2.1.7 **Future Station Locations.** The City shall require developers to set aside land with adequate space for future fire station locations in areas of new development.

PHS 2.1.8 **Co-Location of Facilities.** The City shall seek to co-locate fire facilities with other City facilities, such as police stations, to promote efficient use of space and provision of fire protection and emergency medical services within dense, urban portions of the city.

PHS 2.1.10 **Regional Cooperative Delivery.** The City shall work with the various fire protection districts and other agencies to promote regional cooperative delivery of fire protection and emergency medical services.

PHS 2.1.11 **Development Fees for Facilities and Services.** The City shall require development projects to contribute fees for fire protection services and facilities.

Goal PHS 2.2 Fire Prevention Programs and Suppression. The City shall deliver fire prevention programs that protect the public through education, adequate inspection of existing development, and incorporation of fire safety features in new development.

Policies

PHS 2.2.2 **Development Review.** The City shall continue to include the Fire Department in the review of development proposals to ensure projects adequately address safe design and on-site fire protection and comply with applicable fire and building codes.

PHS 2.2.3 **Fire Sprinkler Systems.** The City shall promote installation of fire sprinkler systems in new commercial and residential development, and shall encourage the installation of sprinklers in existing structures when it is reasonable and not cost prohibitive.

PHS 2.2.4 **Water Supply for Fire Suppression.** The City shall ensure that adequate water supplies are available for fire-suppression throughout the city, and shall require development to construct all necessary fire suppression infrastructure and equipment.

PHS 2.2.5 **High-Rise Development.** The City shall require that high rise structures include sprinkler systems and on-site fire suppression equipment and materials, and be served by fire stations containing truck companies with specialized equipment for high-rise fire and/or emergency incidents.

The DSP would be consistent with the General Plan goals and policies listed above. Consistent with Policy PHS 2.1.11, the all entitled projects within the DSP area would pay all required development impact fees to assist with the funding of expanded fire protection services. In accordance with PHS 2.1.2 through 2.1.5, with the supporting funding from the projects comprising the proposed DSP, fire protection facilities, staffing, and service levels would be maintained within the DSP area and across Sacramento. Consistent with Policy PHS 2.2.2, all entitled projects comprising the proposed DSP would go through development review in order to ensure it adequately addresses fire safety. Projects comprising the proposed DSP would also be required to meet water pressure and fire flow requirements, consistent with Policy PHS 2.2.4. Consistent with Policies PHS 2.2.3 and 2.2.5, these projects would include sprinkler systems and appropriate fire suppression equipment as required by City Code and the UFC. Finally, consistent with PHS 2.1.6, 2.1.7 and 2.1.8, should the circumstances require, the entitled projects would assist in locating a fire station, with the possibility of co-locating with a police substation.

Although SFD does not have an official staffing ratio goal, SFD uses a number of measures to determine the need for fire protection services, which include the provision of one station for every 1.5 mile service radius, one station for every 16,000 residents, and one station where a company experiences call volumes exceeding 3,500 in a year.[32]

[32] City of Sacramento, 2015. City of Sacramento 2035 General Plan Master Environmental Impact Report. Certified March 3, 2015. p. 4.10-5.

Analysis, Impacts, and Mitigation

Significance Criteria

This EIR assumes implementation of the proposed DSP would have a significant impact related to fire protection if it would:

- Require, or result in, the construction of new or expanded facilities related to the provision of fire protection, such that a substantial adverse physical environmental impact could result.

Methodology and Assumptions

The impact analysis for the provision of fire protection services determines whether the proposed DSP would require new or expanded fire protection facilities, the construction of which would result in substantial adverse physical environmental effects. The proposed DSP would result in an increase in the number of residents, employees and non-residential uses in the DSP area. Increases in population and commercial activity in the DSP area could result in a need for additional SFD staff, and/or a need for additional fire protection equipment or facilities. This analysis utilizes the estimated number of calls per fire station to determine the impact of the proposed DSP. Estimated response calls are used in this methodology because there are several stations within the requisite response time of the DSP area, but their ability to respond depends largely on how many total calls they must respond to, rather than distance to the site. As mentioned in the regulatory setting, 2035 General Plan Policy PHS 2.1.4 requires the City to provide additional response units, staffing, and related capital improvements when existing fire stations experience call volumes exceeding 3,500 calls per year. It is assumed that if calls for service at any of the fire stations responsible for responding to the DSP area exceed this threshold, another fire station (potentially a new one) would be needed to assist with the additional number of calls.

Impacts and Mitigation Measures

Impact 4.11-3: The proposed DSP would increase the demand for fire protection services.

The proposed DSP would result in increased employees, residents and visitors within the DSP area, and this increased activity would increase demand for fire protection and emergency services. These increased activities and new uses could result in an incremental increase in calls for fire and emergency medical services beyond the amount currently experienced in the DSP area. All fire stations within the DSP area experience call volumes that exceed 3,500 calls a year.

The proposed DSP has been designed to allow for residential and non-residential growth that would be consistent with the growth anticipated in the 2035 General Plan. This growth would not exceed the demand of fire stations and companies already anticipated within the 2035 General Plan. As discussed in the Environmental Setting, the three fire stations within the DSP area—Stations 1, 2, and 5—and the two stations near the DSP area—Stations 4 and 14—would be responsible for collectively accommodating response to the additional calls and activities needed to serve the proposed DSP population and uses.

A new fire station is included in the proposed DSP, and it would be located to the west of the Burlington Northern and Santa Fe (BNSF) railway tracks that run near 19th Street. All environmental impacts associated with the construction and operation of this new fire station are addressed in the other sections of this EIR.

In addition, the Railyards Specific Plan Update is anticipated to provide for a fire station at one of two locations within the RSP area, to be located at either the southeast corner of Railyards Boulevard and 7th Street or the northeast corner of Railyards Boulevard and 10th Street.[33] A new station would improve response times within the RSP area, and provide an additional facility to respond to call volume.

All new development within the DSP area would be required to meet SFD standards related to access, fire hydrants, automatic sprinkler systems, fire alarm systems, water flow, and other UFC/CFC requirements. SFD would review project construction plans and inspect the construction work as it progresses to ensure that future projects in the DSP area meet State and local Building and Fire Code requirements.

Funding for fire protection services would come from a number of different sources, in a similar manner as police protection. As described earlier, the City's General Fund also provides funding for the operations of SFD and is generated through a combination of property taxes, sales taxes, and additional taxes. All new projects within the DSP area would contribute sales and property taxes into the General Fund to assist with funding fire protection services. The City's General Plan provides a policy that requires the City to assign additional fees for development projects, along with an implementation program to prepare and adopt a fire protection development impact fee program, but has not yet implemented this action. In addition, the DSP Financing Plan provides for additional funding mechanisms.

Because additional facilities are not anticipated to be required to meet the fire protection needs of the DSP area in the future, there would be no physical environmental effects associated with facility construction or operation, beyond what has been analyzed in this EIR. Therefore, this impact would be **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

The geographic context for the analysis of cumulative fire protection impacts is based on the boundaries of SFD, which includes the entirety of the City of Sacramento. The cumulative analysis for fire protection services in this EIR also utilizes the buildout of the 2035 General Plan.

[33] City of Sacramento, 2016. Sacramento Railyards Specific Plan Update, KP Medical Center, MLS Stadium, & Stormwater Outfall Subsequent Environmental Impact Report. Certified November 16, 2016. SCH No. 2006032058. p. 4.11-21.

Impact 4.11-4: Implementation of the proposed DSP, in combination with other cumulative development within the boundaries of the City of Sacramento, would contribute to cumulative increases in demand for fire protection services.

The proposed DSP would add up to approximately 13,401 new housing units and yield 21,710 new residents, in addition to 22,750 new employees in the DSP area. The 2013-2021 Housing Element states that the Central City area, an area defined as containing the DSP area and the neighboring RSP area and River District, would grow the most among other communities within the City through 2035. The 2035 General Plan assumes a 2035 population for the entire City of Sacramento of 640,381 residents. This would represent an increase of 160,275 from the 2015 count of 480,105 residents.

This additional population and non-residential uses would require additional fire protection services. This could result in increases in response times throughout the Central City, as calls for service would increase and fire stations within the area would be responsible for the protection of more developed areas and additional residents. Other development within the service area could further increase the demand on fire protection services in the Central City area of Sacramento.

Sacramento FD has preliminary plans to construct additional fire station facilities including an additional station that will service South Natomas, two additional stations that will service the southern locations of the city, an additional station in the downtown area, and the relocation of Stations 3 and 14.[34] A total of 12 new fire stations, including re-constructed and relocated stations, are identified as subsequent projects in the MEIR.[35] Additionally, the DSP proposes siting a new fire station within the R Street corridor west of the BNSF railway tracks that run between 19th Street and 20th Street.

As the Sacramento FD maintains and implements a Fire Department Strategic Plan, in accordance with General Plan policy PHS 2.1.1, additional strategies will be developed to address staffing needs, facility needs, deployment strategies, and service goals. The Fire Department Strategic Plan would serve as the guiding document for fire services in the City. If new or expanded fire protection facilities are determined to be necessary, they likely would be developed on property identified in the General Plan and evaluated in the General Plan MEIR for urban development, or already accounted for in the DSP and DSP EIR. Because the proposed DSP, combined with other development, would not result in physical environmental impacts, the impact would be **less than significant**.

Mitigation Measure

None required.

[34] City of Sacramento, 2015. City of Sacramento 2035 General Plan Master Environmental Impact Report. Certified March 3, 2015. p. 4.10-7.
[35] *Ibid*. p. 2-40, Table 2-2.

4.11.3 Public Schools

Introduction

This section addresses schools that would serve the DSP area, which is covered by two school districts, Sacramento City Unified School District (SCUSD) and Twin Rivers Unified School District (TRUSD). The portions of the TRUSD located in the DSP area are located north of the UPRR railroad tracks and include portions of the Sutter Landing Regional Park. Although no residential or commercial development within the DSP area is currently located within TRUSD, some brief analysis for the school district is provided in this section. Existing facilities are described and planned expansion of existing facilities or the construction of new facilities is also discussed. Potential impacts on schools as a result of implementation of the proposed DSP are evaluated based on whether residential growth within the DSP area would create a demand for schools that would exceed the current or projected capacity such that new school facilities would need to be constructed. Existing plans and policies relevant to schools are also provided.

Information was obtained from communications with SCUSD staff, technical studies performed for SCUSD, and information provided on the SCUSD and TRUSD websites.

No comments relating to schools were received during the NOP comment period or the Community Open House for the EIR.

Environmental Setting

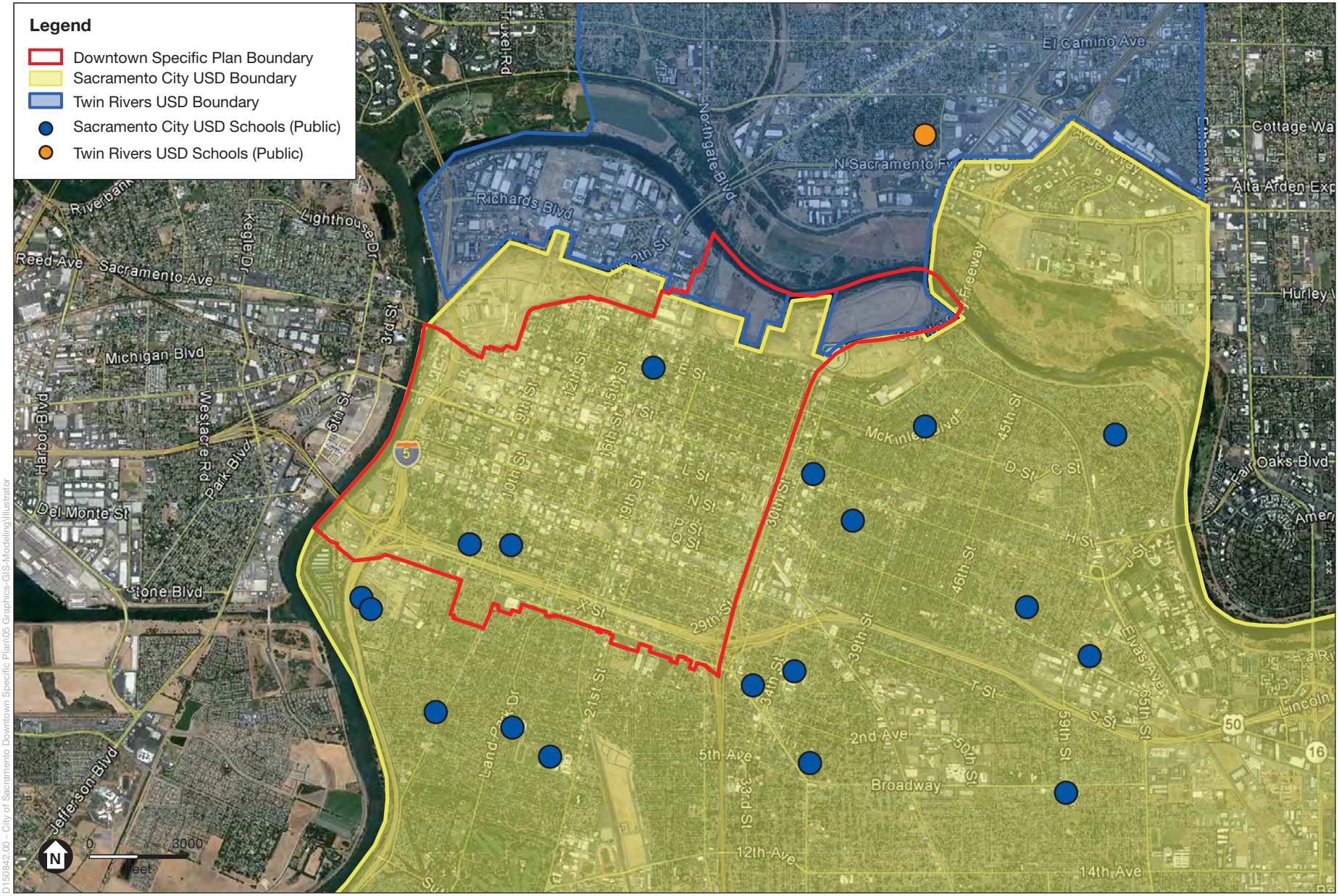
Sacramento Unified School District

The majority of the DSP area, including all anticipated residential and non-residential development areas, is within SCUSD (see **Figure 4.11-3**). Some of the plan area, to the northeast, is located within the boundaries of TRUSD, which is discussed later in this section. SCUSD currently operates a total of 73 schools, including 44 elementary schools (of which one school serves grades K-3 and another school serves grades 4-6), nine K-8 schools, eight middle schools, 12 high schools (of which one serves grades 7-12). SCUSD currently has 26,683 elementary school students (K-6), 7,070 middle school students (7-8), and 13,062 high school students (9-12).[36]

Schools Serving the DSP Area

As seen in **Figure 4.11-4**, the DSP area is located within the current attendance boundaries of five elementary schools: Bret Harte Elementary School (ES), located at 2751 9th Avenue; Crocker/ Riverside ES, located at 2970 Riverside Boulevard; Theodore Judah ES, located at 3919 McKinley Boulevard; Washington ES, located at 520 18th Street; and William Land ES, located at 2120 12th Street.

[36] California Department of Education, 2017. Enrollment by Grade for 2016-17 – District and School Enrollment by Grade. Sacramento City Unified (3467439). Available: http://dq.cde.ca.gov/dataquest/Enrollment/GradeEnr.aspx?cChoice=DistEnrGr2&cYear=2016-17&cSelect=3467439--Sacramento%20City%20Unified&TheCounty=&cLevel=District&cTopic=Enrollment&myTimeFrame=S&cType=ALL&cGender=B. Accessed May 2, 2017.



SOURCE: Google Earth Pro, 2017; ESA 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.11-3
Schools in the Vicinity of the DSP Area

ESA

SOURCE: USDA, 2014; City of Sacramento, 2017; SCUSD, 2017; ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.11-4
Sacramento City Unified School District
Elementary School Boundaries

ESA

Depicted in **Figure 4.11-5**, the DSP area is located within the current attendance boundaries of two middle schools, California Middle School (MS), located at 1600 Vallejo Way, and Sutter MS, at 3150 I Street. The entirety of the DSP area is located within the current attendance boundary of C.K. McClatchy High School (HS) located at 3066 Freeport Boulevard. Students in the DSP area may also attend Arthur Benjamin Health Professions HS, located at 451 McClatchy Way, the MET Charter HS at 810 V Street, or the Success Academy Alternative School at 5601 47th Avenue. Through Open Enrollment, students living with the DSP area could apply for enrollment at other schools within the SCUSD, when space is available.

DSP Area School Enrollment

Enrollment in schools that serve the DSP area is presented in **Table 4.11-2** and discussed below.

- Bret Harte ES serves students in grades K-6, has a design capacity of 576 students, and had 281 students enrolled for the 2016-17 academic year.
- Crocker/Riverside ES serves students in grades K-6, has a design capacity of 552 students, and had 664 students enrolled for the 2016-17 academic year.
- Theodore Judah ES serves students in grades K-6 (along with an Early Kindergarten program), has a design capacity of 504 students, and had 556 students enrolled for the 2016-17 academic year.
- Washington ES serves students in grades K-6 (along with an Early Kindergarten program), has a design capacity of 390 students, and had 186 students enrolled for the 2016-17 academic year. Washington ES reopened during the 2016-17 school year as a STEAM (Science, Technology, Engineering, Art, and Mathematics) school.
- William Land ES serves students in grades K-6, has a design capacity of 504 students, and had 425 students enrolled for the 2016-17 academic year.
- California Middle School serves students in grades 7-8, has a design capacity of 1,023 students, and had 897 students enrolled for the 2016-17 academic year.
- Sutter Middle School serves students in grades 7-8, has a design capacity of 1,320 students, and had 1,171 students enrolled for the 2016-17 academic year.
- C.K. McClatchy High School serves students in grades 9-12, has a design capacity of 1,650 students, and had 2,259 students enrolled for the 2016-17 academic year.[37]

Health Professions High School is an Education for the 21st Century (e21) small high school serving students in grades 9-12. The e21 high schools are smaller, student-centered, high performance, and public charter high schools that enroll no more than 500 students each. Health Professions High School opened during the 2015-2016 school year offering a healthcare-based curriculum. Attendance is through open enrollment within the SCUSD, or an intra-district transfer is required for students residing outside of the District to attend. The school's current enrollment is 263 students, and the school's capacity is 500 students. There is no ability for the school to

[37] Javed, Amna. Manager, GIS/Facilities, Sacramento City Unified School District. Personal communication with Matthew Pruter, ESA, April 19, 2017.

Path: U:\GIS\GIS\Projects\15xxxx\D150842_CityofSacramentoDowntownSpecificPlan\03_Projects\EIR\Fig4_11-5_SchoolBoundaries_Middle.mxd, FEP, 7/31/2017

SOURCE: USDA, 2014; City of Sacramento, 2017; SCUSD, 2017; ESA, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.11-5
Sacramento City Unified School District
Middle School Boundaries

ESA

TABLE 4.11-2
SACRAMENTO CITY USD SCHOOLS AND CAPACITIES IN THE DSP AREA

School Name	Design Capacity[a]	Current Enrollment	Excess Capacity
Elementary Schools			
Bret Harte	576	281	295
Crocker/Riverside	552	664	-112
Theodore Judah	504	556	-52
Washington	390	186	204
William Land	504	425	79
Total	**2,526**	**2,112**	**414**
Middle Schools			
California	1,023	897	126
Sutter	1,320	1,171	149
Total	**2,343**	**2,068**	**275**
High Schools			
C.K. McClatchy	1,650	2,259	-609

NOTES:

a. According to the SCUSD, the design capacity totals shown are calculated on the assumption that every single classroom at a school site would be used for classrooms. However, many of the school sites currently have programs that use classroom space such as an art class, preschool, computer lab, student development program, etc. These other uses reduce the number of classrooms that are available. Design capacity totals also do not provide a precise grade by grade and year by year analysis, and therefore may not accurately true capacity capabilities. (Javed, 2017)

SOURCE: Javed, Amna. Manager, GIS/Facilities, Sacramento City Unified School District. Personal communication with Matthew Pruter, ESA, April 19, 2017.

grow beyond 500 students because the e21 designation places a cap on enrollment at 500 students to maintain the small school environment.

The MET Charter School, established in 2003, serves grades 9-12 and is an open enrollment school, 50 students from inside and outside the District attend the MET. The capacity of the school is 300 students, and the school currently enrolls 300.

As part of the neighboring RSP, an elementary school site is identified at the corner of Richards Boulevard and 5th Street, and when developed would serve to alleviate capacity needs within SCUSD. However, this school has been planned to only serve the RSP Area as part of an agreement between the RSPU developer and SCUSD until some future, undisclosed date in which the enrollment boundary may extend beyond the RSP Area.[38] If student generation increases, or other areas of the City need to be served, the SCUSD can amend individual school attendance boundaries to best serve the students generated by development.

38 Javed, Amna. Manager, GIS/Facilities, Sacramento City Unified School District. Personal communication with Matthew Pruter, ESA, March 29, 2017.

Twin Rivers Unified School District

As seen in Figure 4.11-3, a portion of the DSP area, namely in the north of the UPRR tracks, is located within the attendance boundaries for Twin Rivers Unified School District (TRUSD). The nearest TRUSD schools are Smythe Academy (grades 7-8), which is located at 700 Dos Rios Street and approximately 0.4 miles west of the plan area, and Woodlake Elementary School (grades K-6), which is located at 700 Southgate Road and approximately 0.8 miles north of the DSP area.

Based on the current zoning and general plan designations within these areas, it is possible that development that would generate students could occur. However, these parcels are designated for industrial and open space uses and the 2035 General Plan and the proposed DSP currently do not assume the development of any uses that would generate student enrollment demand (residential units, population, or students) within the planning horizon of year 2035. For these reasons, the analysis of public schools impacts in this EIR is solely focused on land located within the SCUSD boundaries.

Regulatory Setting

Federal

There are no federal regulations regarding public schools that are relevant to the effects of the proposed DSP.

State

California School Facility Program

Proposition 1A/Senate Bill (SB) 50 (Chapter 407, Statues of 1998) is a school construction funding measure that was approved by the voters on the November 3, 1998 ballot. SB 50 created the School Facility Program enabling eligible school districts to obtain state bond funds. State funding requires matching local funds that generally come from developer fees. The passage of SB 50 eliminated the ability of cities and counties to require full mitigation of school impacts and replaced it with the ability for school districts to assess fees directly to offset the costs associated with increasing school capacity as a result of new development. The old “Stirling” fees were incorporated into SB 50 and are referred to as Level 1 fees.

As of January 2012, the State Allocation Board (SAB) authorized an adjustment in the Statutory School Fee amounts (Level 1 fees) for unified school districts pursuant to Government Code Section 65995(b)(3) to $3.20 per square foot for new residential development and $0.51 per square foot for commercial and industrial (non-residential) development. Districts meeting certain criteria may collect Level 2 fees as an alternative to Level 1 fees. Level 2 fees are calculated under a formula in SB 50. Level 3 fees are approximately double Level 2 fees and are implemented only when the State Allocation Board is not apportioning state bond funds. The passage of Proposition 51 on November 8, 2016 authorized an additional $9 billion in general obligation bonds for the construction and modernization of schools across California. Although SB 50 states that payment of developer fees are “deemed to be complete and full mitigation” of

the impacts of new development, fees and state funding do not fully fund new school facilities. Both SCUSD and TRUSD receive Level 1 fees.

California Education Code

The California Education Code authorizes the California Department of Education ("Department") to develop site selection standards for school districts. These standards are found in the California Code of Regulations and require that districts select a site that conforms to certain net acreage requirements established in the Department's 2000 "School Site Analysis and Development" guidebook. The Guide includes the assumption that the land purchased for school sites would be in a ratio of approximately 2 to 1 between the developed grounds and the building area. For example, for a school that houses kindergarten through sixth grade and has an enrollment of 600 children, the recommended acreage is 9.2 acres.

The Department's 2000 Guide includes exceptions to its recommended site size that allow smaller school sites. Additionally, the Department has the policy that if the "availability of land is scarce and real estate prices are exorbitant" the site size may be reduced. It is the Department's policy that if a school site is less than the recommended acreage required, the district shall demonstrate how the students would be provided an adequate educational program including physical education as described in the district's adopted course of study. Through careful planning, a reduced project area school site could follow the recent trend of school downsizing and meet the Department's criteria.

California Code of Regulations

The California Code of Regulations (CCR), Title 5, Division 1, Chapter 13, Subchapter 1, Article 2 outlines minimum requirements for the placement of schools, and specifically addresses placement of school sites in proximity to railroad tracks, as shown below.

> **Section 14010. Standards for School Site Selection**
>
> All districts shall select a school site that provides safety and that supports learning. The following standards shall apply:
>
> d. If the proposed site is within 1,500 feet of a railroad track easement, a safety study shall be done by a competent professional trained in assessing cargo manifests, frequency, speed, and schedule of railroad traffic, grade, curves, type and condition of track, need for sound or safety barriers, need for pedestrian and vehicle safeguards at railroad crossings, presence of high pressure gas lines near the tracks that could rupture in the event of a derailment, preparation of an evacuation plan. In addition to the analysis, possible and reasonable mitigation measures must be identified.
>
> **Section 14011. Procedures for Site Acquisition State-Funded School Districts**
>
> This section requires that the Department of Education provide written approval of new school sites for state-funded school districts. Among the findings that must be made is that the school site does not contain a natural gas line.

Local

City of Sacramento 2035 General Plan

The following goals and policies from the 2035 General Plan are relevant to public schools and the development in the DSP area.

Goal ERC 1.1 Efficient and Equitable Distribution of Facilities. Provide efficient and equitable distribution of quality educational facilities for life-long learning and development of a highly skilled workforce that will strengthen Sacramento's economic prosperity.

Policies

ERC 1.1.1 **School Locations.** The City shall work with school districts at the earliest possible opportunity to provide school sites and facilities that are located in the neighborhoods they serve.

ERC 1.1.2 **Locational Criteria.** The City shall continue to assist in reserving school sites based on each school district's criteria and the school siting guidelines of the California Department of Education and on the City's following location criteria:

- Locate elementary schools on sites that are safely and conveniently accessible, and away from heavy traffic, excessive noise, and incompatible land uses.
- Locate school sites centrally with respect to their planned attendance areas.
- Locate schools in areas where established and/or planned walkways, bicycle paths, or greenways link schools with surrounding uses.
- Locate, plan, and design new schools to be compatible with adjacent uses.

ERC 1.1.3 **Schools in Urban Areas.** The City shall work with school districts in urban areas to explore the use of existing smaller sites to accommodate lower enrollments, and/ or higher intensity facilities (e.g., multi-story buildings, underground parking, and playgrounds on roofs).

ERC 1.1.4 **Joint-Use Development.** The City shall work with school districts and institutions of higher education to explore opportunities for joint-use development that integrates uses for recreation, cultural, and non-school related activities at new and existing facilities.

The Proposed DSP would be consistent with each of the General Plan goals and policies listed above. The proposed DSP would ensure adequate attendance of schools within the plan area to meet capacities within the plan area. Consistent with Policies ERC 1.1.1 through ERC 1.1.3, developers for all of the entitled projects would coordinate school needs with SCUSD to achieve optimum school siting. In addition, developers would pay the appropriate fees and consult with the two school districts to ensure adequate school needs are met. A joint-use facility could be developed if consistent with the type of school that would be developed in the DSP area.

Analysis, Impacts, and Mitigation

Significance Criteria

This EIR assumes implementation of the proposed DSP would have a significant impact related to schools if it would:

- Generate students that would exceed the design capacity of existing or planned schools that would result in the need for new or physically altered school facilities, the construction of which could cause substantial adverse physical environmental impacts.

Methodology and Assumptions

While the DSP area is located within two school districts, as mentioned earlier, because future development that could generate increased enrollment is anticipated to occur solely within the boundaries of the SCUSD, this analysis is only concerned with SCUSD. To calculate student generation rates, the number of students living within the DSP area and attending schools in the SCUSD[39] were compared to the number of households[40,41] in the DSP area. Based on that information, the following student generation rates were calculated: 0.040 for elementary school students, 0.012 for middle school students, and 0.019 for high school students. See **Table 4.11-3** for student generation details within the DSP area.

TABLE 4.11-3
STUDENT GENERATION IN THE DSP AREA

School Type	Generation Rate	Number of DSP Dwelling Units	Students Generated by DSP
Elementary School	0.040	13,401	536
Middle School	0.012	13,401	161
High School	0.019	13,401	255
Total	**--**	**--**	**951**

SOURCES: SACOG SACSIM data, 2017; BAE Urban Economics, 2016. Sacramento Downtown Specific Plan Draft Housing Market Analysis, Phase I and Phase II. November 2016. p. 91, Table 34; ESA, 2017.

The identified design capacity of a particular school may not accurately predict the actual maximum capacity that SCUSD could accommodate. As stated in Table 4.11-2, design capacity totals are calculated on the assumption that every single classroom at a school site would be used for regular teaching classrooms. However, many of the school sites currently have programs that use classrooms for alternative uses that are part of the academic program, including preschool, computer lab, student development program, etc. Although important academic functions, these other uses effectively reduce the number of regular teaching classrooms that are available. Design capacity totals also do not provide a specific grade-by-grade and year-by-year analysis, and therefore may not accurately true capacity at any given time.

Further, enrollment levels increase and decrease over time, depending on the demographics of the residential areas within the boundaries of each school. Additional factors that can affect a school's enrollment include families choosing to send students to public magnet schools, private schools, charter schools, or open-enrollment schools outside of the district.

39 Javed, Amna. Manager, GIS/Facilities. Sacramento City Unified School District. Written communication, August 3, 2017.
40 BAE Urban Economics, 2016. Sacramento Downtown Specific Plan Draft Housing Market Analysis, Phase I and Phase II. November 2016. p. 91, Table 34.
41 Households is defined as the number of occupied dwelling units.

Impacts and Mitigation Measures

Impact 4.11-5: The proposed DSP would generate additional students in Sacramento City Unified School District.

Based on an increase of 13,401 residential units, the proposed DSP is estimated to result in a total of 951 students. Approximately 536 elementary school students, 161 middle school students, and 255 high school students are estimated to be generated by the proposed DSP. In terms of elementary school students, as shown in Table 4.11-2 Bret Harte ES, Crocker/Riverside ES, Theodore Judah ES, Washington ES, and William Land ES are collectively 414 students below its design capacity under existing conditions. Therefore, the DSP would generate 122 elementary school students who could not be immediately accommodated within these five schools. Other elementary schools outside of the DSP area could offer additional capacity for these new students. Currently no schools are identified to be developed as a part of the proposed DSP.

California MS and Sutter MS are currently 275 students below their collective design capacity, and all 161 middle school students anticipated to be generated by the DSP could be immediately served by these two existing middle schools.

C.K. McClatchy HS is currently 609 students beyond its design capacity, and development under the proposed DSP would add approximately 255 students. While other high schools outside of the DSP area could offer additional capacity for these new students, the increase in the number of high school students would exacerbate existing enrollment conditions.

The City is committed to working with the SCUSD to provide adequate, high quality schools to serve the DSP area. DSP policy CA 2.1 requires the City to work closely with SCUSD to determine strategies to serve the increased DSP student population in a manner appropriate for an urban area. DSP policy CA 2.4 requires the City to work collaboratively with the SCUSD to regularly monitor existing student generation rates to accurately determine school facility needs in the future. As new development is built in the DSP area, the actual student generation rate per household will be monitored in order to evaluate and adjust, if necessary, the student projections.

Pursuant to SB 50, all development within the DSP area would be required to pay applicable school fees, which are deemed full and complete mitigation for impacts on schools; as a result, the impact would be **less than significant**.

If SCUSD were to accommodate DSP area enrollments by expanding facilities on existing school sites and/or develop new school sites, there could be additional environmental effects associated with construction and operation of such schools. The nature and extent of those environmental effects would depend on where the schools were located, their size, and other factors. Because these factors are unknown at this time, it would be speculative to attempt to evaluate such impacts within the context of this EIR. Expanded and new school facilities would be subject to environmental review by SCUSD pursuant to CEQA.

Mitigation Measure

None required.

Cumulative Impacts

The cumulative and geographic context for impacts to schools involves the areas served by SCUSD. SCUSD covers approximately 70 square miles, and generally includes the central portions of the City south of the American River, East Sacramento, Southeast Sacramento, much of South Sacramento, and such unincorporated areas as Rosemont, Parkway, and Freeport, along with West Rancho Cordova.[42]

Impact 4.11-6: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in student enrollment in Sacramento City Unified School District.

The effects of increased development in the SCUSD, including buildout of the proposed DSP and the Sacramento 2035 General Plan, and the associated increase in population, would increase enrollments within the SCUSD, as shown in **Table 4.11-4**. Enrollment levels at individual schools would ebb and flow as demographics within the districts change. For example, young families moving into a new neighborhood would initially increase enrollments at elementary schools, but as those students age, the enrollments at local elementary schools may drop. These changes could affect enrollment at elementary, middle, and high schools over time.

TABLE 4.11-4
STUDENT GENERATION IN THE DSP AREA (2036)

School Type	Generation Rate	Number of Households in the DSP Area[a]	Students Generated in the DSP Area
Elementary School	0.040	36,811	1,472
Middle School	0.012	36,811	442
High School	0.019	36,811	699
Total	**--**	**--**	**2,614**

NOTE:
a Households is defined as the number of occupied dwelling units.

SOURCES: SACOG SACSIM data, 2017; BAE Urban Economics, 2016. Sacramento Downtown Specific Plan Draft Housing Market Analysis, Phase I and Phase II. November 2016. p. 91, Table 34; ESA, 2017.

SCUSD incorporates a wide range of temporary measures to respond to changes in student enrollment at city schools that include but are not limited to splitting grade levels, temporarily transferring students to other schools with additional capacity, installing temporary facilities, and sending students to other neighboring school districts when appropriate. In addition, the 2035

42 Sacramento City Unified School District, 2017. Our District. Available: http://www.scusd.edu/our-district. Accessed May 2, 2017.

General Plan contains policies have been developed to ensure adequate school facilities are provided to accommodate the increase in new students. Implementation of Sacramento 2035 General Plan Policies ERC 1.1.1 through ERC 1.1.3 would ensure that adequate school facilities are provided to serve the anticipated student growth in the City. The City is committed to working with the SCUSD to provide adequate, high quality schools to serve the DSP area. DSP policy CA 2.1 requires the City to work closely with SCUSD to determine strategies to serve the increased DSP student population in a manner appropriate for an urban area. DSP policy CA 2.4 requires the City to work collaboratively with the SCUSD to regularly monitor existing student generation rates to accurately determine school facility needs in the future. As new development is built in the DSP area, the actual student generation rate per household will be monitored in order to evaluate and adjust, if necessary, the student projections.

Furthermore, in accordance with SB 50, project applicants across these school districts, including the developers of projects identified in the DSP area, must pay school impact fees established to offset potential impacts on school facilities. The payment of these fees is recognized by the State as full and complete mitigation for impacts on schools. All new development within the DSP area would be required to pay these fees. Therefore, the cumulative impact is considered **less than significant**.

Mitigation Measure

None required.

4.11.4 Parks and Open Space

Introduction

This section discusses the effects of implementation of the proposed DSP on parks and open space. Existing parks, open space, and recreational facilities in the vicinity of the DSP area are documented. The section also examines the potential need to expand or enhance existing facilities or to construct new facilities. The evaluation addresses potential effects of implementation of the proposed DSP on parks and open space resources within the vicinity of the DSP area, primarily the Central City, and also analyzes the proposed DSP's relationship to applicable goals and policies of local park-related plans.

Information was obtained from the City of Sacramento General Plan, the City of Sacramento Municipal Code, the 2005-2010 Parks and Recreation Master Plan (PRMP), and the Riverfront Master Plan.

A comment relating to parks and open spaces that was received during the NOP comment period expressed concern with the role of the proposed DSP in the preservation of greenspaces, parks and the urban forest. A comment relating to parks and open space that was received during the Community Open House for the EIR expressed a concern with the possible loss of open space as a result of back alley development occurring on existing residential parcels. These issues are addressed within this section.

Environmental Setting

City Parks

The City of Sacramento Department of Parks and Recreation (Sacramento DPR) maintains approximately 3,200 acres of developed parkland, and manages more than 226 parks and numerous other community centers and recreational facilities within the City of Sacramento.[43] There are a total of 28 parks located in the Central City area (see **Figure 4.11-6**), an area that closely aligns with the boundaries of the DSP area, but also includes the RSP area and the River District.[44] Twenty one parks are located within the DSP area. Several parks or recreation facilities within the City of Sacramento are owned or operated by other jurisdictions, such as the County of Sacramento and the State of California. The City of Sacramento PRMP guides park development in the City.

The City parks contain a variety of recreational facilities that support active sports, including soccer fields, baseball and softball diamonds, tennis courts, volleyball courts, and basketball courts. Additional recreational facilities include community centers, bocce ball courts and equestrian trails. Turf areas, benches, picnic tables, playgrounds, and barbecue pits are available for informal passive recreation activities. There are many play areas for children in the City's parks. Biking and walking trails also exist across the City's many parks and natural areas. In addition, swimming pools and wading and play pool facilities are available to the public.

Sacramento DPR also provides community services as well as recreational and leisure time opportunities. Sacramento DPR offers adult and youth sports classes; special events; after-school, summer, and aquatic programs; community classes and enrichment programs; and coordinates reservations for baseball and softball fields, picnics, and facilities.

On July 29, 2017, the City opened the Brooks Truitt Bark Park, a 0.9-acre dog park located at 19th and Q streets.[45] Another dog park in the DSP area is located at Sutter Landing Park.

City of Sacramento Park Impact Fee Nexus Study Update

The City's 2017 Park Impact Fee (PIF) Nexus Study Update provides the legal and policy basis for imposing a PIF on new residential and non-residential development in the City, and these fees are periodically updated to adjust for inflation and changes in parkland acreage. The City's PIF focuses funding the development of neighborhood and community parks, via new residential and non-residential development, and it is based on the citywide level of service (LOS) goal of 5 acres of neighborhood and community parks per 1,000 residents (consisting of 2.5 acres of neighborhood parks and community parks each). The PIF is also designed to fund the development of regional parks and improvement of existing regional parks through buildout and

[43] City of Sacramento, 2017. Sacramento Parks. Available: http://www.cityofsacramento.org/ParksandRec/Parks. Accessed March 17, 2017.
[44] City of Sacramento, 2017. Central City Park Directory. Available: http://www.cityofsacramento.org/ParksandRec/Parks/Park-Directory/Central-City. Accessed March 17, 2017.
[45] Chavez, Nashelly, 2017. "Midtown just got its own dog park. Will you be taking your pooch there?" Sacramento Bee. July 29, 2017. Available: http://www.sacbee.com/news/local/article164398837.html. Accessed August 2, 2017.

Figure 4.11-6 Parks Located in Proximity to the Downtown Specific Plan Area

enhancement of facilities. However, actual parkland acquisition is not included in this PIF, and other types of park facilities (e.g., community centers, outdoor pools, and linear parks and parkways) are also not funded through this PIF.[46] Meeting the LOS policy standard of 5 acres of neighborhood and community parks is considered a higher priority than the regional park standard, which is 8 acres per 1,000 residents. This prioritization is largely related to the role of neighborhood and community parks, as they are intended to serve select, geographically-defined areas of the City and are strategically located to be within certain distances of specially identified communities. Citywide and regional parks, on the other hand, are designed at the scale to serve the entire City population.[47] As such, their catchment area spans the entire City and thus does not require any specific geographic location.

State Parks and Private Plazas

In addition to the City parks located within the Central City, there are two large parks that are owned and managed by the State: Capitol Park encompasses 36 acres bounded by 10th, 15th, L, and N streets (surrounding the State Capitol), and Old Sacramento State Historic Park occupies 28 acres west of I-5 between Capitol Mall and I Street. There are also numerous plazas and open spaces throughout the downtown that are privately owned, but generally accessible to the public, including the Downtown Commons event plaza north and west of Golden 1 Center.

Open Space Areas

Along with parks, various open space areas exist throughout and in the vicinity of the Central City area, including the Sacramento River Parkway and the American River Parkway.

Open space in Sacramento is maintained for several reasons, including natural resource preservation, recreational use, community agriculture, and plant and wildlife preservation. Open space areas in the RSP area include portions of the Sacramento River Parkway between the I Street Bridge and Pioneer Bridge.

Downtown Grid Alleys

Alleys have been identified as an important resource in the 2035 General Plan, largely due to their abundance and integration with the City's grid street layout throughout the DSP area. These areas are considered to be opportunities for enhancement as small scale pedestrian routes and potential open space amenities.

Sacramento River Parkway

The City adopted the Sacramento River Parkway Plan in 1997 to guide development of a multi-use trail corridor along the Sacramento River within the City limits. This document was borne out of the Parkway Concept provided in the 1975 Feasibility Study and Master Plan and emphasizes the preservation of riparian vegetation and the provision of public access both to and along the Sacramento River as its major features. The Sacramento River is classified as an "urban" river,

[46] City of Sacramento, 2017. City of Sacramento Park Impact Fee Nexus Study Update. February 1. p. 2.
[47] *Ibid*. p. 23.

with limited natural habitat areas. Improvements such as picnic benches and restrooms can be found in parks on the land side of the levee.

The Sacramento River is a popular location for recreational fishing and boating activities. Access via motorized vehicle to the Sacramento River is limited by the Union Pacific Railroad right-of-way, private industrial properties, I-5, and the highly variable water elevations of the river. Although access to the levee along urbanized portions is difficult due to the steep nature of the levees and proximity of adjacent uses, fishing and other natural recreational uses continue to be popular in the area. The Sacramento River Parkway currently exists as a walking and bicycling trail that runs from the confluence of the American River, where it connects with the Jedediah Smith Memorial Trail, in the north, and extends to Captains Table Road in the Little Pocket neighborhood to the south. Portions of the Sacramento River levee in the Pocket neighborhood also contain a bicycle and walking trail, but these stretches of the Sacramento River Parkway are not continuous.

The Sacramento River Parkway near the DSP area can be accessed on foot or by bicycle, or by vehicle at Discovery Park or Miller Park (south of Pioneer Bridge), both of which also have boat launches. Minor river access points providing pedestrian access only are found at a variety of points throughout the Parkway, including Old Sacramento and the O Street Access.

The Sacramento River Parkway Plan recognizes the portion of the Sacramento River Parkway situated along the western boundary of the DSP area as a high use area, suitable for developed parkland uses. This category roughly corresponds to the Developed Recreation Area designation used in the American River Parkway Plan, and permits amenities similar to those found in a neighborhood park.

A paved multi-use trail extends along the east bank of Sacramento River and along the edge of the DSP area, providing a recreational resource and connection between Old Sacramento and the Jedediah Smith National Recreation Trail on the north bank of the American River and the Two Rivers Trail on the south bank of the American River. Bicycle trails are discussed in greater detail in section 4.12, Transportation and Circulation.

Additional Recreational Resources near the DSP Area

As mentioned earlier, there are a total of 21 parks in the DSP area that are operated by Sacramento DPR. **Table 4.11-5** provides information about City of Sacramento parks in the DSP area. In addition, there are other parks within proximity to the RSP area that are publicly accessible, but operated by other entities, such as Capitol Park, Discovery Park, located at the confluence of the Sacramento and American rivers, Miller Park, and Riverwalk Park in West Sacramento.

Additional recreational resources in the vicinity of the DSP area but outside of the planning boundaries include public parks, marinas, boat launches, and golf courses. Other nearby City-owned recreational resources include McKinley Park (31.9 acres), William Land Park (165 acres), and Sacramento Marina (at Miller Park). Sacramento County operates Discovery Park (275 acres), the American River Parkway, and Tiscornia Park. Although not all of these

areas are located within the Central City, they are included in the discussion because they are within readily accessible distance of the DSP area.

Discovery Park, managed by Sacramento County Regional Parks, is located where the American River flows into the Sacramento River. It is a 275-acre recreational facility that includes a boat launch, fishing, an archery range, and equestrian, pedestrian, and bike trails.

Yolo County Park, located directly across the Sacramento River from the DSP area, contains mostly undeveloped parkland. Primary uses of the park are boat launching and fishing. The Broderick Boat Launch, a popular launching facility, is situated within Yolo County Park.

William Land Park is situated south of the DSP area. William Land Park contains a wide variety of recreational facilities, including the Sacramento Zoo, William Land Park Golf Course, Fairytale Town, and an amphitheater.

Miller Park, located south of the DSP area along the Sacramento River, includes several amenities, such as a marina, boat launching and service facilities, and a concession stand. Although no golf courses are located within the Central City overall, the William Land Park Golf Course, at 1701 Sutterville Road, is located approximately three miles to the south of the project site.

Lastly, while not yet built, there are some parks being developed as a park of the RSP, which include the 9.2-acre Vista Park and approximately 20 additional acres of neighborhood parks also located within the RSP area.

Regulatory Setting

Federal

There are no federal regulations regarding parks and open space that pertain to the effects of implementation of the proposed DSP.

State

State Public Park Preservation Act

The primary instrument for protecting and preserving parkland is the Public Park Preservation Act of 1971. Under the PRC section 5400-5409, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, are provided to replace the parkland acquired. This provides no net loss of parkland and facilities.

Quimby Act

California Government Code Section 66477, referred to as the Quimby Act, permits local jurisdictions to require the dedication of land and/or the payment of in-lieu fees solely for park and recreation purposes. The required dedication and/or fee are based upon the residential density and housing type, land cost, and other factors. Land dedicated and fees collected pursuant to the Quimby Act may be used for developing new, or rehabilitating existing park or recreational facilities.

TABLE 4.11-5
EXISTING CITY OF SACRAMENTO PARKS IN THE DSP AREA

Park and Address	Total Acres	Developed Acres	Open Space Areas (ac)	Undeveloped Acres	Neighborhood Parks (ac)	Community Parks (ac)	Regional Parks (ac)	Other Amenities
Community Parks								
Cesar Chavez Plaza, 910 I Street	2.50	2.50				2.50		Café, Seasonal Farmers' Market, Summer Concert Series
James Marshall Park, 915 27th Street	2.50	2.50				2.50		4 Adult Fitness Stations, Horseshoe Pit
Southside Park, 2115 6th Street	19.50	19.50			5.00	14.50		0.75-mile Jogging Trail; Amphitheatre; Lake with Fishing Piers; Par Course with 4 Fitness Stations; Universal Access Play Area Containing Rubber-surfaced Play Area for Children Ages 0-2, Tot Lot for Children Ages 2-5, and Adventure Play Area for Children Ages 5-12; Walkways
COMMUNITY PARK TOTAL	**24.50**	**24.50**			**5.00**	**19.50**		
Neighborhood Parks								
Brooks Truitt Park, 1818 Q Street	0.90				0.90			Community Garden and Dog Park
Crocker Park, 211 O Street	2.37	2.37			2.37			Managed as part of Crocker Art Museum
Fremont Community Garden, 1401 Q Street	0.44	0.44			0.44			Community Garden
Fremont Park, 1515 Q Street	2.35	2.35			2.35			Benches, Central Seating Area, Drinking Fountain, 14 Historic Lights, Seasonal Farmers' Market, Walkways
Grant Park, 205 21st Street	2.34	2.34			2.34			Walkway
Johnson Park, 516 11th Street	0.91	0.91			0.91			Community Garden, Shaded Grass Areas
Muir Children's Park, 1515 C Street	2.50	2.50			2.50			Benches, Entry Plaza, Walkways, Water Misters
O'Neil Field, 715 Broadway	4.85	4.85			4.85			
Pioneer Landing, 1900 Front Street	0.40	0.40			0.40			“Art in Public Places” Shade Structure with Water Mister, Benches, Plaza, Raised “Ship Hull” Planters, Turf, Walkways
Roosevelt Park, 1615 9th Street	2.50	2.50			2.50			Seasonal Farmers' Market
Saint Rose of Lima Park, 705 K Street	0.51	0.51			0.51			Seasonal Ice Rink and Stage
Southside Community Garden	0.75	0.75			0.75			
Stanford Park, 207 27th Street	2.74	2.74			2.74			John Sutter's Landing Memorial
Washington Park, 1631 F Street	1.53	1.53			1.53			Shade Structure
Winn Park, 1616 28th Street	2.50	2.50			2.50			Benches, Walkways
Zapata Park, 905 E Street	0.94	0.94			0.94			Common Gathering Area, Community Garden, Seating Area with Bench
NEIGHBORHOOD PARK TOTAL	**28.54**	**27.63**		**0.76**	**28.54**			
Regional Parks								
American River Parkway	1.40		1.40				1.40	
Sutter's Landing Park, 20 28th Street	163.18	6.60		156.58	10.00	10.00	143.18	Bocce Ball Courts, Dog Park, Direct Access to the American River, Park Entry Monuments, Trails/ Walkways
REGIONAL PARK TOTAL	**164.58**	**6.60**	**1.40**	**156.58**	**10.00**	**10.00**	**144.58**	
COMPLETE PARK TOTAL	**164.58**	**58.73**	**1.40**	**156.58**	**43.54**	**29.50**	**144.58**	

SOURCES: City of Sacramento, 2009. City of Sacramento Parks and Recreation Master Plan 2005-2010: 2009 Technical Update. Adopted April 21, 2009.
City of Sacramento, 2017. Sacramento Parks. Available: http://www.cityofsacramento.org/ParksandRec/Parks. Accessed August 2, 2017.
Costantino, Raymond, Senior Planner, Department of Park Planning and Development Services, City of Sacramento. Personal communication with Greg Sandlund, Community Development Department, City of Sacramento. May 24, 2017. 12:23pm.

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Local

City of Sacramento 2035 General Plan

The following goals and policies from the 2035 General Plan are relevant to potential effects of the proposed DSP on parks and open space.

Goal ERC 2.2 Parks, Community and Recreation Facilities and Services. Plan and develop parks, community and recreation facilities, and services that enhance community livability; improve public health and safety; are equitably distributed throughout the city; and are responsive to the needs and interests of residents, employees, and visitors.

Policies

ERC 2.2.2 **Timing of Services.** The City shall ensure that the development of parks and community and recreation facilities and services keeps pace with development and growth within the city.

ERC 2.2.3 **Service Level Radius.** The City shall strive to provide accessible public park[s] or recreational open space within one-half mile of all residences.

ERC 2.2.4 **Park Acreage Service Level Goal.** The City shall strive to develop and maintain 5 acres of neighborhood and community parks and other recreational facilities/sites per 1,000 population.

ERC 2.2.5 **Meeting Service Level Goal.** The City shall require new residential development to meet its fair share of the park acreage service level goal by either dedicating land for new parks, paying a fair share of the costs for new parks and recreation facilities or renovation of existing parks and recreation facilities. For new development in urban areas where land dedication or acquisition is constrained by a lack of available suitable properties (e.g., the Central City), new development shall either construct improvements or pay fees for existing park and recreation enhancements to address increased use. Additionally, the City shall identify and pursue the best possible options for park development, such as joint use, regional park partnerships, private open space, acquisition of parkland, and use of grant funding.

ERC 2.2.6 **Urban Park Facility Improvements.** In urban areas where land dedication is not reasonably feasible (e.g., the Central City), the City shall explore creative solutions to provide neighborhood park and recreation facilities (e.g., provision of community-serving recreational facilities in regional parks) that reflect the unique character of the area.

ERC 2.2.9 **Small Public Places for New Development.** The City shall allow new development to provide small plazas, pocket parks, civic spaces, and other gathering places that are available to the public, particularly in infill areas, to help meet recreational demands.

ERC 2.2.10 **Range of Experience.** The City shall provide a range of small to large parks and recreational facilities. Larger parks and complexes should be provided at the city's edges and along the rivers as a complement to smaller sites provided in areas of denser development.

ERC 2.2.12 **Compatibility with Adjoining Uses.** The City shall ensure that the location and design of all parks, recreation, and community centers are compatible with existing adjoining uses.

Goal ERC 2.4 Rivers, Creeks, and Natural Resource Areas. Provide positive recreational experiences and enjoyment of nature through the development, maintenance, patrol, and preservation of the rivers, creeks, and natural resource areas, while maximizing the use of these areas through partnerships with other agencies.

Policies

ERC 2.4.1 **Service Levels.** The City shall provide 0.5 linear mile of parks/parkways and trails/bikeways per 1,000 population.

ERC 2.4.4 **Park Acreage Service Level Goal.** The City shall strive to develop and maintain 5 acres of neighborhood and community parks and other recreational facilities/sites per 1,000 population.

Goal ERC 2.5 Funding. Secure adequate and reliable funding for the acquisition, development, rehabilitation, programming, and maintenance of parks, community facilities, recreation facilities, trails, parkways, and open space areas.

Policies

ERC 2.5.1 **Capital Funding.** The City shall fund the costs of acquisition and development of City neighborhood and community parks, and community and recreation facilities through land dedication, in-lieu fees, and/or development impact fees.

The proposed DSP would be consistent with the above General Plan policies. The DSP area would continue to provide multiple parks of different sizes and types, including smaller parks, plazas, civic spaces and other gathering spaces, along with large public parks (like Southside Park and Capitol Park) and regional open spaces, which together would provide a wide range of experience consistent with Policies ERC 2.2.9 and 2.2.10. Alleys and even excess on-street parking spaces would also be considered as potential small park and open space amenities that could be enhanced, in accordance with Policies ERC 2.2.9 and 2.2.10. Nearly all of the DSP area is located within one-half mile of park facilities and/or open space, and therefore the vast majority of residential units developed under the proposed DSP would be consistent with Policy ERC 2.2.3. As discussed in Impact 4.11-8, while the development facilitated by the proposed DSP would not provide sufficient new parkland to meet the total requirement for parks, required payment of in-lieu fees that the City could use to develop additional park and recreation facilities, so the timing and service level goals could be met (Policies ERC 2.2.2, 2.2.4, 2.2.5, 2.4.1, 2.5.1).

Central City Community Plan

The following goals and policies from the CCCP are relevant to parks and recreational facilities.

Policies

CC.ERC 1.1 **Parks.** The City shall develop three new neighborhood parks to provide park space within convenient access; a fourth neighborhood park may be needed in the vicinity of Newton Booth School in the event the school site is lost for open space use. These parks should be small (approximately 1 acre), have neighborhood-oriented activities, and their development should not involve removal of existing sound housing stock.

CC.ERC 1.5 **Sacramento River Parkway.** The City shall develop the Sacramento River Parkway and Sutter's Landing Park facilities in conjunction with American River Parkway trail linkages.

The DSP would also be consistent with relevant parks and open space policies of the CCCP. Consistent with policy CC.ERC 1.1, and as discussed in Impact 4.11-8, future projects in the DSP area would be required to pay park fees that could support development of new City neighborhood parks. Consistent with policy CC.ERC 1.5, the proposed DSP would provide pedestrian and bicycle linkages to further integrate the Sacramento River Parkway with the DSP area and the City of Sacramento as a whole.

City of Sacramento Parks and Recreation Master Plan 2005-2010: 2009 Technical Update

The City of Sacramento Parks and Recreation Department prepared an update to the 2005-2010 PRMP, and the Sacramento City Council adopted it on April 21, 2009. The PRMP is considered a standalone document, but serves to complement the 2035 General Plan. The PRMP calls for the

provision of approximately 5 park acres per thousand population, including all categories of parks.[48]

The categories of City parks and service level goals are presented below:

- Neighborhood Park: A park intended to be used primarily by the people who live nearby, or within walking or bicycling distance of the park. Some neighborhood parks are situated adjacent to an elementary school, and improvements are usually oriented toward the recreation needs of children. Park amenities may include: a tot lot, an adventure play area, unlighted sport field or court, and/or a group picnic area, and limited on-street parking. The primary service area is within a one-half mile and the park area is typically less than 10.0 acres. There is a service level goal of 2.5 acres per 1,000 Sacramento residents.[49]

- Community Park: A parkland or facility developed primarily to meet the requirements of a large portion of the City. In addition to neighborhood park amenities, a community park may include: a large group picnic area with shade structure, a community garden, a neighborhood/ community skate park, restroom, onsite parking, bicycle trail, a nature area, a dog park, lighted sport fields or sport courts. Specialized facilities may also be found in a community park including: a community center, a water play area, and/or a swimming pool. Some of the smaller community parks may be dedicated to one use, and some elements of the park may be leased to community groups. The primary service area is within two to three miles, a drivable distance from several neighborhoods, and the park is generally between 10.0 and 60.0 acres. There is a service level goal of 2.5 acres per 1,000 Sacramento residents.[50]

- Regional Park: Meant to serve the City and areas that extend beyond the City limits. This park type contains a wide range of improvements usually not available in community or neighborhood facilities. Along with neighborhood and community park type improvements, this type of park may include a golf course, a marina, amusement areas, a zoo, or nature areas. Some elements in this park may additionally be under lease to community groups. There is a service level goal of 8.0 acres per 1,000 Sacramento residents, and portions of regional parks may also serve either community or neighborhood needs.[51]

- Linear Park/Parkway: Similar to open space areas because they also have limited recreational uses. They are used primarily as corridors for pedestrians and bicyclists, linking residential areas to schools, parks, and trail systems. Parkways are typically linear and narrow; parkways may be situated along a waterway, abandoned railroad, or other common corridor. The service level goal for Linear Parks and Parkways combined with other open space is 0.5 linear miles per 1,000 residents as implemented per the adopted City Bikeway and Pedestrian Master Plans.[52]

48 City of Sacramento, 2009. *City of Sacramento Parks and Recreation Master Plan 2005-2010*: 2009 Technical Update. Adopted April 21, 2009. Page Policy-8.
49 *Ibid*. Page Appendices-136.
50 *Ibid*. Page Appendices-132.
51 *Ibid*. Page Appendices-139.
52 *Ibid*. Page Policy-5.

The PRMP also sets service level goals for recreation facilities. Those goals for neighborhood centers and community centers are as follows:

- Neighborhood Center: 1 per neighborhood as defined by service area of an elementary school.[53]
- Community Center: A 10-30,000 square foot facility which serves the population within a two- to three-mile radius. There is a service level goal of 1/50,000 Sacramento residents, which can be met through facilities with regional significance, private providers, or schools.[54]

City of Sacramento Municipal Code

Chapter 12.72 Park Buildings and Recreational Facilities

The City's Municipal Code includes regulations associated with building and park use, fund raising, permit procedures, and various miscellaneous provisions related to parks. Park use regulations include a list of activities that require permits for organized activities that include groups of 50 or more people for longer than 30 minutes, amplified sound, commercial and business activities, and fund raising activities. This code also includes a list of prohibited uses within parks such as unleashed pets, firearms of any type, and drinking alcoholic beverages, or smoking near children's playground areas. Activities such as golfing, swimming, and horseback riding are only permitted within the appropriate designated areas.

Chapter 17.512 Parks and Recreational Facilities

Chapter 17.512 of the Municipal Code provides standards and formulas for the dedication of parkland and in-lieu fees that help the City acquire new parkland. This chapter sets forth the standard that 1.75 acres of property for every 1,000 persons residing within the Central City, and 3.5 acres of property for every 1,000 persons residing within the remainder of the City, be devoted to local recreation and park purposes. This standard supersedes the 2035 General Plan goal of providing 5 acres of neighborhood and community parks and other recreational facilities/sites per 1,000 residents (Policy ERC 2.2.4). Where a recreational or park facility has been designated in the General Plan or a specific plan, and is to be located in whole or in part within a proposed subdivision to serve the immediate and future needs of the residents of the subdivision, the subdivider shall dedicate land for a local recreation or park facility sufficient in size and topography to serve the residents of the subdivision. The amount of land to be provided shall be determined pursuant to the appropriate standards and formula contained within the chapter. Under the appropriate circumstances, the subdivider shall, in lieu of dedication of land, pay a fee equal to the value of the land prescribed for dedication to be used for recreational and park facilities which would serve the residents of the area being subdivided.

Chapter 18.56 Park Impact Fee

Chapter 18.56 (Article II) of the City's Code imposes a park impact fee on residential and non-residential development within the city. Fees collected pursuant to Chapter 18.56 are primarily

[53] *Ibid*. Page Appendices-136.
[54] *Ibid*. Page Appendices-131.

used to finance the construction of park facilities. The park fees are assessed upon landowners developing property in order to provide all or a portion of the funds which would be necessary to provide neighborhood, community, or regional and citywide parks required to meet the needs of and address the impacts caused by the additional persons residing or employed on the property as a result of the development.

Downtown Special Planning District

The Downtown SPD would provide for different multi-family private and common open space requirements than what are currently provided in the citywide open space standards (Chapter 17.600.135 of City Code). Multi-unit dwellings would be exempt from the requirement that open space on site must be open to the sky. The Downtown SPD would also modify the existing standard for open space provision in multi-unit dwellings, which is currently 100 sf per dwelling unit (beyond the required front, side, and rear yard setbacks). For multi-unit dwellings in the DSP SPD, the Central Business and Arts & Entertainment Open Space Districts would eliminate the requirement for open space for multi-unit dwellings; parcels located in the Urban Open Space District would change to 25 sf per dwelling unit; and parcels located in the Traditional Open Space District would change to 50 sf per dwelling unit. Parcels located in the Suburban Open Space District would still remain at 100 sf per dwelling unit.

Analysis, Impacts, and Mitigation

Significance Criteria

This EIR assumes implementation of the proposed DSP would have a significant impact related to parks and open space if it would:

- Cause or accelerate a substantial physical deterioration of existing area parks or recreational facilities; or
- Create a need for construction or expansion of recreational facilities beyond what was anticipated in the General and/or Community Plans.

Methodology and Assumptions

This analysis considers whether an increase in use of public parks and recreation facilities resulting from the DSP would cause the substantial physical deterioration of those facilities (e.g., damage to vegetation, accelerated wear on sports facilities and fields, or erosion along trails) or in the need for new or expanded facilities the construction or operation of which would result in substantial adverse physical effects. This analysis further considers whether implementation of the proposed DSP would diminish or otherwise adversely affect recreational opportunities and existing facilities within the DSP area based on facility capacity.

In particular, to address the first issue raised above, it is common for jurisdictions (as addressed under the Quimby Act listed above), to use an “acres of park per 1,000 residents” target to determine whether a residential project would necessitate construction of new onsite parks to serve additional residents, which in turn, could result in physical environmental effects. This analysis incorporates an assessment of the potential for physical deterioration of parks in the DSP

area through parkland ratios provided by the City. Recognizing the unique circumstances of the DSP area, this EIR uses a total neighborhood and community parkland standard of 1.75 acres of parkland per 1,000 population, of which 0.875 acres per 1,000 would be neighborhood serving and 0.875 acres per 1,000 would be community serving. Additionally, there is a citywide, or regional, parkland ratio of 8.0 acres per 1,000 residents (although the City does not require parkland dedication to meet the regional park need).

Impacts and Mitigation Measures

Impact 4.11-7: The proposed DSP could cause existing parks within the DSP area to physically deteriorate, requiring additional parks to be constructed.

The proposed DSP would facilitate development of up to 13,401 housing units and yield 28,142 residents and 22,750 employees. This increase in resident population and employees would create an additional demand for parks and recreational facilities within the DSP area. Based on the City's modified standards for provision of parkland, the proposed DSP would generate a demand for a total of 472.1 acres of parklands, consisting of 42.37 acres of community parks, 42.37 acres of neighborhood parks, and 387.36 acres of regional parks. **Table 4.11-6** provides a detailed breakdown of existing parkland totals, anticipated parkland demand, and proposed parks for the plan area.

TABLE 4.11-6
PARKLAND DEMAND IN THE DSP AREA

Park Type	Existing DSP Population (residents)	Projected DSP Growth (residents)	Projected DSP Area Total Population (residents)	City Standard (ac/residents)	Required Park Acres in the DSP Area	Existing Park Acres in the DSP Area	Planned Park Acres in the DSP Area	Surplus/ Deficit (ac)
Community	26,710	27,710	48,420	0.875/1,000	42.37	29.50	4.87	-8.00
Neighborhood	26,710	27,710	48,420	0.875/1,000	42.37	43.54	4.87	6.04
Citywide/Regional[a]	26,710	27,710	48,420	8/1,000	387.36	144.58	34.56	-208.22
TOTAL	**26,710**	**27,710**	**48,420**	**--**	**472.10**	**217.62**	**44.30**	**-210.18**

NOTES:

[a] The City does not require dedication and/or in-lieu fees for Citywide/Regional parks. This demand is met through other means.

SOURCE: City of Sacramento, Parks and Recreation Department, 2017. Park Planning and Development Services, May 2017.

Development within the DSP area would generate additional residents which would increase the use of existing community parks, neighborhood parks, and regional parks. However, several other parks exist within the plan area that not under the jurisdiction of Sacramento DPR that provide additional parkland acreage and recreational opportunities, relieving pressure on Sacramento DPR-managed facilities. These parks include Capitol Park, Old Sacramento State Historic Park, and Sutter's Fort State Historic Park, among others. Further, there are a few larger parks located just beyond the plan area boundaries that would similarly provide additional park access for plan area residents, including McKinley Park, Miller Regional Park, and much of the American River

Parkway. Together, these parks help alleviate parkland demand that may occur to Sacramento DPR-managed parks in the DSP area.

In addition, it should be noted that the DSP area once rose to a population of approximately 50,000 residents during the mid-20th century, and while many of the existing DSP parks were designed during or before that time period, the plan area contained fewer developed parks than are currently located within the DSP area. Combining the existing DSP population of 26,710 residents with the additional 21,710 proposed residents, this buildout total would have more park acreage yet still be smaller than the peak DSP area population.

Although new residential development in the DSP area would add residents in the DSP area and result in increased use of existing parks and recreational facilities, there are enough parks within and immediately adjacent to the DSP area to serve residents. As a result, development in the DSP area would not cause or accelerate physical deterioration of the park facilities, and the impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.11-8: The proposed DSP could result in substantial adverse physical impacts associated with the provision of new or physically altered parks or recreation facilities or the need for new or physically altered parks or recreation facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives for parks and recreation services.

As seen in Table 4.11-6, buildout of the DSP area would result in demand for a total of 472.1 acres of parkland, consisting of 42.37 acres of community parks, 42.37 acres of neighborhood parks, and 387.36 acres of regional parks. A total of 4.87 acres of community parks, 4.87 acres of neighborhood parks, and 34.56 acres of regional parks would be constructed as part of the proposed DSP. The physical impacts of the construction and operations of these proposed parks included in the proposed DSP are analyzed in the appropriate technical sections of this EIR. Although the proposed DSP would be closer to reaching its required parkland amount through the construction of these parks, more parks would still need to be constructed to meet the LOS standards established by the City. As seen in Table 4.11-6, the proposed DSP would need an additional 1.96 acres of community parks to offset the deficit for community and neighborhood parks. This additional acreage is incremental in relation to the DSP area, and it would be provided over the course of the buildout of the proposed DSP, but the approximately 208-acre regional park deficit would require additional strategies to be satisfied. The City could utilize other means that could include land dedication, grants, and special land acquisition fee programs, along with enhancing the existing facilities at existing regional parks. The Citywide PIF was recently adopted to assist with the development of regional parks but not the acquisition of new land for regional parks. It should be noted that the City places emphasis on the development of

community and neighborhood parks, and because regional parks serve a citywide catchment, regional parks can be located anywhere within Sacramento. However, because there would not be enough regional parkland provided to meet City standards, additional regional parks would need to be constructed within the City to serve the demand generated by the DSP area. Therefore, this would be a **potentially significant** impact.

Mitigation Measure 4.11-8

Projects within the DSP area shall comply with the City's Quimby and Park Impact Fees (PIF) ordinances.

Significance after Mitigation: Mitigation Measure 4.11-8 would ensure that City park standards reflective of urban residential needs are met through dedication of parks and open space and the payment of in-lieu fees. Consistent with General Plan Policy ERC 2.2.6, this mitigation measure allows the City to consider the urban nature of the DSP area, as well as the recreational value of project elements that are not typical parks. With the proposed mitigation, this impact would be **less than significant**.

Cumulative Impacts

The cumulative context for the proposed DSP parks and recreation cumulative impact analysis is the Central City, an area that includes the DSP area, RSP area, and River District. Together, these portions within the Central City feature a range of similar densities and land uses relative to the proposed DSP. It is unlikely that residents would travel outside of the City to use parks and open space facilities that are similar to those available nearby.

Impact 4.11-9: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in the physical deterioration of existing DSP area parks, requiring additional parks to be provided.

The 2035 General Plan does not provide an estimated population for the Central City, but the latest data for the Central City indicate a total of 27,340 residents, which is projected to increase by 35,538 residents to reach a population of 62,878 residents by 2035.[55] This increase in population would create a demand for additional parks and recreational services. Based on the City's modified standards, the Central City would generate a demand for a total of 472.1 acres of parkland, consisting of 55.02 acres of community parks, 55.02 acres of neighborhood parks, and 503.02 acres of regional parks. **Table 4.11-7** provides a detailed breakdown of existing parkland totals, anticipated parkland demand, and proposed parks for the plan area.

As a result of the development of the Central City, it is evident that the population would increase to twice its existing amount by the year 2035 but would not meet the required parkland acreage that has been assessed. These cumulative demands for parkland would be potentially significant.

[55] Costantino, Raymond, Senior Planner, Department of Park Planning and Development Services, City of Sacramento. Personal communication with Greg Sandlund, Community Development Department, City of Sacramento. May 24, 2017.

TABLE 4.11-7
PARKLAND DEMAND IN THE CENTRAL CITY IN 2035

Park Type	Existing Central City Population (residents)	Projected Central City Growth by 2035 (residents)	Projected Central City Total Population (residents)	City Standard (ac/residents)	Required Park Acres in the Central City	Existing Park Acres in the Central City	Planned Park Acres in the Central City	Surplus/ Deficit (ac)
Community	27,340	35,538	62,878	0.875/1,000	55.02	70.94	22.47	38.39
Neighborhood	27,340	35,538	62,878	0.875/1,000	55.02	48.76	41.40	35.14
Citywide/ Regional[a]	27,340	35,538	62,878	8/1,000	503.02	174.16	34.56	-294.30
TOTAL	**27,340**	**35,538**	**62,878**	**--**	**613.06**	**293.86**	**98.43**	**-220.77**

NOTES:

[a] The City does not require dedication and/or in-lieu fees for Citywide/Regional parks. This demand is met through other means.

SOURCE: City of Sacramento, Parks and Recreation Department, 2017. Park Planning and Development Services, May 2017.

As seen in Table 4.11-6, the DSP area would face a parkland deficit of 210.18 acres, which accounts for the majority of the proposed Central City parkland deficit of 220.77 acres. The contribution of the proposed DSP is cumulatively considerable. Thus, this impact is a **potentially significant cumulative impact**.

Mitigation Measure

Mitigation Measure 4.11-9

Implement Mitigation Measure 4.11-8.

Significance after Mitigation: Mitigation Measure 4.11-9 would ensure that City park standards reflective of urban residential needs are met through dedication of parks and open space and the payment of in-lieu fees. The City would use in-lieu fees from these developments and other residential development projects to fund parks and recreational facilities as needed throughout the community, including regional parks, as indicated by the PRMP and applicable City policies. With mitigation, this impact would be reduced to a **less-than-significant** level.

Impact 4.11-10: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in the substantial adverse physical impacts associated with the provision of new or physically altered parks or recreation facilities or the need for new or physically altered parks or recreation facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives for parks and recreation services.

Although the 2035 General Plan does not provide an estimated population for the Central City, it is anticipated that the area will grow substantially due to infill and replacement of lower-density development with higher-density development. This increase in population would create a

demand for additional parks and recreational services. As shown in Table 4.11-7, adequate community and neighborhood park acreage would be provided in the Central City to serve Central City residents and visitors. However, the amount of regional parkland anticipated to be built within the Central City is less than the acreage of parkland required to meet its share of the City's regional parkland standards. For the regional parkland requirement, since regional parks are of citywide benefit and cover a service area that is greater than the DSP boundaries, the Central City, much like the DSP area, would not have to provide all regional parkland exclusively within its respective boundaries but would still have to provide the required amount within the City limits. This is a potentially significant impact.

Furthermore, the PRMP has been developed to ensure required service level ratios for parks and recreational facilities are met as the population in the City increases. The Citywide PIF was recently adopted to assist with the development of regional parks but not the acquisition of new land for regional parks. While the Central City would be able to meet its community and neighborhood park requirements within the Central City boundaries, the regional park deficit would have to be located largely beyond the Central City. To account for this deficit, the City will need to incorporate such strategies as land dedication, grants, and special land acquisition fee programs, along with enhancing the existing facilities at existing regional parks. In addition, the City places emphasis on the development of community and neighborhood parks, and because regional parks serve a citywide catchment, regional parks can be located anywhere within Sacramento. However, because there would not be enough regional parkland provided to meet City standards, additional regional parks would need to be constructed to serve the DSP area. As seen in Table 4.11-6, the DSP area would face a parkland deficit of 210.18 acres, which accounts for the majority of the proposed Central City parkland deficit of 220.77 acres. The contribution of the proposed DSP is cumulatively considerable. Thus, this impact is a **potentially significant cumulative impact**.

Mitigation Measure

Mitigation Measure 4.11-10

Implement Mitigation Measure 4.11-8.

Significance after Mitigation: Mitigation Measure 4.11-10 would ensure that City park standards reflective of urban residential needs are met through dedication of parks and open space and the payment of in-lieu fees. The City would use in-lieu fees from these developments and other residential development projects to fund parks and recreational facilities as needed throughout the community, including regional parks, as indicated by the PRMP and applicable City policies. With mitigation, this impact would be **less than significant**.

4.12 Transportation and Circulation

This section describes the existing transportation system in the vicinity of the Downtown Specific Plan (DSP) and evaluates the potential impacts on the system associated with implementation of the DSP. Roadway, transit, bicycle, and pedestrian components of the overall transportation system are included in the analysis. Impacts are evaluated under existing conditions with and without the proposed plan, and cumulative (year 2036) conditions with and without the proposed plan. The transportation analysis focuses on a specific plan area for transportation and circulation, which is defined in Section 4.12.1, "Environmental Setting," below. All supporting technical calculations and additional technical information can be found in Appendix G of the Draft EIR.

The City of Sacramento (the City) received various transportation-related comments on the NOP. These include letters from the California Department of Transportation (Caltrans), Sacramento Area Council of Governments (SACOG), WALKSacramento, and Sacramento Area Bicycle Advocates (SABA). The comments related to future transit ridership and capacity levels within the area, potential effects on the State Highway System, consideration of cumulative projects, evaluation of pedestrian safety and mobility, and evaluation of bicycle access to/from and within the area. The comment letters were taken into consideration when developing the analysis methodology, and this chapter addresses each of these comments.

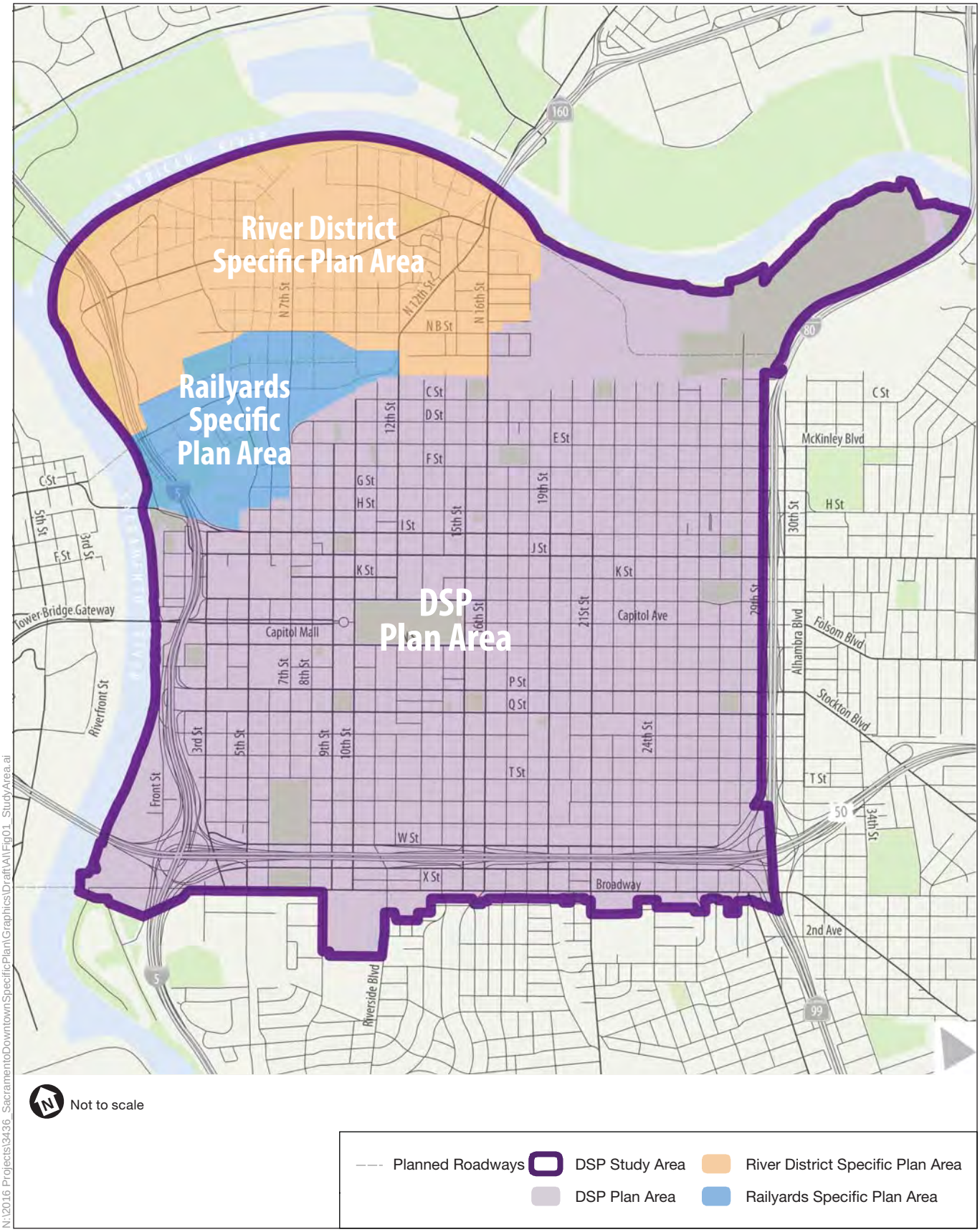
One specific comment received from Caltrans requested that the DSP evaluate the closure of the P Street on-ramp to Interstate 5 (I-5). A preliminary evaluation of this proposal found that closing the P Street on-ramp to I-5 would have deleterious effects upon multiple components of the DSP, including planned bicycle facilities in the vicinity. Further, the closure of the P Street on-ramp is not consistent with SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) or with the City's 2035 General Plan. For these reasons, this proposal was not evaluated further as part of the DSP analysis.

The analysis included in this section was developed based on plan-specific operational features, data provided in the City's 2035 General Plan, and traffic forecasts from the most recent version of the SACSIM regional travel demand model developed and maintained by SACOG.

Figure 4.12-1 displays the DSP study area and the DSP area. As shown in the figure, the DSP area excludes the Railyards and River District areas. The Railyards and River District areas are subject to their own specific plans and are not included in the analysis of this EIR.

4.12.1 Environmental Setting

This section describes the environmental setting, which is the baseline scenario upon which plan-specific impacts are evaluated. The baseline for this study represents conditions based on data collected between 2011 and 2017 and field observations conducted in 2017. The environmental setting for transportation includes baseline descriptions for the roadway, bicycle, pedestrian, and transit systems.



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SOURCE: Fehr & Peers, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.12-1
Study Area

ESA

Analysis Scenarios

The following scenarios are analyzed in this EIR:

- Existing Conditions – represents the baseline condition, upon which plan impacts are measured. The baseline condition represents conditions in February 2017.
- Existing Plus DSP Conditions – reflects changes in travel conditions associated with implementation of the DSP.
- Existing Plus DSP Streetcar Conversion Option – reflects changes in travel conditions associated with implementation of a slightly modified transportation network.
- Cumulative Conditions – represents the cumulative baseline condition, upon which cumulatively considerable impacts are measured. The cumulative scenario represents future conditions in 2036.
- Cumulative Plus DSP Conditions – reflects changes in cumulative travel conditions associated with implementation of the DSP.
- Cumulative Plus DSP Streetcar Conversion Option – reflects changes in cumulative travel conditions associated with implementation of a slightly modified DSP transportation network.

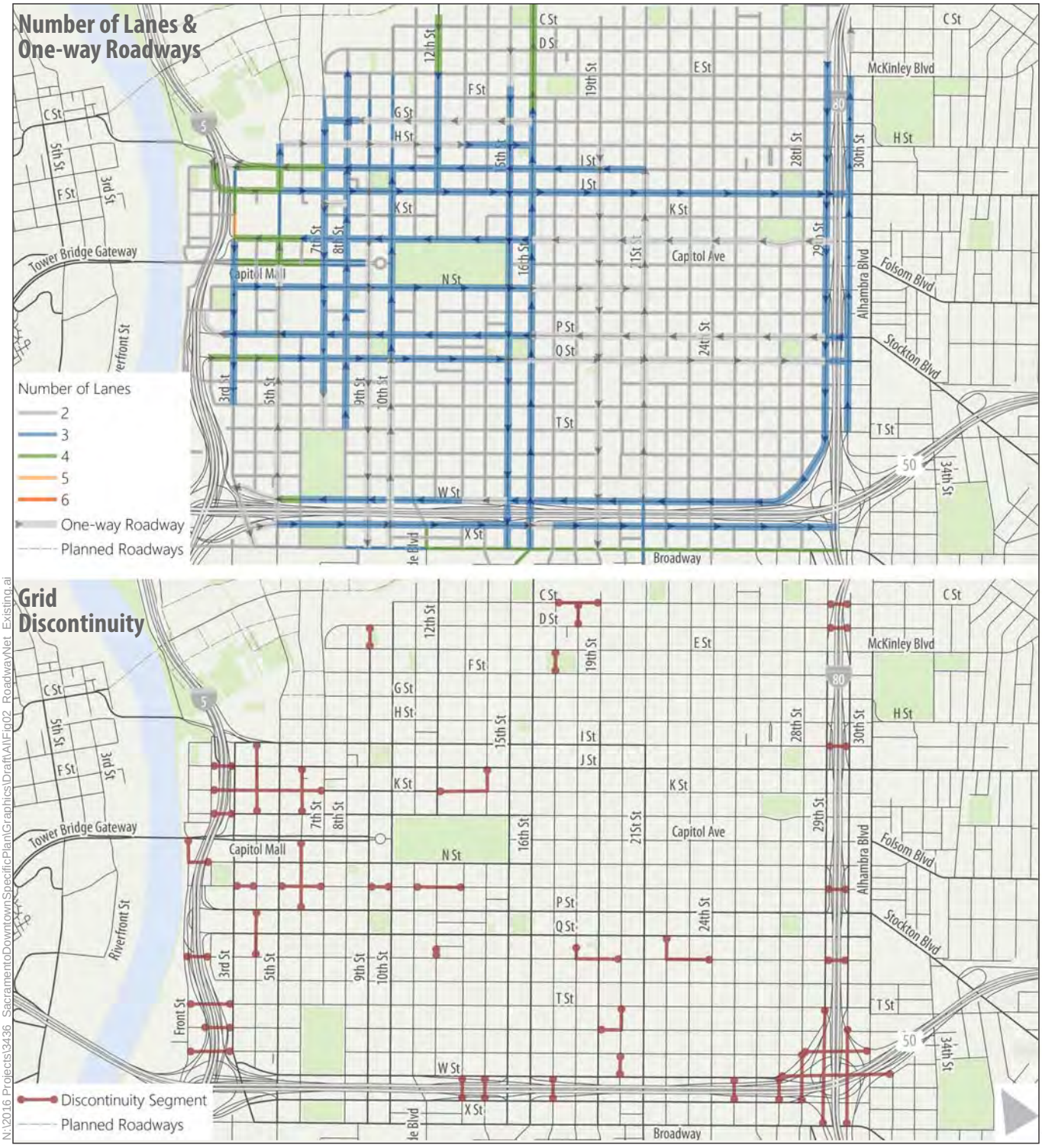
Roadway System

The study area is served by a street grid system comprised of numbered north-south streets and lettered east-west streets. The Downtown and Midtown Sacramento street grid ("the Grid") covers an area of approximately 4.25 square miles, with lettered and numbered streets spaced approximately every 400 feet. Most portions of the Grid feature east-west alleys located halfway between lettered streets, resulting in 200-foot north-south spacing of public roadways. Multiple freeways provide regional access to the periphery of the Grid including I-5 on the west, United States Highway 50 (US 50) on the south, and Business 80 (Capital City Freeway) on the east. Additionally, State Route 160 (SR 160) provides northerly access across the American River.

The Grid operates primarily as a system of two-way streets interspersed with one-way couplets. The one-way couplets provide access to the surrounding freeways and are effective in moving large volumes of traffic through the Grid network. The one-way couplets are typically flanked by office and retail uses, although portions of some one-way couplets are lined with residential land uses as well. Primary one-way couplets include I Street and J Street, P Street and Q Street, W Street and X Street, 9th Street and 10th Street, 15th Street and 16th Street, 19th Street and 21st Street, and 29th Street and 30th Street.

The Grid's two-way streets, in comparison to the one-way couplets, typically carry lower traffic volumes and are common in both retail and residential neighborhoods. Within some residential neighborhoods in the DSP area, traffic calming measures including traffic circles and half-street closures are utilized to decrease vehicle speeds and discourage cut-through traffic.

Figure 4.12-2 illustrates the study roadway facilities including the number and direction of travel lanes, as well as existing discontinuities of the roadway grid network.



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Not to scale

SOURCE: Fehr & Peers, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.12-2
Existing Roadway Network

ESA

Truck Routes

All federal and state highways within the City of Sacramento have been designated as truck routes by Caltrans and are included in the National Network for Service Transportation Assistance Act (STAA) of 1982. The City identified 31 two-way streets as City truck routes in a 1983 resolution, in addition to all one-way streets.[1] **Figure 4.12-3** displays City and STAA truck routes within the study area.

Methodology

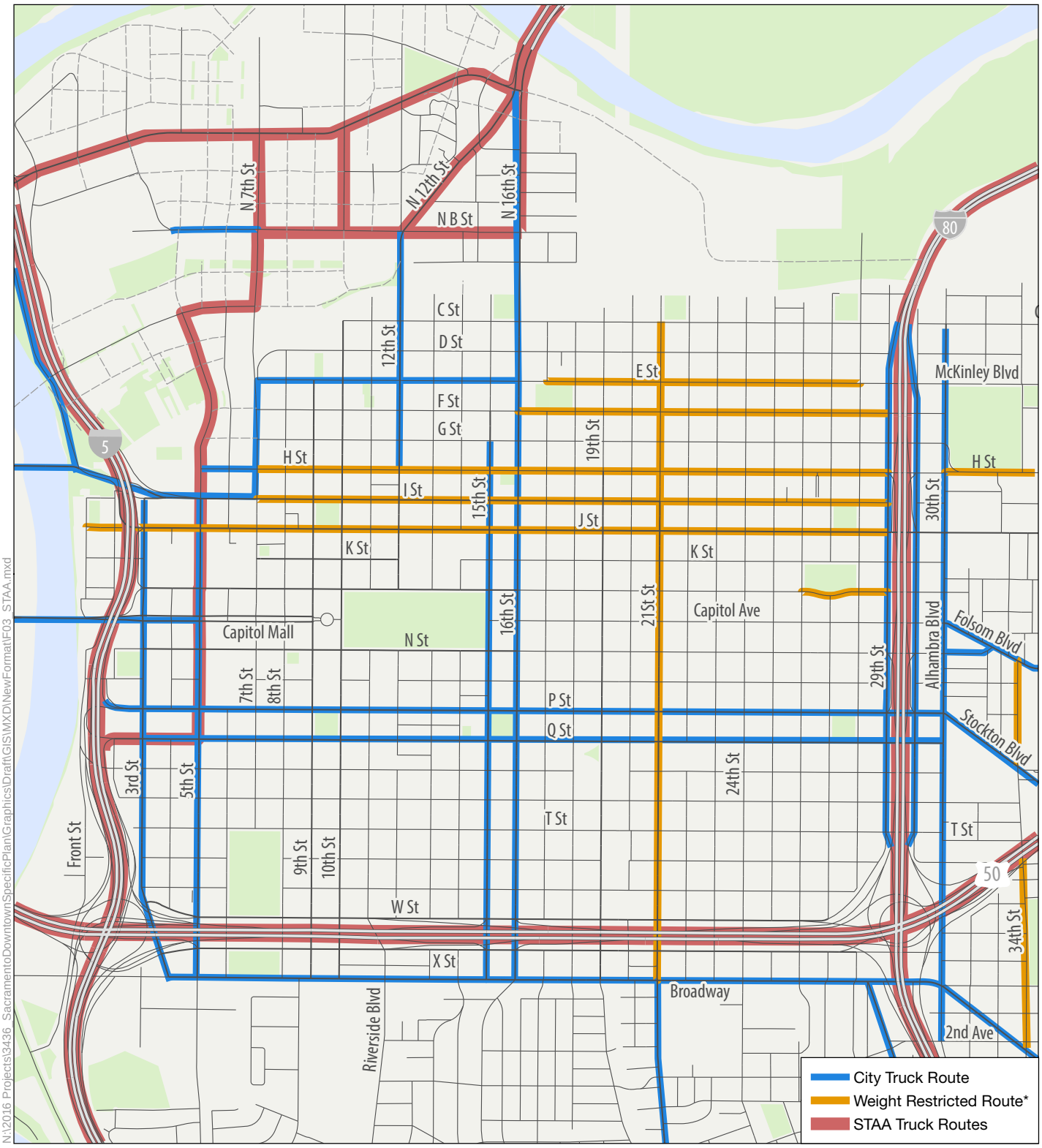
As part of the General Plan, the City assessed expectations about transportation system performance to help guide future network modifications. The specific process considered community values related to transportation accessibility (ability to complete desired personal or economic transactions) and mobility (where you can travel, when, and how fast), while also recognizing environmental impacts. The City desired to provide an efficient multi-modal network that connects people and places (i.e., homes, work, school, shopping, recreation, etc.) while providing a high degree of personal mobility. This envisioned network increases travel choices and supports other goals related to economic development and growth.

The City wants to be proactive in its approach to "smart growth" policies and is currently engaged in a process to update the transportation performance metrics and thresholds used to measure transportation system impacts of discretionary projects. For the DSP, the City will evaluate transportation impacts using both VMT and LOS.

Vehicle Miles Traveled

The primary tool used for calculating vehicle miles traveled (VMT) was SACSIM, an activity-based travel demand model that SACOG has adopted for use to prepare its MTP/SCS and its air quality conformity analysis. This model bases trips on activities and accounts for travel throughout the day in trip "tours." The model inputs are detailed demographics of residents in households or jobs by type at a parcel level and the land uses and transportation system that are in close proximity to each parcel. This detail allows the model to capture (1) the design of the local walking and biking environment, (2) accurate distances for short trips including walking distances to transit stops and (3) nearby land use opportunities/diversity/density. The parcel-level detail and information on the area surrounding each parcel thus greatly improves forecasting of walk, bike and transit trips and is sensitive to the local physical environment, including the presence (or absence) of pedestrian and bicycle facilities, the patterns of local street networks (e.g., grid vs. cul-de-sacs), and the density, proximity and mix of surrounding land uses (i.e., employment destinations, schools, retail, parks, etc.).

[1] City of Sacramento, 1983. City Truck Routes. Available: https://www.cityofsacramento.org/Public-Works/Transportation/Traffic-Data-Maps.



Not to scale

* City Code 10.24.020:
Trucks exceeding a manufacturer's gross vehicle weight rating of ten thousand pounds prohibited.

SOURCE: Fehr & Peers, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.12-3
Existing Truck Routes

ESA

The refined SACSIM model that was developed for the detailed analysis of the DSP area was used to estimate a number of system-wide performance measures, average VMT per capita, and average VMT per employee. Informed by OPR's Revised Proposal, SACOG defines VMT per capita and VMT per employee as follows:

- VMT per capita: VMT from all travel "tours" made by all residents of a household divided by the number of residents in that household
- VMT per employee: VMT from all "work tours" made by employees on a parcel divided by the number of employees on that parcel

SACOG bases the threshold for VMT per employee on Sacramento County averages rather than the SACOG regional average. SACOG used its SACSIM travel demand model to calculate this definition of VMT per employee for all existing parcels with employees in the region, and then calculated the average VMT per employee for Sacramento County.

Level of Service

Traffic operations at all study intersections were analyzed for weekday AM and PM peak-hour conditions using procedures and methodologies contained in the Highway Capacity Manual[2] for calculating delay at intersections. These methodologies were applied using the SimTraffic software program, which considers the effects of lane utilization, turn pocket storage lengths, upstream/downstream queue spillbacks, coordinated signal timings, pedestrian crossing activity, and other conditions on intersection and overall corridor operations. Utilization of SimTraffic microsimulation analysis is appropriate given the presence of coordinated signal timing plans, close spacing of signalized intersections, and overall levels of traffic and peak-hour congestion within the study area. Reported results are based on an average of ten model runs. The following procedures and assumptions were applied in the development of the SimTraffic model:

- Roadway geometric data were gathered using aerial photographs and field observations.
- Peak-hour traffic volumes were entered into the model according to the peak hour of the study area.
- The peak-hour factor (PHF) was set at 1.0, in accordance with the City's Traffic Impact Study Guidelines.
- The counted pedestrian and bicycle volumes were entered into the model according to the peak-hour measurements.
- Signal phasing and timings were based on existing signal timing plans provided by the City and field observations.
- Speeds for the model network were based on the posted speed limits.

Each study roadway facility was analyzed using the concept of Level of Service (LOS). LOS is a qualitative measure of traffic operating conditions whereby a letter grade, from A (the best) to F

[2] Transportation Research Board. 2010. Highway Capacity Manual 2010.

(the worst), is assigned. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. In general, LOS A represents free-flow conditions with no congestion, and LOS F represents severe congestion and delay under stop-and-go conditions. **Table 4.12-1** displays the delay range associated with each LOS category for signalized and unsignalized intersections.

TABLE 4.12-1
INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Average Control Delay (seconds/vehicle)[1]	
	Signalized Intersections	Unsignalized Intersections
A	0 – 10.0	0 – 10.0
B	10.1 – 20.0	10.1 – 15.0
C	20.1 – 35.0	15.1 – 25.0
D	35.1 – 55.0	25.1 – 35.0
E	55.1 – 80.0	35.1 – 50.0
F	> 80.0	> 50.0

NOTES:
1. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and acceleration delay based on Highway Capacity Manual (Transportation Research Board, 2010).

SOURCE: Fehr & Peers, 2017.

For signalized intersections, the LOS is based on the average delay experienced by all vehicles passing through the intersection. For unsignalized intersections, the delay and LOS for the worst case movement is reported along with average delay and LOS for the entire intersection.

Freeway segments were evaluated using the LOS capacity thresholds in **Table 4.12-2** consistent with the freeway analysis conducted for the City's 2035 General Plan MEIR.

TABLE 4.12-2
LEVEL OF SERVICE THRESHOLDS FOR FREEWAY SEGMENTS

Number of Lanes	ADT Level-of-Service Capacity Threshold				
	A	B	C	D	E
2	14,000	21,600	30,800	37,200	40,000
4	28,000	43,200	61,600	74,400	80,000
6	42,000	64,800	92,400	111,600	120,000
8	56,000	86,400	123,200	148,800	160,000
10	70,000	108,000	154,000	186,000	200,000

SOURCE: City of Sacramento, 2014. 2035 General Plan MEIR.

Traffic Counts

Traffic counts were collected at the 58 study intersections over a four-year period (2011 to 2015) during the AM (7:00-9:00) and PM (4:00-6:00) peak periods on the dates presented below:

- February 2, 2011
- April 17, 2012
- October 17, 2012
- April 23-24, 2013
- May 29, 2013
- October 22, 2013
- September 17, 2014
- October 30, 2014
- January 14, 2015
- April 28, 2015
- April 22, 2015

During all counts, weather conditions were generally dry, no unusual traffic patterns were observed, and the Sacramento City Unified School District was in full session. In addition to collecting vehicle turning movements at the study intersections, all counts included pedestrian and bicycle activity.

Figures 4.12-4A, **4.12-4B**, and **4.12-4C** display the existing AM and PM peak-hour intersection turning movement volumes, traffic controls, and lane configurations. In general, the AM peak hour within the study area occurred from 7:45AM to 8:45AM, and the PM peak hour occurred from 4:30PM to 5:30PM.

Existing VMT

Table 4.12-3 presents the existing VMT for the DSP area, the County, and the Region (refer to separate Appendix G for detailed calculations). As shown, the estimated VMT for the DSP area is lower than the regional and countywide averages.

TABLE 4.12-3
ESTIMATED VMT – EXISTING CONDITIONS

	Existing			
	Regional Average VMT	**Countywide Average VMT**	**DSP Area Average VMT**	**DSP Area Percent of Regional Average VMT**
Per Capita	17.95	N/A	11.93	66%
Per Employee	21.83	22.59	17.73	81%

SOURCES: SACOG, 2017 and DKS, 2017.

A number of factors contribute to a lower average VMT within the DSP area. When compared to the County and Region, the DSP area has a denser and more diverse mix of land uses, has a higher level of connectivity for all travel modes with an urbanized street grid, and has higher levels of transit service. With these characteristics in place, allowing higher levels of automobile delay helps to encourage the selection of other travel modes, including walking, bicycling, and transit; this in turn results in more efficient usage of the overall multimodal travel system and

lower levels of VMT per capita. In contrast, much of the County/Region is characterized by wider roadways, less room for pedestrian and bicycle infrastructure, more turn lanes at intersections, longer pedestrian crossing distances, and longer traffic signal cycle lengths with increased wait times for pedestrians, all of which are directly in conflict with the City's goals of a walkable, bikeable, transit-supportive urban environment.

Existing Levels of Service

Table 4.12-4 summarizes the existing peak-hour intersection operations at the study intersections (refer to separate Appendix G for detailed calculations). As shown, all of the study intersections operate with an average intersection delay of LOS D or better during both the AM and PM peak hours except for Intersection 1 (J Street/3rd Street/I-5 Off-ramps), which operates at LOS E during the PM peak hour.

Overall, the existing roadway system within the area can be characterized as operating efficiently. Motorists typically incur modest delays, do not experience substantial vehicle queues, and benefit from the coordinated traffic signal system along the primary commute corridors that connect the Central City (comprised of Midtown and Downtown) to the regional freeway system. The study intersections that experience the highest levels of delay are located near freeway ramps and along frontage roads, due primarily to competing traffic flows entering and exiting the freeway system. **Table 4.12-5** presents existing freeway operations along study segments on I-5, US 50, Capital City Freeway, and SR 160.

As shown in Table 4.12-5, portions of I-5, US 50, and Capital City Freeway currently operate at LOS F. The above LOS results are based on daily volume-to-capacity comparisons and do not necessarily consider specific operational characteristics (e.g., length of weave sections, peak hour factors, etc.) within the I-5, SR 160, US 50, and Capital City Freeway corridors.

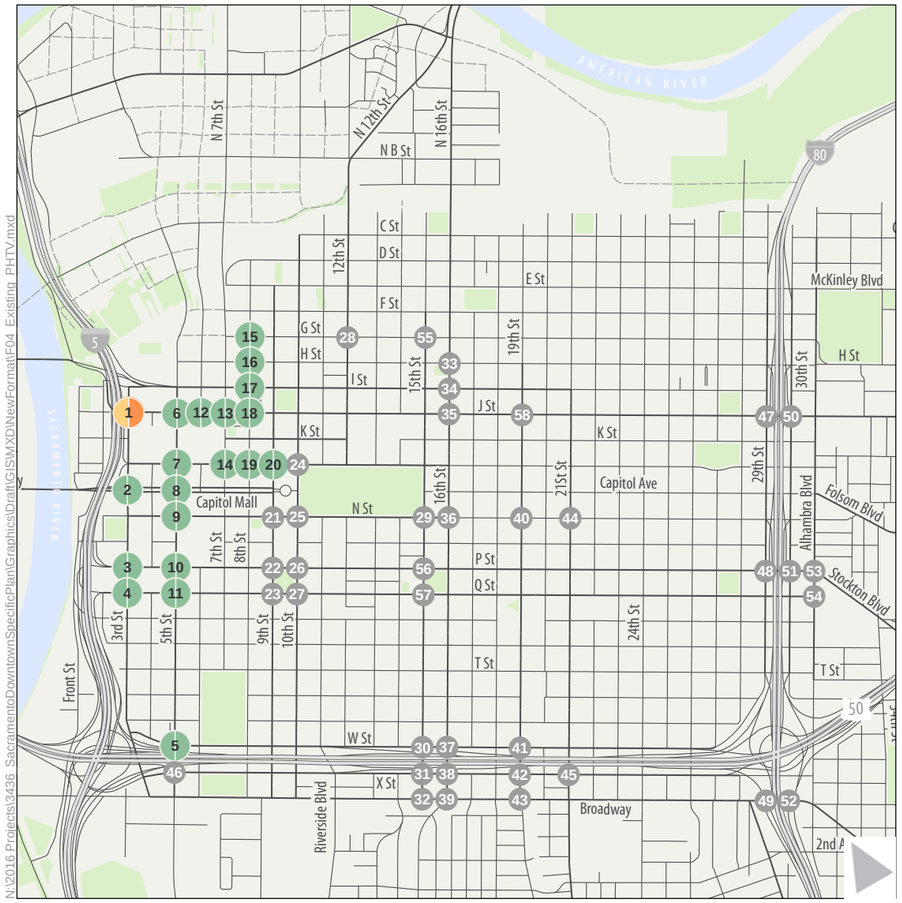
Existing Off-Ramp Queueing

Table 4.12-6 displays the existing off-ramp queuing within the study area during the AM and PM peak hours.

As shown below, queues at all study off-ramps are within their available storage during both peak hours.

Pedestrian System

The street grid system within the Central City serves the most walkable 4.25 square mile area in the Sacramento region. According to 2010 Census data, fifteen percent of the residents within the Central City walk to work on a regular basis, which equates to approximately five times the rate of those who choose this form of commute in the City as a whole; and anecdotal evidence suggests that the percentage of walk trips for non-commute trips in the Grid is even higher. Although Sacramento's mild climate and flat terrain contribute to a walkable environment, the transportation system within the Central City provides the mobility framework that makes pedestrian travel preferable for many.



1 Study Intersection

2 Study Intersection (See Figure 4B/C)

Planned Roadways

AM (PM) Peak Hour Traffic Volume

Turn Lane

Traffic Signal

Stop Sign

Channelized Right-turn

Level of Service (LOS)

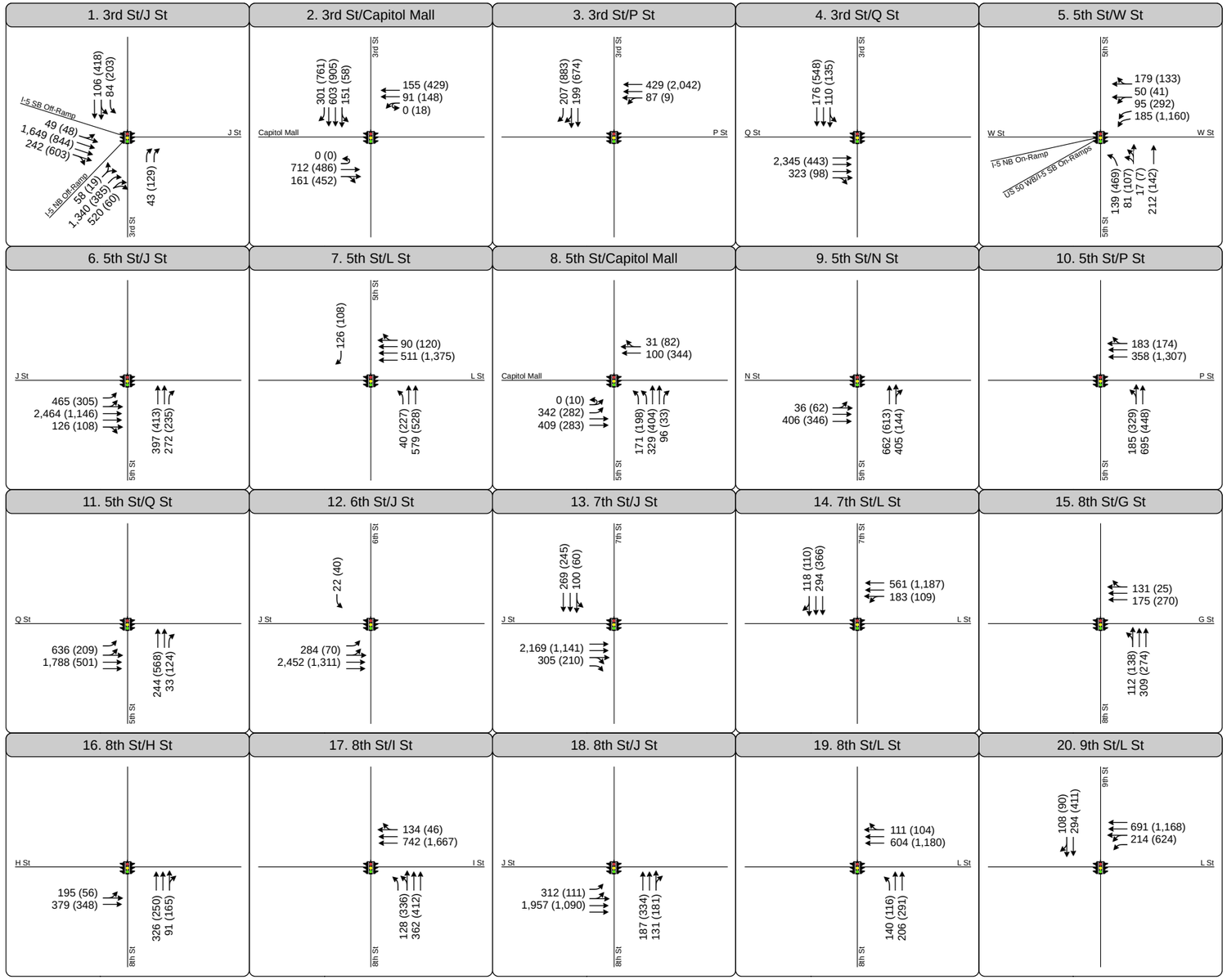
A - C D E F

AM LOS PM LOS

No Data

Not to scale

SOURCE: Fehr & Peers, 2017

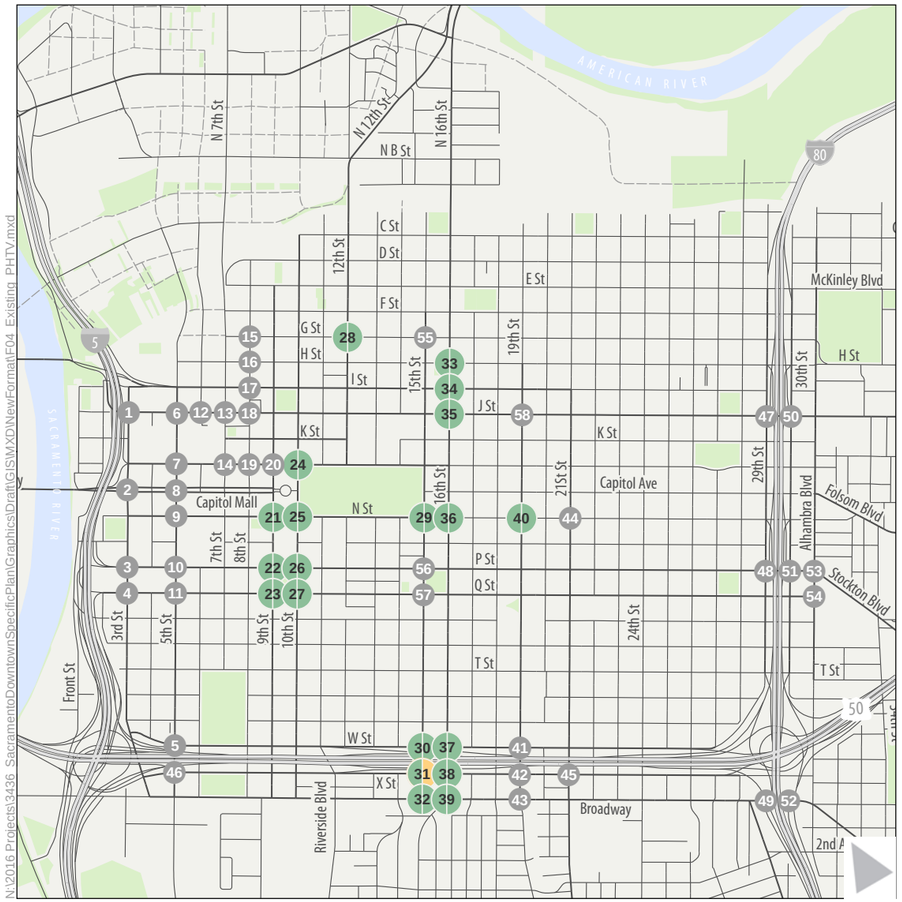


City of Sacramento Downtown Specific Plan EIR

Figure 4.12-4A

Peak Hour Traffic Volumes and Lane Configurations - Existing Conditions

ESA



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1 Study Intersection

2 Study Intersection (See Figure 4A/C)

Planned Roadways

AM (PM) Peak Hour Traffic Volume

Turn Lane

Traffic Signal

Stop Sign

Channelized Right-turn

Level of Service (LOS)

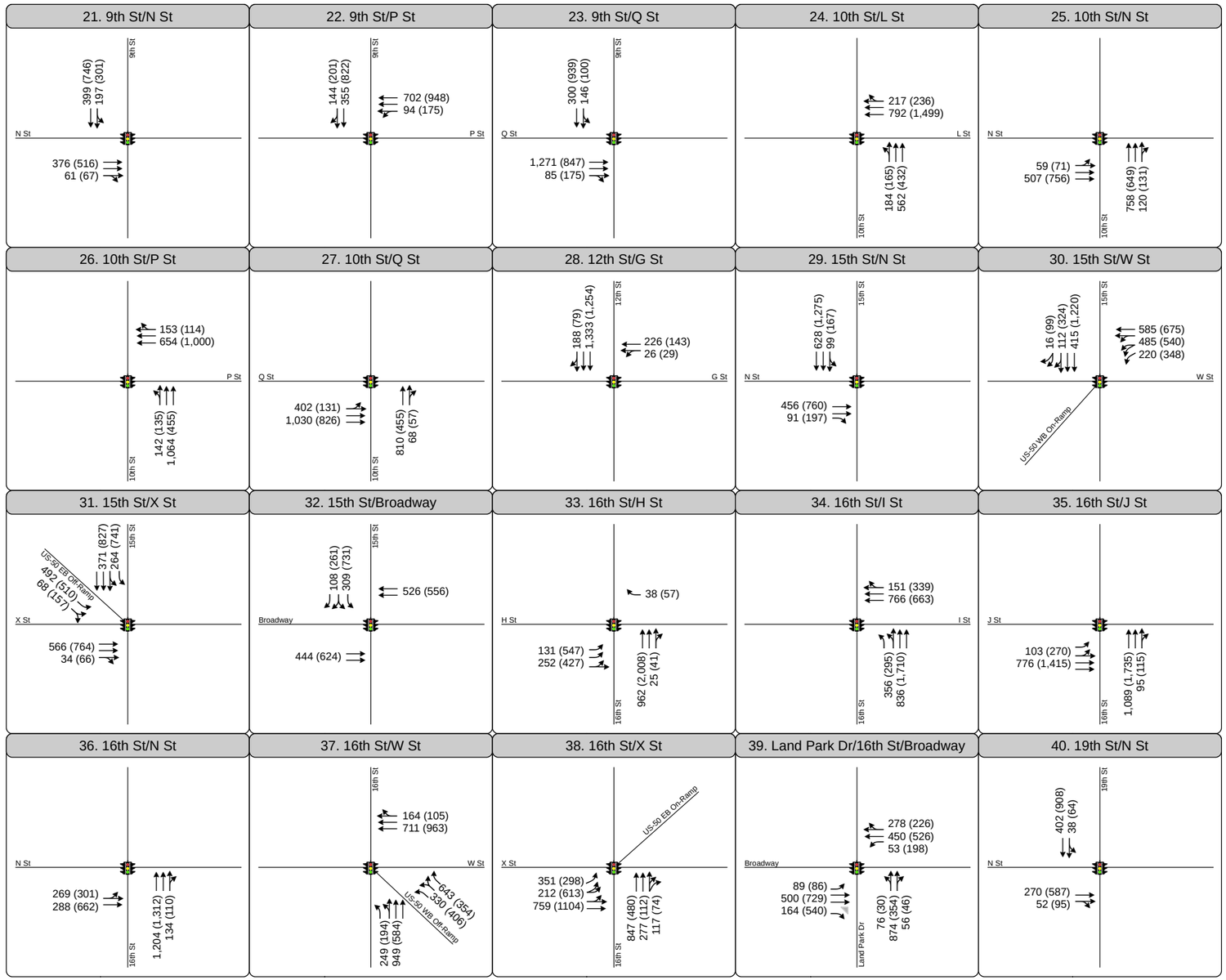
A - C D E F

AM LOS PM LOS

No Data

Not to scale

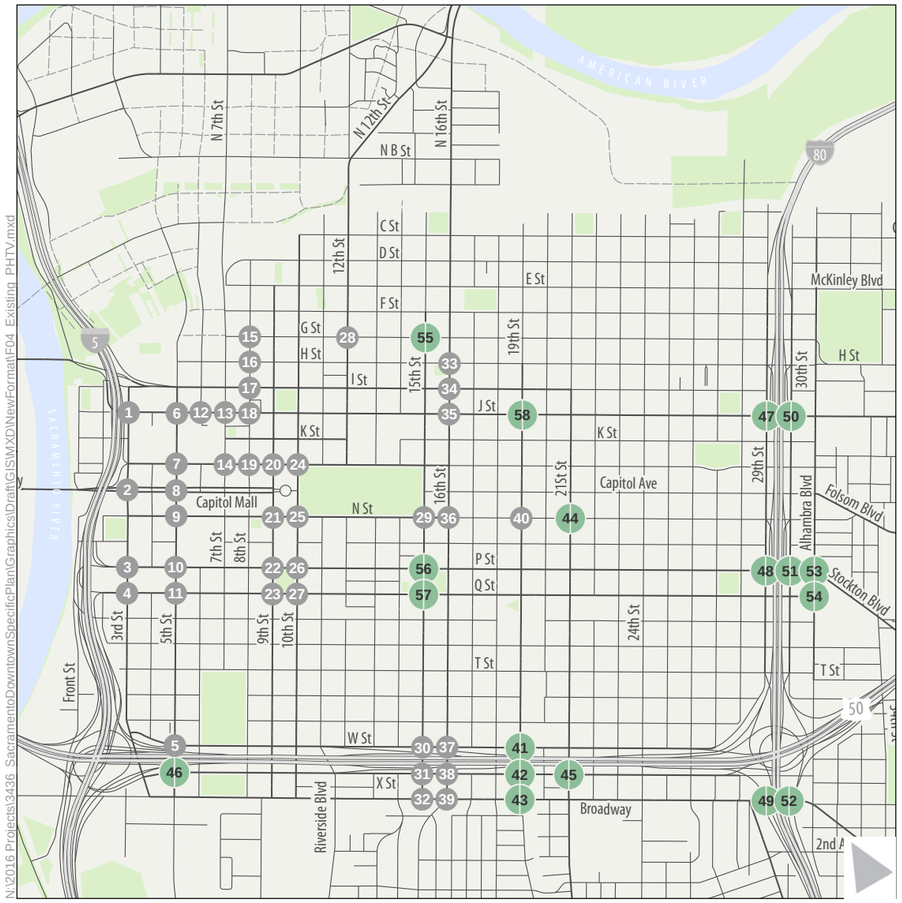
SOURCE: Fehr & Peers, 2017



City of Sacramento Downtown Specific Plan EIR

Figure 4.12-4B

Peak Hour Traffic Volumes and Lane Configurations - Existing Conditions



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1 Study Intersection

2 Study Intersection (See Figure 4A/B)

Planned Roadways

AM (PM) Peak Hour Traffic Volume

Turn Lane

Traffic Signal

Stop Sign

Channelized Right-turn

Level of Service (LOS)

A - C D E F

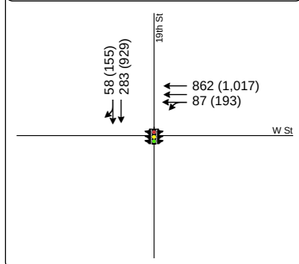
AM LOS PM LOS

No Data

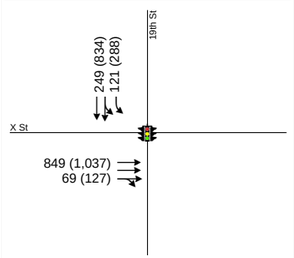
Not to scale

SOURCE: Fehr & Peers, 2017

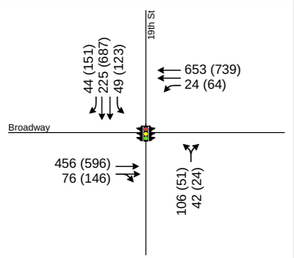
41. 19th St/W St



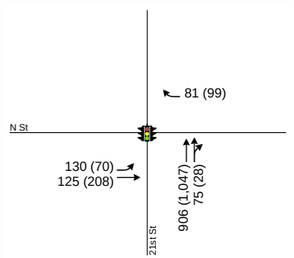
42. 19th St/X St



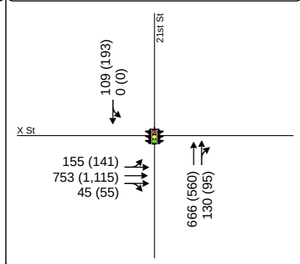
43. 19th St/Broadway



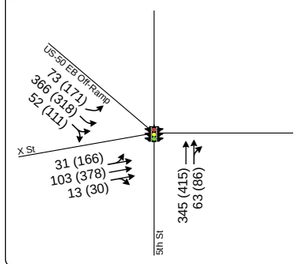
44. 21st St/N St



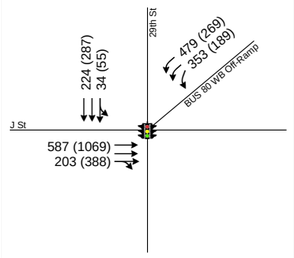
45. 21st St/X St



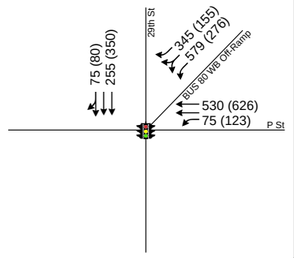
46. 5th St/X St



47. 29th St/J St

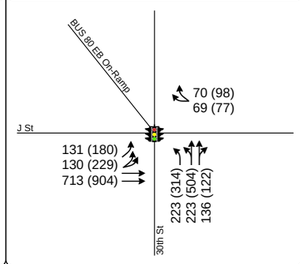


48. 29th St/P St



49. SR 99 SB On-Ramp/Broadway

50. 30th St/J St



51. 30th St/P St

52. SR 99 NB Off-Ramp/Broadway

53. Alhambra Blvd/P St/Stockton Blvd

54. Alhambra Blvd/Q St

55. 15th St/G St

56. 15th St/P St

57. 15th St/Q St

58. 19th St/J St

City of Sacramento Downtown Specific Plan EIR

Figure 4.12-4C

Peak Hour Traffic Volumes and Lane Configurations - Existing Conditions

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TABLE 4.12-4
INTERSECTION OPERATIONS – EXISTING CONDITIONS

Intersection	Traffic Control	Peak Hour	Existing	
			Delay	LOS
1. 3rd Street/J Street/I-5 Off-Ramp	Signal	A.M.	53	D
		P.M.	75	E
2. 3rd Street/Capitol Mall	Signal	A.M.	22	C
		P.M.	25	C
3. 3rd Street/P Street	Signal	A.M.	5	A
		P.M.	29	C
4. 3rd Street/Q Street	Signal	A.M.	10	B
		P.M.	5	A
5. 5th Street/W Street	Signal	A.M.	16	B
		P.M.	16	B
6. 5th Street/J Street	Signal	A.M.	18	B
		P.M.	11	B
7. 5th Street/L Street	Signal	A.M.	12	B
		P.M.	16	B
8. 5th Street/Capitol Mall	Signal	A.M.	12	B
		P.M.	14	B
9. 5th Street/N Street	Signal	A.M.	15	B
		P.M.	13	B
10. 5th Street/P Street	Signal	A.M.	10	B
		P.M.	16	B
11. 5th Street/Q Street	Signal	A.M.	10	A
		P.M.	11	B
12. 6th Street/J Street	Signal	A.M.	5	A
		P.M.	3	A
13. 7th Street/J Street	Signal	A.M.	10	A
		P.M.	8	A
14. 7th Street/L Street	Signal	A.M.	11	B
		P.M.	10	A
15. 8th Street/G Street	Signal	A.M.	9	A
		P.M.	7	A
16. 8th Street/H Street	Signal	A.M.	10	B
		P.M.	7	A
17. 8th Street/I Street	Signal	A.M.	8	A
		P.M.	16	B
18. 8th Street/J Street	Signal	A.M.	8	A
		P.M.	8	A
19. 8th Street/L Street	Signal	A.M.	10	B
		P.M.	12	B
20. 9th Street/L Street	Signal	A.M.	14	B
		P.M.	20	C

TABLE 4.12-4
INTERSECTION OPERATIONS – EXISTING CONDITIONS

Intersection	Traffic Control	Peak Hour	Existing	
			Delay	LOS
21. 9th Street/N Street	Signal	A.M.	9	A
		P.M.	12	B
22. 9th Street/P Street	Signal	A.M.	6	A
		P.M.	12	B
23. 9th Street/Q Street	Signal	A.M.	15	B
		P.M.	10	B
24. 10th Street/L Street	Signal	A.M.	8	A
		P.M.	14	B
25. 10th Street/N Street	Signal	A.M.	9	A
		P.M.	9	A
26. 10th Street/P Street	Signal	A.M.	14	B
		P.M.	13	B
27. 10th Street/Q Street	Signal	A.M.	17	B
		P.M.	14	B
28. 12th Street/G Street	Signal	A.M.	10	B
		P.M.	10	A
29. 15th Street/N Street	Signal	A.M.	10	B
		P.M.	15	B
30. 15th Street/W Street/US 50 On-Ramp	Signal	A.M.	12	B
		P.M.	20	B
31. 15th Street/X Street/US 50 Off-Ramp	Signal	A.M.	19	B
		P.M.	40	D
32. 15th Street/Broadway	Signal	A.M.	15	B
		P.M.	16	B
33. 16th Street/H Street	Signal	A.M.	6	A
		P.M.	15	B
34. 16th Street/I Street	Signal	A.M.	8	A
		P.M.	11	B
35. 16th Street/J Street	Signal	A.M.	13	B
		P.M.	20	C
36. 16th Street/N Street	Signal	A.M.	11	B
		P.M.	11	B
37. 16th Street/W Street/US 50 Off-Ramp	Signal	A.M.	25	C
		P.M.	33	C
38. 16th Street/X Street/US 50 On-Ramp	Signal	A.M.	10	A
		P.M.	14	B
39. 16th Street/Broadway	Signal	A.M.	18	B
		P.M.	16	B
40. 19th Street/N Street	Signal	A.M.	8	A
		P.M.	15	B

TABLE 4.12-4
INTERSECTION OPERATIONS – EXISTING CONDITIONS

Intersection	Traffic Control	Peak Hour	Existing	
			Delay	LOS
41. 8th Street/I Street	Signal	A.M.	14	B
		P.M.	17	B
42. 19th Street/X Street	Signal	A.M.	10	B
		P.M.	12	B
43. 19th Street/Broadway	Signal	A.M.	13	B
		P.M.	16	B
44. 21st Street/N Street	Signal	A.M.	14	B
		P.M.	16	B
45. 21st Street/X Street	Signal	A.M.	9	A
		P.M.	10	B
46. 5th Street/X Street	Signal	A.M.	21	C
		P.M.	24	C
47. 29th Street/J Street/Bus. 80 Off-Ramp	Signal	A.M.	22	C
		P.M.	20	C
48. 29th Street/P Street/Bus. 80 Off-Ramp	Signal	A.M.	17	B
		P.M.	15	B
49. 29th Street/Broadway/SR 99 On-Ramp	Uncontrolled	A.M.	2 (6)	A (A)
		P.M.	2 (6)	A (A)
50. 30th Street/J Street/Bus. 80 On-Ramp	Signal	A.M.	20	B
		P.M.	17	B
51. 30th Street/P Street	Signal	A.M.	9	A
		P.M.	7	A
52. 30th Street/Broadway/SR 99 Off-Ramp	Signal	A.M.	6	A
		P.M.	6	A
53. Alhambra Boulevard/P Street	Signal	A.M.	21	C
		P.M.	32	C
54. Alhambra Boulevard/Q Street	Signal	A.M.	22	C
		P.M.	35	C
55. 15th Street/G Street	Signal	A.M.	9	A
		P.M.	8	A
56. 15th Street/P Street	Signal	A.M.	12	B
		P.M.	9	A
57. 15th Street/Q Street	Signal	A.M.	6	A
		P.M.	7	A
58. 19th Street/J Street	Signal	A.M.	10	A
		P.M.	12	B

NOTES:
1. Average intersection delay for signalized intersections is reported in seconds per vehicle for all approaches.
2. For uncontrolled intersections, the delay is reported in seconds per vehicle for the overall intersection and the worst movement (in parentheses).

SOURCE: Fehr & Peers, 2017.

TABLE 4.12-5
FREEWAY OPERATIONS – EXISTING CONDITIONS

Freeway Segment	Lanes	ADT Volume[1]	LOS[2]
I-5 at L Street	9	180,800	F
I-5 at P Street	7	152,300	F
I-5 at W Street	6	83,300	C
US 50 at 15th Street	10	229,500	F
US 50 at 28th Street	8	165,200	F
Capital City Freeway at A Street	6	170,900	F
Capital City Freeway at I Street	8	135,700	D
Capital City Freeway at T Street	8	78,200	B
SR 160 at Exposition Boulevard	4	65,400	D

NOTES:
1. ADT = average daily traffic.

SOURCE: Fehr & Peers, 2017.

TABLE 4.12-6
AVERAGE MAXIMUM QUEUE LENGTHS – EXISTING CONDITIONS

Location	Available Storage (ft)	Peak Hour	Average Maximum Queue Length (ft)
Interstate 5 SB Off-Ramp at J Street	1,550	A.M. P.M.	500 1,525
Interstate 5 NB Off-Ramp at J Street	1,025	A.M. P.M.	675 200
Interstate 5 SB Off-Ramp at Q Street	1,725	A.M. P.M.	425 100
Interstate 5 NB Off-Ramp at Q Street	2,075	A.M. P.M.	425 100
US 50 EB Off-Ramp at 15th Street	1,125	A.M. P.M.	225 250
US 50 WB Off-Ramp at 16th Street	1,050	A.M. P.M.	375 375
US 50 EB Off-Ramp at 5th Street	1,275	A.M. P.M.	225 250
Bus. 80 SB Off-Ramp at J Street	1,225	A.M. P.M.	350 250
Bus. 80 SB Off-Ramp at P Street	1,300	A.M. P.M.	250 175

NOTES:
1. **BOLD** text indicates that the queue exceeds the storage length.

SOURCE: Fehr & Peers, 2017.

The relatively dense, grid network of streets within the Central City provides for a high level of connectivity and pedestrian accessibility. The Grid benefits from high density and mix of land uses, which result in a high proportion of short-distance walk trips relative to the City as a whole. Most streets in the Grid feature sidewalks on both sides of the street with landscaped buffers and on-street parking, which increase pedestrian comfort by providing a buffer between the sidewalk and the roadway. Many places in the Grid also feature a mature tree canopy that offers shade from direct sunlight. Traffic signals within the study area operate on relatively short cycle lengths, and most have automatic walk signals (pedestrian recall) for pedestrians and crosswalks on all approaches; combined, these features result in low levels of crossing delay for pedestrians at most locations. Other factors that increase pedestrian safety and comfort include the dispersion of automobile traffic across the Grid, short crossing distances for pedestrians, and relatively low vehicle travel speeds.

Bicycle System

The Grid serves as the hub of the Sacramento region's bicycle network. The Sacramento River Bike Trail, Two Rivers Bike Trail, and Sacramento Northern Bike Trail all serve the Central City; just across the American River, the American River Bike Trail stretches for 33 miles between Sacramento and Folsom Lake. These facilities serve the periphery of the Grid, and the Grid's street network functions as the bicycle network within the Central City. Many streets in the Grid feature relatively slow travel speeds and low traffic volumes. The redundancy of the Grid provides multiple route options, allowing bicyclists to avoid streets with higher traffic volumes. In addition to the numerous low-speed, low-volume streets found in the Grid, many streets with relatively higher motor vehicle traffic volumes and speeds feature dedicated on-street bicycle lanes. Lastly, the flat topography contributes to the ease of biking around the Grid.

The following types of bicycle facilities currently exist within the study area:

- Multi-use paths (Class I) – are paved trails that are separated from roadways and allow for shared use by both cyclists and pedestrians
- On-street bike lanes (Class II) – are designated for use by bicycles by striping, pavement legends, and signs.
- On-street bike routes (Class III) – are designated by signage for shared bicycle use with vehicles but do not necessarily include any additional pavement width.

In Midtown (east of 16th Street), most one-way streets that have higher motor vehicle traffic volumes and average travel speeds and feature on-street Class II bicycle lanes on both sides of the roadway. In Downtown (west of 16th Street), one-way streets have lower levels of on-street bicycle lane coverage, but recent investments in bicycle infrastructure have expanded the number of bicycle lanes within Downtown.

The network of on-street bicycle lanes within Midtown provides a high degree of east-west connectivity and a lower level of north-south connectivity; twelve east-west streets feature on-street Class II bicycle lanes while six north-south streets feature on-street Class II bicycle lanes.

Within Downtown, on-street bicycle lane coverage is more balanced in the east-west and north-south directions, however Downtown's bicycle lane network is somewhat concentrated in the area north of Capitol Mall. Additionally, several of the primary east-west bicycle routes in Midtown do not extend through Downtown, including those found on F Street, K Street, L Street, N Street, P Street, and Q Street.

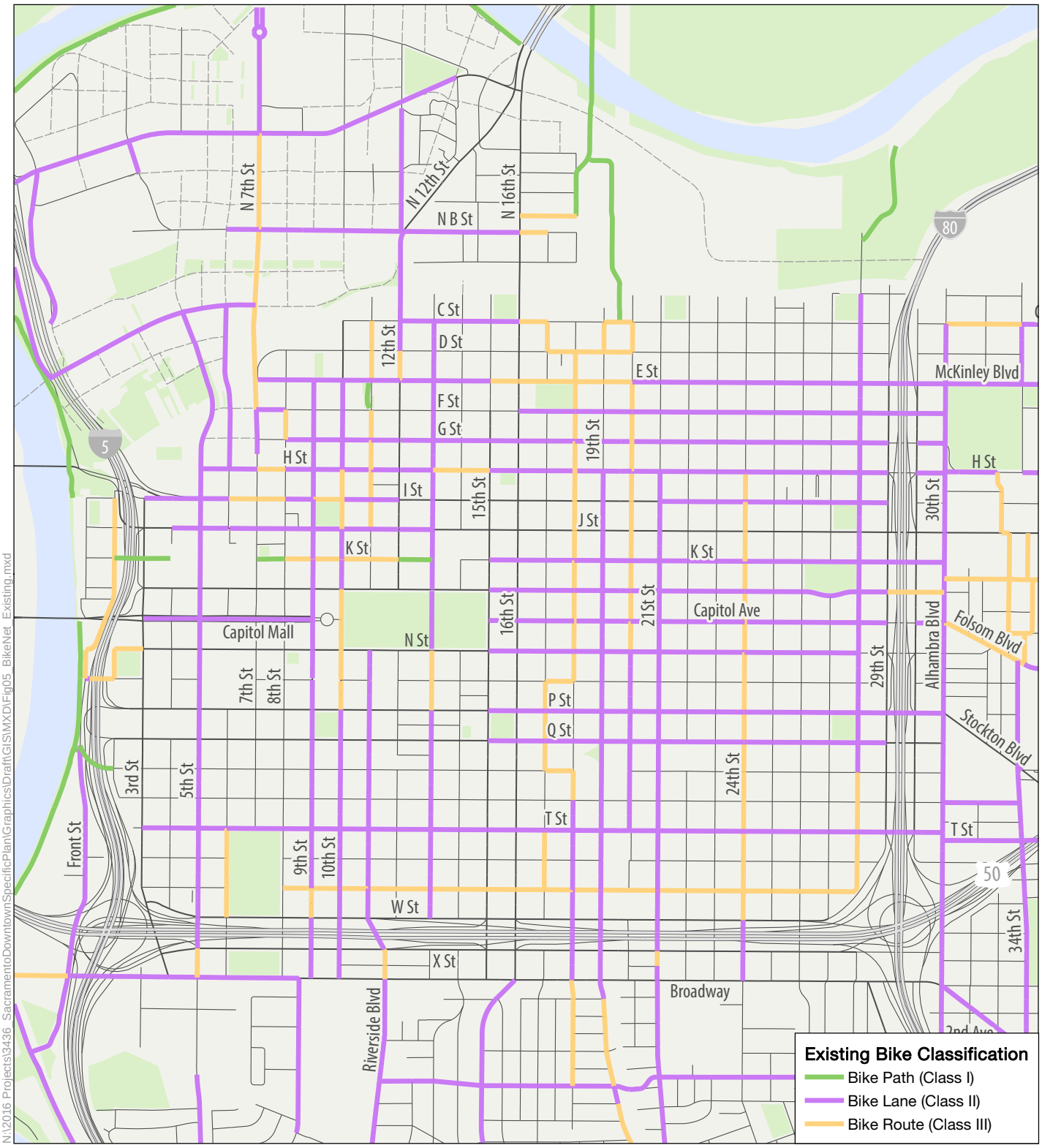
The Central City's street grid network creates the ideal framework for an excellent network of bicycle facilities. Bicycle facilities in the Grid are connected to regional and citywide facilities via bike lanes on West Capitol Avenue to West Sacramento, via the Class I bike path along the American River Parkway and the Sacramento River, and via several bike lane connections to the adjoining East Sacramento, Land Park, and Curtis Park neighborhoods. The majority of Downtown's bicycle network consists of on-street facilities including Class II bike lanes and Class III bike routes, although short segments of Class I bike path or plaza spaces allow bicyclist connectivity to on-street facilities where motorized travel is not permitted (including segments of the K Street Mall). Gaps do exist in the network of on-street facilities, particularly on east-west (lettered) streets between 5th Street and 15th Street south of Capitol Park. And while Class II bike lanes and Class III bike routes are provided on several streets, bicyclist comfort analysis completed as part of Grid 3.0[3] reveals that several of these streets do not provide for a high level of bicyclist comfort. This is especially apparent for bicycle facilities that cross underneath the Capital City Freeway and US-50. This lack of high-comfort facilities limits utility amongst the majority of bicyclists who are not willing to tolerate low-comfort bikeways. The regional bike share program launched in Sacramento in May 2017 with an expanded rollout projected by November 2017 will provide short-term bicycle access to Downtown residents, employees and visitors.

Figure 4.12-5 displays existing bicycle facilities located within the Central City based on data provided by the City and field observations.

Transit System

The Central City is the hub of the Sacramento Regional Transit District (RT), which serves as the region's primary provider of bus and rail transport. Region-wide, RT operates 69 bus routes and 42.9 miles of light rail on three lines: the Blue Line, Gold Line, and Green Line. All three light rail lines converge in Downtown and run concurrently on the portion of the system located between 7th Street, 13th Street, K Street and R Street. The 16th Street Station, located near the center of the Grid at the border between Midtown and Downtown, has the highest number of daily boardings in the entire light rail system, due in part to the large number of transfers between the Blue Line and Gold Line that occur at this station. Light rail service operates on 15-minute headways during the day and 30-minute headways during evenings, weekends, and holidays. Fixed-route bus service operates on headways ranging from 15 to 75 minutes, depending on the route. Buses and light rail run 365 days a year, using 87 light rail vehicles, 211 buses, and 29

[3] City of Sacramento, 2014. Sacramento Grid 2.0, State of the Grid: Sacramento Central City.



Not to scale

SOURCE: Fehr & Peers, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.12-5
Existing Bike Network

ESA

shuttle vans. The annual ridership on the system (bus and light rail) has grown from 14 million passengers in 1987 to more than 25 million passengers in Fiscal Year 2016.[4] Currently, weekday light rail ridership averages about 36,000, and the weekday bus ridership is approximately 38,500 passengers per day.[5]

Until 2009, RT offered a Central City Fare that allowed riders to travel anywhere in the Grid for a flat fare of $1.00. However, this fare was eliminated due to budget constraints, and replaced by a system-wide flat fare that is currently $2.75. The system-wide flat fare disincentivizes short transit trips in the Grid, as a quick journey between closely spaced light rail stations costs the same as a 20-mile commute trip from the suburbs. Consequences of this change in fare structure include potential transit riders in the Grid shifting to other modes of transportation.

In addition to RT, numerous other transit providers offer commuter service to the Grid, including Yolo County Transportation District's Yolobus, Elk Grove Transit (e-Tran), Roseville Transit, El Dorado Transit, Yuba-Sutter Transit, Folsom Stage Lines, the San Joaquin Regional Transit District, and Amador Regional Transit. These commuter services utilize RT stops in the Grid that are shared with local bus service. Commuters to the Grid also have the ability to travel by intercity rail. The Sacramento Valley Station is located Downtown, just north of I Street between 3rd Street and 5th Street. This station is served by two long distance Amtrak routes and two Amtrak California regional routes: the Coast Starlight (Seattle-Portland-Sacramento-Los Angeles), the California Zephyr (Emeryville-Sacramento-Denver-Chicago), the San Joaquin (Sacramento-Bakersfield), and the Capitol Corridor (San Jose-Oakland –Sacramento-Auburn). The Capitol Corridor route carries the vast majority of the passengers using the Sacramento Valley Station. Amtrak's Fiscal Year 2016 National Fact Sheet lists the Sacramento Valley Station as 7th in the nation in total Amtrak ridership with over 1.05 million passengers annually. The RT Gold Line connects the Sacramento Valley Station to the region's light rail transit network, and the station is also served by Amtrak intercity buses and local RT buses.

Transit service offered within the study area is displayed on **Figure 4.12-6**.

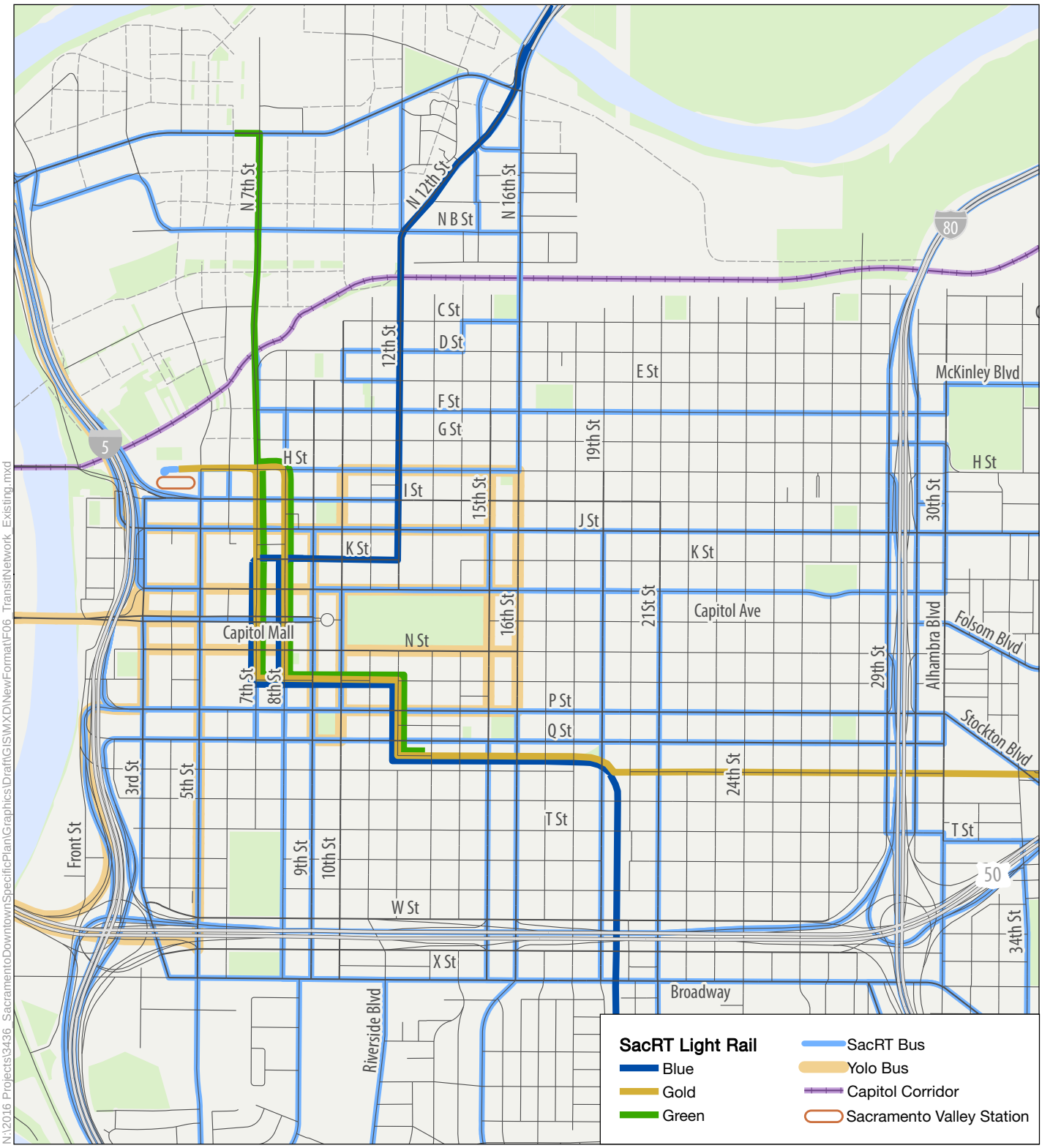
4.12.2 Regulatory Setting

This section provides a discussion of federal, state, and local regulations pertaining to transportation that may be applicable to the proposed plan.

Federal

There are no applicable federal regulations that apply directly to the proposed plan. However, federal regulations relating to the Americans with Disabilities Act (ADA), Title VI, and Environmental Justice relate to transit service.

[4] Sacramento Regional Transit District, May 2016. Regional Transit Fact Sheet. Available: https://www.sacrt.com/factsheetindex.stm. Accessed July 5, 2017.
[5] *Ibid.*



Not to scale

SOURCE: Fehr & Peers, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.12-6
Existing Transit Network

ESA

State

Senate Bill 743

Senate Bill 743, passed in 2013, requires the California Governor's Office of Planning and Research (OPR) to develop new guidelines that address traffic metrics under CEQA. As stated in the legislation, upon adoption of the new guidelines, "automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any." OPR is currently updating its CEQA Guidelines to implement SB 743 and is proposing that vehicle miles traveled (VMT) be the primary metric used to identify transportation impacts.

Certification of these revisions to the Guidelines by the Secretary of the California Natural Resources Agency will trigger requirements for their use by lead agencies, including the City of Sacramento.[6] As this is a substantive change to CEQA practice, there has been considerable statewide interest and comment on OPR's latest (January 2016) on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA[7] (Revised Proposal). As of today, the date for formal adoption of these Guidelines is uncertain.

In anticipation of formal adoption of the revised Guidelines, and in order to implement its "smart growth" policies, the City of Sacramento is currently engaged in a process to update the transportation performance metrics and thresholds used to measure transportation system impacts of discretionary projects. For the purposes of this EIR, the transportation analysis evaluates transportation impacts using both VMT and LOS.

Caltrans

Caltrans issued interim guidance on incorporating SB 743 into their policies and procedures in *Local Development – Intergovernmental Review Program*.[8] The high-level interim guidance document for District staff refocuses Caltrans' attention on local development project's VMT, appropriate transportation demand measures (TDM), and determining how to address multimodal operational issues.

In 2010, Caltrans released a Corridor System Management Report (CSMP) that includes portions of I-5 within the study area. CSMPs are long-range comprehensive planning documents that define the current LOS on a facility and the future LOS when considering feasible long-term projects. Table 4.12-5 of this report shows existing operations on study segments of I-5 as being at LOS F. The Interstate 5 Transportation Corridor Concept Report (TCCR) indicates a Concept LOS F for this corridor. The Concept LOS represents the minimum acceptable service conditions

6 Public Resources Code section 21099(b)(2).
7 Governor's Office of Planning and Research, 2016. Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA, Implementing Senate Bill 743 (Steinberg, 2013), January 20, 2016.
8 California Department of Transportation. 2016. *Local Development – Intergovernmental Review Program Interim Guidance*. Implementing Caltrans Strategic Management Plan 2015-2020 Consistent with SB 743 (Steinberg, 2013). Approved September 2, 2016.

over the next 20 years. Page 5 of the TCCR indicates that for existing LOS F conditions, no further degradation is permitted as indicated by the applicable performance measure.

The *State Route 160 Transportation Corridor Concept Report* shows existing LOS E operations on SR 160 from the American River Bridge to the Capital City Freeway. The report indicates a Concept LOS F for this corridor.

In May 2009, Caltrans released a CSMP for the Capital City Freeway.[9] The segments of the freeway located within the study area are covered by this document. Based on the CSMP, the segments of the Capital City Freeway located within the project study area currently operate at LOS F conditions, and are expected to operate at LOS F conditions in the future.

In 2014, Caltrans released the *United States Route 50 Transportation Concept Report and Corridor System Management Plan* for portions of US 50 within the study area. Table 4.12-5 of this report shows existing operations on US 50 as being at LOS F. The report indicates a Concept LOS E for this corridor.

According to the *Guide for the Preparation of Traffic Impact Studies*,[10] if a freeway facility currently operates at an unacceptable LOS (e.g., LOS F), then the existing LOS should be maintained. An impact occurs if the addition of traffic exacerbates existing LOS F conditions and leads to a perceptible increase in density on freeway mainline segments or ramp junctions, or a perceptible increase in service volumes in a weaving area. In addition, an impact occurs when the addition of traffic causes a queue on the off-ramp approach to a ramp terminal intersection to extend beyond its storage area and onto the freeway mainline.

Regional

SACOG is responsible for the preparation of, and updates to, the 2016 MTP/SCS and the corresponding Metropolitan Transportation Improvement Program (MTIP) for the six-county Sacramento region. The MTP/SCS provides a 20-year transportation vision and corresponding list of projects. The MTIP identifies short-term projects (7-year horizon) in more detail. The current MTP/SCS was adopted by the SACOG board in 2016.

Local

City of Sacramento 2035 General Plan

On March 3, 2015, the City Council adopted the 2035 General Plan. The Mobility Element of the City's 2035 General Plan outlines goals and policies that coordinate the transportation and circulation system with planned land uses. The following policies are relevant to this study:

9 California Department of Transportation. 2009. *Interstate 80 and Capital City Freeway Corridor System Management Plan*. May 2009.

10 California Department of Transportation. 2002. *Guide for the Preparation of Traffic Impact Studies*. December 2002.

Goal M 1.2 **Multimodal Choices. The City shall develop an integrated, multimodal transportation system that improves the attractiveness of walking, bicycling, and riding transit over time to increase travel choices and aid in achieving a more balanced transportation system and reducing air pollution and greenhouse gas emissions.**

Policies

M 1.2.1 **Multimodal Choices.** The City shall develop an integrated, multimodal transportation system that improves the attractiveness of walking, bicycling, and riding transit over time to increase travel choices and aid in achieving a more balanced transportation system and reducing air pollution and greenhouse gas emissions.

M 1.2.2 **The City shall implement a flexible context-sensitive Level of Service (LOS) standard, and will measure traffic operations against the vehicle LOS thresholds established in this policy.** The City will measure vehicle LOS based on the methodology contained in the latest version of the Highway Capacity Manual (HCM) published by the Transportation Research Board. The City's specific vehicle LOS thresholds have been defined based on community values with respect to modal priorities, land use context, economic development, and environmental resources and constraints. As such, the City has established variable LOS thresholds appropriate for the unique characteristics of the City's diverse neighborhoods and communities. The City will strive to operate the roadway network at LOS D or better for vehicles during typical weekday conditions, including AM and PM peak hour with the following exceptions described below and mapped on Figure M-1 (displayed in the General Plan):

a. Core Area (Central City Community Plan Area) - LOS F allowed

b. Priority Investment Areas – LOS F allowed

c. LOS E roadways (11 distinct segments listed). LOS E is also allowed on all roadway segments and associated intersections located within ½ mile walking distance of a light rail stations.

d. LOS F roadways (24 distinct segments listed)

e. If maintaining the above LOS standards would, in the City's judgment, be infeasible and/or conflict with the achievement of other goals, LOS E or F conditions may be accepted provided that provisions are made to improve the overall system, promote non vehicular transportation and/or implement vehicle trip reduction measures as part of a development project or a city-initiated project. Additionally, the City shall not expand the physical capacity of the planned roadway network to accommodate a project beyond that identified in Figure M4 and M4A (2035 General Plan Roadway Classification and Lanes).

As shown on Figure M1 (Vehicle Level of Service Exception Areas) of the City's 2035 General Plan, most of the DSP area is situated within one of three Tier 1 Priority Investment Areas. Additionally, the entire DSP area is also located within the Core Area, which is bounded by the Sacramento River, American River, Broadway, and Alhambra Boulevard. All study intersections are located within the Core Area, and several also fall within a Priority Investment Area.

The Mobility Element of the City's 2035 General Plan also includes the following policies related to connectivity, walking, biking, transit, and parking that are relevant to this study:

M 1.2.3 **Transportation Evaluation.** The City shall evaluate discretionary projects for potential impacts to traffic operations, traffic safety, transit service, bicycle facilities, and pedestrian facilities, consistent with the City's Traffic Study Guidelines.

M 1.2.4 **Multimodal Access.** The City shall facilitate the provision of multimodal access to activity centers such as commercial centers and corridors, employment centers, transit stops/stations, airports, schools, parks, recreation areas, medical centers, and tourist attractions.

M 1.2.5 **Eliminate Gaps.** The City shall eliminate "gaps" in roadways, bikeways, and pedestrian networks. To this end:

a. The City shall construct new multi-modal crossings of the Sacramento and American Rivers.

b. The City shall plan and pursue funding to construct grade-separated crossings of freeways, rail lines, canals, creeks, and other barriers to improve connectivity.

c. The City shall construct new bikeways and pedestrian paths in existing neighborhoods to improve connectivity.

Goal M 1.3 Grid Network. To promote efficient travel for all modes, the City shall require all new residential, commercial, or mixed-use development that proposes or is required to construct or extend streets to develop a transportation network that is well-connected, both internally and to off-site networks preferably with a grid or modified grid-form.

Policies

M 1.3.3 **Improve Transit Access.** The City shall support RT in addressing identified gaps in public transit networks by working with RT to appropriately locate passenger facilities and stations, pedestrian walkways and bicycle access to transit stations and stops, and public rights of way as necessary for transit- only lanes, transit stops, and transit vehicle stations and layover.

M 1.3.4 **Barrier Removal for Accessibility.** The City shall remove barriers, where feasible, to allow people of all abilities to move freely and efficiently throughout the city.

M 1.3.5 **Connections to Transit Stations.** The City shall provide and improve connections to transit stations by identifying, roadways, bikeways and pedestrian improvements within walking distance (1/2 mile) of existing and planned transit stations. Such improvements shall emphasize the development of complete streets.

Goal M 2.1 Integrated Pedestrian System. Design, construct, and maintain a universally accessible, safe, convenient, integrated and well-connected pedestrian system that promotes walking.

Policies

M 2.1.2 **Sidewalk Design.** The City shall require that sidewalks wherever possible be developed at sufficient width to accommodate all users including persons with disabilities and complement the form and function of both the current and planned land use context of each street segment (i.e., necessary buffers, amenities, outdoor seating space).

M 2.1.3 **Streetscape Design.** The City shall require that pedestrian-oriented streets be designed to provide a pleasant environment for walking and other desirable uses of public space, including such elements as shade trees; plantings; well-designed benches, trash receptacles, news racks, and other furniture; pedestrian-scaled lighting fixtures; wayfinding signage; integrated transit shelters; public art; and other amenities.

M 2.1.4 **Cohesive and Continuous Network.** The City shall develop a pedestrian network of public sidewalks, street crossings, and other pedestrian paths that makes walking a convenient and safe way to travel citywide. The network should include a dense pattern of routes in pedestrian-oriented areas such as the Central City and include wayfinding where appropriate.

Goal M 3.1 Safe, Comprehensive, and Integrated Transit System. Create and maintain a safe, comprehensive, and integrated transit system as an essential component of a multimodal transportation system.

Policies

M 3.1.1 **Transit for All.** The City shall support a well-designed transit system that provides accessibility and mobility for all Sacramento residents, workers and visitors. The City shall enhance bicycle and pedestrian access to stations.

M 3.1.3 **Expand Transit Coverage.** The City shall work with transit operators and community partners to develop and implement a policy that expands affordable public transportation coverage to within walking distance of all city residents, as funding is available.

M 3.1.5 **Variety of Transit Types.** The City shall consider a variety of transit types including high speed rail, intercity rail, regional rail, light rail transit, bus rapid transit, trolleys (streetcars), enhanced buses, express buses, local buses, car sharing, bike sharing, neighborhood shuttles, pedi-cabs, and jitneys to meet the needs of residents, workers, and visitors.

Goal M 4.1 Street and Roadway System. Create a context-sensitive street and roadway system that provides access to all users and recognizes the importance that roads and streets play as public space. As such, the City shall strive to balance the needs for personal travel, goods movement, parking, social activities, business activities, and revenue generation, when planning, operating, maintaining, and expanding the roadway network.

Policies

M 4.1.1 **Emergency Access.** The City shall develop a roadway system that is redundant (i.e., includes multiple alternative routes) to the extent feasible to ensure mobility in the event of emergencies.

Goal M 4.2 Complete Streets. The City shall plan, design, operate and maintain all streets and roadways to accommodate and promote safe and convenient travel for all users – pedestrians, bicyclists, transit riders, and persons of all abilities, as well as freight and motor vehicle drivers.

Policies

M 4.2.1 **Accommodate All Users.** The City shall ensure that all new roadway projects and any reconstruction projects designate sufficient travel space for all users including bicyclists, pedestrians, transit riders, and motorists except where pedestrians and bicyclists are prohibited by law from using a given facility.

M 4.2.2 **Pedestrian and Bicycle-Friendly Streets.** In areas with high levels of pedestrian activity (e.g., employment centers, residential areas, mixed-use areas, schools), the City shall ensure that all street projects support pedestrian and bicycle travel. Improvements may include narrow lanes, target speeds less than 35 miles per hour, sidewalk widths consistent with the Pedestrian Master Plan, street trees, high-visibility pedestrian crossings, and bikeways (e.g., Class II and Class III bike lanes, bicycle boulevards, separated bicycle lanes and/or parallel multiuse pathways).

M 4.2.5 **Multi-Modal Corridors.** Consistent with the Roadway Network and Street Typologies established in this General Plan, the City shall designate multimodal corridors in the Central City, within and between urban centers, along major transit lines, and/or along commercial corridors appropriate for comprehensive multimodal corridor planning and targeted investment in transit, bikeway, and pedestrian path improvements if discretionary funds become available.

M 4.2.6 **Identify and Fill Gaps in Complete Streets.** The City shall identify streets that can be made "complete" either through a reduction in the number or width of travel lanes or through two-way conversions, with consideration for emergency vehicle operations. The City shall consider including new bikeways, sidewalks, on-street parking, and exclusive transit lanes on these streets by re- arranging and/or re-allocating how the available space within the public right of way issued. All new street configurations shall provide for adequate emergency vehicle operation.

Goal M 5.1 Integrate Bicycle System. Create and maintain a safe, comprehensive, and integrated bicycle system and set of support facilities throughout the city that encourage bicycling that is accessible to all. Provide bicycle facilities, programs, and services and implement other transportation and land use policies as necessary to achieve the City's bicycle mode share goals as documented in the Bicycle Master Plan.

Policies

M 5.1.1 **Bicycle Master Plan.** The City shall maintain and implement a Bicycle Master Plan that carries out the goals and policies of the General Plan. All new development shall be consistent with the applicable provisions of the Bicycle Master Plan.

M 5.1.2 **Appropriate Bikeway Facilities.** The City shall provide bikeway facilities that are appropriate to the street classifications and type, number of lanes, traffic volume, and speed on all rights-of-way.

M 5.1.3 **Continuous Bikeway Network.** The City shall provide a continuous bikeway network consisting of bike-friendly facilities connecting residential neighborhoods with key destinations and activity centers (e.g., transit facilities, shopping areas, education institutions, employment centers).

M 5.1.4 **Conformance to Applicable Standards.** The City shall require all bikeways to conform to applicable Federal, State, and City standards while considering a full range of innovative bikeway design best practices.

Central City 2035 Community Plan

The Central City Community Plan serves as a vision to identify how the Downtown and Midtown areas can contribute to the General Plan's vision of becoming the most livable city in America. Where the 2035 General Plan's goals, policies, and implementation programs define the roadmap of strategies to achieve the overall citywide vision, the Central City Community Plan vision is specific to the Downtown area's role in supporting the overall citywide vision.

Policies

CC.M 1.1 **Major Street System.** The City shall establish a major street system which will route vehicular traffic to the activity areas of the Central City without directing such traffic through predominantly residential neighborhoods.

CC.M 1.5 **Richards Boulevard and Capital City Freeway Connection.** The City shall designate the connection of Richards Boulevard and Capital City Freeway as a potential transportation corridor that may be considered in the future for various modes of travel.

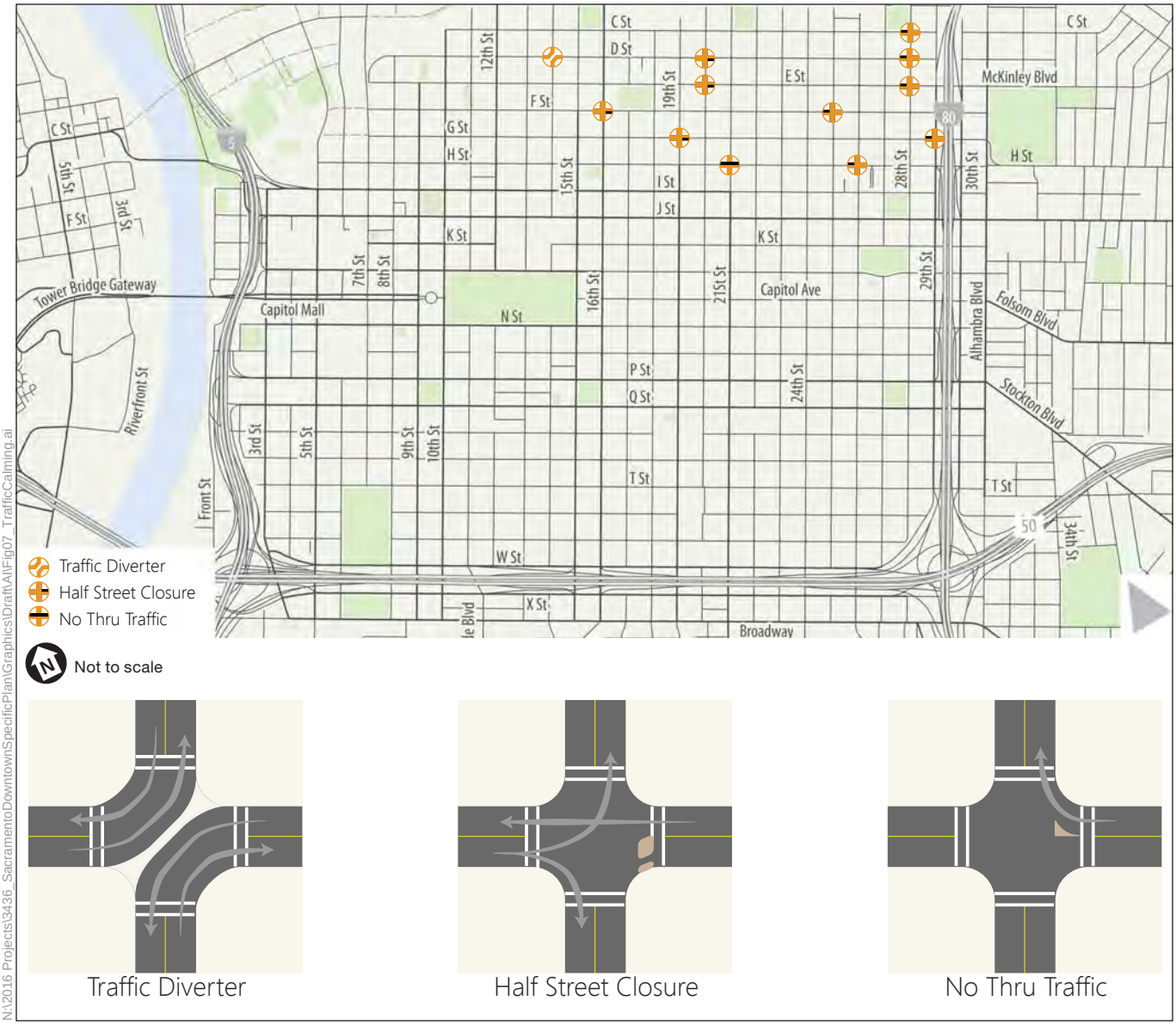
CC.M 1.6 **Commuter Bikeways.** The City shall prioritize the addition of commuter routes to existing bikeways. The plan recommends that the City identify a north/south route and an east/west bike route that would be improved for commuter use. Improvements would involve modification of the streets to accommodate bicycle commuters rather than exclusively for auto use.

Neighborhood Traffic Management Program

The City has a Neighborhood Traffic Management Program (NTMP) under which neighborhoods can petition the City to install traffic calming devices to address residents' concerns about traffic. There are two phases of an NTMP. Phase I involves less restrictive modifications such as the installation of high visibility speed limit signs, striping of bike lanes, and the installation of speed humps. Phase II involves more restrictive measures including half- and full-street closures, diverters, and one-way/two-way street conversions. Refer to **Figure 4.12-7** for the location and types of Phase II traffic calming measures, which result in changes to travel patterns.

Sacramento Railyards Specific Plan

The Sacramento Railyards Specific Plan covers 244 acres north of Downtown and proposes development of a transit-oriented mixed-use urban environment that will include between 10,000 and 12,000 dwelling units, 2.3 million square feet of office, 1.3 million square feet of retail, 1,100 hotel rooms, 491,000 square feet of mixed-use flex space, and 485,390 square feet of historic/ cultural uses.



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SOURCE: Fehr & Peers, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.12-7
Phase II
Traffic Calming Measures

ESA

Since the Railyards area is subject to the Sacramento Railyards Specific Plan, it is not included in the DSP area.

River District Specific Plan

The River District Specific Plan (2011) establishes planning and development standards for the redevelopment of approximately 773 acres of land located at the confluence of the American and Sacramento Rivers, north of the downtown core of the City of Sacramento.

Since the River District is subject to the River District Specific Plan, it is not included in the DSP area.

Sacramento Docks Specific Plan

The Sacramento Docks Specific Plan proposes redevelopment of 29 acres along the Sacramento riverfront just south of Tower Bridge that will convert the existing commercial and industrial activity to both residential and nonresidential uses.

The Sacramento Docks is located within the DSP area.

4.12.3 Analysis, Impacts and Mitigation

Significance Criteria

The following describes the significance criteria used to identify plan-specific and cumulatively considerable impacts to the transportation and circulation system.

Vehicle Miles Traveled

Transportation impacts to VMT are considered significant if:

- For residential uses – the residential use is not within a Transit Priority Area and VMT per capita exceeds 85 percent of the existing average regional household VMT per capita; and/or
- For office/employment center uses – the office/employment center use is not within a Transit Priority Area and VMT per employee exceeds 85 percent of the existing average VMT per employee for Sacramento County; and/or
- For retail uses - the retail use is not within a Transit Priority Area and it is a “regional” retail use.

Intersections

Impacts to intersections are considered significant if:

- The traffic generated by the plan degrades the overall roadway system operation to the extent that the plan would not be consistent with General Plan Policy M 1.2.2 relating to the City’s Level of Service Policy.

General Plan Mobility Element Policy M 1.2.2 sets forth definitions for what is considered an acceptable LOS. All study intersections are located in the Core Area and are governed by Policy

M 1.2.2 (a). LOS F is acceptable at these locations during peak hours, provided that the project (plan) provides improvements to other parts of the citywide transportation system within the project site vicinity (or within the area affected by the project's vehicular traffic impacts) to improve transportation-system-wide roadway capacity, to make intersection improvements, or to enhance non-auto travel modes in furtherance of the General Plan goals. Road widening or other improvements to road segments are not required.

The above significance criterion is the City's interpretation of how General Plan Policy M 1.2.2 should be applied in the Core Area and Priority Investment Areas of the City. This policy allows these areas to have intersections that operate at LOS F. However, such conditions should not be detrimental to other General Plan circulation policies (including but not limited to policies M 1.2.1, 1.2.4, 1.3.3, and 1.3.5), which pertain to providing high-quality transit, walkable neighborhoods and business districts, continuous and connected bikeways, TDM, emergency response, and other circulation considerations. Therefore, while LOS F peak hour operating conditions at a single intersection may be considered acceptable, an entire roadway system that experiences severe gridlock, and hampers all modes of travel is generally not considered acceptable. To this end, the evaluation of intersection LOS focuses on the totality of system operations to assess consistency with General Plan Policy M 1.2.2.

In developing policy M 1.2.2, the City evaluated the benefits of allowing lower levels of service in order to promote infill development within an urbanized high density area of the city that reduces VMT and supports more transportation alternatives, including biking, walking, and transit, as compared to requiring a higher level of service that would accommodate more cars but may also require widening roads and would result in increased VMT and greenhouse gas (GHG) emissions. Based on this evaluation, the City determined that LOS F is acceptable during peak hours within the Core Area, provided that the project provides improvements to other parts of the citywide transportation system within the project site vicinity (or within the area affected by the project's vehicular traffic impacts) to improve transportation-system-wide roadway capacity, to make intersection improvements, or to enhance non-auto travel modes in furtherance of the general plan goals.

The City's LOS policy was adopted to allow decreased levels of service (e.g., LOS F) in the urbanized Core Area of the City that supports more transportation alternatives and places residents proximate to employment, entertainment, retail and neighborhood centers and thus reduces overall vehicle miles traveled and results in environmental benefits (e.g., improved air quality and reduced GHG emissions).

Freeway Facilities

A significant impact would occur if:

- The plan degrades LOS from acceptable (without the plan) to unacceptable (with the plan);
- The LOS (without project) is already (or projected to be) unacceptable and the plan leads to a perceptible worsening of the applicable performance measure for freeway operations; or

- The plan causes off-ramp traffic to queue back to the freeway gore point (the diverging point or merging point of two lanes) or mainline, or worsens an existing/projected queuing problem.

Pedestrian Circulation

Impacts to pedestrian circulation are considered significant if the proposed plan would:

- Adversely affect existing or planned pedestrian facilities; or
- Fail to adequately provide for access by pedestrians.

Transit Facilities

Impacts to the transit system are considered significant if the proposed plan would:

- Adversely affect public transit operations; or
- Fail to adequately provide access to transit.

Bicycle Facilities

Impacts to bicycle facilities are considered significant if the proposed plan would:

- Adversely affect existing or planned bicycle facilities; or
- Fail to adequately provide for access by bicycle.

Methodology and Assumptions

This section describes the analysis techniques, assumptions, and results used to identify potential significant impacts of the DSP on the transportation system. This section first describes the improvements proposed by the DSP and then documents the analysis methodology.

Plan Description

The transportation elements of the DSP are based on the goals, objectives and transportation improvements developed for Sacramento "Grid 3.0," the City's plan to integrate a number of planned transportation improvements and programs and to enhance the downtown street grid. This plan, described in *GRID 3.0 - Planning the Future of Mobility in the Sacramento Central City* (adopted by City Council on August 16, 2016), was shaped by significant input from community stakeholders, who identified overarching themes and objectives, provided input on modal priorities for blocks within the Grid, and provided input on potential network enhancements.

The DSP includes a high level of investment in pedestrian facilities plus various "conversions" of some one-way streets that will allow for installation of new bike lanes and exclusive transit lanes. All of these improvements are consistent with Grid 3.0 with the following exceptions:

- Capitol Mall between 5th Street and 9th Street –lane reduction from a four-lane cross section to a two-lane cross section

- 10th Street between I Street and L Street –lane reduction from a three-lane cross section to a two-lane cross section
- J Street between 16th Street and 19th Street –lane reduction from a three-lane cross section to a two-lane cross section
- 10th Street between Railyards Boulevard and C Street – removed multimodal connection, consistent with recently updated Railyards Specific Plan

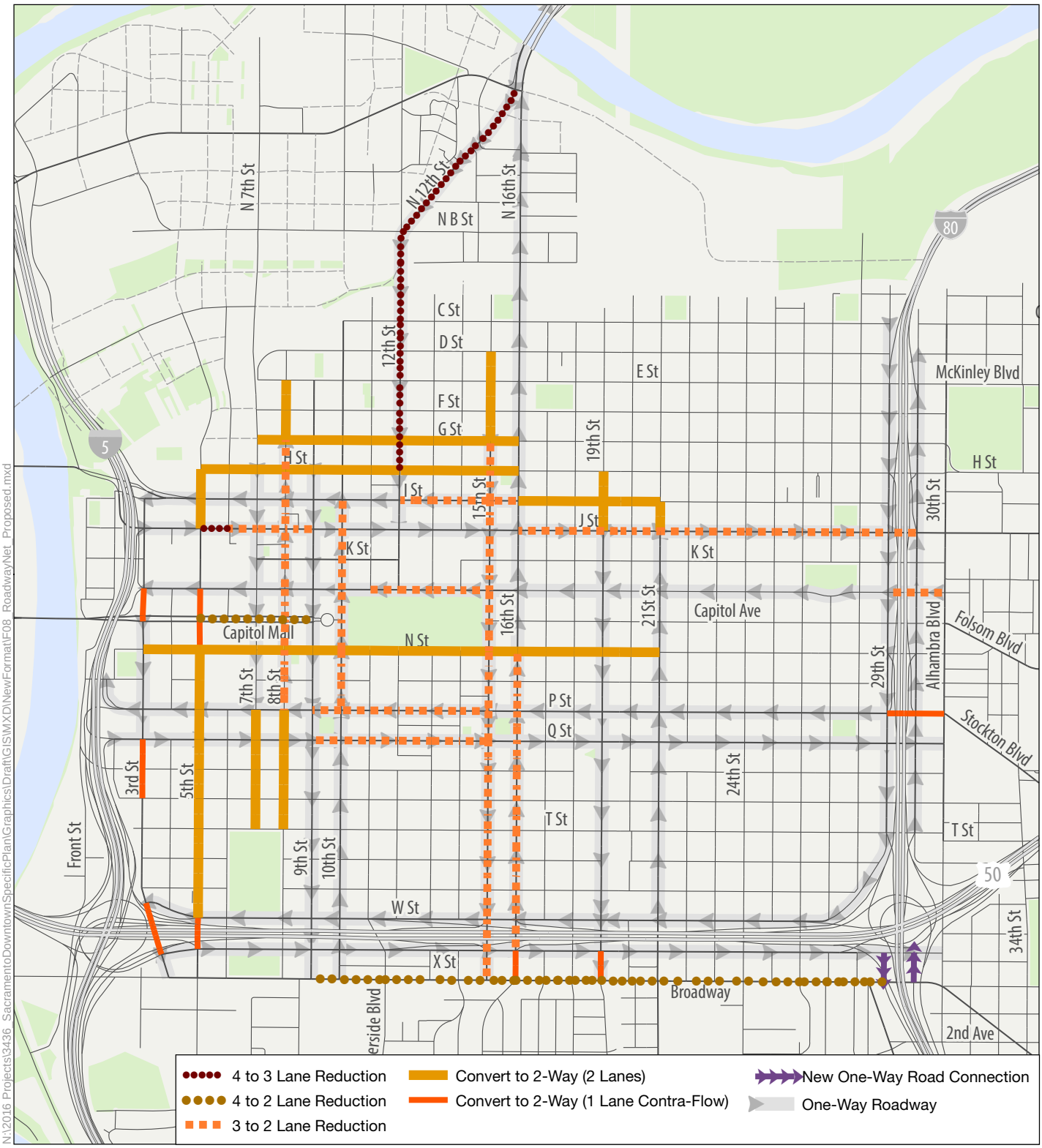
The elements of the proposed DSP transportation system are discussed below.

Roadway Network Improvements

- **Figure 4.12-8** displays the DSP's proposed roadway network and includes the following types of street conversions:
- Three-Lane to Two-Lane Conversion for Bike Lanes – that involve reducing the number of travel lanes on one-way streets from three lanes to two lanes. The reduction in travel lanes would allow for the provision of on-street bike lanes on streets that currently have no bike facilities;
- Three-Lane to Two-Lane Conversion for Transit Lanes – that involve reducing the number of travel lanes on one-way streets from three lanes to two lanes. The reduction in travel lanes would allow for the provision of dedicated transit lanes to improve transit operations on streets with high transit vehicle volumes and/or high transit ridership;
- Two-Way Conversions – that transform one-way streets with three travel lanes to two-way flow. The reduction from three to two travel lanes would allow for the provision of on-street bike lanes on streets that currently have no bike facilities; and
- Two-Way Conversions with Third "Contraflow" Lane – that maintain a total of three travel lanes. Two travel lanes would be maintained in the direction of the existing one-way travel flow, while one lane would be converted to provide travel in the opposite direction. Since a lane reduction would not be included in this project type, new bicycle or transit lanes would not be included.

Table 4.12-7 summarizes key proposed transportation improvements included as part of the DSP:

- 290 blocks of pedestrian enhancements focused on gap closures and locations with high pedestrian volumes
- 82 additional blocks of two-way streets
- 188 additional blocks with on-street bike lanes - a 55 percent increase from today
- Up to 27 blocks with exclusive transit lanes within core area where there would be more that 70 transit vehicles per hour during peak periods
- Up to 189 blocks would have a reduction in traffic lanes to create room for on-street bike lanes and exclusive transit, as well as widened sidewalks on a few blocks (i.e., Capitol Mall)



Not to scale

SOURCE: Fehr & Peers, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.12-8
Proposed Roadway Network

ESA

TABLE 4.12-7
DSP KEY TRANSPORTATION IMPROVEMENTS (BY NUMBER OF BLOCKS)

Facility	Existing Network	Proposed DSP Network	Change	
			Amount	Percent
Pedestrian Enhancements	-	290	290	-
One-way Streets	429	349	-80	-19%
Two-way Streets	781	863	82	10%
On-street Bike Lanes	340	528	188	55%
Exclusive Bus Lanes	0	27	27	-
Blocks with lane reductions	-	189	189	-

SOURCE: DKS, 2017.

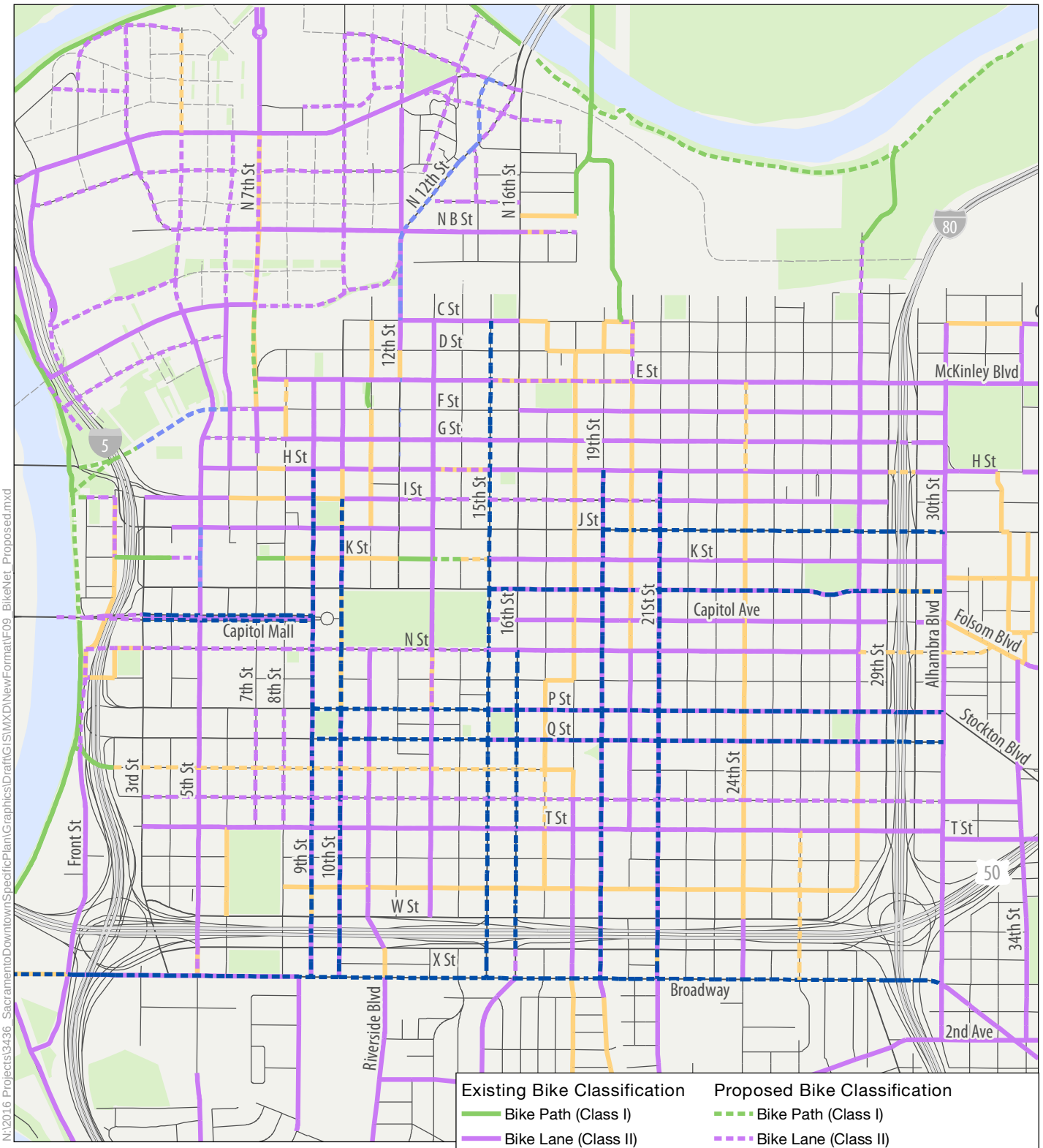
The proposed DSP would include the re-opening of two City blocks – 29th and 30th Streets between X Street and Broadway. These streets were closed when US 50/SR 99 freeway interchange was constructed in the 1950s, but it is feasible to construct streets along their original alignments. Modeling conducted as part of Grid 3.0 found that re-opening these streets would help shift traffic off of Broadway, which is proposed to have a "road diet" (reduction from four lanes to two lanes) to allow future addition of bike lanes and transit improvements. Each of these new connections would be about 370 feet long.

Bicycle Network Improvements

The proposed plan includes a variety of investments intended to improve access by bicyclists, which are displayed in **Figure 4.12-9**. As shown in Figure 4.12-9, the proposed bicycle network improvements include:

- Class I bike paths – bike paths are for the exclusive use of bicyclists and pedestrians. The proposed plan includes a limited number of high-priority bike paths along the Sacramento River from I Street to Capitol Mall, along 7th Street from Railyards Boulevard to F Street, along the south side of the American River east of 16th Street, along F Street from the Railyards to Old Sacramento and the American River and on K Street from 13th Street to 14th Street.

- Class II bike lanes – bike lanes are on-street facilities that provide delineated (i.e., striped) separation from adjacent travel lanes or parking lanes. Providing separation from motorized vehicle traffic increases comfort for bicyclists. The proposed plan includes bike lanes on several Central City streets including Front Street from Capitol Mall to Q Street, 2nd Street from I Street to K Street, 7th Street from P Street to T Street, 8th Street from P Street to T Street, 13th Street from N Street to P Street, 20th Street from C Street to E Street, 28th Street from Sutter's Landing Park to B Street, E Street from 15th Street to 20th Street, F Street from 6th Street to 7th Street, G Street from 5th Street to 8th Street and from 29th Street to 30th Street, H Street from 13th Street to 15th Street, I Street from 12th Street to 21st Street, K Street from 4th Street to 5th Street, Capitol Mall from Tower Bridge to 3rd Street, N Street from Front Street to 15th Street and S Street from 3rd Street to Alhambra Boulevard. Additionally, the DSP includes planned bike lanes on several streets within with Railyards and River District Specific Plan areas consistent with these plans.



Not to scale

SOURCE: Fehr & Peers, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.12-9
Proposed Bike Network

ESA

- Buffered bike lanes (Class II enhanced facilities) – buffered bike lanes are enhancements to Class II bike lanes that provide buffer space to separate the bike lane from adjacent travel lanes and/or parking lanes. This increased separation generally increases comfort for bicyclists. Buffered bike lanes are proposed on one-way streets that currently have bike lanes on both sides of the street. The proposed plan includes buffered bike lanes on several streets including 9th Street from H Street to Broadway, 10th Street from I Street to Broadway, 15th Street from C Street to Broadway, 16th Street from N Street to X Street, 19th Street from H Street to Broadway, 21st Street from H Street to Broadway, K Street from 19th Street to Alhambra Boulevard, L Street from 15th Street to Alhambra Boulevard, Capitol Mall from 3rd Street to 9th Street, P Street from 9th Street to Alhambra Boulevard, Q Street from 9th Street to Alhambra Boulevard, and Broadway from the Sacramento River Bike Trail to Alhambra Boulevard.

  It should be noted that the proposed plan provides flexibility for the City to construct Class IV separated bikeways (see description below) in place of the buffered bike lanes described above, which would provide additional separation between bicyclists and motor vehicles.

- Class III bike routes – bike routes are roadways shared between bicyclists and motorized vehicles. The proposed plan includes bike routes on several Downtown and Midtown streets including 8th Street from E Street to F Street, 17th Street from R Street to T Street, 24th Street from E Street to H Street, 26th Street from T Street to Broadway, H Street from 29th Street to 30th Street, N Street from 28th Street to Folsom Boulevard and R Street from 2nd Street to 17th Street.

- Class IV separated bikeways (also known as protected bikeways or cycle tracks) – separated bikeways improve upon buffered bike lanes by providing vertical separation between bike lanes and the adjacent travel lanes. Vertical separation can be provided with concrete curb and gutter, bollards or on-street parking. Specially designed intersection treatments ensure that mid-block comfort and safety for all users is maintained at intersections. The proposed plan includes separated bikeways on three Downtown streets including 5th Street from J Street to L Street, North 12th Street from Richards Boulevard to C Street and F Street from I-5 (where there is a Class I bike path connection) to 6th Street.

These investments are intended to increase Central City accessibility for bicyclists by closing gaps in the existing system and by enhancing existing facilities to create a Low Stress Bicycle Network (i.e., a bicycle network that provides for a high level of user comfort).

Pedestrian Network Improvements

The Grid's network of pedestrian facilities is amongst the most complete of pedestrian networks in the City. Sidewalks exist along both sides of Central City streets. Crosswalks, in some cases enhanced with flashing beacons or signals, are provided abundantly across Central City streets and new installations are considered consistent with the City's *Pedestrian Crossing Guidelines* (2014). And in many cases, sidewalks cross major barriers to pedestrian travel including I-5, US 50 and the Capital City Freeway.

The proposed plan includes a variety of investments intended to improve access by pedestrians in the Central City. These include:

- Pedestrian-scale street lighting – the proposed plan includes pedestrian-scale street lighting throughout the Central City.

- Streetscape projects – the proposed plan includes streetscape projects such as street lighting, street furniture (benches, planters, etc.), widening of sidewalks, improved landscaping and new/improved crosswalks consistent with the City's *Pedestrian Crossing Guidelines* on several streets including 3rd Street from I Street to R Street, 7th Street from Capitol Mall to O Street, 8th Street from H Street to O Street, 9th Street from J Street to R Street, 10th Street from J Street to R Street, 12th Street from C Street to L Street, 15th Street from J Street to R Street, 16th Street from C Street to R Street, 19th Street from J Street to S Street, 21st Street from J Street to S Street, H Street from 5th Street to 12th Street, J Street from 7th Street to 29th Street, L Street from 7th Street to 29th Street, Capitol Mall from 3rd Street to 9th Street, N Street from 3rd Street to 10th Street, R Street from 3rd Street to 10th Street and Broadway from 3rd Street to 24th Street.

- Connector street enhancement projects – the proposed plan includes connector street enhancements that provide new sidewalks and intersection crossing treatments to mitigate the barrier that freeways surrounding Downtown and Midtown Sacramento present to pedestrian travel. The proposed plan includes these on 5th Street from Broadway to W Street, 6th Street from Broadway to W Street, 8th Street from Broadway to W Street, 9th Street from Broadway to W Street, 10th Street from Broadway to W Street, Riverside Boulevard from Broadway to W Street, North 12th Street from C Street to Richards Boulevard, 15th Street from Broadway to W Street, 16th Street from Broadway to R Street, North 16th Street from C Street to Richards Boulevard, 19th Street from Broadway to S Street, 21st Street from Broadway to S Street, 24th Street from Broadway to W Street, E Street from 29th Street to Alhambra Boulevard, H Street from 29th Street to Alhambra Boulevard, J Street from 29th Street to Alhambra Boulevard, K Street from 29th Street to Alhambra Boulevard, Capitol Avenue from 29th Street to Alhambra Boulevard, P Street from 29th Street to Alhambra Boulevard and Q Street from 29th Street to Alhambra Boulevard.

- Gap projects – whereas connector street enhancement projects generally upgrade sidewalks and intersection crossing treatments at existing crossings of barriers, the gap projects included in the proposed plan address barriers to pedestrian travel with new connections. The proposed plan includes these along the Sacramento River Bike Trail from R Street to Broadway, 2nd Street from Neasham Circle to N Street, 7th Street from Railyards Boulevard to F Street, 20th Street from R Street to S Street, 28th Street from Sutter's Landing Park to B Street, various segments of 29th Street from B Street to T Street, various segments of 30th Street from J Street to T Street, Alhambra Boulevard north of B Street, F Street from the I Street Bridge to 7th Street, I Street from Front Street to 3rd Street, J Street from 2nd Street to 3rd Street and O Street from Front Street to 2nd Street.

- Activity center enhancement projects – the proposed plan includes activity center enhancement projects that will expand existing pedestrian facilities adjacent to major activity centers such as Golden 1 Center, Old Sacramento, City Hall and Cesar Chavez Plaza Park. The proposed plan includes activity center enhancement projects along the Sacramento River Bike Trail from I Street to Capitol Avenue, 4th Street from L Street to N Street, various segments of 5th Street from I Street to N Street, 6th Street from L Street to Capitol Avenue, 7th Street from H Street to Capitol Avenue, 9th Street from H Street to J Street, 10th Street from H Street to J Street, 20th Street from J Street to K Street, I Street from 9th Street to 10th Street, J Street from 3rd Street to 5th Street, K Street from 12th Street to 13th Street and L Street from 3rd Street to 5th Street.

Figure 4.12-10 displays the DSP proposed pedestrian investments.

Transit Network Improvements

The conversion projects include reducing the number of travel lanes on select one-way streets (e.g., J Street, L Street, 8th Street, and 9th Street) from three lanes to two lanes to provide dedicated transit lanes where the number of transit vehicles is projected to exceed 70 during the peak hour. Dedicated transit lanes would be implemented only when transit volumes warrant. The dedicated transit priority lanes will all be "right side" travel lanes and will be striped in red. Non-transit vehicles will be prohibited from using these dedicated transit lanes unless they are turning right at an upcoming intersection or accessing a parking facility on the right side of the street. The restrictions for the dedicated transit priority lanes may be limited to peak hours during initial implementation periods.

Additionally, the DSP proposed to enlarge bus stop areas at high demand locations by constructing bulb-outs, larger pedestrian waiting areas, enhanced sidewalks, and lighting. A total of 12 high activity bus stops have been identified for improvements.

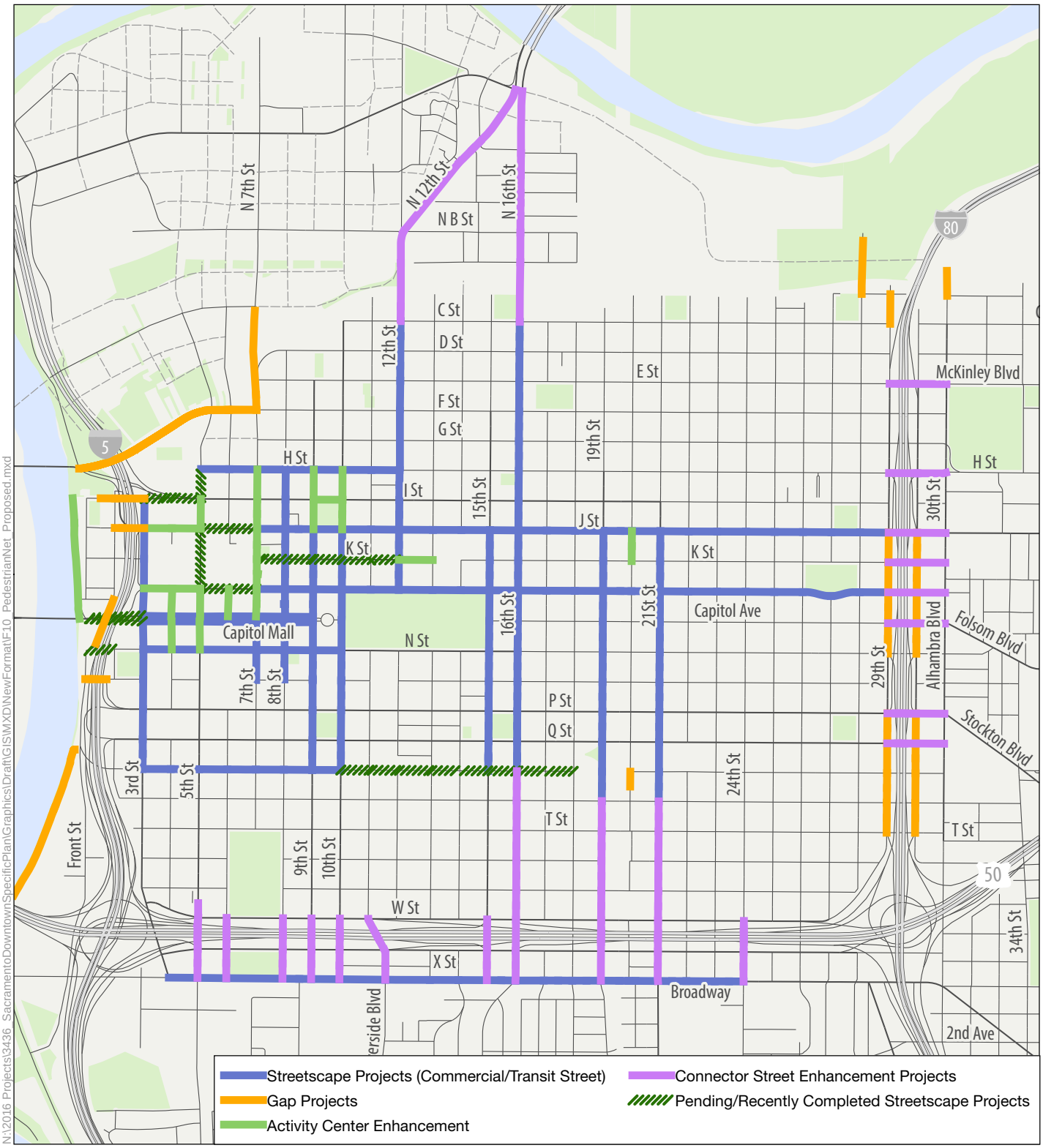
Figure 4.12-11 displays the DSP's proposed transit investments.

Travel Demand Forecasting

The primary tool used for travel demand forecasting was SACSIM, the same tool used for calculating VMT. While the analysis of the DSP is focused on a study area that covers the Central City, SACSIM is a regional model covering the six county SACOG region. It simulates the "activities" and travel behavior for each individual resident in the region on "typical" weekday. Thus the model predicts how the DSP interacts with land uses region-wide and the entire regional transportation system.

The refined SACSIM-based forecasting process that was developed for the detailed analysis of the DSP area was used to estimate a number of system-wide performance measures, including traffic turning-movement forecasts at intersections, average VMT per capita, and average VMT per employee.

While SACSIM uses parcel-level detail, its traffic assignment process uses larger traffic analysis zones (TAZs). SACSIM's TAZ system and roadway system is not detailed enough to evaluate all of the key signalized intersections or all the local streets in the DSP area. Thus a block-level TAZ system and comprehensive roadway network was developed for the DSP analysis to provide traffic volume assignments for all streets in the DSP area. A detailed comprehensive parking inventory for the entire Central City allowed commuter vehicle trips to be assigned to where people park, not just where they work. This refined detailed model was run with existing development/demographic estimates and the existing transportation system to validate its traffic forecasting results to existing traffic count data.



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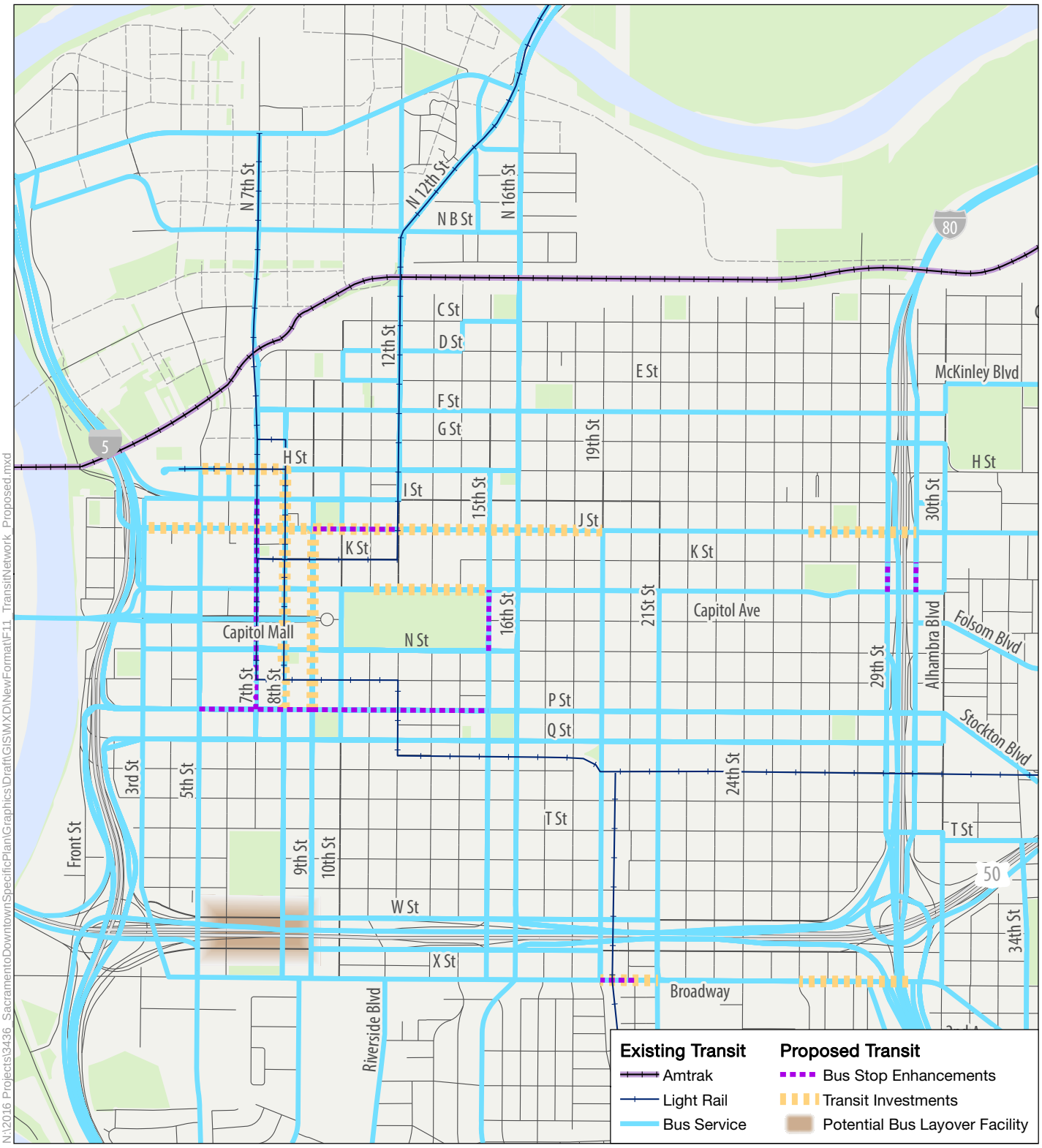
Not to scale

SOURCE: Fehr & Peers, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.12-10
Proposed Pedestrian Improvements

ESA



Not to scale

SOURCE: Fehr & Peers, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.12-11
Proposed Transit Investments

ESA

Land Use Forecasts

The cumulative/future year transportation analysis of the DSP is based on 2036 development forecasts prepared by SACOG for the 2016 MTP/SCS. Outside the Central City, SACOG's 2036 development forecasts by parcel were used directly. Within the Central City, the population and number of dwelling units and jobs are consistent with the SACOG's 2036 residential totals for the Central City as a whole. However, a detailed analysis of the City's "pipeline" and "opportunity" sites was conducted and the base year to 2036 growth was allocated to different City blocks than SACOG's forecasts. It should be noted that in addition to accounting for growth in the number of dwelling units and jobs, the model also accounts for corresponding growth in the number of students attending schools and colleges within the City and surrounding region.

Future Transportation System

The analysis of cumulative conditions assumes the 2036 transportation system in SACOG's 2016 MTP/SCS. Cumulative transportation projects that would affect travel in and out of the DSP area include the following:

- Downtown Sacramento to West Sacramento streetcar
- Green Line Light Rail extension to the Sacramento International Airport
- Increase in bus service with 15 minute or better headways from roughly one quarter of all services in base year to about half of all services by 2036. The number of buses entering Downtown Sacramento during peak periods is projected to increase by 75 percent by 2036
- New carpool lanes on I-5 from Downtown Sacramento south to Elk Grove and north to I-80
- New carpool lanes on US 50 from Downtown Sacramento to Watt Avenue
- I Street Bridge Replacement between Sacramento and West Sacramento
- New Sacramento River crossing at Broadway connecting Sacramento and West Sacramento
- New roadway connection between Richards Boulevard and 28th Street (Sutter's Landing Parkway)
- New all-modes American River crossing between Downtown and Natomas

The MTP/SCS also includes $100 million in funding for unspecified improvements to accommodate increased travel demand for all travel modes in the Central City. Since these improvements were not specified, they could not be included in SACOG's MTP/SCS analysis and were not assumed in the cumulative transportation system for the DSP. The MTP/SCS funding for transportation improvements in the Central City formed the basis for the Sacramento Grid 3.0 effort and the proposed DSP transportation system, described previously.

Refer to **Figure 4.12-12** for the locations of major cumulative transportation network improvements.

Impacts and Mitigation Measures

This section presents the results of the impact analysis, identifies significant impacts, and provides mitigation measures (where necessary). First, the focus is on presenting the effects of the

plan on existing conditions (i.e., the Existing Plus DSP condition) and addressing these effects. Then, the focus of analysis is on presenting the transportation effects of the plan in the context of cumulative conditions and addressing those effects.

Impact 4.12-1: The proposed DSP could increase Vehicle Miles Traveled (VMT).

Table 4.12-8 displays the regional average VMT per capita and VMT per employee for Existing Plus DSP conditions.

TABLE 4.12-8
ESTIMATED VMT – EXISTING PLUS DSP CONDITIONS

	Existing				Existing Plus DSP	
	Regional Average VMT	Countywide Average VMT	DSP Area Average VMT	DSP Area Percent of Regional Average VMT	DSP Area Average VMT	DSP Area Percent of Regional Average VMT
Per Capita	17.95	N/A	11.93	66%	11.64	65%
Per Employee	21.83	22.59	17.73	81%	17.30	79%

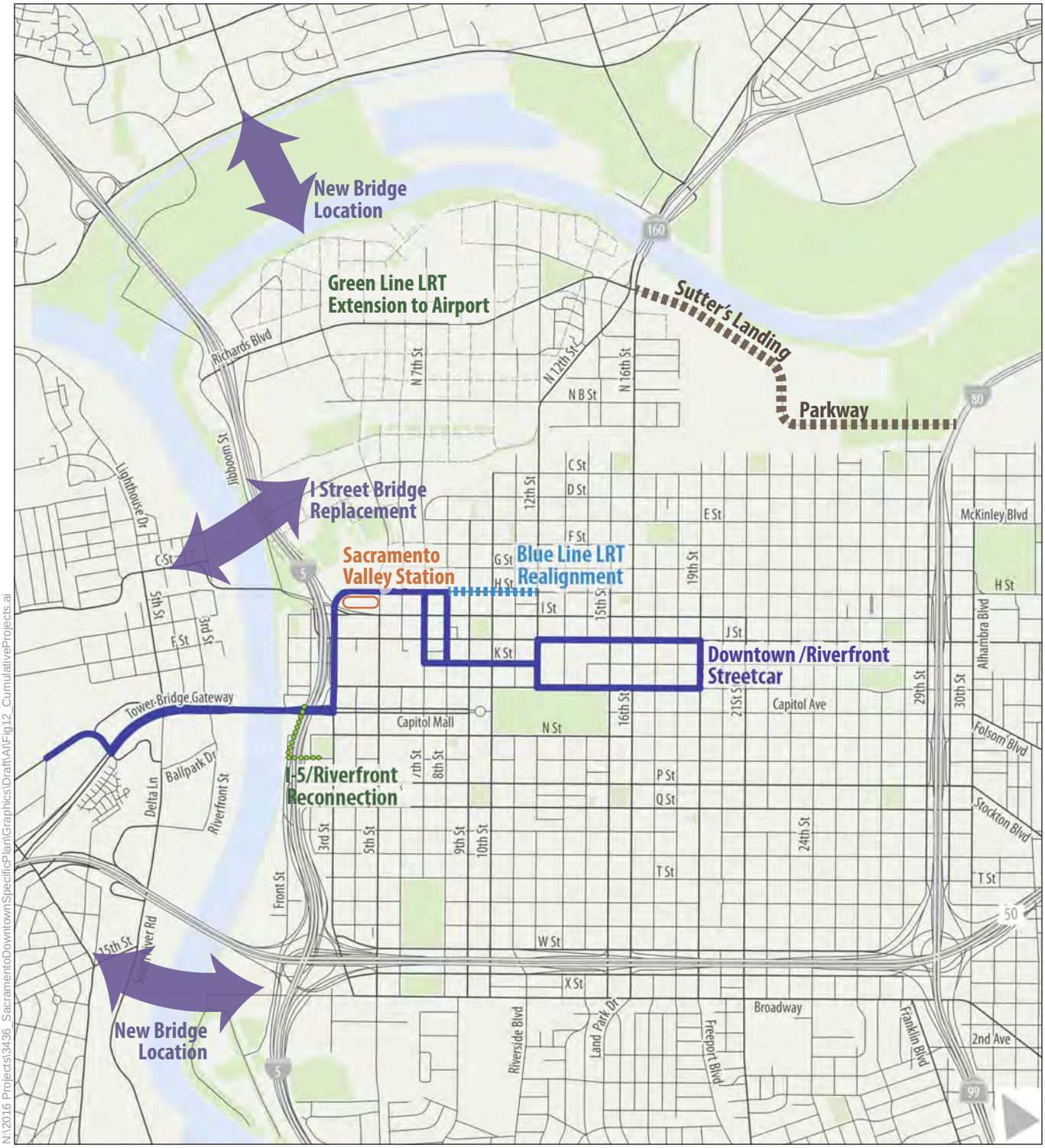
SOURCE: SACOG, 2017 and DKS, 2017.

As seen in Table 4.12-8, the average VMT per capita with the DSP is 66 percent of the regional average, and the average VMT per employee with the DSP is 81 percent of the regional average and 78 percent of the countywide average. Both of these measurements are below the 85 percent threshold used to identify significant VMT impacts.

There are a number of factors contributing to the low average VMT (compared to regional averages) for residential and commercial uses in the DSP area, including the following:

- The high density and diverse mix of land use uses in the DSP area;
- The ease of access for walking and biking in the DSP area provided by its street grid and close proximity of complimentary uses; and
- The proximity of high frequency transit services to both nearby and regional destinations, which makes nearly the entire DSP area a Transit Priority Area.

Since the average VMT per capita and average VMT per employee for the DSP are below the regional and countywide averages calculated by SACOG, the impact would be **less than significant**. Implementation of the DSP, including all consistent land use development and transportation improvements, would have no significant impact on per capita or per employee VMT in the DSP area, and would not require further project-specific analysis of VMT for the purposes of CEQA compliance.



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Not to scale

SOURCE: Fehr & Peers, 2017

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Figure 4.12-12
Cumulative Transportation Projects

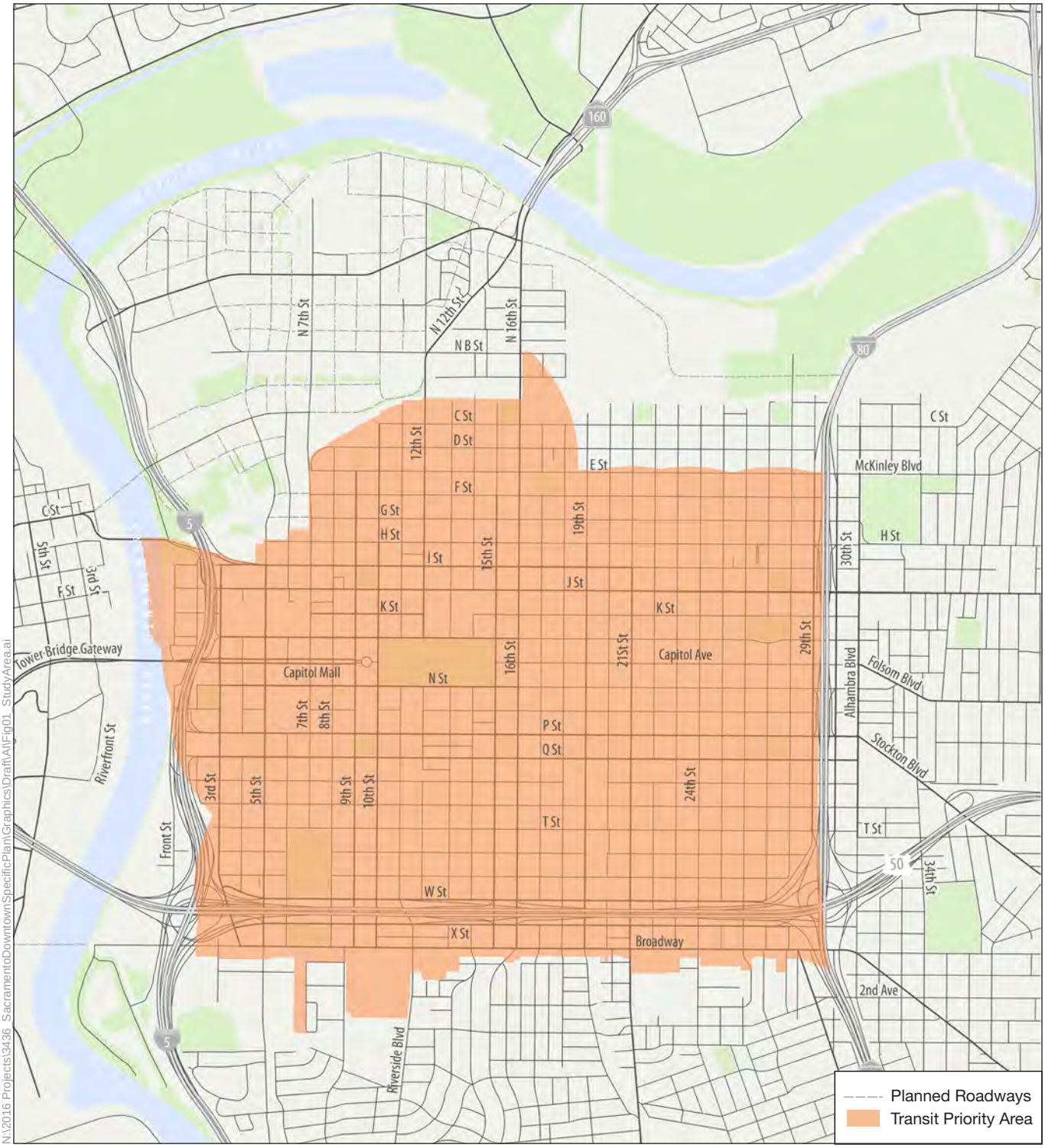
ESA

The enactment of SB 743 established CEQA exemptions for certain qualifying projects. Specifically, Public Resources Code section 21155.4 states the following:

> "(a) Except as provided in subdivision (b), a residential, employment center, as defined in paragraph (1) of subdivision (a) of Section 21099, or mixed use development project, including any subdivision, or any zoning, change that meets all of the following criteria is exempt from the requirements of this division:
>
> 1) The project is proposed within a transit priority area, as defined in subdivision (a) of Section 21099.
>
> 2) The project is undertaken to implement and is consistent with a specific plan for which an environmental impact report has been certified.
>
> 3) The project is consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy for which the State Air Resources Board, pursuant to subparagraph (H) of paragraph (2) of subdivision (b) of Section 65080 of the Government Code, has accepted a metropolitan planning organization's determination that the sustainable communities strategy or the alternative planning strategy would, if implemented, achieve the greenhouse gas emissions reduction targets.
>
> (b) Further environmental review shall be conducted only if any of the events specified in Section 21166 have occurred."

As defined above, pursuant to PRC section 21099(a)(7), Transit Priority Area is defined as an area within one half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon in SACOG's Transportation Improvement Program (currently 2020). The Revised Proposal states that lead agencies can presume that residential, retail, and office projects, as well as mixed use projects proposed within one-half mile of an existing major transit stop or an existing stop along a high-quality transit corridor would have a less-than-significant impact on VMT. Pursuant to PRC section 21064.3, a major transit stop is "a site containing an existing rail transit station or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." Pursuant to PRC section 21155(b), a high-quality transit corridor is defined as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

Figure 4.12-13 shows the portion of the DSP area would meet the criteria for proximity to transit identified in the Revised Proposal. This map is based on areas one-half mile from RT's existing light rail stations and one-half mile from two high quality transit corridors with service intervals of 15 minutes or less (RT's Routes 30 and 51). The areas in shown in yellow would meet the criteria for proximity to an existing major transit stop or an existing stop along a high-quality transit corridor.



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Not to scale

SOURCE: Fehr & Peers, 2017

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Figure 4.12-13
Transit Priority Area

ESA

Based on the discussion above, a new residential, retail, office/employment center and mixed use project in the yellow areas of Figure 4.12-13 would be determined to not have significant transportation impacts, and thus would not require further VMT analysis for the purposes of CEQA compliance, if it:

- Is consistent with the DSP, and
- Does not include more parking for use by residents, customers, or employees of the project than the maximum allowed by the City.

The "retail" category represents building space that can have a range of uses, including restaurants and bars. Likewise, the "office" categories represents building space with a range of potential uses, including hotels. **Table 4.12-9** shows how the City of Sacramento will categorize uses for the purpose of the analyzing VMT impacts of projects in the DSP.

It is recognized that on a project-by-project basis there would be variability in the per capita or per employee VMT generated in specific developments as a result of project-specific factors that are typically not under the control or jurisdiction of the City, including type/cost of housing units, income levels of future employees in new non-residential development, specific locations within the DSP area, etc. Thus, within the DSP area there would be individual projects that would have VMT characteristics that would be lower or higher than the overall average. Because the overall average for the DSP area would improve per capita and per employee VMT compared to existing conditions, individual residential, retail, office/employment center and mixed use projects would be considered to not exceed significance thresholds related to VMT.

Informed by input from OPR and SACOG, the City has defined types of transportation projects that would not likely lead to a substantial or measureable increase in VMT. If a DSP project falls within the categories of transportation projects listed below, then it is presumed VMT impacts would be less than significant for the project and a project-specific VMT analysis would not be required:

- Passenger rail projects, bus projects, or bicycle or pedestrian infrastructure projects;
- Reductions in number of through lanes, e.g., a "road diet;"
- Conversions of streets from one-way to two-way operation with no net increase in number of traffic lanes;
- Conversions of existing general purpose lanes to other uses such as transit lanes;
- Installation, removal, or reconfigurations of traffic lanes that are not for through-traffic, such as left, right, and U-turn pockets that are not utilized as through lanes;
- Additions of traffic wayfinding signage; and
- Lane additions under 0.3 miles in length.

TABLE 4.12-9
CITY OF SACRAMENTO LAND USE CATEGORIZATION FOR VMT ANALYSIS

Land Use Category	Planning and Development Code Definition	
A. Retail	• Adult entertainment business; Adult-related establishment; Auto (sales, storage, rental); Airport • Bar / nightclub • Check cashing center; Cinema; Commercial service; Community market • Drive-in theater (Aud/Theater-Util) • Gas station; Golf course, driving range; Gun range, rifle range • Laundromat, self-service; Library, archive; Lumber yard, retail	• Medical marijuana dispensary; Mobile home, sales; Mortuary, crematory; Museum • Outdoor market • Plant nursery; Produce stand; Produce stand (not exceeding 120 square feet) • Restaurant; Retail store; Riding stables • Sports complex; Superstore • Theater • Wholesale store
B. Office	• Bed and breakfast inn • Childcare center; College campus; College extension; Correctional facility • Hotel, motel • Kennel • Laboratory, research • Major medical facility	• Non-residential care facility • Office • Residential care facility • School – dance, music, art, martial arts; School, K-12; School, vocational • Veterinary clinic, veterinary hospital
C. Residential	• Residential use (including mixed use projects with greater than 50% of square footage dedicated to residential)	
D. Other	• Amusement center (indoor); Amusement center (outdoor); Assembly center (outdoor); Assembly – cultural (social); Assembly – religious; Athletic club (fitness studio) (gym/health; studio-util); Auto service, repair; Agriculture, general use; Animal slaughter; Auto dismantler • Boat dock, marina • Cemetery; Cleaning plant, commercial (laundromat Industrial-Util); Community garden; Contractor storage yard • Equipment rental, sales yard • Fuel storage yard • Hazardous waste facility; Heliport, helistop; High voltage transmission facility • Junkyard	• Livestock yard • Manufacturing, service, and repair; Mini storage, locker building; Mobile home, storage • Non-profit organization, food preparation for offsite consumption; Non-profit organization food storage and distribution; Non-profit organization, meal service facility • Passenger terminal; Public utility yard • Railroad yard, shop; Recycling facility • Solid waste landfill; Solid waste transfer station • Terminal yard, trucking; Telecommunications facility; Towing service, vehicle storage yard; Tractor or heavy truck service, repair / rental; Transit vehicle – service, repair, storage • Warehouse, distribution center; Well – gas, oil

NOTE:
Represents Title 17 land use categorization.
SOURCE: City of Sacramento

All of the proposed DSP transportation projects fit the categories that the City has defined as having no significant transportation impacts. As shown in Table 4.12-8, implementation of the proposed DSP transportation improvements would reduce per capita and per employee VMT in the DSP area, and would not cause average per capita and per employee VMT in the DSP area to exceed 85 percent of the regional and County averages. Thus, implementation of the proposed DSP transportation improvements would not result in a significant impact, and such

improvements would not require further project-specific VMT analysis for purposes of CEQA compliance.

The above conclusions support a **less than significant** finding for VMT-related impacts.

Mitigation Measures

None required.

Impact 4.12-2: The proposed DSP could worsen intersection operations.

Existing Plus DSP traffic volumes account for the shifting of travel patterns associated with implementation of the previously described DSP transportation improvements. **Figures 4.12-14A**, **4.12-14B**, and **4.12-14C** display the resulting AM and PM peak hour intersection traffic volumes under Existing Plus DSP conditions.

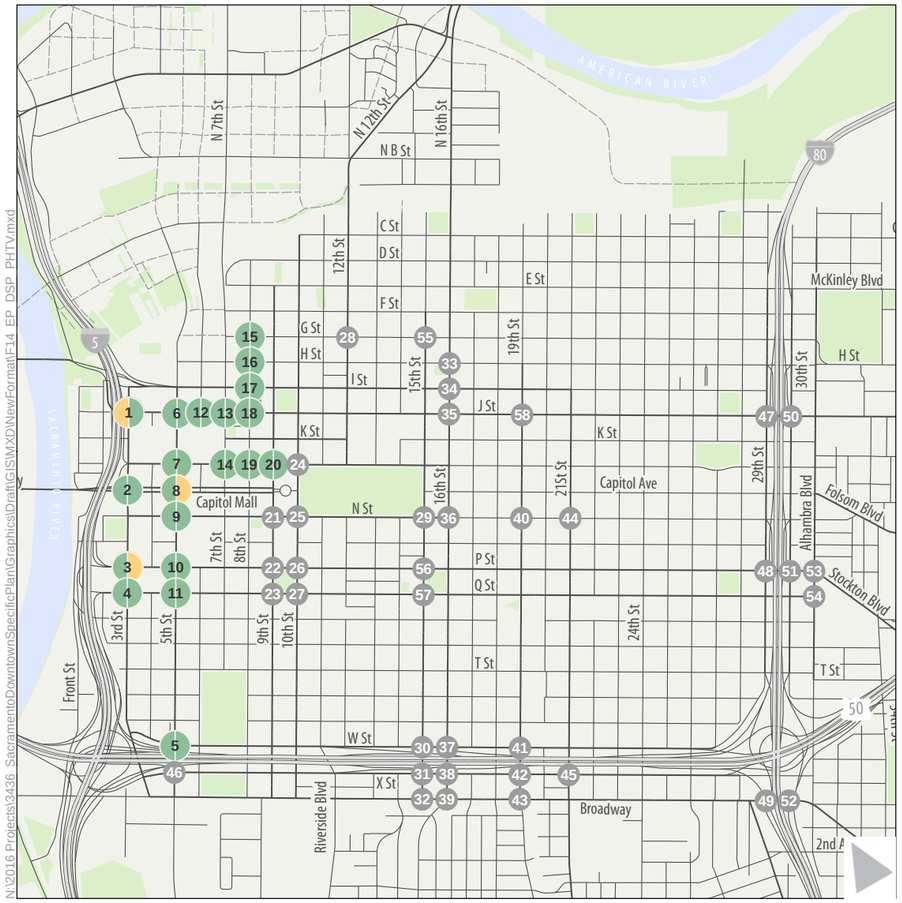
Table 4.12-10 shows the Existing Plus DSP peak-hour intersection operations at the study intersections (refer to Appendix G for technical calculations).

Under Existing Plus DSP conditions, most intersections would continue to operate acceptably at LOS C or better during both peak hours. Intersection 35 (J Street/16th Street), Intersection 8 (Capitol Mall/5th Street), and select intersections near freeway ramps, including Intersection 1 (J Street/3rd Street/I-5 off-ramps), Intersection 3 (P Street/3rd Street), Intersection 30 (W Street/ 15th Street/US 50 on-ramp), and Intersection 31 (X Street/15th Street/US 50 off-ramp), would operate acceptably at LOS D or LOS E during one or both peak hours. In general, the plan would result in relatively minor changes in traffic operations within the DSP area. In some cases, such as Intersection 53 (P Street/Alhambra Boulevard), the plan reduces intersection delay. These LOS results are consistent with General Plan Policy M 1.2.2 as described above.

As discussed previously, General Plan Policy M 1.2.2 was adopted to allow decreased levels of service (e.g., LOS F) in the urbanized Core Area of the City that supports more transportation alternatives and places residents proximate to employment, entertainment, retail and neighborhood centers and thus reduces overall vehicle miles traveled and results in environmental benefits (e.g., improved air quality and reduced GHG emissions). Based on this evaluation, the City determined that LOS F is considered acceptable during peak hours within the Core Area, therefore, the impact would be **less than significant**.

Mitigation Measures

None required.



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1 Study Intersection

2 Study Intersection (See Figure 4B/C)

Planned Roadways

AM (PM) Peak Hour Traffic Volume

Turn Lane

Traffic Signal

Stop Sign

Channelized Right-turn

Level of Service (LOS)

A - C D E F

AM LOS PM LOS

No Data

Not to scale

SOURCE: Fehr & Peers, 2017

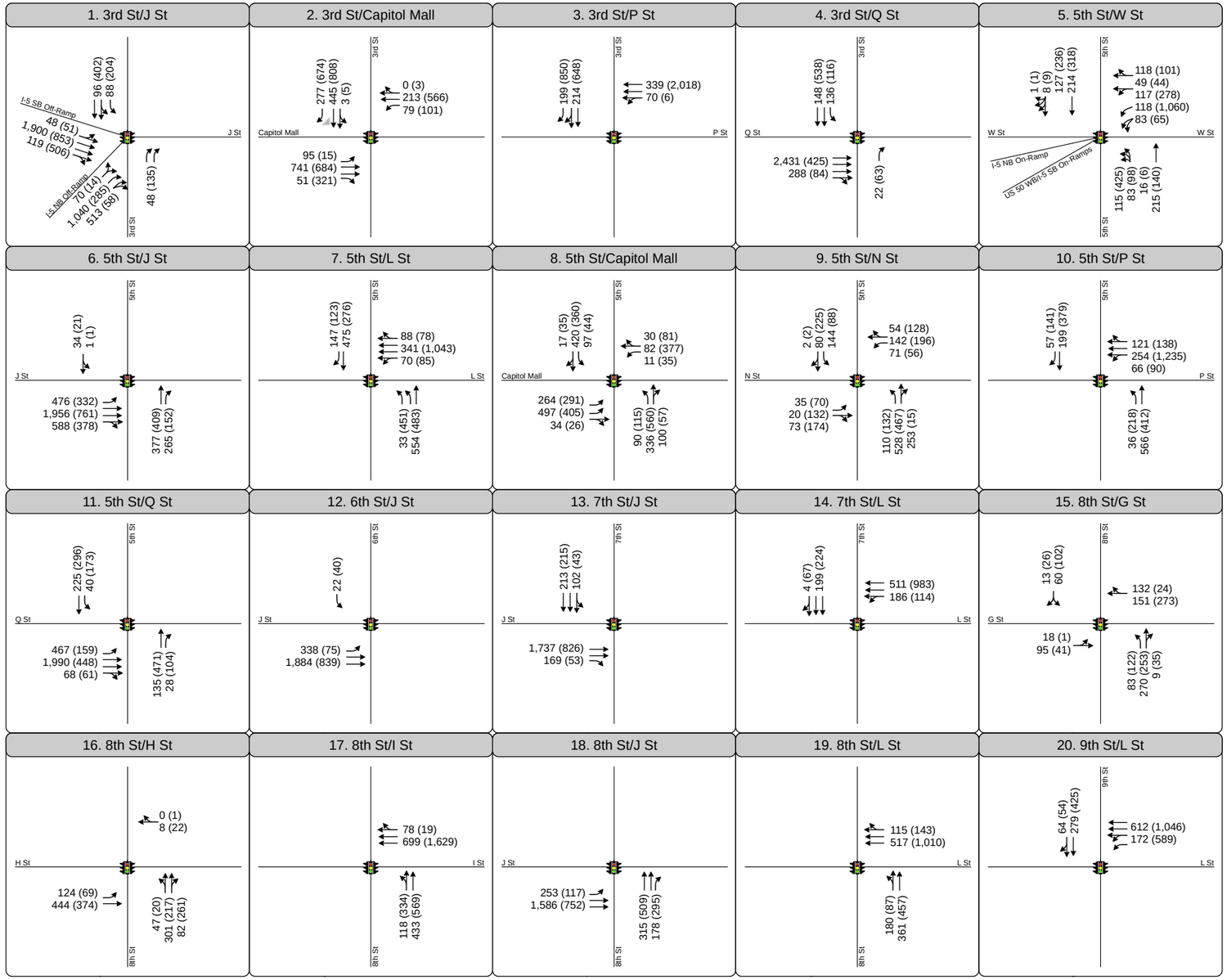

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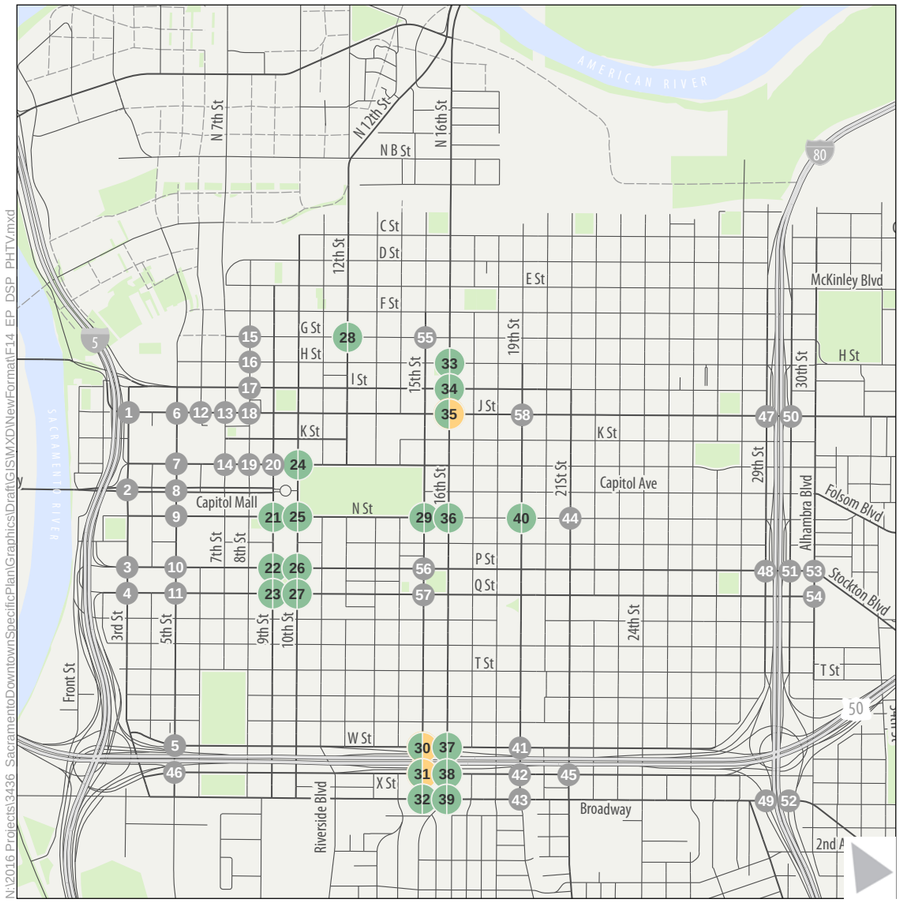
Figure 4.12-14A

Peak Hour Traffic Volume and Lane Configurations - Existing Plus DSP Conditions

ESA



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1 Study Intersection

2 Study Intersection (See Figure 4A/C)

Planned Roadways

AM (PM) Peak Hour Traffic Volume

Turn Lane

Traffic Signal

Stop Sign

Channelized Right-turn

Level of Service (LOS)

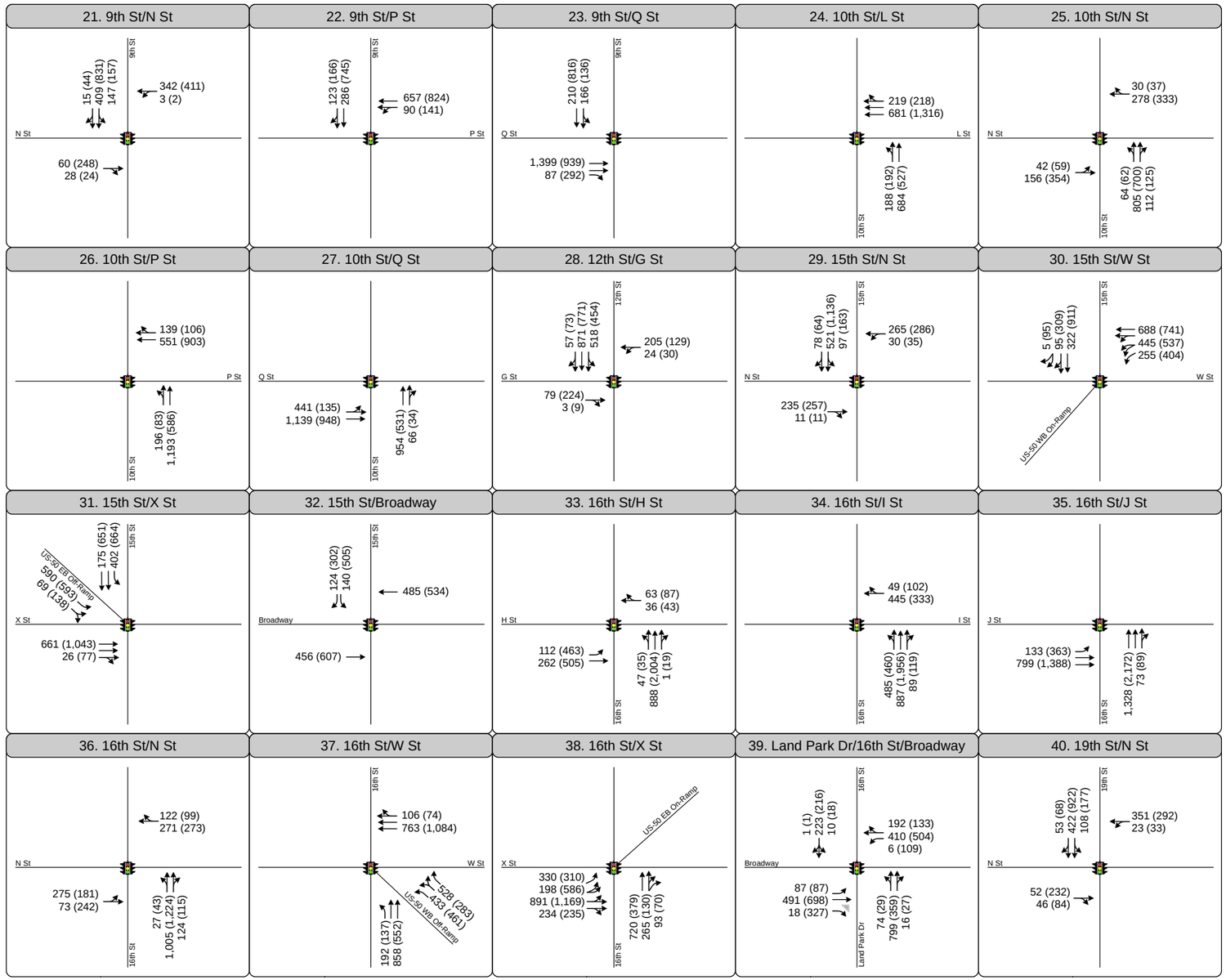
A - C D E F

AM LOS PM LOS

No Data

Not to scale

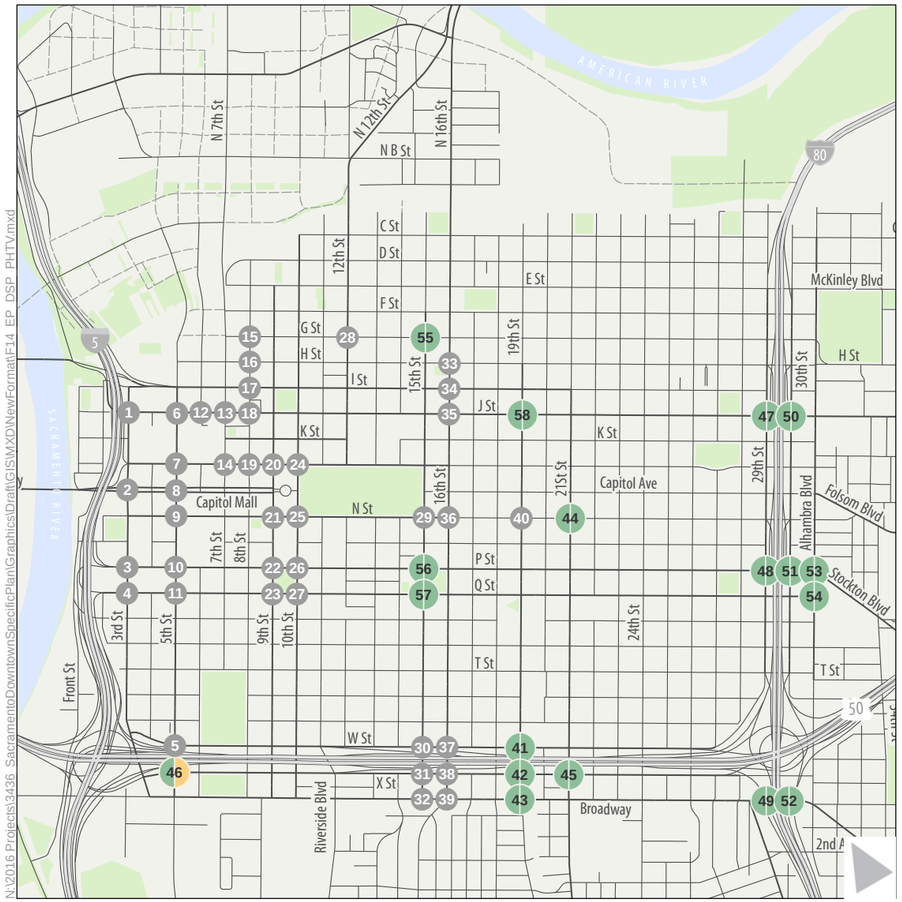
SOURCE: Fehr & Peers, 2017



City of Sacramento Downtown Specific Plan EIR

Figure 4.12-14B

Peak Hour Traffic Volume and Lane Configurations - Existing Plus DSP Conditions



1 Study Intersection

2 Study Intersection (See Figure 4A/B)

Planned Roadways

AM (PM) Peak Hour Traffic Volume

Turn Lane

Traffic Signal

Stop Sign

Channelized Right-turn

Level of Service (LOS)

A - C D E F

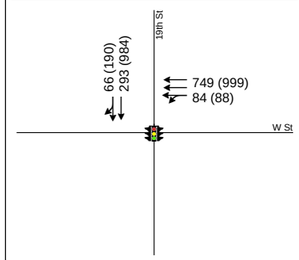
AM LOS PM LOS

No Data

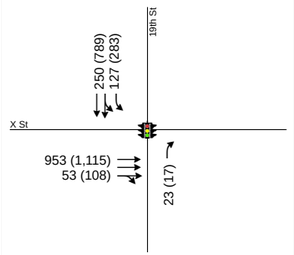
Not to scale

SOURCE: Fehr & Peers, 2017

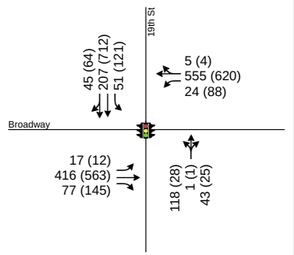
41. 19th St/W St



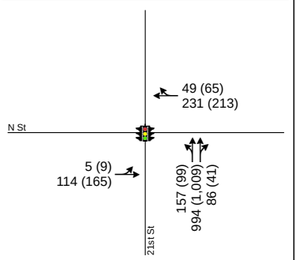
42. 19th St/X St



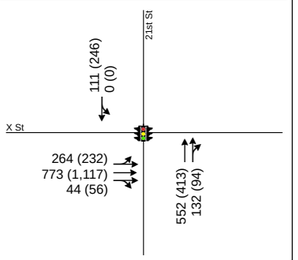
43. 19th St/Broadway



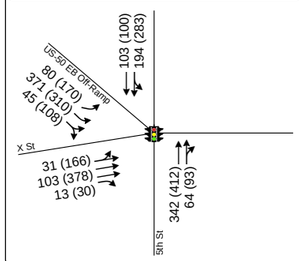
44. 21st St/N St



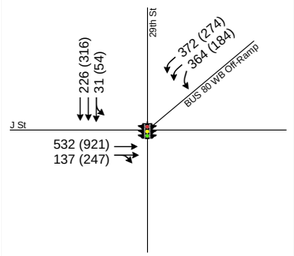
45. 21st St/X St



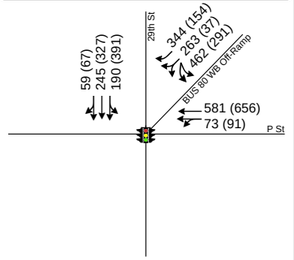
46. 5th St/X St



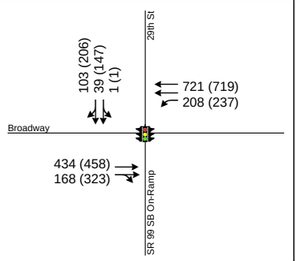
47. 29th St/J St



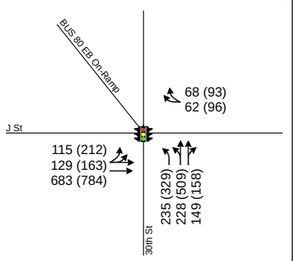
48. 29th St/P St



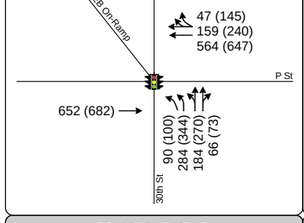
49. SR 99 SB On-Ramp/Broadway



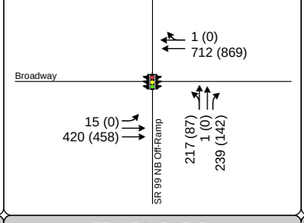
50. 30th St/J St



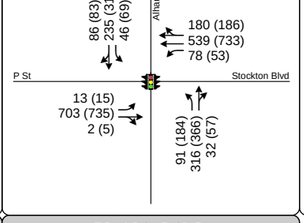
51. 30th St/P St



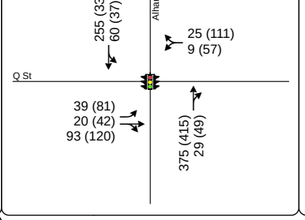
52. SR 99 NB Off-Ramp/Broadway



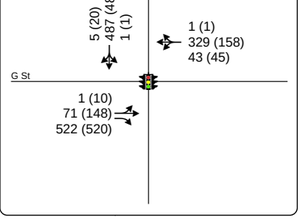
53. Alhambra Blvd/P St/Stockton Blvd



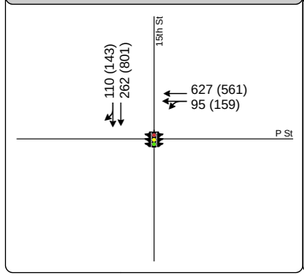
54. Alhambra Blvd/Q St



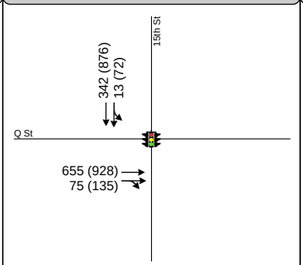
55. 15th St/G St



56. 15th St/P St



57. 15th St/Q St



58. 19th St/J St

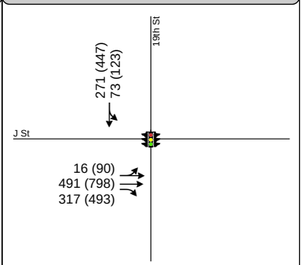


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TABLE 4.12-10
INTERSECTION OPERATIONS – EXISTING PLUS DSP CONDITIONS

Intersection	Traffic Control	Peak Hour	Existing		Existing Plus DSP	
			Delay	LOS	Delay	LOS
1. 3rd Street/J Street/I-5 Off-Ramp	Signal	A.M.	53	D	53	D
		P.M.	75	E	27	C
2. 3rd Street/Capitol Mall	Signal	A.M.	22	C	20	C
		P.M.	25	C	16	B
3. 3rd Street/P Street	Signal	A.M.	5	A	6	A
		P.M.	29	C	43	D
4. 3rd Street/Q Street	Signal	A.M.	10	B	10	A
		P.M.	5	A	7	A
5. 5th Street/W Street	Signal	A.M.	16	B	10	B
		P.M.	16	B	25	C
6. 5th Street/J Street	Signal	A.M.	18	B	11	B
		P.M.	11	B	14	B
7. 5th Street/L Street	Signal	A.M.	12	B	16	B
		P.M.	16	B	19	B
8. 5th Street/Capitol Mall	Signal	A.M.	12	B	27	C
		P.M.	14	B	35	D
9. 5th Street/N Street	Signal	A.M.	15	B	27	C
		P.M.	13	B	26	C
10. 5th Street/P Street	Signal	A.M.	10	B	12	B
		P.M.	16	B	19	B
11. 5th Street/Q Street	Signal	A.M.	10	A	7	A
		P.M.	11	B	18	B
12. 6th Street/J Street	Signal	A.M.	5	A	5	A
		P.M.	3	A	4	A
13. 7th Street/J Street	Signal	A.M.	10	A	12	B
		P.M.	8	A	9	A
14. 7th Street/L Street	Signal	A.M.	11	B	10	B
		P.M.	10	A	12	B
15. 8th Street/G Street	Signal	A.M.	9	A	10	A
		P.M.	7	A	10	A
16. 8th Street/H Street	Signal	A.M.	10	B	11	B
		P.M.	7	A	14	B
17. 8th Street/I Street	Signal	A.M.	8	A	9	A
		P.M.	16	B	15	B
18. 8th Street/J Street	Signal	A.M.	8	A	10	B
		P.M.	8	A	12	B
19. 8th Street/L Street	Signal	A.M.	10	B	11	B
		P.M.	12	B	12	B
20. 9th Street/L Street	Signal	A.M.	14	B	12	B
		P.M.	20	C	18	B
21. 9th Street/N Street	Signal	A.M.	9	A	11	B
		P.M.	12	B	13	B

TABLE 4.12-10
INTERSECTION OPERATIONS – EXISTING PLUS DSP CONDITIONS

Intersection	Traffic Control	Peak Hour	Existing		Existing Plus DSP	
			Delay	LOS	Delay	LOS
22. 9th Street/P Street	Signal	A.M.	6	A	6	A
		P.M.	12	B	7	A
23. 9th Street/Q Street	Signal	A.M.	15	B	17	B
		P.M.	10	B	12	B
24. 10th Street/L Street	Signal	A.M.	8	A	9	A
		P.M.	14	B	11	B
25. 10th Street/N Street	Signal	A.M.	9	A	11	B
		P.M.	9	A	12	B
26. 10th Street/P Street	Signal	A.M.	14	B	16	B
		P.M.	13	B	14	B
27. 10th Street/Q Street	Signal	A.M.	17	B	21	C
		P.M.	14	B	16	B
28. 12th Street/G Street	Signal	A.M.	10	B	13	B
		P.M.	10	A	14	B
29. 15th Street/N Street	Signal	A.M.	10	B	12	B
		P.M.	15	B	15	B
30. 15th Street/W Street/US 50 On-Ramp	Signal	A.M.	12	B	16	B
		P.M.	20	B	41	D
31. 15th Street/X Street/US 50 Off-Ramp	Signal	A.M.	19	B	27	C
		P.M.	40	D	42	D
32. 15th Street/Broadway	Signal	A.M.	15	B	14	B
		P.M.	16	B	22	C
33. 16th Street/H Street	Signal	A.M.	6	A	5	A
		P.M.	15	B	11	B
34. 16th Street/I Street	Signal	A.M.	8	A	8	A
		P.M.	11	B	17	B
35. 16th Street/J Street	Signal	A.M.	13	B	18	B
		P.M.	20	C	47	D
36. 16th Street/N Street	Signal	A.M.	11	B	16	B
		P.M.	11	B	22	C
37. 16th Street/W Street/US 50 Off-Ramp	Signal	A.M.	25	C	29	C
		P.M.	33	C	34	C
38. 16th Street/X Street/US 50 On-Ramp	Signal	A.M.	10	A	14	B
		P.M.	14	B	10	A
39. 16th Street/Broadway	Signal	A.M.	18	B	22	C
		P.M.	16	B	17	B
40. 19th Street/N Street	Signal	A.M.	8	A	9	A
		P.M.	15	B	16	B
41. 8th Street/I Street	Signal	A.M.	14	B	12	B
		P.M.	17	B	18	B

TABLE 4.12-10
INTERSECTION OPERATIONS – EXISTING PLUS DSP CONDITIONS

Intersection	Traffic Control	Peak Hour	Existing		Existing Plus DSP	
			Delay	LOS	Delay	LOS
42. 19th Street/X Street	Signal	A.M.	10	B	12	B
		P.M.	12	B	11	B
43. 19th Street/Broadway	Signal	A.M.	13	B	22	C
		P.M.	16	B	16	B
44. 21st Street/N Street	Signal	A.M.	14	B	15	B
		P.M.	16	B	16	B
45. 21st Street/X Street	Signal	A.M.	9	A	9	A
		P.M.	10	B	11	B
46. 5th Street/X Street	Signal	A.M.	21	C	25	C
		P.M.	24	C	50	D
47. 29th Street/J Street/Bus. 80 Off-Ramp	Signal	A.M.	22	C	24	C
		P.M.	20	C	28	C
48. 29th Street/P Street/Bus. 80 Off-Ramp	Signal	A.M.	17	B	27	C
		P.M.	15	B	30	C
49. 29th Street/Broadway/SR 99 On-Ramp	Uncontrolled (Existing) Signal (Existing Plus DSP)	A.M.	2 (6)	A (A)	9	A
		P.M.	2 (6)	A (A)	9	A
50. 30th Street/J Street/Bus. 80 On-Ramp	Signal	A.M.	20	B	23	C
		P.M.	17	B	22	C
51. 30th Street/P Street	Signal	A.M.	9	A	14	B
		P.M.	7	A	12	B
52. 30th Street/Broadway/SR 99 Off-Ramp	Signal	A.M.	6	A	6	A
		P.M.	6	A	6	A
53. Alhambra Boulevard/P Street	Signal	A.M.	21	C	17	B
		P.M.	32	C	23	C
54. Alhambra Boulevard/Q Street	Signal	A.M.	22	C	21	C
		P.M.	35	C	30	C
55. 15th Street/G Street	Signal	A.M.	9	A	10	B
		P.M.	8	A	10	B
56. 15th Street/P Street	Signal	A.M.	12	B	11	B
		P.M.	9	A	10	A
57. 15th Street/Q Street	Signal	A.M.	6	A	9	A
		P.M.	7	A	11	B
58. 19th Street/J Street	Signal	A.M.	10	A	10	B
		P.M.	12	B	18	B

NOTES:
1. For signalized intersections, average intersection delay is reported in seconds per vehicle for all approaches.
2. For uncontrolled intersections, the delay is reported in seconds per vehicle for the overall intersection and the worst movement (in parentheses).
BOLD text indicates the intersection operates at an unacceptable LOS based on the presiding jurisdiction's level of service policy.
UNDERLINED text indicates a potentially significant impact based on the significance criteria.

SOURCE: Fehr & Peers, 2017.

Impact 4.12-3: The proposed DSP could worsen freeway operations.

The LOS results presented below are based on daily volume-to-capacity comparisons and do not necessarily consider specific operational characteristics (e.g., length of weave sections, peak hour factors, etc.) within the I-5, SR 160, US 50, and Capital City Freeway corridors. Nevertheless, this data is valuable in understanding Caltrans' expectations of current and projected operating performance on State facilities.

Table 4.12-11 displays freeway operations under Existing Plus DSP conditions.

TABLE 4.12-11
FREEWAY OPERATIONS – EXISTING PLUS DSP CONDITIONS

Freeway Segment	Lanes	Existing Conditions		Existing Plus DSP Conditions	
		ADT Volume[1]	LOS[2]	ADT Volume[1]	LOS[2]
I-5 at L Street	9	180,800	F	179,600	E
I-5 at P Street	7	152,300	F	151,100	F
I-5 at W Street	6	83,300	C	82,500	C
US 50 at 15th Street	10	229,500	**F**	229,200	**F**
US 50 at 28th Street	8	165,200	**F**	165,500	**F**
Capital City Freeway at A Street	6	170,900	F	171,100	F
Capital City Freeway at I Street	8	135,700	D	135,600	D
Capital City Freeway at T Street	8	78,200	B	77,200	B
SR 160 at Exposition Boulevard	4	65,400	D	65,000	D

NOTES:
1. ADT = average daily traffic.
2. **BOLD** text indicates that the freeway operates at an unacceptable LOS based on Caltrans' level of service policy.

SOURCE: Fehr & Peers, 2017.

As shown in Table 4.12-11, all study freeway segments operate acceptably except for US 50, which operates unacceptably at LOS F under existing conditions and would continue to do so under Existing Plus DSP conditions. Additionally, implementation of the proposed DSP would increase traffic volume on a segment of US 50 that operations unacceptably under existing conditions. This would be a **potentially significant impact**.

Mitigation Measures

Mitigation Measure 4.12-3. Freeway Subregional Corridor Mitigation Program (SCMP).

Each project developed pursuant to the DSP that generates more than 100 vehicular peak hour trips that are directed toward the highway system shall:

- *Remit monetary payment to the I-5 Freeway SCMP. This remittance shall be completed prior to the issuance of building permits.*

OR

- *Negotiate a mutually acceptable agreement with Caltrans and the City.*

Significance After Mitigation: On April 5, 2016, the City approved the I-5 SCMP and certified its Supplemental EIR (SCH #2011012081). The SCMP would reduce auto travel on study area freeways by providing funding towards a diverse list of multimodal transportation improvement projects, including a new bridge across the American River, two new bridges across the Sacramento River, a streetcar system that would serve the study area, and new high occupancy vehicle (HOV) lanes on I-5.

The SCMP provides the option for development projects to monetarily contribute to the program, which would constitute mitigation for a project's impacts to the area's freeway system. To reduce the Plan's freeway impacts shown in Table 4.12-11, the Plan would participate in the SCMP through **Mitigation Measure 4.12-3**. Therefore, the Plan would not have significant impacts to freeway facilities in the area. Implementation of **Mitigation Measure 4.12-3** would reduce this impact to **less than significant** under CEQA.

Impact 4.12-4: The proposed DSP could worsen freeway off-ramp queueing.

Table 4.12-12 displays the Existing Plus DSP off-ramp queuing results within the study area during the AM and PM peak hours.

TABLE 4.12-12
AVERAGE MAXIMUM QUEUE LENGTHS – EXISTING PLUS DSP CONDITIONS

Location	Available Storage (ft)	Peak Hour	Average Maximum Queue Length (ft)	
			Existing Conditions	Existing Plus DSP Conditions
Interstate 5 SB Off-Ramp at J Street	1,550	A.M. P.M.	500 1,525	600 400
Interstate 5 NB Off-Ramp at J Street	1,025	A.M. P.M.	675 200	775 125
Interstate 5 SB Off-Ramp at Q Street	1,725	A.M. P.M.	425 100	325 100
Interstate 5 NB Off-Ramp at Q Street	2,075	A.M. P.M.	425 100	325 100
US 50 EB Off-Ramp at 15th Street	1,125	A.M. P.M.	225 250	225 275
US 50 WB Off-Ramp at 16th Street	1,050	A.M. P.M.	375 375	400 450
US 50 EB Off-Ramp at 5th Street	1,275	A.M. P.M.	225 250	275 275
Bus. 80 SB Off-Ramp at J Street	1,225	A.M. P.M.	350 250	325 250
Bus. 80 SB Off-Ramp at P Street	1,300	A.M. P.M.	250 175	400 275

NOTES:
1. **BOLD** text indicates that the queue exceeds the storage length.

SOURCE: Fehr & Peers, 2017.

As shown, all study freeway off-ramp queues would remain within the available storage area with implementation of the proposed DSP. Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

Impact 4.12-5: The proposed DSP could impact pedestrian facilities.

Adversely Affect Existing or Planned Pedestrian Facilities

The proposed plan does not include any components that will adversely affect existing pedestrian facilities. The proposed plan will only widen existing sidewalks, fill in gaps in existing sidewalks, and enhance the pedestrian environment with streetscape treatments such as pedestrian-scale lighting, landscaping, street furniture, etc. Bus stop enhancements, described in the transit section, would provide for wider pedestrian spaces at high activity bus stops. Roadway network projects would either reduce general purpose travel lanes to create dedicated transit lanes or on-street bikeways or would convert one-way roadways to two-way operation; none of these projects will result in wider roadways for pedestrians to cross. Additionally, reducing the number of travel lanes and converting one-way streets to two-way streets is likely to reduce travel speeds and therefore improve pedestrian safety.

The City's *Pedestrian Master Plan* (2006) identified the Central City as a high area of overall pedestrian improvement need. The *Pedestrian Master Plan* identified many Central City streets as Pedestrian Street Corridors and Pedestrian Nodes where features such as wider sidewalks, street lighting, landscaping, street furniture, wayfinding signage and crossing treatments should be considered. The process to develop the proposed plan considered these types of improvements across all Central City streets and includes them in the appropriate locations. The proposed plan also proposes similar improvements in areas identified by the *Pedestrian Master Plan* as Sidewalk Candidate Project Areas. Lastly, to address the *Pedestrian Master Plan's* Candidate Street Crossing Review Locations, subsequent to the *Pedestrian Master Plan* the City developed its *Pedestrian Crossing Guidelines* (2014) which address the process for reviewing and installing marked crosswalks.

As the proposed plan does not adversely affect any existing pedestrian facilities and accommodates planned pedestrian facilities identified in the *Pedestrian Master Plan*, the impact would be **less than significant**.

Fail to Adequately Provide for Access by Pedestrians

For the proposed plan to fail to adequately provide for access by pedestrians it would need to remove existing sidewalks or crossings in the Central City or preclude the future installation of sidewalks and crossings in priority locations.

As the proposed plan improves access for pedestrians in the Central City, the impact would be **less than significant**.

Mitigation Measures

None required.

Impact 4.12-6: The proposed DSP could impact transit facilities.

Adversely Affect Public Transit Operations

For the proposed plan to adversely affect public transit operations, it would have to create significant delay for buses and light rail trains in the DSP area. Public transit delay can be organized into several types: traffic delay due to congestion (roadway segment delay or intersection delay), traffic delay due to friction (trucks/taxi/transportation network company [i.e., Lyft, Uber] loading, parking maneuvers, car door openings, slow-moving bicyclists etc.), passenger stop delay and delay due to adding more transit stops. Each of these delay types is discussed more below.

Some of Downtown Sacramento's light rail system operates in its own right-of-way (12th Street to 24th Street on the Gold Line, Blue Line and portions of the Green Line; the Green Line from H Street to North B Street; and the Gold Line from 7th Street to Sacramento Valley Station). As the proposed plan does not affect these exclusive right-of-way segments, the delay analysis applies to buses and light rail vehicles that share travel lanes with vehicular and bicycle traffic.

Traffic Delay due to Congestion

Traffic delay due to congestion is caused by delay from traffic signals and delay from slow-moving traffic. In the Central City, most delay from slow-moving traffic is due to intersection delay given the tightly spaced grid, high volumes at freeway ramp junctions, high-volume turn movements, traffic flow interruptions due to driveways, and frequent signal spacing along many Central City streets.

The proposed plan includes a variety of roadway network and transit network projects that are intended to reduce transit vehicle delay resulting from traffic signals and slow-moving traffic. Specifically, the proposed plan includes several transit investments that could include transit signal priority or three-lane to two-lane conversions for dedicated transit lanes. Dedicated transit lanes will significantly reduce transit vehicle delay resulting from slow-moving traffic. Additionally, because dedicated transit lanes would allow transit vehicles to bypass traffic stopped at signalized intersections, traffic delay to transit vehicles caused by traffic signals at locations with dedicated transit lanes would be reduced as well. Proposed streets with transit investments include:

- 8th Street from H Street to P Street

- 9th Street from J Street to P Street
- H Street from 5th Street to 8th Street
- J Street from 3rd Street to 19th Street and from 26th Street to 30th Street
- Broadway from 19th Street to 21st Street and from 26th Street to 30th Street

The proposed plan also includes a variety of lane reductions and one-way to two-way conversions on Central City streets where dedicated transit lanes will not be provided. Intersection operations analysis included in the vehicular section of this report found that in Existing Plus DSP conditions, the proposed plan will increase delays by less-than-significant amounts; in fact, no intersections are projected to operate at LOS F and only one intersection would operate at LOS E during the peak hours under Existing Plus Project conditions (the 3rd Street/J Street/I-5 Off-Ramp intersection during the AM peak hour). Otherwise, Central City intersections are expected to operate at LOS D or better which will facilitate relatively high operating speeds for transit in Sacramento's most constrained transportation environment.

Additionally, the City's Traffic Operations Center (TOC), located in City Hall, monitors traffic conditions and system performance in real time. Intelligent transportation system (ITS) measures employed by the TOC include a computer-based traffic signal control system, sensors, and closed-circuit television surveillance equipment. This allows the City to monitor and adjust traffic signal timing to respond to conditions and help maintain traffic flow. The City is currently collaborating with SACOG and Sacramento County to develop an ITS Master Plan that will guide future improvements to this system.

As the proposed plan does not adversely affect public transit operations due to traffic delay, the impact would be **less than significant**.

Traffic Delay due to Friction

Traffic delay due to friction is caused by curbside activity interfering with buses including truck/ taxi/transportation network company loading, parking maneuvers, car doors being opened and slow-moving bicyclists obstructing buses. This type of curbside activity already occurs on Central City streets and is likely to increase as population and employment grows. On streets both with and without dedicated transit lanes, buses will be allowed to merge out of the dedicated transit lane or the right-most travel lane to go around these friction points. Where buffered bike lanes (enhanced Class II facilities) or separated bikeways (Class IV facilities) are proposed many of these buffered bike lanes will likely be constructed on the left side of the street to avoid conflicts with transit vehicles. Lastly, although there are some short segments of Class III bike routes that occur on roadways with transit (such as 8th Street from F Street to G Street and G Street from 29th Street to 30th Street), the combined effect of these segments being very short, the frequency of buses on these lines and the anticipated number of bicyclists causing friction for these buses will not result in a significant amount of delay for transit.

As the proposed plan does not adversely affect public transit operations due to friction caused by curbside activity, the impact would be **less than significant**.

Passenger Stop Delay

Passenger stop delay is caused by transit vehicles dwelling at a stop to allow time for passengers to board and alight and by transit vehicles dwelling at a stop to allow passengers to pay fares.

Dwell Delay due to Boarding and Alighting

Dwell delay due to boarding and alighting is determined by the number of passengers entering or exiting the transit vehicle at a given stop, limitations of space on the transit vehicle, limitations of space on the sidewalk or platform, and the number and width of the doors on the transit vehicle.

To address limitations of space on the sidewalk or platform, the proposed plan includes longer stop areas, bus bulb-outs and enhanced sidewalks at 12 high activity bus stops in the Central City. These improvements will add space to the sidewalk or platform thereby reducing dwell delay due to boarding and alighting. The proposed plan does not include reducing the area of any platforms or sidewalks that would increase dwell delay due to boarding and alighting.

The proposed plan does not include any changes to RT's vehicle fleet that would reduce the number and width of doors, so the proposed plan will not increase dwell delay due to boarding and alighting.

Dwell Delay due to Fare Collection

Dwell due to fare collection is affected by the fare payment system in place: "pay the driver" systems versus smartcards or mobile device payment versus proof of payment systems.

Currently, RT uses "pay the driver" systems on its buses and proof of payment systems on its light rail trains; the proposed streetcar line is also likely to use a proof of payment system. The proposed plan does not include any changes to these systems. Although not proposed as a part of this plan, RT is a participating agency in the Connect Card which allows for smartcard fare payment and use across multiple participating regional transit agencies. On buses, increasing the number of passengers using smartcard fare payment reduces dwell time due to fare collection (although passengers without a smartcard will still have the option to pay with cash). RT will continue with their proof of payment system for light rail trains, so no change in dwell time is expected.

Delay due to Adding More Transit Stops

Adding more transit stops causes transit vehicles to stop more frequently, thereby requiring extra deceleration and acceleration events and adding additional opportunities for passenger stop delay. The proposed plan does not include any new stops that would increase the frequency of deceleration and acceleration events or create additional opportunities for passenger stop delay. Additionally, the proposed plan does not include any changes to RT's vehicle fleet that would affect its deceleration/acceleration capabilities. The proposed plan does include expanding existing bus stops to accommodate the increased in transit ridership over time.

Based on the above assessment, the DSP would not adversely affect public transit operations due to passenger stop delay. Therefore, this impact would be a **less than significant**.

Fail to Adequately Provide Access to Transit

For the proposed plan to fail to adequately provide access to transit, it would either have to remove or reduce existing accessible transit service or fail to provide acceptable infrastructure (for people walking or people biking) to access transit stops and stations.

The proposed plan does not include any changes to RT's existing service and therefore would not affect accessibility relating to the provision of transit service.

The proposed plan includes a variety of improvements to improve conditions for people biking and people walking. The creation of more robust infrastructure for people biking and people walking will benefit transit by improving the ease, comfort and safety of walking or biking to and from transit stops and stations. Other analysis in this report found that impacts to bicycle facilities and pedestrian facilities are less than significant; therefore, the impact to providing accessibility to transit is **less than significant** as well.

Mitigation Measures

None required.

Impact 4.12-7: The proposed DSP could impact bicycle facilities.

The proposed plan would not impact bicycle facilities to unacceptable levels. Therefore, this impact would be **less than significant**.

Adversely Affect Existing or Planned Bicycle Facilities

For the proposed plan to adversely affect existing or planned bicycle facilities, it would need to diminish the quality of existing bikeways or preclude planned facilities from the City's *Bicycle Master Plan*.

The proposed plan does not include any projects that will adversely affect existing bicycle facilities. The proposed plan will only enhance existing bicycle facilities by filling in gaps in those facilities or increasing the separation of bicyclists within these facilities from adjacent travel lanes. Additionally, the proposed plan's bicycle facilities are consistent with those planned in the City's *Bicycle Master Plan*.

As the proposed plan does not adversely affect any existing bicycle facilities and accommodates planned bicycle facilities from the *Bicycle Master Plan*, the impact would be **less than significant**.

Fail to Adequately Provide for Access by Bicyclists

For the proposed plan to fail to adequately provide for access by bicyclists it would need to remove existing bikeways in the Grid or preclude the future installation of bikeways in priority locations.

As the proposed plan improves access for bicyclists in the Central City, the impact would be **less than significant**.

Mitigation Measures

None required.

Cumulative Impacts

Cumulative impacts refer to the combined effect of DSP impacts with the impacts of other past, present, and reasonably foreseeable future projects. The geographic area that could be affected by a project varies, depending on the type of environmental issue being considered. This cumulative impact analyses does not rely on any list of specific pending, reasonably foreseeable development proposals in the general vicinity of the proposed plan. As described below, this cumulative assessment relies on existing and future development accommodated under the City's General Plan, which is included in the SACOG MTP/SCS regional travel demand model.

For transportation and traffic impacts, the geographic focus of the cumulative analysis is the study area and intersections previously identified in Figure 4.12-1.

Impact 4.12-8: Implementation of the proposed DSP, in combination with other cumulative development, could contribute to increased vehicle miles traveled (VMT).

Table 4.12-13 displays the regional average VMT per capita and VMT per employee for Cumulative Plus DSP conditions.

TABLE 4.12-13
ESTIMATED VMT – CUMULATIVE PLUS DSP CONDITIONS

	Existing				Cumulative		Cumulative Plus DSP	
	Regional Average VMT	Countywide Average VMT	DSP Area Average VMT	Percent of Regional Average VMT	DSP Area Average VMT	Percent of Regional Average VMT	DSP Area Average VMT	Percent of Regional Average VMT
Per Capita	17.95	N/A	11.93	66%	8.62	48%	8.56	47%
Per Employee	21.83	22.59	17.73	81%	10.28	47%	10.21	47%

SOURCES: SACOG, 2017 and DKS, 2017.

As seen in Table 4.12-13, the average VMT per capita and average VMT per employee is expected to decrease under cumulative conditions. These decreases are due to the following:

- With the expected growth in residential units in the DSP area, the percentage of person trips remaining internal to the DSP area will increase by 2036, and most of those will be made by walking, biking and transit.

- Many of the DSP generated trips will also travel to new nearby growth areas – the Railyards, River District, and developing riverfront areas in West Sacramento. Thus there will be a higher percentage of short distance trips in the DSP area compared to today. Many of those nearby trips will also be made by walking, biking and transit.

The proposed DSP transportation improvements are projected to further decrease VMT to 47 percent of the regional average, which is well below the 85 percent threshold.

Since the average VMT per capita and average VMT per employee for the DSP are below the regional and countywide averages calculated by SACOG, the impact would **not be cumulatively considerable**. Implementation of the DSP, including all consistent land use development and transportation improvements, would have no significant impact on per capita or per employee VMT in the DSP area, and would not require further project-specific analysis of VMT for the purposes of CEQA compliance.

Furthermore, and as previously discussed, portions of the proposed DSP meet criteria established as part of SB 743 allowing for exemptions within Transit Priority Areas, and the transportation components of the DSP fall within categories that are presumed to have a less than significant impact.

The above conclusions support a **less than cumulatively considerable** finding for cumulative VMT-related impacts.

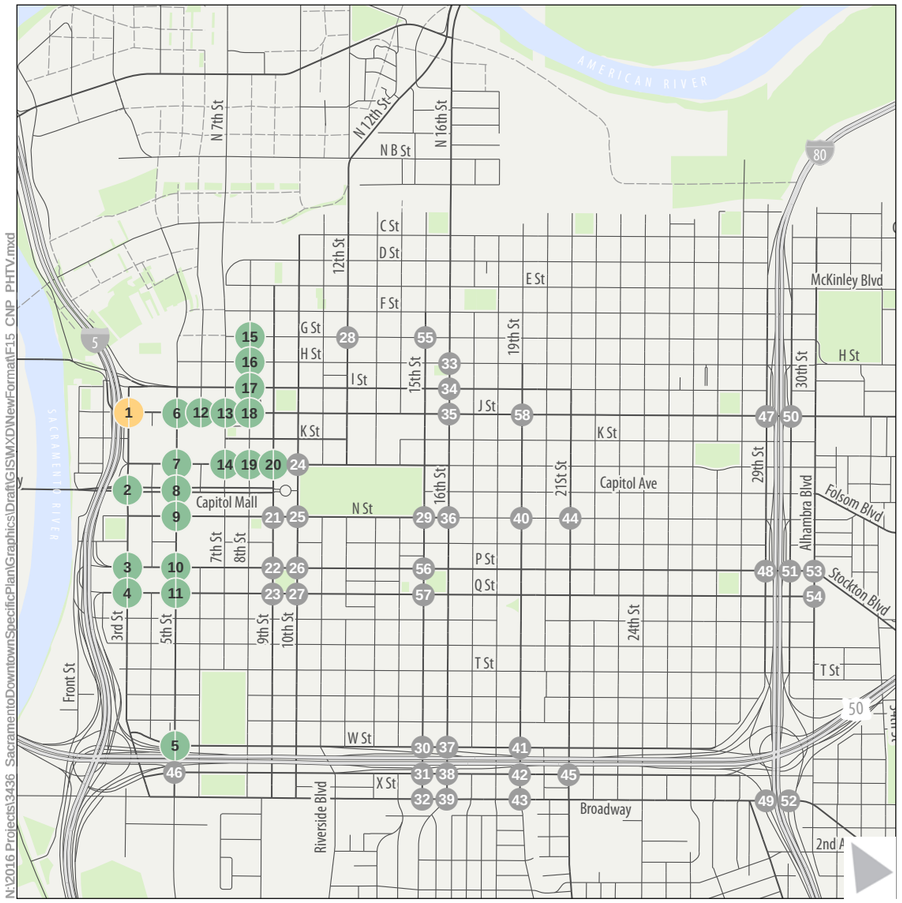
Mitigation Measure

None required.

Impact 4.12-9: Implementation of the proposed DSP, in combination with other cumulative development, could contribute to cumulative impacts to intersection operations.

Cumulative and Cumulative Plus DSP traffic volumes were determined using the traffic forecasting methodology previously presented. **Figures 4.12-15A**, **4.12-15B**, and **4.12-15C** display the AM and PM peak hour intersection traffic volumes under Cumulative Conditions. **Figures 4.12-16A**, **4.12-16B**, and **4.12-16C** display the AM and PM peak hour intersection traffic volumes under Cumulative Plus DSP conditions. **Table 4.12-14** shows the Cumulative Plus DSP peak-hour intersection operations at the study intersections (refer to Appendix G for technical calculations).

Under Cumulative Plus DSP conditions, all intersections would operate acceptably at LOS D or better except for Intersection 31 (15th Street/X Street/US 50 Off-Ramp), Intersection 35 (16th Street/J Street), and Intersection 46 (X Street/5th Street), which would operate acceptably at LOS E in the PM peak hour. These LOS results are consistent with General Plan Policy M 1.2.2 as described above.



1 Study Intersection

2 Study Intersection (See Figure 4B/C)

Planned Roadways

AM (PM) Peak Hour Traffic Volume

Turn Lane

Traffic Signal

Stop Sign

Channelized Right-turn

Level of Service (LOS)

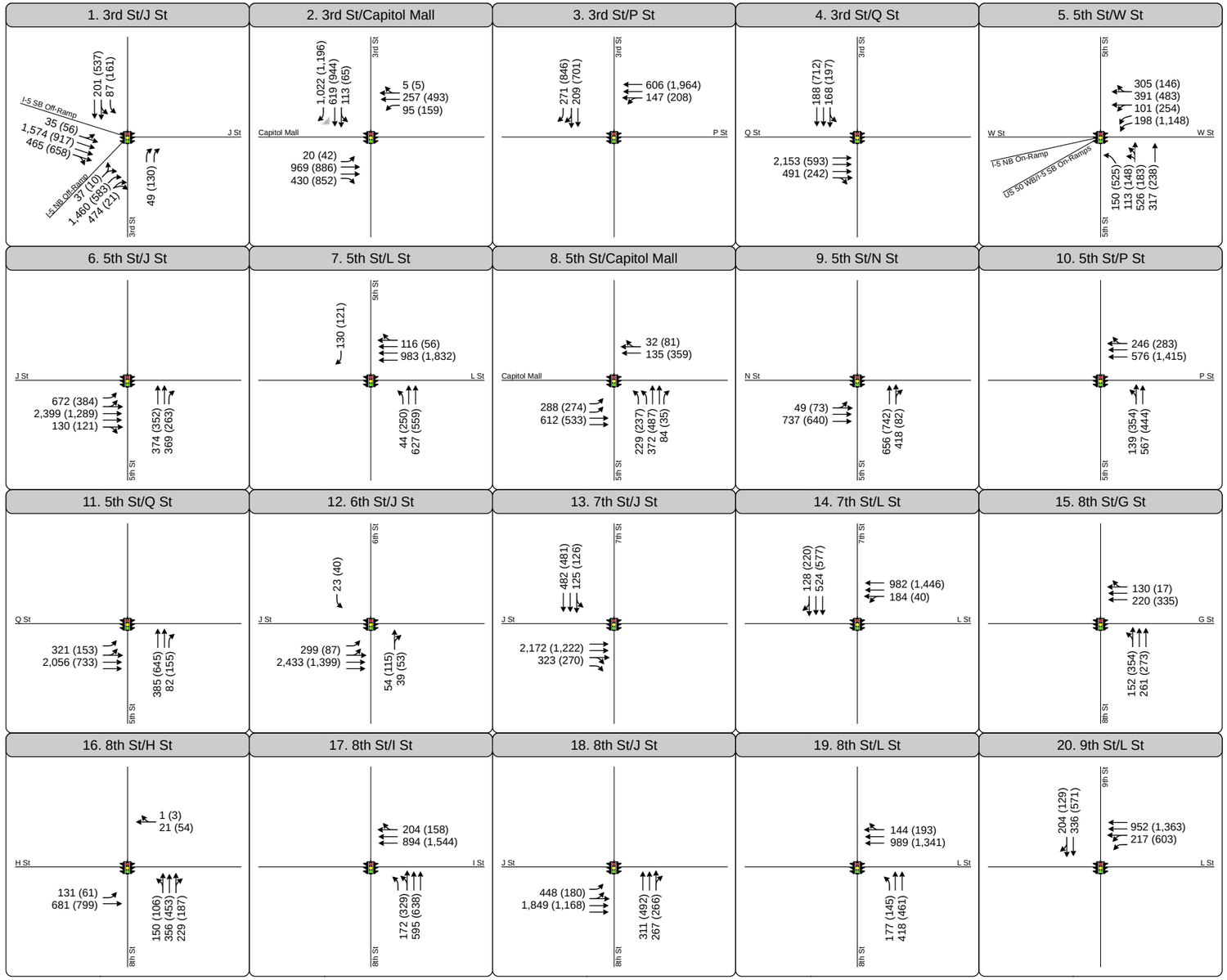
A - C D E F

AM LOS PM LOS

No Data

Not to scale

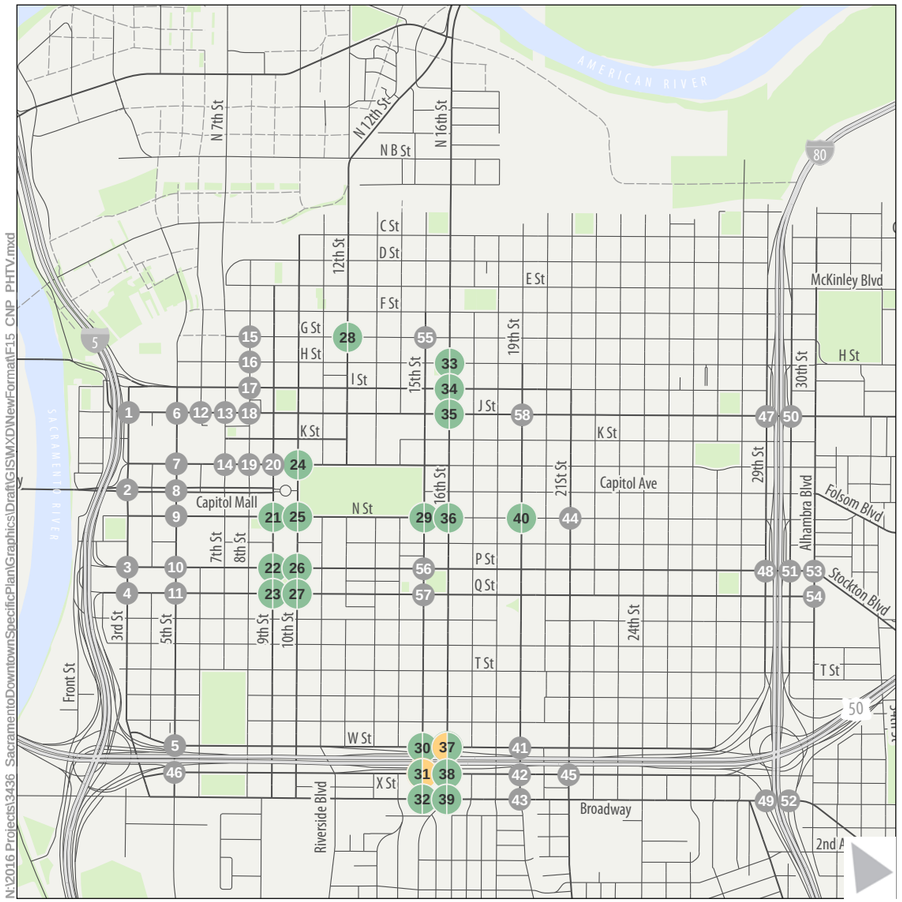
SOURCE: Fehr & Peers, 2017



City of Sacramento Downtown Specific Plan EIR

Figure 4.12-15A
Peak Hour Traffic Volumes and Lane Configurations - Cumulative Conditions

ESA



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1	Study Intersection	Traffic Signal	
2	Study Intersection (See Figure 4A/C)	Stop Sign	
	Planned Roadways	Channelized Right-turn	
AM (PM)	Peak Hour Traffic Volume		
	Turn Lane		

Level of Service (LOS)

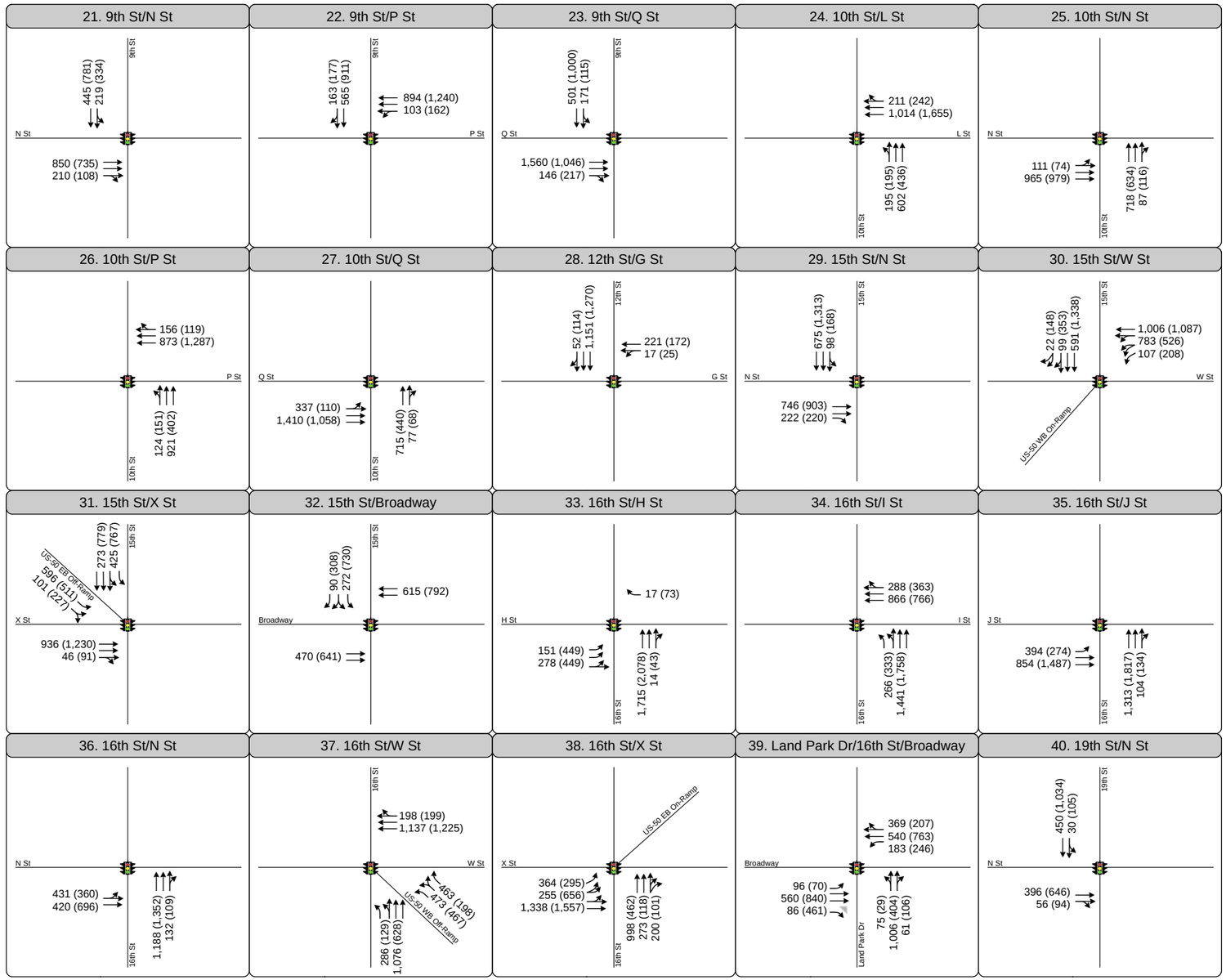
A - C D E F

AM LOS PM LOS

No Data

Not to scale

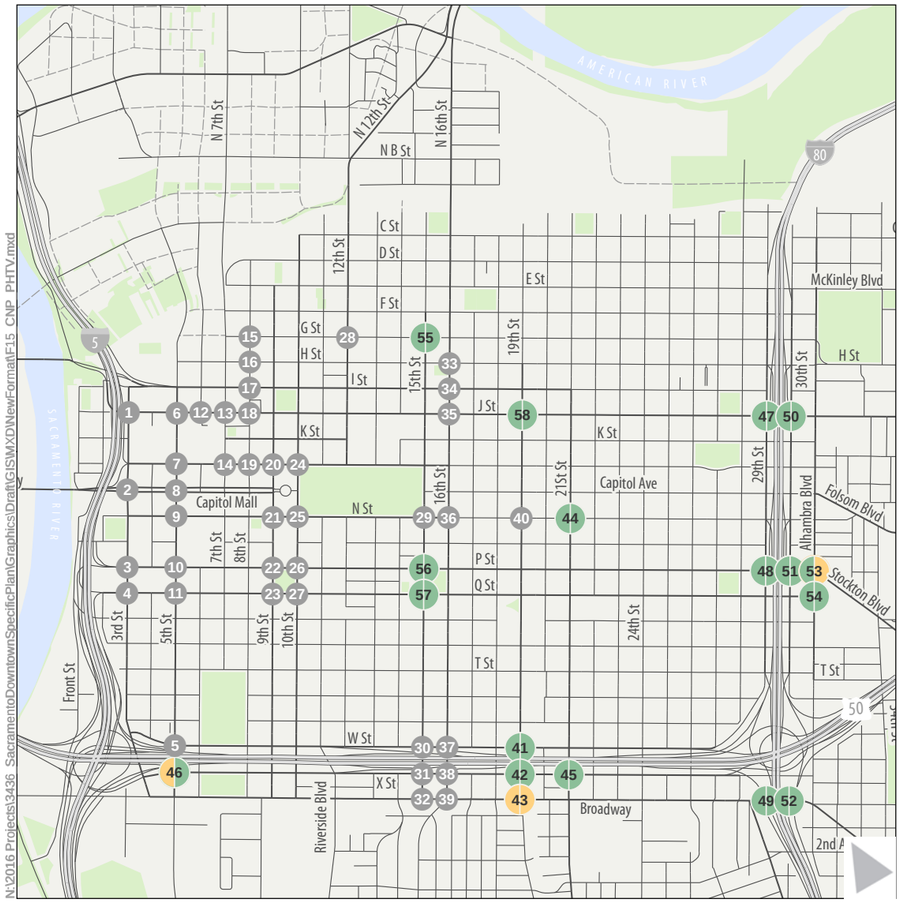
SOURCE: Fehr & Peers, 2017



ESA

City of Sacramento Downtown Specific Plan EIR

Figure 4.12-15B
Peak Hour Traffic Volumes and Lane Configurations - Cumulative Conditions



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1 Study Intersection

2 Study Intersection (See Figure 4A/B)

Planned Roadways

AM (PM) Peak Hour Traffic Volume

Turn Lane

Traffic Signal

Stop Sign

Channelized Right-turn

Level of Service (LOS)

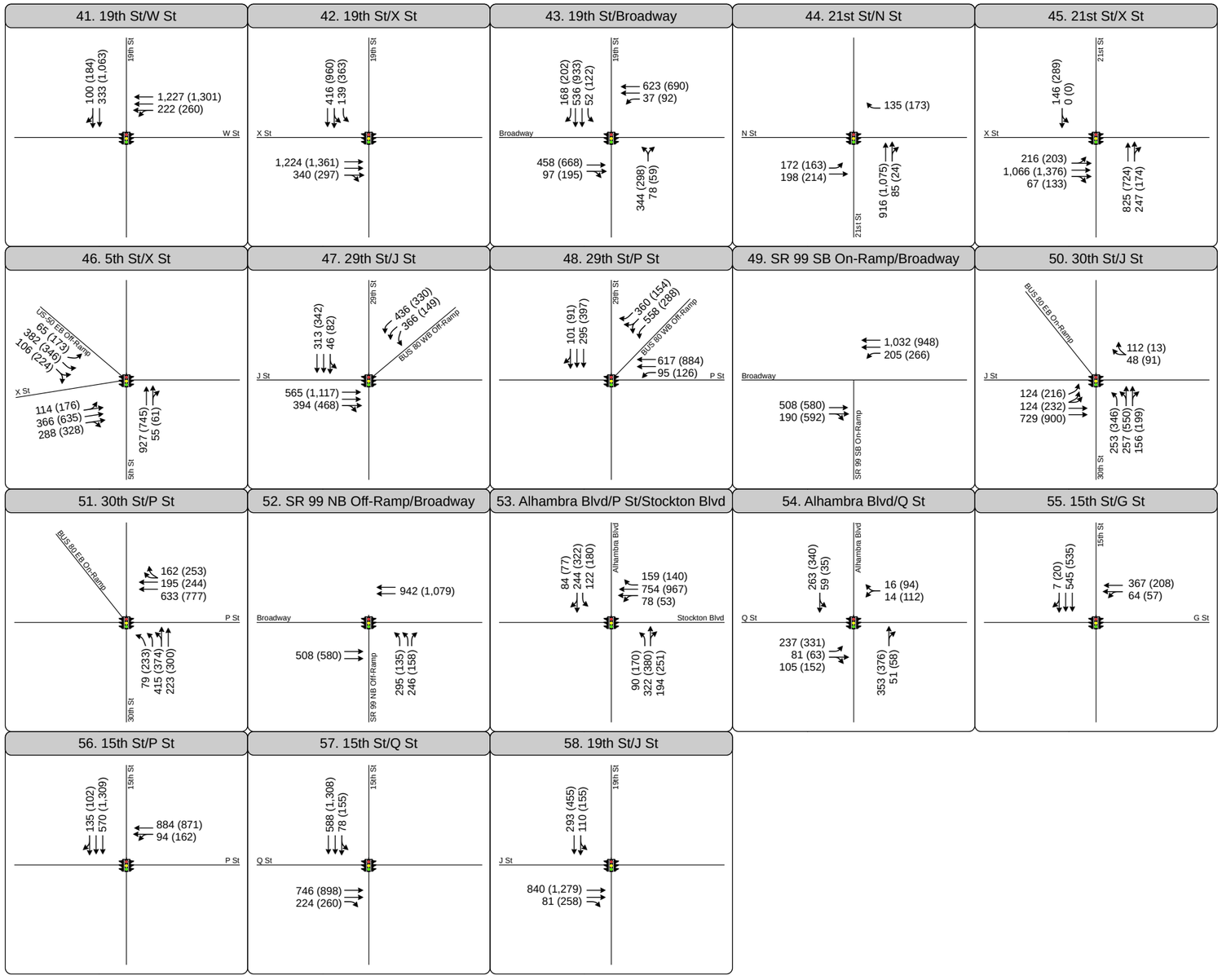
A - C D E F

AM LOS PM LOS

No Data

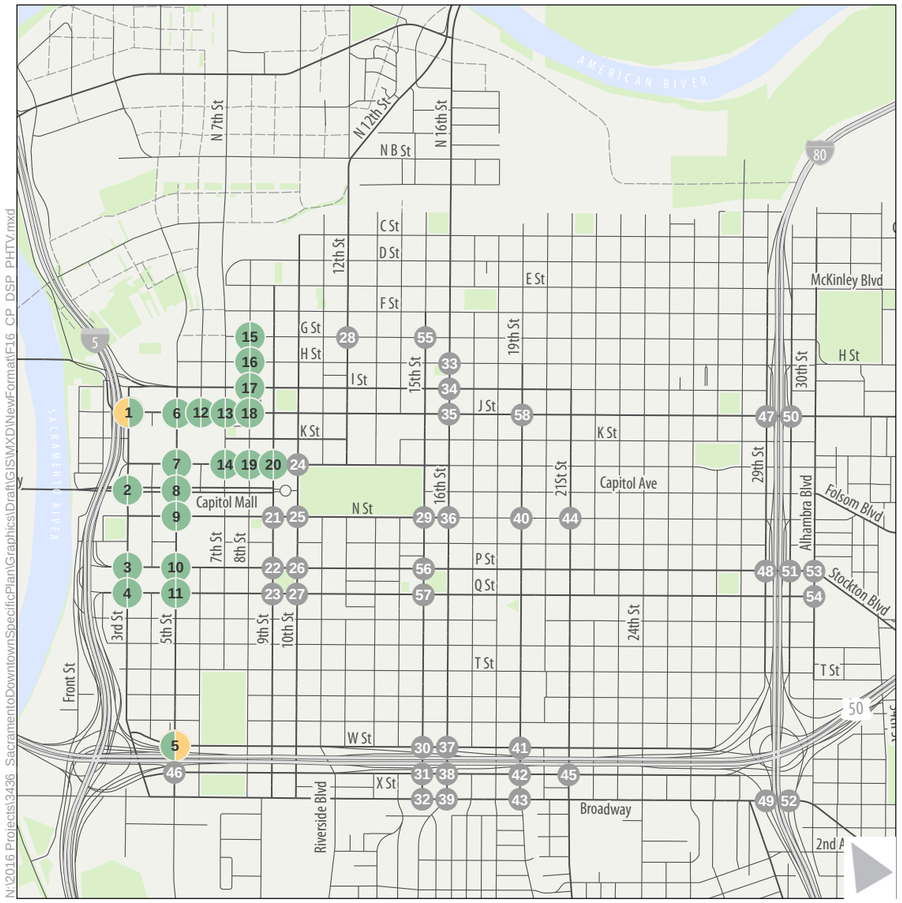
Not to scale

SOURCE: Fehr & Peers, 2017



City of Sacramento Downtown Specific Plan EIR

Figure 4.12-15C
Peak Hour Traffic Volumes and Lane Configurations - Cumulative Conditions



1 Study Intersection

2 Study Intersection (See Figure 4B/C)

Planned Roadways

AM (PM) Peak Hour Traffic Volume

Turn Lane

Traffic Signal

Stop Sign

Channelized Right-turn

Level of Service (LOS)

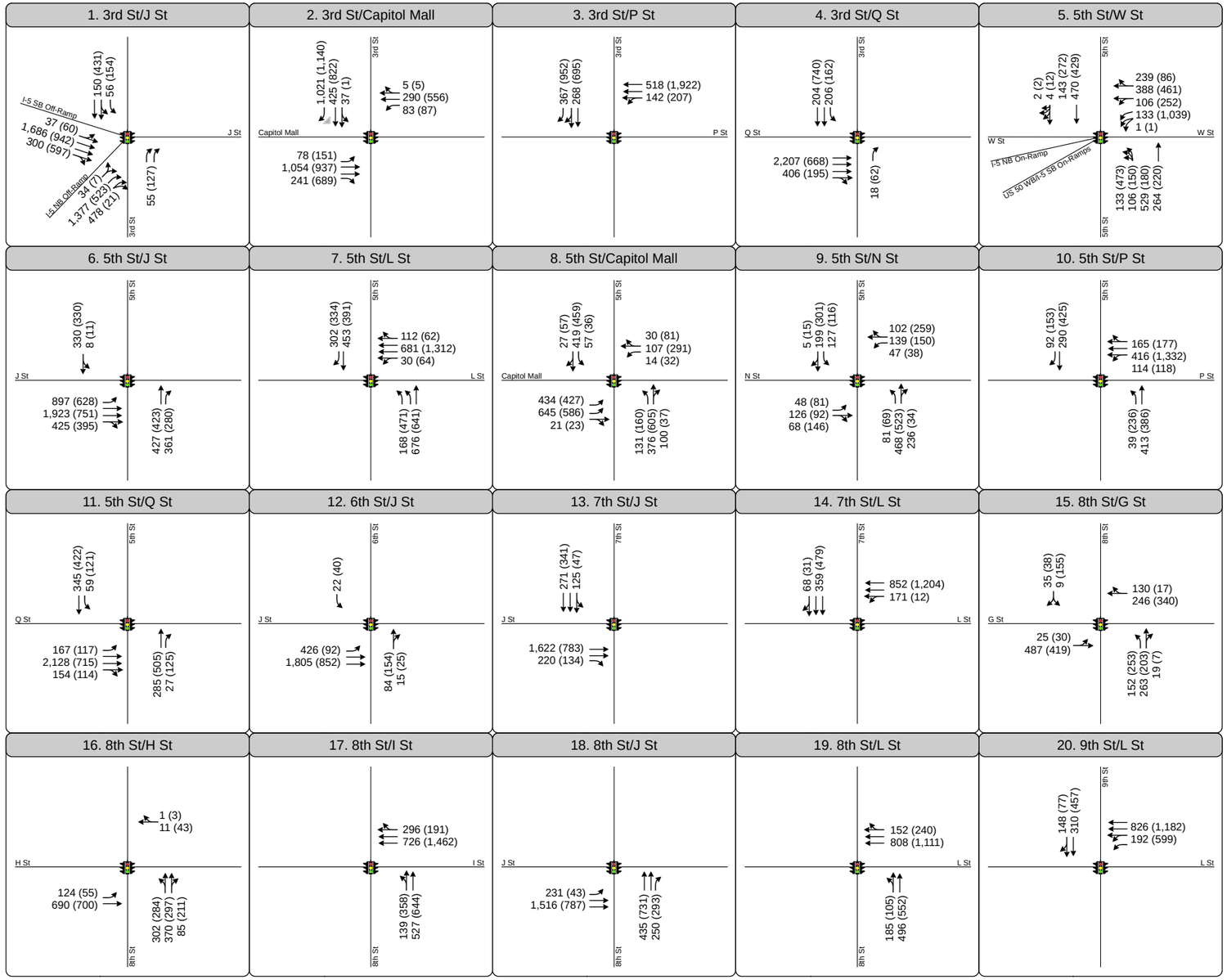
A - C D E F

AM LOS PM LOS

No Data

Not to scale

SOURCE: Fehr & Peers, 2017

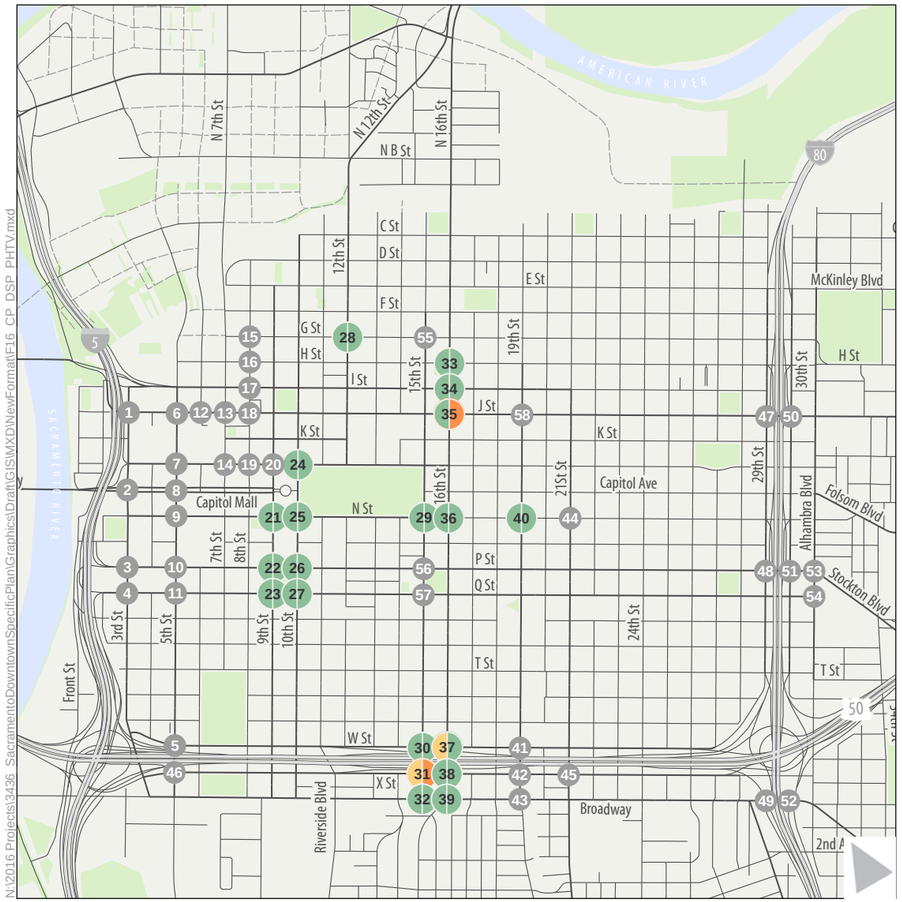


City of Sacramento Downtown Specific Plan EIR

Figure 4.12-16A

Peak Hour Traffic Volumes and Lane Configurations - Cumulative Plus DSP Conditions

ESA



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1 Study Intersection

2 Study Intersection (See Figure 4A/C)

Planned Roadways

AM (PM) Peak Hour Traffic Volume

Turn Lane

Traffic Signal

Stop Sign

Channelized Right-turn

Level of Service (LOS)

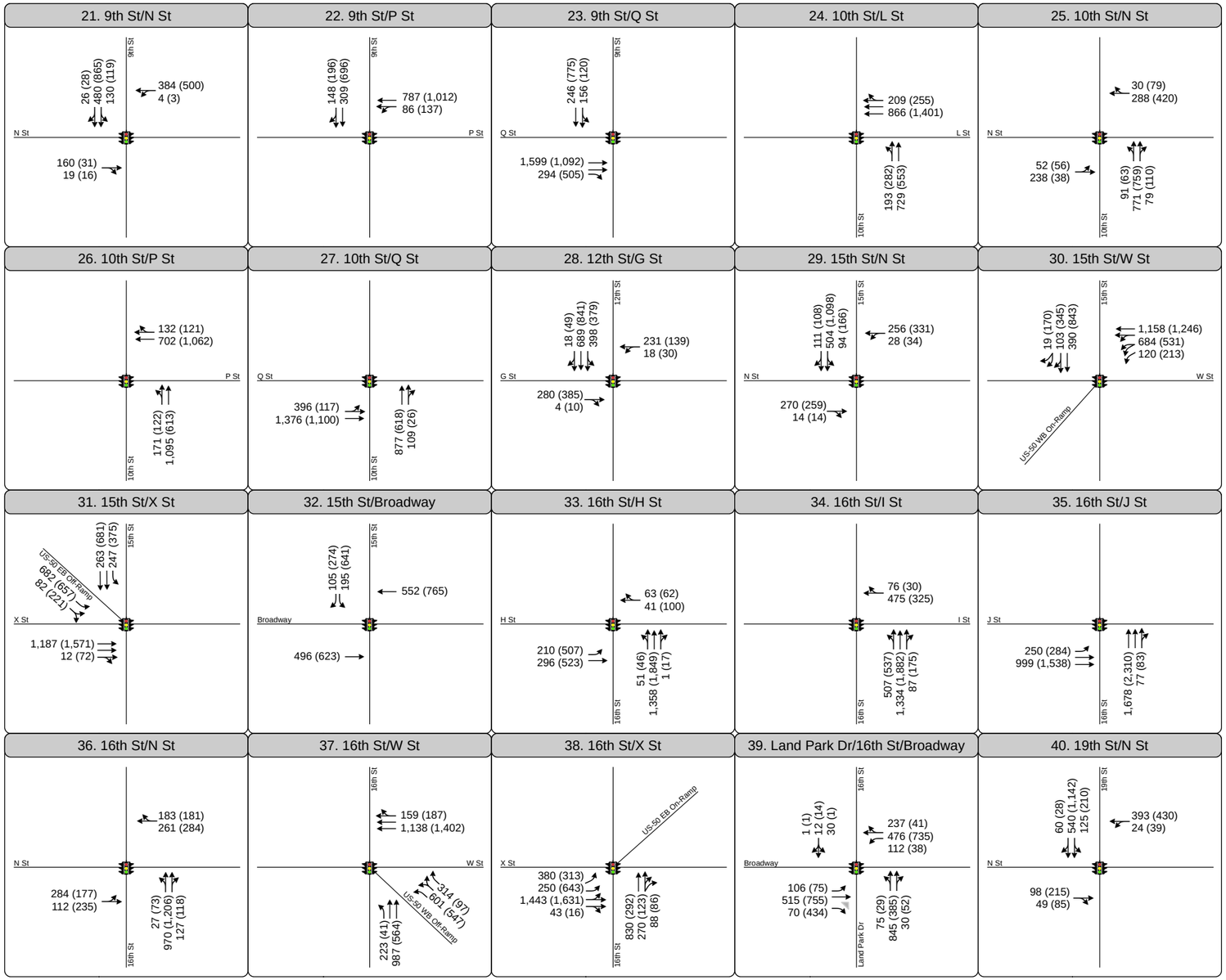
A - C D E F

AM LOS PM LOS

No Data

Not to scale

SOURCE: Fehr & Peers, 2017

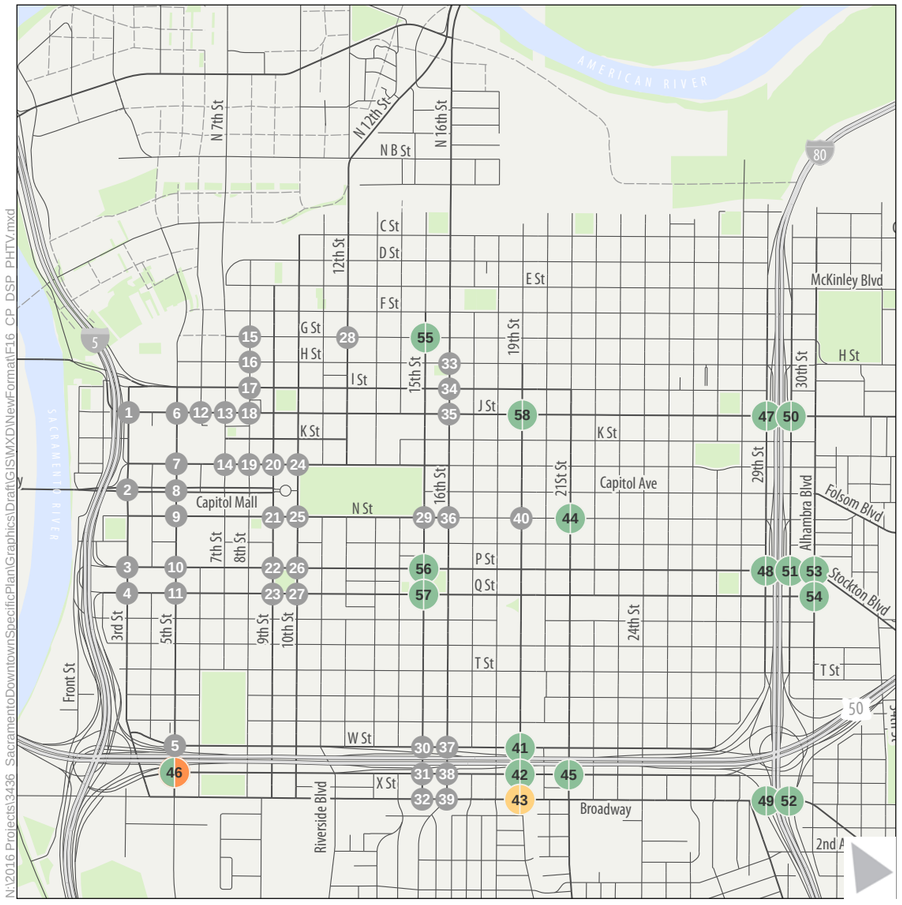


City of Sacramento Downtown Specific Plan EIR

Figure 4.12-16B

Peak Hour Traffic Volumes and Lane Configurations - Cumulative Plus DSP Conditions

ESA



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1 Study Intersection

2 Study Intersection (See Figure 4A/B)

Planned Roadways

AM (PM) Peak Hour Traffic Volume

Turn Lane

Traffic Signal

Stop Sign

Channelized Right-turn

Level of Service (LOS)

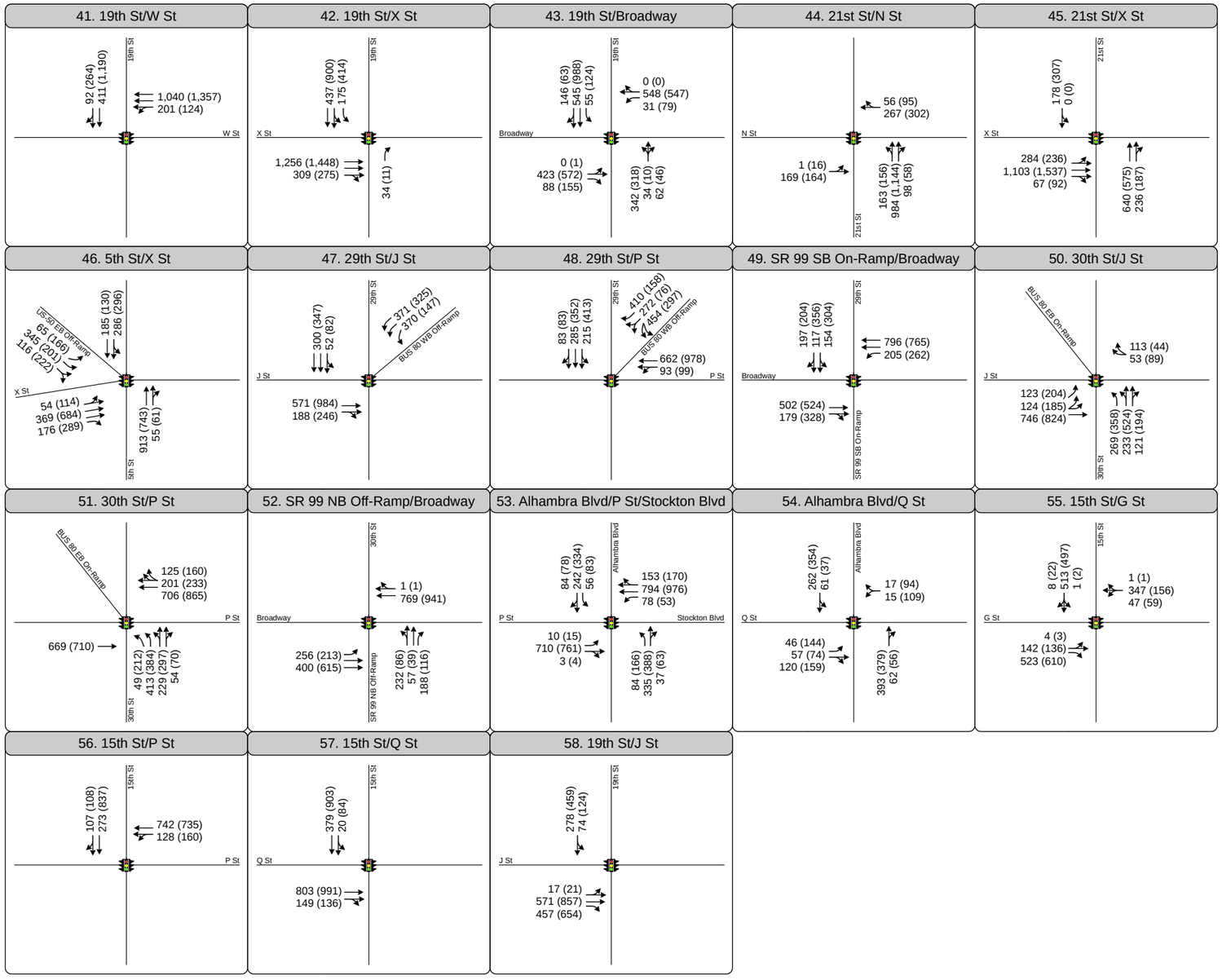
A - C D E F

AM LOS PM LOS

No Data

Not to scale

SOURCE: Fehr & Peers, 2017



City of Sacramento Downtown Specific Plan EIR

Figure 4.12-16C

Peak Hour Traffic Volumes and Lane Configurations - Cumulative Plus DSP Conditions

TABLE 4.12-14
INTERSECTION OPERATIONS – CUMULATIVE CONDITIONS

Intersection	Traffic Control	Peak Hour	Cumulative Conditions		Cumulative Plus DSP	
			Delay	LOS	Delay	LOS
1. 3rd Street/J Street/I-5 Off-Ramp	Signal	A.M.	53	D	47	D
		P.M.	46	D	31	C
2. 3rd Street/Capitol Mall	Signal	A.M.	21	C	22	C
		P.M.	26	C	22	C
3. 3rd Street/P Street	Signal	A.M.	4	A	6	A
		P.M.	27	C	25	C
4. 3rd Street/Q Street	Signal	A.M.	13	B	12	B
		P.M.	7	A	8	A
5. 5th Street/W Street	Signal	A.M.	22	C	32	C
		P.M.	16	B	48	D
6. 5th Street/J Street	Signal	A.M.	23	C	25	C
		P.M.	11	B	21	C
7. 5th Street/L Street	Signal	A.M.	14	B	20	B
		P.M.	19	B	21	C
8. 5th Street/Capitol Mall	Signal	A.M.	12	B	28	C
		P.M.	14	B	34	C
9. 5th Street/N Street	Signal	A.M.	14	B	21	C
		P.M.	16	B	32	C
10. 5th Street/P Street	Signal	A.M.	11	B	11	B
		P.M.	18	B	23	C
11. 5th Street/Q Street	Signal	A.M.	10	B	13	B
		P.M.	15	B	20	B
12. 6th Street/J Street	Signal	A.M.	7	A	12	B
		P.M.	6	A	10	A
13. 7th Street/J Street	Signal	A.M.	12	B	12	B
		P.M.	11	B	12	B
14. 7th Street/L Street	Signal	A.M.	11	B	11	B
		P.M.	13	B	9	A
15. 8th Street/G Street	Signal	A.M.	8	A	11	B
		P.M.	11	B	12	B
16. 8th Street/H Street	Signal	A.M.	19	B	25	C
		P.M.	31	C	21	C
17. 8th Street/I Street	Signal	A.M.	9	A	9	A
		P.M.	14	B	20	B
18. 8th Street/J Street	Signal	A.M.	11	B	11	B
		P.M.	11	B	15	B
19. 8th Street/L Street	Signal	A.M.	11	B	11	B
		P.M.	13	B	13	B
20. 9th Street/L Street	Signal	A.M.	15	B	14	B
		P.M.	23	C	18	B
21. 9th Street/N Street	Signal	A.M.	10	A	11	B
		P.M.	15	B	13	B

TABLE 4.12-14
INTERSECTION OPERATIONS – CUMULATIVE CONDITIONS

Intersection	Traffic Control	Peak Hour	Cumulative Conditions		Cumulative Plus DSP	
			Delay	LOS	Delay	LOS
22. 9th Street/P Street	Signal	A.M.	7	A	6	A
		P.M.	14	B	7	A
23. 9th Street/Q Street	Signal	A.M.	14	B	18	B
		P.M.	12	B	12	B
24. 10th Street/L Street	Signal	A.M.	9	A	10	A
		P.M.	21	C	13	B
25. 10th Street/N Street	Signal	A.M.	10	A	12	B
		P.M.	10	A	13	B
26. 10th Street/P Street	Signal	A.M.	13	B	15	B
		P.M.	16	B	17	B
27. 10th Street/Q Street	Signal	A.M.	14	B	22	C
		P.M.	16	B	16	B
28. 12th Street/G Street	Signal	A.M.	9	A	12	B
		P.M.	10	B	14	B
29. 15th Street/N Street	Signal	A.M.	21	C	13	B
		P.M.	21	C	16	B
30. 15th Street/W Street/US 50 On-Ramp	Signal	A.M.	19	B	19	B
		P.M.	27	C	24	C
31. 15th Street/X Street/US 50 Off-Ramp	Signal	A.M.	29	C	40	D
		P.M.	40	D	64	E
32. 15th Street/Broadway	Signal	A.M.	14	B	15	B
		P.M.	18	B	28	C
33. 16th Street/H Street	Signal	A.M.	8	A	5	A
		P.M.	18	B	14	B
34. 16th Street/I Street	Signal	A.M.	11	B	11	B
		P.M.	13	B	15	B
35. 16th Street/J Street	Signal	A.M.	14	B	20	C
		P.M.	29	C	66	E
36. 16th Street/N Street	Signal	A.M.	10	A	19	B
		P.M.	11	B	26	C
37. 16th Street/W Street/US 50 Off-Ramp	Signal	A.M.	36	D	40	D
		P.M.	26	C	31	C
38. 16th Street/X Street/US 50 On-Ramp	Signal	A.M.	17	B	22	C
		P.M.	13	B	10	A
39. 16th Street/Broadway	Signal	A.M.	25	C	23	C
		P.M.	19	B	15	B
40. 19th Street/N Street	Signal	A.M.	9	A	10	B
		P.M.	16	B	21	C
41. 8th Street/I Street	Signal	A.M.	16	B	15	B
		P.M.	23	C	26	C

TABLE 4.12-14
INTERSECTION OPERATIONS – CUMULATIVE CONDITIONS

Intersection	Traffic Control	Peak Hour	Cumulative Conditions		Cumulative Plus DSP	
			Delay	LOS	Delay	LOS
42. 19th Street/X Street	Signal	A.M.	14	B	14	B
		P.M.	17	B	19	B
43. 19th Street/Broadway	Signal	A.M.	37	D	43	D
		P.M.	39	D	54	D
44. 21st Street/N Street	Signal	A.M.	15	B	16	B
		P.M.	17	B	19	B
45. 21st Street/X Street	Signal	A.M.	10	A	11	B
		P.M.	12	B	17	B
46. 5th Street/X Street	Signal	A.M.	39	D	34	C
		P.M.	35	C	57	E
47. 29th Street/J Street/Bus. 80 Off-Ramp	Signal	A.M.	21	C	26	C
		P.M.	22	C	30	C
48. 29th Street/P Street/Bus. 80 Off-Ramp	Signal	A.M.	18	B	32	C
		P.M.	17	B	34	C
49. 29th Street/Broadway/SR 99 On-Ramp	Uncontrolled (Cumulative) Signal (Cumulative Plus DSP)	A.M.	2 (6)	A (A)	10	A
		P.M.	3 (9)	A (A)	15	B
50. 30th Street/J Street/Bus. 80 On-Ramp	Signal	A.M.	21	C	25	C
		P.M.	16	B	20	C
51. 30th Street/P Street	Signal	A.M.	10	A	16	B
		P.M.	8	A	13	B
52. 30th Street/Broadway/SR 99 Off-Ramp	Signal	A.M.	7	A	13	B
		P.M.	7	A	10	A
53. Alhambra Boulevard/P Street	Signal	A.M.	24	C	17	B
		P.M.	53	D	24	C
54. Alhambra Boulevard/Q Street	Signal	A.M.	22	C	20	B
		P.M.	32	C	27	C
55. 15th Street/G Street	Signal	A.M.	9	A	11	B
		P.M.	9	A	13	B
56. 15th Street/P Street	Signal	A.M.	13	B	9	A
		P.M.	13	B	11	B
57. 15th Street/Q Street	Signal	A.M.	8	A	8	A
		P.M.	8	A	12	B
58. 19th Street/J Street	Signal	A.M.	11	B	11	B
		P.M.	15	B	16	B

NOTES:
1. For signalized intersections, average intersection delay is reported in seconds per vehicle for all approaches.
2. For uncontrolled intersections, the delay is reported in seconds per vehicle for the overall intersection and the worst movement (in parentheses).
   BOLD text indicates the intersection operates at an unacceptable LOS based on the presiding jurisdiction's level of service policy.
   UNDERLINED text indicates a potentially significant impact based on the significance criteria.

SOURCE: Fehr & Peers, 2017.

As discussed previously, General Plan Policy M 1.2.2 was adopted to allow decreased levels of service (e.g., LOS F) in the urbanized Core Area of the City that supports more transportation alternatives and places residents proximate to employment, entertainment, retail and neighborhood centers and thus reduces overall vehicle miles traveled and results in environmental benefits (e.g., improved air quality and reduced GHG emissions). Based on this evaluation, the City determined that LOS F is considered acceptable during peak hours within the Core Area; therefore, the impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.12-10: Implementation of the proposed DSP, in combination with other cumulative development, could contribute to cumulative impacts to freeway operations.

The LOS results presented below are based on daily volume-to-capacity comparisons and do not necessarily consider specific operational characteristics (e.g., length of weave sections, peak hour factors, etc.) within the I-5, SR 160, US 50, and Capital City Freeway corridors. Nevertheless, this data is valuable in understanding Caltrans' expectations of their current and projected operating performance. Cumulative freeway operations with and without the DSP are presented in **Table 4.12-15**.

TABLE 4.12-15
FREEWAY OPERATIONS – CUMULATIVE CONDITIONS

Freeway Segment	Lanes	Cumulative Conditions		Cumulative Plus DSP Conditions	
		ADT Volume[1]	LOS[2]	ADT Volume[1]	LOS[2]
I-5 at L Street	9	190,700	F	189,500	F
I-5 at P Street	7	159,200	F	158,400	F
I-5 at W Street	6	86,500	C	85,900	C
US 50 at 15th Street	10	267,700	**F**	268,700	**F**
US 50 at 28th Street	8	204,000	**F**	204,600	**F**
Capital City Freeway at A Street	6	183,400	F	184,600	F
Capital City Freeway at I Street	8	147,100	D	148,400	D
Capital City Freeway at T Street	8	90,700	C	91,300	C
SR 160 at Exposition Boulevard	4	82,100	F	81,500	F

NOTES:
1. ADT = average daily traffic.
2. **BOLD** text indicates that the freeway operates at an unacceptable LOS based on Caltrans' level of service policy.

SOURCE: Fehr & Peers, 2017.

As shown in Table 4.12-15, all study freeway segments operate acceptably except for US 50, which operates unacceptably at LOS F under cumulative conditions and would continue to do so under Cumulative Plus DSP conditions. Additionally, implementation of the proposed DSP would increase traffic volume on segments of US 50 that operations unacceptably under cumulative conditions. This would be a **potentially significant impact**.

Mitigation Measures

Mitigation Measure 4.12-10. Freeway Subregional Corridor Mitigation Program (SCMP).

Implement Mitigation Measure 4.12-3.

Significance After Mitigation: On April 5, 2016, the City approved the I-5 SCMP and certified its Supplemental EIR (SCH #2011012081). The SCMP would reduce auto travel on study area freeways by providing funding towards a diverse list of multimodal transportation improvement projects, including a new bridge across the American River, two new bridges across the Sacramento River, a streetcar system that would serve the study area, and new HOV lanes on I-5. The SCMP provides the option for development projects to monetarily contribute to the program, which would constitute mitigation for a project's impacts to the area's freeway system. To reduce the Plan's freeway impacts shown in Table 4.12-15, the Plan would participate in the SCMP through **Mitigation Measure 4.12-3**. Therefore, the Plan would not have cumulatively considerable impacts to freeway facilities in the area. Implementation of **Mitigation Measure 4.12-3** would reduce this impact to **less than significant** under CEQA.

Impact 4.12-11: Implementation of the proposed DSP, in combination with other cumulative development, could contribute to cumulative impacts to freeway off-ramp queueing.

Table 4.12-16 displays the Cumulative Plus DSP off-ramp queuing within the study area during the AM and PM peak hours.

As shown, all off-ramp queues are within available storage under Cumulative Conditions. Under Cumulative Plus DSP conditions, all study freeway off-ramp queues would remain within the available storage area. This impact is **less than significant**.

Mitigation Measures

None required.

TABLE 4.12-16
AVERAGE MAXIMUM QUEUE LENGTHS – CUMULATIVE CONDITIONS

Location	Available Storage (ft)	Peak Hour	Average Maximum Queue Length (ft)	
			Cumulative Conditions	Cumulative Plus DSP Conditions
Interstate 5 SB Off-Ramp at J Street	1,550	A.M. P.M.	600 600	500 525
Interstate 5 NB Off-Ramp at J Street	1,025	A.M. P.M.	775 225	725 250
Interstate 5 SB Off-Ramp at Q Street	1,725	A.M. P.M.	350 175	350 150
Interstate 5 NB Off-Ramp at Q Street	2,075	A.M. P.M.	350 175	350 150
US 50 EB Off-Ramp at 15th Street	1,125	A.M. P.M.	275 325	425 450
US 50 WB Off-Ramp at 16th Street	1,050	A.M. P.M.	350 275	400 300
US 50 EB Off-Ramp at 5th Street	1,275	A.M. P.M.	225 325	225 350
Bus. 80 SB Off-Ramp at J Street	1,225	A.M. P.M.	250 250	375 250
Bus. 80 SB Off-Ramp at P Street	1,300	A.M. P.M.	175 175	425 300

NOTES:
1. **BOLD** text indicates that the queue exceeds the storage length.

SOURCE: Fehr & Peers, 2017.

Impact 4.12-12: The proposed DSP, in combination with other cumulative development, could impact pedestrian facilities.

Implementation of the DSP and other proposed projects would result in the expansion of pedestrian facilities within the DSP area and within other areas of the City. Providing additional pedestrian connections, such as filling gaps in the existing pedestrian network, would result in a higher level of pedestrian connectivity between neighborhoods, further encouraging the use of sidewalks and reducing the demand for vehicular facilities. Further, the expansion of other roadway improvements such as one-way to two-way lane conversions and the provision of additional bicycle lanes and transit access would not remove result in the removal of pedestrian facilities or adversely impact the quality of pedestrian facilities.

The City's *Pedestrian Master Plan* (2006) identified the Central City as a high area of overall pedestrian improvement need. The *Pedestrian Master Plan* identified many Central City streets as Pedestrian Street Corridors and Pedestrian Nodes where features such as wider sidewalks, street lighting, landscaping, street furniture, wayfinding signage and crossing treatments should be considered. Implementation of the Pedestrian Master Plan will enhance pedestrian facilities throughout the DSP area and the City.

As the proposed plan does not adversely affect any existing pedestrian facilities and accommodates planned pedestrian facilities from the *Pedestrian Master Plan*, the impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.12-13: The proposed DSP, in combination with other cumulative development, could impact transit facilities.

Adversely Affect Public Transit Operations

For the proposed plan or other development to adversely affect public transit operations, they would have to create significant delay for buses, light rail trains and the planned streetcar in the Central City or in other parts of the City.

Some of the Central City's future transit system will operate in its own right-of-way. As the proposed plan or other development would not affect these exclusive right-of-way segments, light rail trains would not be delayed.

Traffic Delay due to Congestion

The proposed plan includes a variety of roadway network and transit network projects that are intended to reduce transit vehicle delay from traffic signals and from slow-moving traffic. Other proposed projects in the City could also include roadway and transit network improvements, including implementation of the Downtown-Riverfront streetcar. The proposed plan includes several transit investments which could include transit signal priority or three lane to two lane conversions for dedicated transit lanes. Dedicated transit lanes will significantly reduce transit vehicle delay from slow-moving traffic. Because dedicated transit lanes would allow transit vehicles to bypass traffic stopped at signalized intersections, traffic delay to transit vehicles caused by traffic signals at locations with dedicated transit lanes would be reduced as well.

Additionally, lane reductions and one-way to two-way conversions on Central City streets would result in less-than-significant increases in delay for Cumulative Plus DSP conditions. No intersections are projected to operate at LOS F and only four intersections are expected to operate at LOS E during the peak hours in 2036 (the 3rd Street/J Street/I-5 Off-Ramp intersection during the AM peak hour, the 15th Street/X Street/US 50 Off-Ramp intersection during the PM peak hour, the 16th Street/J Street intersection during the PM peak hour, and the 5th Street/X Street intersection during the PM peak hour). Otherwise, Central City intersections are expected to operate at LOS D or better which will facilitate relatively high operating speeds for transit in Sacramento's most constrained transportation environment.

Traffic Delay due to Friction

Traffic delay due to friction is caused by curbside activity interfering with buses including truck/ taxi/transportation network company (i.e., Lyft, Uber) loading, parking maneuvers, car doors being opened and slow-moving bicyclists obstructing buses. This type of curbside activity already occurs on Central City streets and is likely to increase as population and employment grows. On streets both with and without dedicated transit lanes, buses will be allowed to merge out of the dedicated transit lane or the right-most travel lane to go around these friction points. Where buffered bike lanes (enhanced Class II facilities) or separated bikeways (Class IV facilities) are proposed many of these buffered bike lanes will likely be placed on the left side of the street to avoid conflicts with transit vehicles. Lastly, although there are some short segments of Class III bike routes that occur on roadways with transit (such as 8th Street from F Street to G Street and G Street from 29th Street to 30th Street), the combined effect of these segments being very short, the frequency of buses on these lines and the anticipated number of bicyclists causing friction for these buses will result in an insignificant amount of delay for transit.

Passenger Stop Delay

Passenger stop delay is caused by transit vehicles dwelling at a stop to allow time for passengers to board and alight and by transit vehicles dwelling at a stop to allow passengers to pay fares.

Population growth, employment growth and improvements to transit service (such as implementation of streetcar and dedicated transit lanes) are all likely to increase the number of people who use transit in the City. Increasing the number of people who use transit will inherently reduce free space on the transit vehicles thereby also likely increasing dwell delay due to boarding and alighting. However, this is generally considered to be an acceptable tradeoff for transit agencies unless the transit vehicles are so full that they either cause passenger discomfort or require turning away new passengers. In the even that high ridership is causing passenger discomfort or requires turning away new passengers, RT will have several options including increasing service on its lines, purchasing larger buses or extending the span of its longer trains. The proposed plan and future development projects in the City would not include changes to RT's services or vehicle fleet.

Improvements to transit facilities such as longer stop areas, bus bulb-outs and enhanced sidewalks at high activity bus stops would further enhance transit access and reduce dwell delay due to boarding and alighting.

Currently, RT uses "pay the driver" systems on its buses and proof of payment systems on its Light Rail trains; the proposed streetcar line is also likely to use a proof of payment system. Neither the proposed plan nor other cumulative projects do not include any changes to these systems. RT's participation in the Connect Card program would allow for smartcard fare payment, increasing the number of passengers using smartcard fare payment. This reduces dwell time due to fare collection. Light Rail will continue with their proof of payment system so no change in dwell time is expected.

Adding more transit stops causes transit vehicles to stop more frequently, thereby requiring extra deceleration and acceleration events and adding additional opportunities for passenger stop delay. Neither the proposed plan nor other development include any new stops that would increase the frequency of deceleration and acceleration events or create additional opportunities for passenger stop delay.

Based on the above assessment, the DSP would not adversely affect public transit operations. Therefore, this impact would be a **less than significant**.

Fail to Adequately Provide Access to Transit

For the proposed plan or other development projects to fail to adequately provide access to transit, they would either have to remove or reduce existing accessible transit service or fail to provide acceptable infrastructure (for people walking or people biking) to access transit stops and stations.

The proposed plan and other development do not include any changes to RT's existing service and therefore would not affect accessibility relating to the provision of transit service. Therefore, the impact to providing accessibility to transit is **less than significant**.

Mitigation Measure

None required.

Impact 4.12-14: The proposed DSP, in combination with other cumulative development, could impact bicycle facilities.

Implementation of the DSP and other proposed projects would result in the expansion of bicycle facilities within the DSP area and within other areas of the City. Providing additional bicycle connections, such as filling gaps in the existing bicycle network or increasing the separation of bicyclists within these facilities from adjacent travel lanes would result in a higher level of bicycle connectivity between neighborhoods. Further, these improvements would further encourage the use of bike lanes and reduce the demand for vehicular facilities. Further, the expansion of other roadway improvements such as one-way to two-way lane conversions and the provision of additional pedestrian facilities and transit access would not remove result in the removal of bicycle facilities or adversely impact the quality of bicycle facilities. Implementation of the *Bicycle Master Plan* would provide additional opportunities for bicyclists to safely access more areas of the City. It is not anticipated that cumulative development would reduce access to or remove bicycle facilities.

As the proposed plan does not adversely affect any existing bicycle facilities and accommodates planned bicycle facilities from the *Bicycle Master Plan*, the impact would be **less than significant**.

Mitigation Measures

None required.

4.12.4 Streetcar Conversion Option

The design phase of the Downtown-Riverfront Streetcar project is currently underway. As part of this effort, streetcar designers are considering roadway cross-sections for segments of 3rd Street and H Street within the DSP area that differ from the proposed DSP network. This section documents how these optional cross-sections would alter the previously presented DSP analysis and findings in the event that the streetcar design incorporates these options.

The Streetcar Conversion Option differs from the proposed DSP network described in Section 4.12.3 (displayed in Figure 4.12-8) as follows:

- Removal of the two-way conversion on H Street between 5th Street and 8th Street (maintain one-way eastbound travel on this segment)
- Removal of the two-way conversion on 3rd Street between L Street and Capitol Mall (maintain one-way southbound travel on this segment)

The Streetcar Conversion Option does not include any changes to the proposed bicycle, pedestrian, or transit networks displayed in Figures 4.12-9, 4.12-10, and 4.12-11, respectively. The removal of the two-way roadway conversion on 3rd Street between L Street and Capitol Mall would result in a northbound contraflow transit-only lane for one block. The removal of the two-way conversion on H Street between 5th Street and 8th Street would keep this segment as one-way eastbound, but with a reduction in travel lanes from two to one.

The Streetcar Conversion Option traffic forecasts were obtained by shifting DSP forecasted volumes to account for the two modifications presented above. The Streetcar Conversion Option would not significantly affect freeway operations or off-ramp queueing in comparison to the proposed DSP.

A subset of the 58 DSP study intersections was selected for analysis of the Streetcar Conversion Option. These intersections were selected based on their potential to be affected by the above modifications.

2. 3rd Street/Capitol Mall
7. 5th Street/L Street
8. 5th Street/Capitol Mall
16. 8th Street/H Street
17. 8th Street/I Street

Figure 4.12-17 displays the AM and PM peak hour intersection traffic volumes under Existing Plus DSP Alternative conditions. **Table 4.12-17** shows the Existing Plus Streetcar Conversion

Option peak-hour intersection operations at the study intersections (refer to Appendix G for technical calculations).

TABLE 4.12-17
INTERSECTION OPERATIONS – EXISTING PLUS STREETCAR CONVERSION OPTION CONDITIONS

Intersection	Traffic Control	Peak Hour	Existing Plus DSP		Existing Plus DSP Alternative	
			Delay	LOS	Delay	LOS
2. 3rd Street/Capitol Mall	Signal	A.M. P.M.	20 15	C B	20 16	C B
7. 5th Street/L Street	Signal	A.M. P.M.	16 19	B B	15 17	B B
8. 5th Street/Capitol Mall	Signal	A.M. P.M.	27 35	C D	27 32	C C
16. 8th Street/H Street	Signal	A.M. P.M.	11 14	B B	12 13	B B
17. 8th Street/I Street	Signal	A.M. P.M.	9 15	A B	9 16	A B

NOTES:
1. For signalized intersections, average intersection delay is reported in seconds per vehicle for all approaches.
BOLD text indicates the intersection operates at an unacceptable LOS based on the presiding jurisdiction's level of service policy.
UNDERLINED text indicates a potentially significant impact based on the significance criteria.

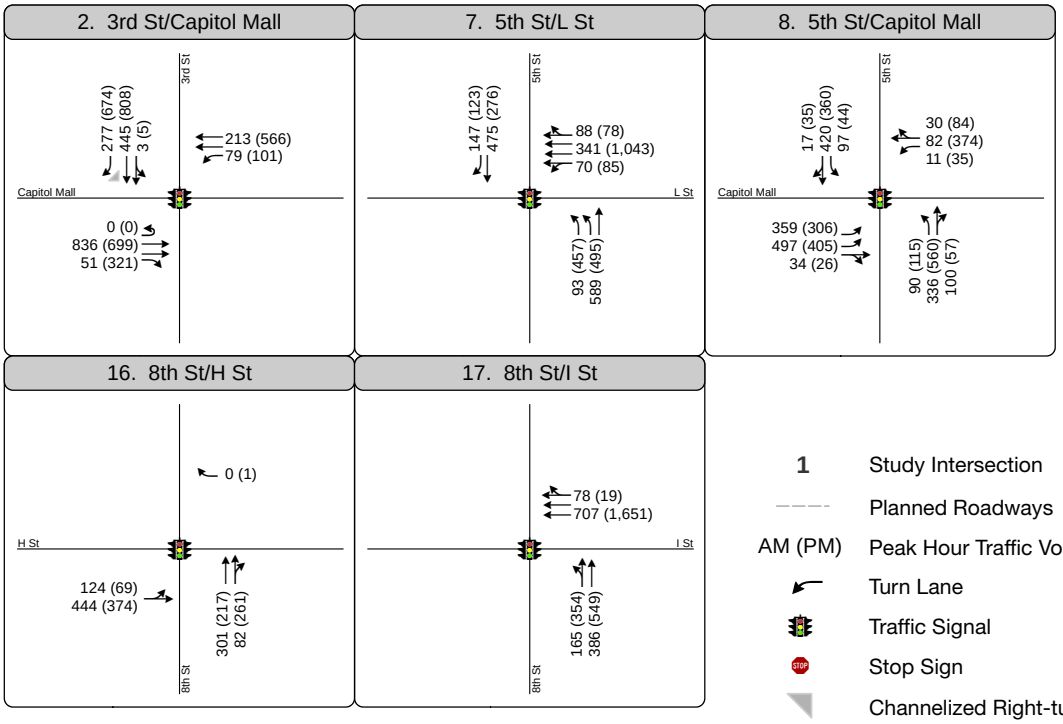
SOURCE: Fehr & Peers, 2017.

Under Existing Plus Streetcar Conversion Option conditions, the five study intersections above would operate at LOS C or better during both peak hours. These LOS results are consistent with General Plan Policy M 1.2.2 as described above. In the event that the Downtown-Riverfront Streetcar final design does not include the conversions of 3rd Street and H Street included as part of the proposed DSP, no additional project-specific impacts to the transportation system would occur beyond those previously described in Section 4.12.3, above.

Figure 4.12-18 displays the AM and PM peak hour intersection traffic volumes under Cumulative Plus Streetcar Conversion Option conditions.

Table 4.12-18 shows the Cumulative Plus Streetcar Conversion Option peak-hour intersection operations at the study intersections (refer to Appendix G for technical calculations).

Under Cumulative Plus Streetcar Conversion Option conditions, the study intersections above would operate at LOS C or better during both peak hours except for Intersection 8 (5th Street/ Capitol Mall), which would operate at LOS C during the AM peak hour and LOS D during the PM peak hour. These LOS results are consistent with General Plan Policy M 1.2.2 as described above. In the event that the Downtown-Riverfront Streetcar final design does not include the conversions of 3rd Street and H Street included as part of the proposed DSP, no additional cumulatively considerable impacts to the transportation system would occur beyond those previously described in Section 4.12.3, above.



Not to scale

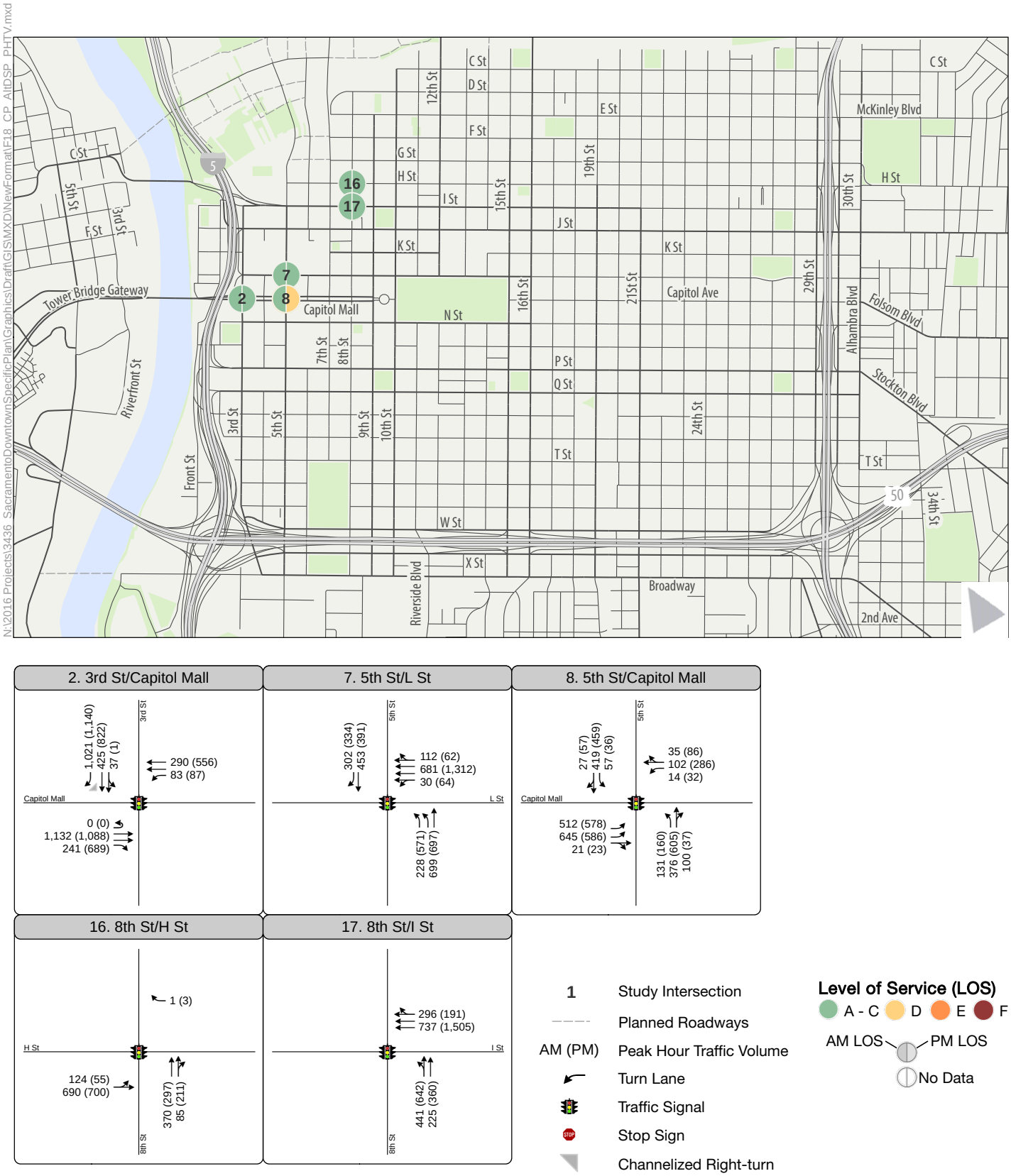
SOURCE: Fehr & Peers, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.12-17

Peak Hour Traffic Volume and Lane Configurations - Existing Plus DSP Streetcar Conversion Option Conditions

ESA



Not to scale

SOURCE: Fehr & Peers, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 4.12-18

Peak Hour Traffic Volumes and Lane Configurations - Cumulative Plus DSP Streetcar Conversion Option Conditions

ESA

TABLE 4.12-18
INTERSECTION OPERATIONS – CUMULATIVE PLUS STREETCAR CONVERSION OPTION CONDITIONS

Intersection	Traffic Control	Peak Hour	Cumulative Plus DSP		Cumulative Plus Streetcar Conversion Option	
			Delay	LOS	Delay	LOS
2. 3rd Street/Capitol Mall	Signal	A.M.	20	C	24	C
		P.M.	18	B	25	C
7. 5th Street/L Street	Signal	A.M.	20	B	20	B
		P.M.	21	C	22	C
8. 5th Street/Capitol Mall	Signal	A.M.	28	C	28	C
		P.M.	34	C	40	D
16. 8th Street/H Street	Signal	A.M.	25	C	29	C
		P.M.	21	C	26	C
17. 8th Street/I Street	Signal	A.M.	9	A	10	A
		P.M.	20	B	21	C

NOTES:
1. Average intersection delay for signalized intersections is reported in seconds per vehicle for all approaches.
BOLD text indicates the intersection operates at an unacceptable LOS based on the presiding jurisdiction's level of service policy.
UNDERLINED text indicates a potentially significant impact based on the significance criteria.

SOURCE: Fehr & Peers, 2017.

4.13 Utilities

This section provides a summary of existing utilities and service systems that serve the DSP area and vicinity including water supply, stormwater conveyance, wastewater conveyance and treatment, and solid waste collection and disposal. Pertinent regulations and requirements at the federal, State, and local level are reviewed. Potential impacts on utilities and service systems that could result from implementation of the proposed DSP are discussed, and, as warranted, mitigation measures that could be applied in order to avoid or minimize the magnitude of potential utilities and service system-related impacts are presented. Potential impacts on stormwater conveyance facilities are also discussed in this section. For a discussion of stormwater quality management, please refer to Section 4.9, Hydrology and Water Quality.

The City received comments on the NOP related to utilities and service systems, which are addressed in this chapter to the extent they pertain to potential impacts of the proposed DSP (see Appendix B). NOP comment letters received relevant to this section include requests to (1) comply with the state antidegradation policy to maintain highest water quality possible, (2) acquire the appropriate permits for wastewater discharge, and (3) destroy wells not intended for future use under an Environmental Management District (EMD) permit prior to future grading activities. Comment letters also included the recommendation for private property owners to be made aware of the potential for litter accumulation on their property and their responsibility for disposal, and requests for the City to evaluate impacts related to transmission and distribution line easements, utility line routing, and energy efficiency.

The analysis included in this section was developed based on plan-level construction and operational information, data provided by the City with respect to existing water use, and additional data and information gathered from the City of Sacramento 2035 General Plan, City of Sacramento 2035 General Plan Master Environmental Impact Report, the City of Sacramento 2015 Urban Water Management Plan (UWMP), the Downtown Specific Plan Utility Infrastructure Analysis prepared by NV5, and other published technical reports, as indicated in the footnoted references.

4.13.1 Wastewater and Drainage

This section of the EIR describes existing public utilities available in the vicinity of the DSP area, and evaluates the effects of proposed development on those services. The services evaluated in this section are wastewater and drainage. Site characteristics such as regional and local wastewater and drainage are described.

Environmental Setting

Stormwater and wastewater are collected and conveyed through the DSP by both the Combined Sewer System (CSS) and Storm Drainage Basin 52 (Basin 52). The CSS is the legacy storm drain and sanitary sewer system that conveys both storm water and sanitary flows. The drainage area of the CSS encompasses approximately 7,500 acres of the Downtown, East Sacramento and Land

Park areas. Another 3,700 acres including the River Park, California State University and East Sacramento areas utilize the system for sanitary sewer only. The City discontinued constructing combined sewer and storm systems in 1946 although continued connections to the existing CSS were allowed.

The City of Sacramento's storm drainage requirements are handled by numerous drainage basins. Most of these basins are located outside of the CSS area. Basin 52 provides a separate storm drainage collection system in the westerly portion of the DSP area. Storm drainage within this area is gravity piped to Pump Station 52 located at 3rd and P Streets, near the Crocker Art Museum, where it discharges directly to the Sacramento River. Wastewater from the Basin 52 subarea is collected with a separated gravity sewer system and connected to the CSS.

Combined Sewer System

The CSS is a collection system of pipes that convey both sanitary sewage and stormwater in a single pipeline. The piping system is greatly oversized for the sanitary sewer component, but inadequate for the City's current storm drainage design standard of a 10-year stormwater runoff capacity.

The CSS that serves both the sanitary sewage and stormwater needs of the DSP area consists of pipes ranging in size from 4-inches to 120-inches in diameter. The largest pipe in the CSS is the 120-inch Pioneer Interceptor (force main) which conveys flows from Sump 2 to Pioneer Reservoir. Piping material includes brick, polyvinyl chloride (PVC), reinforced concrete pipe (RCP) and vitrified clay pipe (VCP). Flows through the DSP area are generally from the north to the south. Stormwater runoff and sanitary sewage is typically collected in 8-inch to 12-inch piping systems located in streets and alleyways. The collection system has collector pipelines ranging in size from 24-inch to 36-inch diameter that run in City streets.

Currently all flows into the CSS are conveyed to two pumping stations (Sump 2 and 1/1A) located on the Sacramento River. For secondary treatment and disinfection of the flow, the City has entered into an agreement with the Sacramento Regional Wastewater Treatment Plant (SRWWTP) to convey 60 million gallons per day (mgd). This treatment capacity is currently sufficient for dry weather flows.

During heavy storms when the capacity is exceeded, the Combined Wastewater Treatment Plant (CWTP) at South Land Park Drive and 35th Avenue is used to provide primary treatment of an additional 130 mgd. Excess flows from SRWTP and CWTP are diverted to the Pioneer Reservoir storage and treatment facility that has a capacity of 350 mgd. When all three treatment facilities (SRWWTP, CWTP, and Pioneer) have reached capacity, excess flows are directly discharged without treatment into the Sacramento River from Sump 2. When the pipeline system and treatment plant capacities are surpassed, the excess flows flood local streets in the downtown area through maintenance holes and catch basins.

Combined Sewer System Improvement Plan (CSSIP)

As explained above, the CSS has combined sewer outflows and overflows when flows to the CSS exceed the system's capacity. Outflows are when stormwater runoff exceeds the rate of flow in the CSS and flow onto the streets. Overflows are defined as the rare instances when untreated flows discharge to the Sacramento River. Outflows and the rare overflow usually occur only during heavy storm events.

The CSS area is currently regulated by the Central Valley Regional Water Quality Control Board (CVRWQCB) per Cease and Desist Order No. 85-342. The 1985 order, including its subsequent amendments, requires the City to make operational improvements to reduce combined sewer and stormwater runoff overflows and to ultimately provide 10-year capacity for the CSS.

In 1995, the City developed and approved the CSSIP to reduce Combined Sewer Outflow (CSO) events that include rehabilitating and expanding Sumps 1/1A and 2, rehabilitating and converting Pioneer Reservoir into a treatment facility, rehabilitating and up-sizing of the sewer mains in the CSS, and rehabilitating the CWTP. Many of these improvement projects are complete.

The City prepared a CSSIP Update Report in August 2014 to evaluate and provide recommendations for projects to alleviate flooding in the CSS area during a 10-year event and to prevent flooding during the 100-year event. The CSSIP Update analysis of system improvements included increased sewer flows from future development in the service area. Recommendations for specific project improvements that provide localized or system-wide reductions to flooding were identified and prioritized based on considerations such as flood-reduction benefits, cost-effectiveness, ensuring no increase in untreated discharges, sewer condition/age, cost-sharing opportunities, and City/community interests.

The final CSSIP Update recommended 12 projects located within the DSP area to alleviate system capacity constraints:

1. WA1-1 Zapata Park
2. WA1-2 G & 9th Street Parking Lot
3. WA1-3 9th Street from G to L Street
4. WA1-4 14th Street Storage
5. WA1-5 N & 22nd Street
6. WA1-6 24th Street Storage
7. WA1-7 Grant Park Storage
8. WA5-1 T & 20th Street Pipe Installation
9. WA5-2 28th & T/U Alley
10. WA5-3 W & 25th Street Storage
11. WA3-7 Target Parking Storage

A twelfth project, the WA6-2 Riverside Boulevard Upsizing is partially located within the DSP Downtown Grid boundary with the upper reaches of the pipe system improvements located on Broadway and Riverside.

As part of the CSSIP, the City has recently completed the majority of the Downtown Combined Sewer Upsizing Project.

Impact Fees

The City of Sacramento has adopted the Combined Sewer Development Fee (City Code 13.08.490), an impact mitigation fee that requires mitigation of any significant increase in wastewater flows over the present level. If a proposed development project is determined to have a significant impact on the CSS, an acceptable mitigation plan is required by the City. The current CSS Development Fee is $130.31 per Equivalent Single Family Dwelling Unit (ESD) for up to 25 ESD and $3,251.72 per ESD for more than 25 ESDs. The payment of the fee mitigates a project's sewer impacts.

In lieu of paying impact fees, a developer may mitigate project impacts to the system through implementation of a Mitigation Plan approved by the Department of Utilities. The Mitigation Plan could include on-site storage with retention, sewer main up-sizing, diversion of flows, rerouting or replacement of pipes, connection to separated areas, and/or other mitigation measures depending on the site.

There is a second fee associated with the sanitary sewer system, the Facility Impact Fee levied by the Sacramento Regional County Sanitation District (Regional San). This fee pays for planning, designing, construction and other related costs for wastewater conveyance, treatment and disposal facilities for the system's expansion.

The Regional San Facility Impact Fee currently is calculated by multiplying the ESDs generated by the development by the fee of $3,358 per ESD for infill projects. It is possible in certain cases to receive a credit of 1 ESD per parcel as credit for previously paid fees. The County's policy determines when the credit is allowed. The County has published the method of calculating the ESDs for the different types of development.[1]

Storm Drainage Basin 52

Basin 52 serves the storm drainage needs of an area of approximately 320 acres, bounded generally by the UPRR tracks north of I Street, Sacramento River, S Street, and 7th & 10th Streets. There are two additional smaller storm drainage basins, Basins 73 & 114 that are pumped into the Basin 52 system and are generally considered part of the larger Basin 52 system for planning purposes. Basin 114 serves the area bounded by 3rd to 5th Streets and I to J Street. The sump for Basin 114 is located near at the intersection of 4th and J Streets. Basin 73 serves the depressed section of 5th Street from J Street to L Street. The sump for Basin 73 is located just west of

[1] City of Sacramento, 2017. Downtown Specific Plan Utility Infrastructure Analysis. March 2017.

5th Street in Downtown Commons. These combined basins discharge stormwater through the levee into the Sacramento River at Sump 52, located near the Crocker Museum at 3rd and P Streets.

Basin 52 consists of a system of pipelines that conveys stormwater to Sump 52. The Basin 52 piping system ranges from 12-inches to 54-inches in diameter. The larger collection mains are located in 3rd Street, 4th Street, and 7th Streets. The system generally flows southwesterly towards the Sump 52 pump station. The system is currently over capacity, resulting in significant street flooding even during the 2-year storm event. This flooding is comprised only of stormwater, and does not include sanitary sewage. Property flooding for at-grade structures within Basin 52 occurs during the 100-year storm event, although underground structures are at risk during smaller storm events.

The Basin 52 Stormwater Master Plan, published in May 1996, recommended improvements for the shed area, including construction of a new pump station and storage basin, new outfall lines to the river, upsizing 8,800 feet of pipe and replacement in kind of 3,300 feet of pipe, as the life cycle requires. The City Department of Utilities is currently preparing an update of the Basin 52 Stormwater Master Plan that is expected to be in 2017.

Sacramento Regional Wastewater Treatment Plant

The SRWWTP is located in Elk Grove, and is owned and managed by Regional San. Regional San provides regional wastewater conveyance and treatment services to commercial, residential, and industrial end users within the City of Sacramento, several other areas including Sacramento County and the cities of Citrus Heights, Elk Grove, Folsom, Rancho Cordova, and West Sacramento, as well as the communities of Courtland and Walnut Grove. Regional San maintains 177 miles of interceptor pipelines. The existing SRWWTP currently maintains a maximum average dry weather treatment capacity of 181 mgd. As of 2014, actual average dry weather flow (ADWF) for the facility was approximately 106 mgd, substantially lower than the facility's capacity.[2] Treated effluent is discharged into the Sacramento River.

In 2010, the Central Valley Water Quality Control Board (CVRWQCB) released a draft permit for the SRWWTP that targeted ammonia reductions from the existing SRWWTP facility. The SRWWTP currently maintains secondary-level treatment processes. In order to meet the target requirements, as well as other anticipated future discharge requirements, Regional San is upgrading the SRWWTP. The proposed upgrade includes deployment of new treatment technologies and facilities, and would increase the quality of effluent discharged into the Sacramento River. The proposed upgrade would not, however, result in a net increase in permitted capacity of the SRWWTP.

[2] MacKay & Somps Civil Engineers, 2015. *RegionalSan Capacity Analysis - Sutter Pointe Wastewater Conveyance Project*. p. 19.

Regulatory Setting

Federal

Environmental Protection Agency's National CSO Control Policy

The U.S. Environmental Protection Agency (US EPA) initiated its Combined Sewer Overflow (CSO) Control Policy (40 CFR 122) in April, 1994. The CSO Control Policy provides a national level framework for the control and management of CSOs. The CSO Control Policy provides guidance regarding how to achieve Clean Water Act (CWA) goals and requirements when faced with management of a CSO. Key components of the CSO Control Policy that are relevant to the proposed plan include a requirement for Nine Minimum Controls (NMCs), which apply to every CSS in the nation. The NMCs are minimum technology-based actions or measures that are designed to reduce CSOs and their effects on receiving water quality. The intent of the NMCs is to be implementable without extensive engineering studies or major construction. The policy requires that at least 85 percent of the average annual CSS storm flow must be captured and routed to at least primary treatment with disinfection prior to discharge.

Clean Water Act

Title 40 CFR Part 503, Title 23 CCR, and standards established by the Regional Water Quality Control Boards (RWQCBs) all regulate the disposal of biosolids. The main purpose for these regulatory measures is to ensure appropriate limits for effluent discharge to surface waters. These limits affect the sizing and treatment capacities of wastewater utilities that serve communities in California. For discussion of flood management regulatory setting, see Section 4.9 Hydrology and Water Quality.

State

NPDES

As authorized by the CWA, the NPDES Permit Program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. The NPDES Program is a federal program which has been delegated to the State of California for implementation through the State Water Resources Control Board (State Water Board) and the nine RWQCBs, collectively, Water Boards. Each NPDES permit for point discharges contains limits on allowable concentrations of pollutants contained in discharges. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that the US EPA must consider in setting effluent limits for priority pollutants. The SRWTP treats wastewater and then discharges the treated effluent into the Sacramento River near the town of Freeport. These discharges from the SRWTP are subject to the NPDES permit program, which protects the beneficial uses of surface waters that could be used for drinking, fishing, swimming, agriculture, and other activities.

The CWA was amended in 1987 to require NPDES permits for non-point source (i.e., stormwater) pollutants in discharges. Stormwater sources are diffuse and originate over a wide area rather than from a definable point. The goal of NPDES stormwater regulations is to improve the quality of stormwater discharged to receiving waters to the "maximum extent practicable"

through the use of structural and non-structural Best Management Practices (BMPs). BMPs can include the development and implementation of various practices including educational measures (workshops informing public of what impacts results when household chemicals are dumped into storm drains), regulatory measures (local authority of drainage facility design), public policy measures, and structural measures (filter strips, grass swales and detention ponds). The NPDES permits that apply to activities in the City of Sacramento are described under local regulations below and in Section 4.9, Hydrology and Water Quality.

Dewatering Activities

Where groundwater levels tend to be shallow, dewatering during construction is sometimes necessary to keep trenches or excavations free of standing water when improvements or foundations/footings are installed. Clean or relatively pollutant-free water that poses little or no risk to water quality may be discharged directly to surface water under certain conditions. The Central Valley Water Board has adopted a general NPDES permit for short-term discharges of small volumes of wastewater from certain construction-related activities (General Dewatering Permit). Permit conditions for the discharge of these types of wastewaters to surface waters are specified in "General Order for Dewatering and Other Low-Threat Discharges to Surface Waters" (Order No. R5-2013-0074, NPDES No. CAG995001). Discharges may be covered by the General Dewatering Permit provided they are (1) either four months or less in duration or (2) the average dry weather discharge does not exceed 0.25 mgd and meet the effluent limitations provided in the order for pH, turbidity, total suspended solids, and biological oxygen demand. Construction dewatering, well development water, pump/well testing, and miscellaneous dewatering/low-threat discharges are among the types of discharges that may be covered by the General Dewatering Permit. The General Dewatering Permit also specifies standards for testing, monitoring, and reporting, receiving water limitations, and discharge prohibitions. When project construction would exceed four months in duration or 0.25 mgd, a project-specific permit from the Central Valley Water Board is required. Impacts associated with construction dewatering are addressed entirely within section 4.8, Hazards and Hazardous Materials.

Local

City of Sacramento 2035 General Plan

Goal U 1.1 **High-Quality Infrastructure and Services. Provide and maintain efficient, high quality public infrastructure facilities and services throughout the city.**

Policies

U 1.1.1 **Provision of Adequate Utilities.** The City shall continue to provide and maintain adequate water, wastewater, and stormwater drainage utility services utility services to areas in the city currently receiving these services from the City, and shall provide and maintain adequate water, wastewater, and stormwater drainage utility services to areas in the city that do not currently receive these City services upon funding and construction of necessary infrastructure.

U 1.1.5 **Growth and Level of Service.** The City shall require new development to provide adequate facilities or pay its fair share of the cost for facilities needed to provide services to accommodate growth without adversely impacting current service levels.

Goal U 3.1 **Adequate and Reliable Sewer and Wastewater Facilities. Provide adequate and reliable sewer and wastewater facilities that collect, treat, and safely dispose of wastewater.**

Policies

U 3.1.1 **Sufficient Service.** The City shall provide sufficient wastewater conveyance, storage, and pumping capacity for peak sanitary sewer flows and infiltration.

U 3.1.2 **New Developing Areas.** The City shall ensure that public facilities and infrastructure are designed to meet ultimate capacity needs. For facilities subject to incremental upsizing, initial design shall include adequate land area and any other elements not easily expanded in the future. Infrastructure and facility planning should discourage over-sizing of infrastructure that could contribute to growth beyond what is anticipated in the General Plan.

U 3.1.4 **Combined Sewer System Rehabilitation and Improvements.** In keeping with its Combined Sewer System (CSS) Long Term Control Plan (LTCP), the City shall continue to rehabilitate the CSS to decrease flooding, CSS outflows and Combined System Overflow (CSO). Through these improvements and new development requirements the City shall also insure that development in the CSS does not result in increased flooding, CSS outflows or CSOs.

Goal U 4.1 Adequate Stormwater Drainage. Provide adequate stormwater drainage facilities and services that are environmentally-sensitive, accommodate growth, and protect residents and property.

Policies

U 4.1.1 **Adequate Drainage Facilities**. The City shall ensure that all new drainage facilities are adequately sized and constructed to accommodate stormwater runoff in urbanized areas.

U 4.1.4 **Watershed Drainage Plans.** The City shall require developers to prepare watershed drainage plans for proposed developments that define needed drainage improvements per City standards, estimate construction costs for these improvements, and comply with the City's National Pollutant Discharge Elimination System (NPDES) permit.

U 4.1.6 **New Development.** The City shall require proponents of new development to submit drainage studies that adhere to City stormwater design requirements and incorporate measures, including "green infrastructure" and Low Impact Development (LID) techniques, to prevent on- or off-site flooding.

The proposed plan would be consistent with each of the 2035 General Plan goals and policies listed above.

The City requires developers to mitigate increased drainage flows caused by a particular project using one of the following approaches to mitigate impacts:[3]

1. Project Developer pay the proposed CSS drainage impact fee. This fee was calculated by to be $6.89 per square foot of increased imperviousness in 2015.

2. Project Developer directly mitigate the impacts utilizing low impact development BMPs.

3. Project Developer directly mitigate the impacts via an on-site or off-site improvement as determined by a Drainage Design Report.

4. For projects disturbing less than 2 acres, the Project Developer prepare a Drainage Design Report, and provide a minimum of 7,600 cubic-feet of on-site storage per acre of increased impervious area. The maximum discharge flow rate from the on-site storage shall be limited to 0.18 cubic feet per second (cfs) per acre.

[3] City of Sacramento, 2017. *Downtown Specific Plan Utility Infrastructure Analysis*. March 2017.

5. At the City's discretion, the Project Developer can share in a City sponsored Project that improves the system in the area, and can be upsized to incorporate mitigation of the project. A separate cost sharing agreement shall be executed for this option.

Stormwater Quality

The City of Sacramento adopted the Stormwater Quality Design Manual (SQDM) for the Sacramento and South Placer Regions (May 2007), a joint effort of the communities in the greater Sacramento region. The SQMD provides locally-adapted information for design and selection of three categories of stormwater quality control measures: source control, runoff reduction and treatment control. Per the requirements, multi-family and commercial, projects greater than one acre are required to implement permanent post-construction treatment measures.

The DSP area is subject to the requirements of the SQDM only for those projects that fall within the boundary of Basin 52. All projects greater than one acre would be required to comply with the stormwater quality measures outlined in the SQMD. These measures may include treatments measures such as bioswale planters, stormwater treatment vaults, green roofs, etc. either used as a single treatment or as a combination of several measures. Developers are urged to discuss their project with the Stormwater Quality Section of the City's Utility Department while in the planning stages so that proper permanent post construction stormwater quality treatment measures can be effectively implemented into the project.

The remainder of the area is within the CSS which is under NPDES permit regulations for stormwater discharges. The stormwater flows from the CSS are treated at the SRWWTP, CWTP, and the Pioneer treatment facilities. Therefore, projects within the CSS are not required to have additional stormwater quality control measures.

Dewatering

All new groundwater discharges to the CSS or separated sewer system are regulated and monitored by the City's Utilities Department pursuant to Department of Utilities Engineering Services Policy No. 0001, adopted as Resolution No. 92-439 by the Sacramento City Council. Groundwater discharges to the City's sewer system are defined as construction dewatering discharges, foundation or basement dewatering discharges, treated or untreated contaminated groundwater cleanup, discharges, and uncontaminated groundwater discharges.

The City requires that any short-term discharge be permitted, or an approved Memorandum of Understanding (MOU) for long-term discharges be established, between the discharger and the City. Short-term limited discharges of seven days duration or less must be approved through the City Department of Utilities by acceptance letter. Long-term discharges of greater duration than seven days must be approved through the City Department of Utilities and the Director of the Department of Utilities through a MOU process. The MOU must specify the type of groundwater discharge, flow rates, discharge system design, a City-approved contaminant assessment of the proposed groundwater discharge indicating tested levels of constituents, and a City-approved effluent monitoring plan to ensure contaminant levels remain in compliance with State standards or the Sacramento County Regional Sanitation District (Regional San) and Central Valley Water

Board-approved levels. All groundwater discharges to the sewer must be granted a Regional San discharge permit. If the discharge is part of a groundwater cleanup or contains excessive contaminants, Central Valley Water Board approval is also required. See Section 4.9, Hydrology and Water Quality for more information regarding groundwater.

Analysis, Impacts and Mitigation

Significance Criteria

The proposed DSP would result in a significant impact on wastewater or storm drainage utilities if it would:

1. Result in inadequate wastewater capacity to serve the DSP's demand in addition to existing commitments; or
2. Require or result in either the construction of new wastewater treatment facilities or storm water drainage facilities or the expansion of existing facilities, the construction of which could cause significant environmental impacts.

Methodology and Assumptions

The following impact analysis evaluates potential for the proposed plan related facilities to result in changes to existing wastewater and stormwater infrastructure capacity. Anticipated wastewater generation was estimated based on the City's standard wastewater generation factors, derived from the Downtown Specific Plan Utility Infrastructure Analysis.[4] Wastewater generation was calculated by applying generation factors to the estimated amounts of different types of use anticipated to be developed within the DSP area.

The City of Sacramento Design Standards for wastewater generation rates contain average daily flow rates for residential and non-residential uses. The existing standard for sewer generation is 400 gallons per day (gpd) per ESD. The City DOU is currently in the process of revising these Design Standards. The new standards are anticipated to be adopted by Fall 2017.

For more recent planning studies, the City has used a lower generation rate of 310 gpd per ESD. This is based on the stricter water usage construction standards limiting the flow per fixture unit that have been adopted over the last decade. With the State's adoption of CALGreen construction standards, even further reductions would be realized. However, this lower generation rate has not been formally adopted as the City's standard, and is therefore subject to change.

A factor of 0.55 ESD per residential unit was selected based on the nature of the high density urban infill residential. The factor is consistent with other recent planning studies for the Railyards and Richards Boulevard Specific Plans. This factor when multiplied by 310 gpd per ESD yields a sewer generation rate of 170 gpd per residential unit. This factor has not been formally adopted as the City's standard, and is therefore subject to change.

4 *Ibid.*

For the non-residential land uses, the City's standards recommend 0.2 ESDs per 1,000 square feet for general office/commercial buildings. This generation rate has been applied to both the Office and Commercial/Retail land uses, and yields a rate of 62 gpd per 1,000 square feet.

Given the anticipated development of 13,400 dwellings units in the DSP Downtown Grid area, the anticipated increase in the residential ADWF is 2.28 mgd (13,400 dwelling units x 0.55 ESDs x 310 gpd/ESD). The anticipated development of 3.8 million square feet of commercial/office/ retail space is anticipated to increase the ADWF by 0.24 mgd (3.8 million square feet x 0.2 ESD/1000 square feet x 310 gpd/ESD). The total anticipated increase in the ADWF is 2.52 mgd.

Impacts and Mitigation Measures

Impact 4.13-1: The proposed DSP would discharge additional flows to the City's sewer and drainage systems, which could exceed existing infrastructure capacity.

Construction

Excavation and pile driving during construction would encounter groundwater, which would require temporary dewatering. Groundwater extracted during construction would be discharged into either the CSS or into the separate drainage system that conveys stormwater flows to Storm Basin 52 before discharge to the Sacramento River. During dry periods and minor storm events, these systems would have sufficient capacity to convey dewatering flows. However, in the event that construction period dewatering occurs during a major storm event, sufficient storm drain capacity in either the CSS or Storm Basin 52 system might not be available to support dewatering discharges and existing capacity could be exceeded. This is considered a **potentially significant** impact.

Operation

Because the DSP is served, in part, by the CSS, increases in wastewater and stormwater runoff must be considered together. These aspects of the DSP would collectively have the potential to exacerbate periodic capacity shortfalls in the City's wastewater and stormwater conveyance systems.

CSS – Wastewater and Stormwater Flows

In order to calculate increases in wastewater for the DSP, a comparison of existing flows from the DSP area was made. Proposed development in the DSP area is expected to increase the sanitary sewer flows due to expected increases in residential, office, commercial, and other uses. The addition of over 13,400 new residences and 3.8 million square feet of office/commercial/retail uses would affect the existing sewer system, and the total anticipated increase in the ADWF is 2.52 mgd. The CSS has more than enough capacity to convey wastewater flows during dry weather. During wet weather, wastewater in the CSS is commingled with stormwater. There are approximately 2,682 acres in the DSP served by the CSS system. Of this area, approximate 61 acres (or approximately two percent) are considered pervious or raw land. Conversion of the 61 acres to impervious surfaces would result in an increase in stormwater runoff during storm events to the CSS. During storm events, flow rates in the CSS can increase by a factor of

approximately 2 to 3, and system capacity can be exceeded, particularly during peak flows. This is considered a **potentially significant** impact.

Basin 52 - Stormwater Flows

The stormwater runoff characteristics of the current land uses would be similar to proposed land uses. There are approximately 294 acres within the DSP area served by Basin 52. Of that area, only 3.6 acres is pervious or raw land. As a result, the peak stormwater flow rate and volume of rainfall-runoff is not expected to significantly change when the land use changes. However, in the event that construction period dewatering occurs during a major storm event, sufficient capacity in the Basin 52 system would be available to support dewatering discharges and existing capacity would not be exceeded. This is considered a **less-than-significant impact**.

Summary

Under dry weather conditions and small storm events, there is adequate capacity in the City's sewer and drainage systems to accommodate plan-related increases in wastewater and stormwater discharges. Additionally, reductions in operation period dewatering would reduce operation flows of dewatered groundwater to the CSS. However, during large storm events, the combined stormwater and wastewater could exceed system capacity. This is considered a **potentially significant** impact.

Mitigation Measure

Mitigation Measure 4.13-1

The City shall manage wastewater from the DSP such that it shall not exceed existing CSS capacity by implementing the following methods:

a) Project applicants within the DSP area shall pay the established CSS mitigation fee.

b) For projects within the DSP area that require localized upsizing of existing CSS infrastructure for service, applicants shall pay their fair share for improvements to upsize or upgrade the CSS infrastructure. A separate cost sharing agreement may be executed between applicants and the City for this option.

Significance After Mitigation: Mitigation Measure 4.13-1 would require the implementation of measures to manage wastewater, drainage and dewatered groundwater flows in a manner that would not exceed existing capacity of the CSS and Basin 52 systems. Therefore, impacts to infrastructure capacity would be **less than significant**.

Impact 4.13-2: The proposed DSP would increase demand for wastewater treatment.

The proposed plan would increase the amount of developed land uses and population in the City and result in the generation and discharge of additional wastewater and stormwater runoff requiring treatment at the SRWWTP. Peak wastewater flows from development within the DSP

area would be approximately 2.52 mgd. This amount of wastewater would not exceed the current excess capacity of approximately 75 mgd at the SRWWTP and the increase of wastewater flows would not exceed the dry or wet weather treatment capacity at the SRWWTP. Regional San expects per capita consumption to fall 25 percent over the next 20+ years through the ongoing installation and use of water meters as well as compliance with conservation mandates such as the state Water Conservation Act of 2009 (SB X7-7).[5] As a result, substantial additional conservation is expected throughout Regional San's service area, and the existing 181 mgd ADWF capacity will be sufficient for at least 40 more years.[6] Thus, no additional wastewater treatment facilities would need to be constructed to accommodate the growth and development anticipated under the proposed DSP, and this impact is **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

The cumulative context for the CSS includes the area of downtown Sacramento, Land Park, Curtis Park, and East Sacramento that it serves, including CSS conveyance. The cumulative context for Basin 52 includes the areas of the City within the Basin 52 system. The cumulative context for wastewater treatment includes the service area for the SRWWTP. This includes the City of Sacramento, Citrus Heights, Folsom, Rancho Cordova, Elk Grove, West Sacramento, and select unincorporated areas of Sacramento County.

Impact 4.13-3: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in demand for wastewater and stormwater facilities.

Under existing conditions, the wastewater conveyance and storage systems within the DSP area flood and overflow during major storm events. The vast majority of existing land area within the areas served by these systems is hardscape and impervious. However, new project development that may occur in coming years could convert some of the limited remaining pervious areas to impervious surfaces. Therefore, new development in areas served by the CSS or Basin 52 would result in a net increase in wastewater and stormwater flows directed to the CSS and stormwater directed to Basin 52. This would result in a potentially significant cumulative impact to these existing facilities.

CSS – Wastewater and Stormwater

As discussed in Impact 4.13-2, the proposed plan has several components—increased wastewater flows, increased stormwater runoff and dewatering--that could further tax the CSS system during major storm events. There are approximately 2,682 acres in the DSP served by the CSS system.

5 City of Sacramento. *2035 General Plan Master EIR*, Certified March 3, 2015, p. 4.13-16.
6 Sacramento Regional County Sanitation District. 2014. EchoWater Draft Environmental Impact Report. Available: http://www.regionalsan.com/echowater-project. Accessed April 2014 as cited in City of Sacramento. *2035 General Plan Master EIR*, Certified March 3, 2015, p. 4.13-16.

Of this area, approximate 61 acres (or approximately two percent) are considered pervious or raw land. Conversion of the 61 acres to impervious surfaces would result in an increase in stormwater runoff during storm events to the CSS. During these periods, the project contribution to cumulative increases in the CSS from stormwater runoff, wastewater, and construction dewatering could exacerbate the lack of capacity in the system. Therefore, the DSP's contribution to wastewater flow conveyance in the CSS would be cumulatively considerable.

The Downtown Infrastructure Analysis and CSSIP identify a number of improvements to the drainage and sewer systems in the vicinity of the DSP area, as listed on page 4.13-3 of this EIR. If these improvements were fully implemented, there would be additional capacity within the system, which would reduce the potential for existing and future flows to exceed system capacity. Funding for these improvements has not been secured, and the cumulative impact would be **potentially significant**.

Basin 52 - Stormwater

There are approximately 294 acres within the DSP area t served by Basin 52. Of that area, only 3.6 acres is pervious or raw land. Development of this limited amount of pervious land would not result in a significant increase in stormwater runoff within the Basin 52 area. Therefore, the proposed DSP would not result in a considerable contribution to exceeding capacity of stormwater facilities in Basin 52. This impact would be **less than significant**.

Mitigation Measure

Mitigation Measure 4.13-3

Implement Mitigation Measure 4.13-1.

Significance After Mitigation: Mitigation Measure 4.13-3 would fully offset the project contribution to the sewer and wastewater systems by requiring that the applicant construct appropriate facilities to delay discharge of wastewater, groundwater and/or stormwater or pay the applicable fee to the City to make necessary localized or system-wide improvements. With mitigation, the project contribution would be **less than significant**.

Impact 4.13-4: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in demand for wastewater treatment capacity at the SRWWTP.

As development occurs throughout the region, wastewater flows requiring treatment at the SRWWTP will increase. The SRWWTP currently has an excess capacity of 76 mgd, which would be available for a substantial portion of growth in the region. The Regional San's 2020 Master Plan identifies improvements needed to expand to 207 mgd, in order to accommodate growth in its service area through 2020 based on SACOG projections. Additionally, the Regional San is considering upgrades to enable compliance with revised and anticipated Regional Board

effluent requirements. The DSP's contributions to cumulative scenario significant impacts would be less than one percent of the SRWWTP's total capacity. The proposed DSP would increase wastewater requiring treatment by 2.52 mgd that would fit within the growth projections used to prepare the 2020 Master Plan. Therefore, the proposed plan contribution would not be considerable, and the resulting impact would be **less than significant.**

Mitigation Measure

None required.

4.13.2 Water Supply

Environmental Setting

This section of the EIR describes the City's overall water supplies and the water supply and conveyance system that serves the DSP area. The section assesses the expected water demand resulting from the implementation of the proposed DSP, evaluates the effects of the proposed DSP on existing and future water infrastructure, and where appropriate recommends measures that could avoid or reduce the magnitude of significant impacts.

Surface Water

Most of the City's water supply comes from surface water that the City diverts pursuant to its established surface water rights and entitlements. These consist of water rights established before 1914 (pre-1914 rights), water rights established after 1914, and a settlement contract the City has with the United States Bureau of Reclamation (USBR). Each of these is discussed briefly below.

The City's pre-1914 appropriative rights entitle the City to water from the Sacramento River. The City's right is based on use of Sacramento River water since 1854; this pre-1914 appropriative right allows for direct diversion of 75 cfs from the Sacramento River.

The City's post-1914 Sacramento River rights are reflected in five water rights permits issued by the State Water Board or it predecessor, the State Water Rights Board. Permit 992 authorizes the City to take up to 81,800 acre-feet per year (AFY) with a maximum diversion of 225 cfs from the Sacramento River by direct diversion, and has a priority date of March 30, 1920. This permit sets a boundary around the area in which the City is allowed to use diverted Sacramento River water (the "place of use" or POU) to be within the legal city limits, an area that changes from time to time through annexations.

The City has four additional water right permits authorizing diversions of American River water. Permits 11358 and 11361 authorize the City to divert water from the American River by direct diversion, and have priority dates of October 29, 1947, and September 22, 1954, respectively. These permits allow for diversions at the City's E.A. Fairbairn Water Treatment Plant (FWTP),

on the south bank of the American River just downstream from the Howe Avenue bridge, and specify a combined maximum allowable rate of diversion of 675 cfs. The authorized POU for both permits is 79,500 acres within and adjacent to the City.

The final two permits (Permits 11359 and 11360) authorize re-diversion for consumptive uses[7] of American River tributary water previously diverted by the Sacramento Municipal Utility District's (SMUD's) Upper American River Project (UARP). Permits 11359 and 11360 have priority dates of February 13, 1948, and July 29, 1948, respectively, and the POU for both permits is 96,000 acres within and adjacent to the City. These permits allow for diversions at the FWTP, and at the City's Sacramento River Water Treatment Plant (SRWTP), located on the east bank of the Sacramento River between the American River confluence and the I Street Bridge. The combined maximum allowable diversion under these permits includes re-diversion of up to 1,510 cfs of UARP direct diversion water and up to 589,000 AFY of UARP stored water.

The City also has a water rights settlement contract entered into in 1957 by the City and the USBR, following the USBR's construction of Folsom Dam which provided improved flood control to downstream communities. The essence of the City/USBR settlement contract is that the City agreed to (1) limit its combined rate of diversion under its American River water rights permits to a maximum of 675 cfs, up to a maximum amount of 245,000 AFY in the year 2030, and (2) limit its rate of diversion under its Sacramento River water rights permit to a maximum of 225 cfs and a maximum amount of 81,800 AFY. This limits the City's total diversions of Sacramento and American River water to 326,800 AFY in the year 2030 as shown in **Table 4.13-1**. The contract also specifies an annual build-up schedule to this maximum amount, as shown in **Table 4.13-2**.

In return, the contract requires USBR to make available at all times enough water in the rivers to enable the agreed-upon diversions by the City. The City agreed to make an annual payment to USBR for Folsom Reservoir storage capacity used to meet the USBR's obligations under the contract, beginning with payment for 8,000 acre feet of storage capacity in 1963 and building up, more or less linearly, to payment for the use of 90,000 acre feet of storage capacity in 2030. The settlement contract is permanent and not subject to deficiencies. The USBR contract, in conjunction with the City's water rights, provides the City with a reliable and secure water supply.

The City's diversions of American River water at the FWTP are also subject during certain time periods to limitations specified in the Water Forum Agreement (WFA). The Water Forum was started in 1993 by a group of water managers, local governments, business leaders, agricultural leaders, environmentalists, and citizen groups with two "co-equal" goals: to provide a reliable and safe water supply through the year 2030, and to preserve the wildlife, fishery, recreational, and

[7] Water used consumptively diminishes the source and is not available for other uses; whereas nonconsumptive water use does not diminish the source or impair future water use. Consumptive water use is defined as any use of water that causes diminishment of the source at the point of appropriation. Diminishment is defined as to make smaller or less in quantity, quality, rate of flow, or availability. Surface water use is nonconsumptive when there is no diversion from the water source or diminishment of the source.

TABLE 4.13-1
SUMMARY OF CITY'S POST-1914 WATER RIGHTS

Application or License Number	Priority Date	River Source	Maximum Amount Specified[1] (cfs)	Maximum Amount Specified[1] (AFY)	Purpose of Use	Season of Diversion and Re-Diversion	Place of Use	Deadline to Perfect Full Use
A. 1743 P. 992	3/30/1920	Sacramento	225	81,800	Municipal	Jan 1 to Dec 31	City of Sacramento	12/31/2030
A. 12140 P. 11358	10/29/1947	American	675	245,000	Municipal	Nov 1 to Aug 1	79,500 acres within and adjacent to the City	12/31/2030
A. 12321 P. 11359	2/13/1948	Tributaries of the American			Municipal	Nov 1 to Aug 1	96,000 acres within and adjacent to the City	12/31/2030
A. 12622 P. 11360	7/29/1948	Tributaries of the American			Municipal	Nov 1 to Aug 1	96,000 acres within and adjacent to the City	12/31/2030
A. 16060 P. 11361	9/22/1954	Tributaries of the American			Municipal	Nov 1 to Aug 1	79,500 acres within and adjacent to the City	12/31/2030
Maximum Diversion Amount			**900**	**326,800**				

NOTE:
1. Amounts shown reflect the settlement agreement, as discussed in text.

SOURCE: City of Sacramento Department of Utilities, 2016. *2015 Urban Water Management Plan*. June 2016, West Yost Associates.

TABLE 4.13-2
SETTLEMENT CONTRACT MAXIMUM DIVERSION SCHEDULE (ACRE-FEET PER YEAR)

Source	2015	2020	2025	2030	2035	2040
American River	189,000	208,500	228,000	245,000	245,000	245,000
Sacramento River	81,800	81,800	81,800	81,800	81,800	81,800
Total	**270,000**	**290,300**	**304,000**	**326,800**	**326,800**	**326,800**

SOURCE: City of Sacramento Department of Utilities, 2016. *2015 Urban Water Management Plan*. June 2016, West Yost Associates.

aesthetic values of the Lower American River. After six years of intense interest-based negotiations, the Water Forum participants approved the 2000 WFA.

As part of the WFA, each water purveyor signed a purveyor specific agreement (PSA) that specified that purveyor's Water Forum commitments. The City's PSA limits the quantity of water diverted from the American River at the FWTP during two hydrologic conditions: extremely dry years (i.e., "Conference Years") and periods when river flows are below the so-called "Hodge Flow Criteria".[8]

8 In the case of *EDF v. East Bay Municipal Utility District* (Superior Court, Alameda County, 1990, No. 425955) the court (Judge Hodge) established minimum flow levels that would have to be met in the American River in order for EBMUD to divert water into the Folsom South Canal. These flow levels have come to be known as "Hodge" flows.

The City's PSA defines extremely dry years (i.e., "Conference Years") as years in which the California Department of Water Resources (DWR) projects an annual unimpaired flow into Folsom Reservoir of 550,000 AFY or less, or the projected March through November unimpaired flow into Folsom Reservoir is less than 400,000 AFY. During Conference Years, the City has agreed to limit its diversions for water treated at the FWTP to 155 cfs and 50,000 AFY. Conference Years have occurred on the American River only twice during the 72-year period of record historical hydrology.

In addition to Conference Years, the City's PSA specifies limitations on the City's diversion rate at the FWTP when American River flows bypassing the FWTP are less than the Hodge Flow Criteria as follows: 2,000 cfs from October 15 through February; 3,000 cfs from March through June; and, 1,750 cfs from July through October 14.

Based on CALSIM-II[9] analysis of the 1922 to 1994 climate data, in 59 percent of years the American River is predicted to experience flows that are less than Hodge flow conditions at some time during the peak months of June through August. When flows passing the FWTP are greater than the Hodge Flow Criteria and Conference Year conditions do not exist, the PSA allows diversions of American River water up to the FWTP's current maximum rate of 310 cfs (200 mgd).

It is important to note that the WFA does not restrict diversion under the City's American River entitlements from a Sacramento River diversion point (which leaves the water in the American River throughout its reaches); therefore, during a Conference Year condition the City's annual surface water diversion amounts are limited only by the FWTP Conference Year condition and the diversion and treatment capacity at the SRWTP. Assuming a maximum treatment capacity of 50,000 AFY at the Fairbairn WTP and 180,000 AFY at the Sacramento WTP, the current drought limiting scenario allows a surface water production of 230,000 AFY.

RiverArc Project

The City is participating as a partner in the RiverArc Project, a multi-agency effort to enhance water supply diversity and reliability on a regional scale. While providing additional water supply options for its stakeholders, the RiverArc Project would also increase the sustainability of regional groundwater supplies and provide additional environmental protection in the American River watershed. The RiverArc Project would divert water from the Sacramento River to offset water currently diverted from the American River, and deliver that water to a new regional water treatment plant. That water would then be distributed through existing and new pipelines to local water agencies, including the City of Sacramento. For the City of Sacramento, the RiverArc Project would enable the City to divert surface water when the Hodge flow restrictions are in place on the American River. A new water treatment plant could also be used to during peak periods, which would increase water supply reliability in the north Natomas area.[10]

[9] CalSim is the model used to simulate California State Water Project (SWP)/Central Valley Project (CVP) operations. CalSim-II is the latest version of CalSim available for use.

[10] West Yost Associates, *Sacramento River Regional Water Reliability Project, Planning Phase 1,* August 2015, p. 7.

Current drought conditions reinforce the need for this project. Supportive stakeholders and water agencies are working quickly to identify and secure project development funding that may not exist in the future. This includes Proposition 1 funding and additional funding opportunities at the local, state, and federal levels. If funded, the RiverArc Project will kick-off in 2020. To date, a Planning Phase 1 report has been prepared, which lays out a conceptual plan to develop the backbone infrastructure necessary to connect the Sacramento River to the American River and incorporate the region's groundwater along the way. This phase is expected to last from 2020 to 2030.[11]

Groundwater

While the City obtains the majority of its water supply from surface water in the American and Sacramento rivers, groundwater makes up the balance of supply. Municipal groundwater is extracted from the North Sacramento Groundwater Basin and the Central Sacramento Groundwater Basin. Groundwater is extracted from 29 municipal wells, most of which are located north of the American River. Of these, 14 groundwater wells provide non-potable water supply, while the remaining 13 provide potable water. Total capacity for the City's municipal groundwater wells is approximately 20.7 mgd.[12,13]

The City pumps groundwater from both the North American Subbasin and the South American Subbasin of the Sacramento Valley Groundwater Basin. The North American Subbasin is bound by Bear River to the north, Feather River to the west, the Sacramento and American Rivers to the south, and a north-south line extending from the Bear River to Folsom Lake to the east. The South American Subbasin is bound by the Sierra Nevada to the east, the Sacramento River to the west, the American River to the north, and the Cosumnes and Mokelumne Rivers to the south. For additional description of water bearing layers, groundwater quality, and other aquifer characteristics, as relevant to the proposed plan, please refer to Section 4.9, Hydrology and Water Quality.

The City is one of many water purveyors that use groundwater from these two subbasins. While the City pumps from both subbasins, approximately 95 percent of the amount pumped by the City each year is pumped from the North American subbasin.[14] For example, the City pumped 17,772 AF of groundwater from the North American subbasin and 665 AF from the South American subbasin for potable water consumption in 2010.[15]

The Sacramento Groundwater Authority (SGA) prepared a Groundwater Management Plan (GMP) in 2014, for the portion of the North American Subbasin that is located north of the American River to the Sacramento County line. Additionally, as a result of the Water Forum

11 RiverArc Project. Balancing Water Reliability. Available: http://riverarcproject.com/project-timeline/. Accessed July 3, 2017.
12 City of Sacramento Department of Utilities. *2015 Urban Water Management Plan.* June 2016, West Yost Associates.
13 City of Sacramento, 2017. Available: https://www.cityofsacramento.org/Utilities/Your-Utilities-Your-Community/Your-Utilities.
14 City of Sacramento Department of Utilities. *2015 Urban Water Management Plan.* June 2016, West Yost Associates.
15 *Ibid.*

Successor Effort, the Central Sacramento County Groundwater Management Plan (CSCGMP) was prepared. These two plans identify measures to be taken to maintain a sustainable, high-quality groundwater resource.

The Water Forum Agreement identified a sustainable yield for the North Basin of 131,000 AFY.[16] The SGA monitored groundwater extractions from the North Basin from 2000 to 2013, and estimated annual average extractions at 99,500 AFY.[17] The GMP also reports that groundwater use declined during this period, largely due to implementation of conjunctive use operations and water use efficiency measures.[18] The GMP concludes that the North Basin is well within its sustainable yield indicator, and because the North Basin is largely developed, it was not expected that new water demands would cause the Basin to approach its average annual sustainable yield.[19] The Water Forum estimated that the long-term average annual sustainable yield of the Central Basin was 273,000 AFY, while extractions were estimated at 250,000 AFY.[20] The CSCGMP identifies measures to maintain pumping levels within the sustainable yield, including reducing demand, conjunctive use with groundwater banking and exchange opportunities, and aquifer storage and recovery projects.[21]

Total Available Water Supply

Accounting for the surface water rights and constraints on those rights discussed above, as well as groundwater availability and pumping capacity, **Table 4.13-3** provides a summary of current total water supplies available for City use.

TABLE 4.13-3
MINIMUM SUPPLY NEXT THREE YEARS FROM RETAIL AND WHOLESALE (AF)

	2016	2017	2018
Retail	273,362	278,362	283,862
Wholesale	9,343	9,343	9,343
Total	**282,705**	**282,705**	**282,705**

SOURCE: City of Sacramento Department of Utilities, 2016. *2015 Urban Water Management Plan*. June 2016, West Yost Associates.

Water Demand

Existing water demand within the City is primarily residential, but also includes commercial, institutional, and landscape irrigation. Generally, water demand decreased from 2000 to 2010, due to a combination of factors, including increased conservation efforts, deployment of water

16 Sacramento Groundwater Authority, *Groundwater Management Plan, Sacramento County-North Basin*, December 2014, p. 59.
17 *Ibid*.
18 *Ibid*.
19 *Ibid*.
20 Water Forum and Sacramento County Water Agency, *Central Sacramento County Groundwater Management Plan*, February 2006, p. ES-5.
21 *Ibid.*, p. 3-19 and 3-20.

conserving fixtures, replacement of leaky pipelines, increased public awareness over drought conditions, the City's meter retrofit program, and the effects of the recent recession. At present, approximately 70 percent of City water connections are on water meters.[22] The City also sells water to other regional agencies including Sacramento International Airport, Sacramento Suburban Water District, California American Water Company, and Sacramento County Water Agency.

Table 4.13-4 provides a projection of total water demand by the City for 2015 through 2040. **Table 4.13-5** presents a summary of water demands and available supply during multiple dry years. As discussed in the City's UWMP, the available water supply figures shown in Table 4.13-5 conform to the requirements of the Water Forum Agreement, including Hodge Flow requirements (discussed previously).

TABLE 4.13-4
CITY MAXIMUM TOTAL WATER DEMAND THROUGH 2040 (ACRE-FEET PER YEAR)

Water Use	2015	2020	2025	2030	2035	2040
Potable and Raw Water	86,031	162,817	177,265	197,468	206,799	219,615
Recycled Water	0	1,000	1,000	1,000	1,000	1,000
Total	86,031	163,817	178,265	198,468	207,799	220,615

SOURCE: City of Sacramento Department of Utilities, 2016. *2015 Urban Water Management Plan*. June 2016, West Yost Associates. pp. 4-7, Tables 4-8 and 4-9.

TABLE 4.13-5
CITY MULTIPLE DRY YEAR SUPPLY AND DEMAND COMPARISON, 2015 THROUGH 2040
(ACRE-FEET PER YEAR)

Year Scenario	Water Supply or Demand	2020	2025	2030	2035	2040
1st Year, Multiple Dry Year Scenario	Supply Total	275,917	288,288	294,419	294,419	294,419
	Demand Total	123,229	130,548	139,882	149,213	162,029
	Excess Supply	**152,688**	**157,740**	**154,537**	**145,206**	**132,390**
2nd Year, Multiple Dry Year Scenario	Supply Total	275,917	288,288	294,419	294,419	294,419
	Demand Total	123,229	130,548	139,882	149,213	162,029
	Excess Supply	**152,688**	**157,740**	**154,537**	**145,206**	**132,390**
3rd Year, Multiple Dry Year Scenario	Supply Total	275,917	288,288	294,419	294,419	294,419
	Demand Total	123,229	130,548	139,882	149,213	162,029
	Excess Supply	**152,688**	**157,740**	**154,537**	**145,206**	**132,390**

SOURCE: City of Sacramento Department of Utilities, 2016. *2015 Urban Water Management Plan*. June 2016. West Yost Associates. p. 7-12. Table 7-11.

[22] City of Sacramento, Department of Utilities. 2016. Water Meters. Available: https://www.cityofsacramento.org/Utilities/Conservation/Water-Meters. Accessed August 20, 2017.

Water Treatment, Storage, and Distribution

Each year the City of Sacramento provides more than 45 billion gallons of water for drinking, household use, fire suppression, landscaping, and commercial and industrial use. The distribution system is a pipeline network, where surface water and groundwater is mixed within the system.[23] The Department of Utilities operates and maintains the City's two water treatment plants, eight pump stations, many storage reservoirs, 29 municipal wells, thousands of hydrants, and nearly 1,600 miles of pipeline to convey water to homes and businesses throughout the City.[24] The City's service area spans north to Elkhorn Boulevard in North Natomas, east to Watt Avenue and Highway 50, west to the Sacramento River, and south to Sheldon Road.

Water Treatment

The City owns and operates two water diversion and treatment facilities: the SRWTP and the E.A. Fairbairn WTP on the American River. These WTPs operate as demands dictate; treatment is directly related to consumer demands. The Sacramento WTP is located on the Sacramento River just downstream of the confluence with the American River, west of I-5 and south of Richards Boulevard. The SRWTP has a design of 160 mgd, but had not been able to operate at that level. Rehabilitation of the plant, which began in 2013 and concluded in 2016, now allows the plant to operate at 160 mgd.[25] The Fairbairn WTP, located on the south bank of the lower American River, has a capacity of 160 mgd, with a peak hydraulic flow of 200 mgd. As discussed above, there are restrictions on how much water can be diverted at the Fairbairn WTP under certain conditions.

Under ordinary conditions, the City's total maximum water treatment capacity is 295 mgd, and will be 320 mgd when the SRWTP improvements are completed. On average, in 2011-2012, the City treated 42 mgd of water and the SRWTP treated approximately 64 mgd for a total average treatment of 106 mgd.[26] In 2015, the average daily demand for treatment was 77 mgd, and the maximum day demand was 120 mgd.[27]

Water Storage

Water storage is used to meet water demand for periods when peak hour demand exceeds maximum daily supply rates. These high demand periods usually occur for four to six hours during hot summer days, and for potentially longer periods during large fire events. The City of Sacramento has ten above-ground storage reservoirs; each with a capacity of three million gallons (mg) and one underground reservoir with a capacity of 15 mg. The reservoirs are at different locations throughout the City's water distribution system. In addition, 44 mg of on-site storage

23 City of Sacramento Department of Utilities. *2015 Urban Water Management Plan.* June 2016, West Yost Associates.
24 City of Sacramento, 2017. Department of Utilities. Available: https://www.cityofsacramento.org/Utilities/Your-Utilities-Your-Community/Your-Utilities.
25 City of Sacramento, 2017. Project Updates. Available: http://www.cityofsacramento.org/Utilities/Sacramento-Water-Works/Water-Project-Updates. Accessed July 3, 2017.
26 City of Sacramento, *2035 General Plan Master EIR Background Report*, adopted March 3, 2015, p. 4-21.
27 Ewert, Brett, Senior Engineer, City of Sacramento Department of Utilities, personal communication, April 13, 2016.

exists at the water treatment plants. Therefore, the total water storage capacity in the City is 92 mg.[28]

Water Transmission

The City conveys water using its system of larger transmission pipelines, which are at least 18 inches in diameter, and smaller distribution mains, which range in diameter from 4 to 16 inches in diameter. Transmission pipelines are used solely for the conveyance of large volumes of water; they are generally not tapped for water or fire services.[29] In total, the City manages approximately 1,600 miles of water pipelines.[30]

The DSP area is served by several major transmission mains ranging in size from 14-inch to 42-inch in diameter together with an extensive system of service mains ranging in size from 6-inch to 12-inch diameter. A major transmission main serving the greater downtown Sacramento area from the SRWTP enters the DSP area at the west end of I Street through a 42-inch diameter pipeline from the Railyards area. This 42-inch pipeline continues easterly along I Street and H Street decreasing in size to a 36-inch and then to a 30-inch pipeline as it branches north and south to serve the greater DSP area. The 30-inch pipeline leaves the DSP area at H Street & 29th Street. The 24-inch transmission mains leave the DSP area at three locations including on Broadway at Muir Street, Broadway on the easterly side of the railroad tracks between 19th & 20th Streets, and Q Street at 29th Street.

There are no wells or reservoirs within the limits of the DSP area. The nearest reservoir outside of the SRWTP is the Alhambra Reservoir located just to the east of the DSP area on the block bounded by Alhambra Boulevard, J Street, 33rd Street, & L Street.

The DSP area is served by an extensive system of service mains ranging in size from 6-inch to 12-inch diameters. Upsizing of the existing mains has been performed over the years as development in the DSP area has occurred. However, many of the system mains within the DSP area are cast iron pipelines which have demonstrated a history of problems associated with mains reaching the end of their useful life. Hydraulic testing of these mains has determined a severe reduction in capacity. Continued replacement/upsizing of the cast iron mains, and the smaller 6-inch and 8-inch mains is envisioned in order to provide adequate domestic water needs and meet current regulations for fire suppression. Assessment and prioritization of rehabilitation of the distribution system in this area is currently in the beginning stages as part of the City Department of Utilities asset management program. The City does not supply recycled water to the DSP area or other parts of the Central City.

28 City of Sacramento, *2035 General Plan Master EIR Background Report*, adopted March 3, 2015, p. 4-22.
29 City of Sacramento Department of Utilities. *2015 Urban Water Management Plan.* June 2016, West Yost Associates.
30 City of Sacramento, 2017. Department of Utilities. Available: https://www.cityofsacramento.org/Utilities/Your-Utilities-Your-Community/Your-Utilities.

Regulatory Setting

Federal

U.S. Environmental Protection Agency

The US EPA established primary drinking water standards in the CWA Section 304 and states are required to ensure that potable water for the public meets these standards. Standards for 81 individual constituents have been established under the Safe Drinking Water Act (SDWA), as amended in 1986. The US EPA may add additional constituents in the future.

Safe Drinking Water Act

The US EPA administers the SDWA, the primary federal law that regulates the quality of drinking water and establishes standards to protect public health and safety. The California Department of Health Services (DHS) implements the SDWA and oversees public water system quality statewide. DHS establishes legal drinking water standards for contaminates that could threaten public health.

State

Drinking Water Quality

As part of its efforts to implement the SDWA, the DHS inspects and provides regulatory oversight for public water systems within California. In the Sacramento area, the CVRWQCB also has the responsibility for protecting the beneficial uses of the State's waters, including groundwater, and these include municipal drinking water supply, as well as various other uses. Public water system operators are required to monitor their drinking water sources regularly for microbiological, chemical, and radiological contaminants to show that drinking water supplies meet the regulatory requirements listed in Title 22 of the California Code of Regulations (CCR) as primary maximum contaminant levels (MCLs). Primary standards are developed to protect public health and are legally enforceable. Among these contaminants are approximately 80 specific inorganic and organic contaminants and six radiological contaminants that reflect the natural environment, as well as human activities. Examples of potential primary inorganic contaminants are aluminum and arsenic, while radiological contaminants can include uranium and radium.

Public water system operators are also required to monitor for a number of other contaminants and characteristics that deal with the aesthetic properties of drinking water. These are known as secondary MCLs. Secondary standards are generally associated with qualities such as taste, odor, and appearance, but these are generally non-enforceable guidelines. However, in California secondary standards are legally enforceable for all new drinking water systems and new sources developed by existing public water suppliers. The public water system operators are also required to analyze samples for unregulated contaminants, and to report other contaminants that may be detected during sampling.

Urban Water Management Planning Act

California Water Code section 10610 (et seq.) requires that all public water systems providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 AFY, must prepare an UWMP. UWMPs represent key water supply planning documents for municipalities and water purveyors in California, and often form the basis of Water Supply Assessments (WSAs) (see below) prepared for individual projects. UWMPs must be updated at least every five years on or before December 31, in years ending in five and zero.

Water Supply Assessment

California Public Resources Code (PRC) Section 21151.9 requires that a WSA be prepared for proposed plan as defined in the statute to ensure that long term water supplies are sufficient to meet the project's demands in normal, single dry and multiple dry years for a period of 20 years. Preparation of a WSA is required if a proposed action meets the statutory definition of a "project," which includes at least one of the following (Water Code section 20912(a)):

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area; or
- A mixed use project that includes one or more of the projects specified in the above bullets.

Completion of a WSA requires collection of proposed water supply data and information relevant to the project in question, an evaluation of existing/current use, a projection of anticipated demand sufficient to serve the project for a period of at least 20 years, delineation of proposed water supply sources, and an evaluation of water supply sufficiency under single year and multiple year drought conditions.

Written Verification of Water Supply

Government Code Section 66473.7(a)(1) requires an affirmative written verification of sufficient water supply. The written verification is designed as a "fail-safe" mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs early in the planning process. This verification must also include documentation of historical water deliveries for the previous 20 years, as well as a description of reasonably foreseeable impacts of the proposed subdivision on the availability of water resources of the region. Government Code section 66473.7(b)(1) states:

> The legislative body of a city or county or the advisory agency, to the extent that it is authorized by local ordinance to approve, conditionally approve, or disapprove the tentative map, shall include as a condition in any tentative map

> that includes a subdivision a requirement that a sufficient water supply shall be available. Proof of the availability of a sufficient water supply shall be requested by the subdivision applicant or local agency, at the discretion of the local agency, and shall be based on written verification from the applicable public water system within 90 days of a request.

In other words, as a result of the information contained in the written verification, the city or county may attach conditions to assure there is an adequate water supply available to serve the proposed plan as part of the tentative map approval process.

While in most cases, following project certification, additional water supply verification is required to be completed at the Tentative Map stage, prior to adoption of the Final Map, for certain tentative maps. Pursuant to Government Code section 66473.7(i), additional water supply verification is not required for:

> Any residential project proposed for a site that is within an urbanized area and has been previously developed for urban uses, or where the immediate contiguous properties surrounding the residential project site are, or previously have been, developed for urban uses, or housing projects that are exclusively for very low and low income households.

California Water Conservation Act

The California Water Conservation Act was enacted in November 2009, and requires each urban water supplier to select one of four water conservation targets contained in California Water Code Section 10608.20 with the statewide goal of achieving a 20 percent reduction in urban per-capita water use by 2020.

Sustainable Groundwater Management Act of 2014

The Sustainable Groundwater Management Act of 2014 (SGMA) became law on January 1, 2015, and applies to all groundwater basins in the state (Water Code section 10720.3). (The SGMA is comprised of three separate bills: Senate Bill (SB) 1168, SB 1319, and Assembly Bill (AB) 1739. All three were signed into law by the Governor on September 16, 2014.) By enacting the SGMA, the legislature intended to provide local agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater within their jurisdiction (Water Code section 10720.1).

Pursuant to SGMA, any local agency that has water supply, water management, or land use responsibilities within a groundwater basin may elect to be a “groundwater sustainability agency” for that basin (Water Code Section 10723). Local agencies had until January 1, 2017 to elect to become or form a Groundwater Sustainability Agency (GSA). In the event a basin is not within the management area of a GSA, the county within which the basin is located will be presumed to be the GSA for the basin. However, the county may decline to serve in this capacity (Water Code section 19724).

In October 2015, the SGA Board submitted a notification of intention to become the GSA for the Sacramento County portion of the North American sub-basin.[31] Following a 90-day comment period, SGA was designated as the exclusive GSA for its management area in late January 2016 and coordinated with representatives throughout the North American Basin to ensure effective GSAs were formed covering the entire subbasin by June 30, 2017. The Groundwater Sustainability Plan (GSP) Emergency Regulations for evaluating GSPs, the implementation of GSPs, and coordination agreements were adopted by DWR and approved by the California Water Commission on May 18, 2016.

Groundwater authorities will have additional powers under the SGMA to manage groundwater within the basin, including, for example, the power to: conduct investigations of the basin, to require registration of groundwater extraction facilities and metering of groundwater extractions, regulate groundwater extractions from individual groundwater wells or wells generally, and to assess fees on groundwater extractions (see generally, Water Code section 10725 et seq.). SGMA also provides local agencies with additional tools and resources designed to ensure that the state's groundwater basins are sustainably managed.

SGMA also requires DWR to categorize each groundwater basin in the state as high-, medium-, low-, or very low priority (Water Code Sections 10720.7, 10722.4). The North American sub-basin has been categorized as high priority.[32] All basins designated as high- or medium-priority basins must be managed by a groundwater sustainability agency under a GSP that complies with Water Code section 10727 et seq.

Local

City of Sacramento 2035 General Plan

The following policies of the Utilities Element of the 2035 General Plan are relevant to development in the DSP area and the provision of water supply utility systems.

Goal U 2.1 **High-Quality and Reliable Water Supply. Provide water supply facilities to meet future growth within the city's Place of Use and assure a high-quality and reliable supply of water to existing and future residents.**

Policies

U 2.1.3 **Water Treatment Capacity and Infrastructure.** The City shall plan, secure funding for, and procure sufficient water treatment capacity and infrastructure to meet projected water demands.

U 2.1.4 **Priority for Water Infrastructure.** The City shall give high priority in capital improvement programming to funding rehabilitation or replacement of critical infrastructure that has reached the end of its useful life.

U 2.1.9 **New Development.** The City shall ensure that water supply capacity is in place prior to granting building permits for new development.

[31] California Department of Water Resources, *Table of GSA Formation Notifications Received by DWR.* Available: www.water.ca.gov/groundwater/sgm/gsa_table.cfm. Accessed March 31, 2016.

[32] California Department of Water Resources, 2014. CASGEM Groundwater Basin Prioritization Results, May 28, 2014.

The proposed plan would be consistent with each of the 2035 General Plan goals and policies listed above. Consistent with these policies, project utilities would be appropriately sized and installed within the project site to maintain adequate service in light of the impact analysis provided below; the project applicant would pay a fair share of the cost for any needed upgrades, as warranted. With respect to Goal U 2.1 and Policy U.2.1.9, a water supply was prepared for the DSP (see Appendix J), and the City expects to be able to serve the proposed DSP in light of all other current and planned projects.

Analysis, Impacts and Mitigation

Significance Criteria

The proposed DSP would result in a significant impact on water supply if it would:

1. Increase demand for potable water in excess of existing supplies;

2. Result in inadequate capacity in the City's water supply facilities to meet the water supply demand, so as to require the construction of new water supply facilities; or

3. Require or result in either the construction of new water treatment facilities or the expansion of existing facilities, the construction of which could cause significant environmental impacts.

Methodology and Assumptions

The following impact analysis evaluates potential for implementation of the proposed DSP to result in changes to existing infrastructure and supply relating to water availability.

Construction period water demand was calculated assuming that dust suppression, compaction, and other construction period water requirements would amount to 0.05 AF/month per acre, on average, consistent with typical construction water consumption for urban projects in the region. The construction water analysis conservatively assumes that all construction within the DSP area would occur at the same time. In actuality, construction would be dispersed in time as individual components are implemented. However, assuming that all construction water demand would occur at once provides an extremely conservative upper limit to the anticipated volume of water that could be consumed annually during project construction. Actual levels would be less than this maximum.

The types of development envisioned with implementation of the DSP, including development of the Opportunity Sites and existing entitled planning projects sites are high density urban infill projects. As described in Chapter 3, Land Use and Population and Housing, the Opportunity Sites located in the Central Business District (CBD) are assumed to have a development density of 165 dwelling units per acres (du/ac). The Opportunity Sites located in the urban corridors are assumed to have a development density of 100 du/acre. The other Opportunity Sites are assumed to have a development density of 30 du/ac. For non-residential uses, each Opportunity Site was assumed to be a mixed-use development with 120 square feet of commercial/retail/office per dwelling unit.

Projects within the DSP area are anticipated to have smaller residential units (700-1000 square feet) with a smaller per capita occupancy rate per unit than traditional single-family or multi-family units in suburban areas. The domestic water demands for these smaller residential units is anticipated to be substantially reduced compared to the City's typical single family or multi-family water usage criteria. Fire flow demands for these three areas are assumed to be 3,500 gpm for the CBD, 2,500 gpm for the urban corridors, and 1,500 gpm for the remaining areas. Ultimately the minimum fire flow for a specific building is designated by the fire department during plan review.

The adoption by the State of California of SB7 – "20 x 2020" Water Conservation Standards – requiring a 20 percent reduction in urban water usage by the year 2020 combined with the CALGreen Building Code would require reductions in overall water usage through stricter indoor and outdoor usage. These requirements mandating water conservation further justify the use of the reduced water rates in estimating water demand from future development in the DSP area.

The City's Water Study Design Manual contains the Water System Design Criteria (Criteria) which is a summary of the recommended potable water system performance and operational criteria. The Criteria provides a table of gross unit water use factors for various land uses. The demands are broken into two categories of water use factors, residential and non-residential. The residential factors are based on the AFY per dwelling unit (AFY/DU) and the non-residential is based on AFY per employee. For the DSP, all of the anticipated dwelling units are anticipated to be the Residential High category which has a residential factor of 0.12 AFY/DU. The Commercial/Office land use has a factor of 0.09 AFY/employee. These factors have not yet been formally adopted as the City's standard, and are therefore subject to change.

The analysis for water supply centers on a comparison of existing uses and demand to future water demand with implementation of the proposed DSP. Net water demand was compared to water supplies available to the City, in accordance with City procedures, and a determination made regarding sufficiency of supply for the proposed DSP using the City's Water Supply Assessment and Certification Form (see Appendix J). To calculate water demand, the WSA compares the existing number of dwelling units and employees in each type of land zoning with the projected number of dwelling units and employees with implementation of the proposed DSP. The current water demand in the DSP area is 5,198 AFY. The proposed DSP would increase water demand by 2,771 AFY.

Impacts and Mitigation Measures

Impact 4.13-5: The proposed DSP would increase demand for potable water.

In 2015 water demand within the City totaled 86,031 AFY, which is 165,969 AFY less than the maximum diversion amount specified in the USBR settlement contract for 2015 (252,000 AFY). The proposed DSP would result in an average demand for water of 2,771 AFY. The existing demand for water in the DSP area is 5,198 AFY. If the increased demand from the DSP is added to the existing demand for water, the total demand in the DSP area would be 7,968.35 AFY,

which is less than the maximum diversion amount specified in the USBR contract under existing conditions. Therefore, the DSP would not exceed available water supply in the City, and this is considered a **less-than-significant impact**.

Mitigation Measure

None required.

Impact 4.13-6: The proposed DSP could require additional water conveyance and treatment.

The proposed DSP includes provisions to upgrade the existing water system supply grid to provide the DSP area, including Opportunity Sites, entitled planning project sites, and commercial/office only sites, with adequate water for both domestic and fire suppression needs. The existing water system would require strategic upgrades to serve the proposed DSP. Upgrades to the existing transmission mains are not anticipated to be required to support future development within the limits of the DSP area. However, the City has identified several sections of older mains that would likely need to be replaced within the next 30 years due to age. These mains would be the responsibility of the City Department of Utilities (DOU) through its ongoing Capital Improvement Program (CIP).

Extensions of the existing distribution main system are envisioned to provide adequate service to the future development within the DSP area. The proposed extensions of the existing service main system would be accomplished using a combination of new 8-inch and 12-inch water mains. Density and placement of fire hydrants are usually dependent on the determination from the City's Fire Department based on the development in question. When street fronting hydrants are required, new sections of water mains which otherwise may not have been required, may need to be added to the system to meet these requirements. The existing system of 8-inch, 10-inch, and 12-inch service mains would be retained provided they adequately serve future development with sufficient hydraulic capacity. The existing 6-inch and 8-inch mains located within the unobstructed alleys can be retained to provide fire and domestic water service to the adjacent existing buildings. The alleyway mains would be retained as installation and maintenance of new services are more easily performed from the alleys. If alley improvements/activation projects occur, it is recommended older pipelines be replaced concurrent with other surface improvements.

The DOU is also anticipating the need to add water transmission mains through the DSP area. These are large diameter transmission mains are expected to range in size between 48-inch to 78-inch diameters. The size and locations for these transmission mains at this time are very conceptual and no detailed alignment/routing studies have been performed. These mains are needed to move water through the DSP area to other parts of the City's service area to service the future water needs. These mains would be the responsibility of the City, and would increase the

conveyance and treatment capacity for the DSP. The City's policy is to require the developer to construct any infrastructure necessary to support the DSP without compromising service or water quality to the DSP area. Reimbursement agreements are available for construction of facilities included in the development impact fee program. This impact is **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

The following discussion provides an analysis of cumulative level impacts that could occur as a result of project implementation. The cumulative context for water supply, treatment and conveyance includes the water service area for the City of Sacramento, including reasonably foreseeable increases in water demand as identified in the City's 2035 General Plan Master EIR and 2015 UWMP.

Impact 4.13-7: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in demand for water supply.

The cumulative context for this impact includes the water service area for the City of Sacramento, including reasonably foreseeable increases in water demand as identified in the City's 2015 UWMP. As discussed previously, the 2015 UWMP does not identify specific development projects that were included in the City's water demand calculations. Instead, the UWMP proposes various categories of development within the City's service area for water supply. The UWMP considers water supply needed for future development as planned in the 2035 General Plan. Buildout within the DSP area is anticipated to be a mix of infill of vacant properties, and reuse and redevelopment of existing economically under-performing or obsolete developments. Based on a review of proposed development categories set forth in the 2035 General Plan and discussed in the 2035 General Plan MEIR, the proposed DSP would be consistent with development anticipated in the downtown area under the 2015 UWMP.

As discussed in the 2015 UWMP and as noted previously in this chapter, Hodge flow conditions can result in diversion restrictions at the existing FWTP. As a result, the City has sufficient water production capacity to meet anticipated demands through the year 2030, but not beyond that year, under anticipated Hodge flow restrictions.[33] This assumes that no additional wholesale or water wheeling customers would be served. No commitments have been made for any additional supplies, and such commitments would not be made unless sufficient water supply was made available.

The MEIR prepared for the 2035 General Plan, and certified in 2015, concluded similarly that the City would need additional diversion and treatment capacity to meet peak demand under Hodge

[33] City of Sacramento Department of Utilities, 2016. *2015 Urban Water Management Plan.* Prepared by Carollo Engineers June 2016.

flow conditions.[34] The Master EIR referenced General Plan policies calling for sound planning for new development and reducing peak demand.[35]

The Sacramento River Water Reliability Study (SRWRS) includes a feasibility study to construct a new Sacramento River diversion and treatment plant along the Sacramento River located in Sacramento County which would provide additional water supply reliability and assist in meeting the future water demand of the Cities of Sacramento and Roseville as well as PCWA and Sacramento Suburban.[36]

The Master EIR also calls for the City to construct a new water treatment plant on the Sacramento River in Natomas, north of the City's present SRWTP, within the vicinity of the Sacramento International Airport, commonly called the Natomas Water Treatment Plan.

While the City's existing water rights would be sufficient to provide water to meet foreseeable development within the City, including the DSP, at least through 2035, the City's ability to divert water from existing facilities could become insufficient in or before 2035, which would make the DSP's contribution cumulatively considerable. This impact is considered **potentially significant**.

Mitigation Measure

Mitigation Measure 4.13-7

To ensure that sufficient capacity would be available to meet cumulative demands, the City shall implement, to the extent needed in order to secure sufficient supply, one or a combination of the following:

a) Maximize Water Conservation

Chapter 6 of the 2015 UWMP outlines an array of Demand Management Measures (DMMs). In order to further reduce water demands, the City could require the DSP to implement additional DMMs, which would support water conservation on site, and a partial offset of anticipated water demand for the Project. DMMs discussed in the 2015 UWMP that would reduce the DSP's contribution to the cumulative impact include the following:

- Water Survey Programs for Single Family and Multiple Family Residential Customers
- Residential Plumbing Retrofit
- System Water Audits, Leak Detection, and Repair
- Metering with Commodity Rates for all New Connections and Retrofit of Existing Connections
- Large Landscape Conservation Programs and Incentives

[34] City of Sacramento, *2035 General Plan Master EIR*, Certified March 3, 2015, p. 4.11-3.
[35] *Ibid*., p. 4.11-4.
[36] *Ibid*., p. 4.11-9.

- High Efficiency Washing Machine Rebate Program
- Public Information Programs
- School Education Programs
- Conservation Programs for Commercial, Industrial, and Institutional Accounts
- Wholesale Agency Programs
- Conservation Pricing
- Water Conservation Coordinator
- Water Waste Prohibition
- Residential High Efficiency Toilet Rebate

b) Implement New Water Diversion and/or Treatment Infrastructure

The 2015 UWMP proposes implementation of three potential additional projects that would support additional surface water diversion and/or treatment capacity within the City. Potential projects include:

1) Installation of a new WTP – Install a new WTP along the Sacramento or American River to support additional diversion and treatment;

2) Expansion of the SRWTP – Use existing water entitlements and expand design and treatment capacity of the SRWTP; and

3) Construction of a raw water line to the FWTP in order to take advantage of available and existing treatment capacity at the FWTP.

Consistent with these approaches, the City is currently exploring an additional potential surface water intake along the Lower American River, downstream of the FWTP. Water would be piped to the FWTP for treatment prior to distribution. Under another alternative, raw water would be piped from the existing Sacramento River intake to the FWTP for treatment. These projects would be initiated by or before 2023, and would be completed by or before 2028. These projects would supplement the City's supply during Hodge Flow conditions, because the proposed facilities would not be restricted by Hodge Flow limitations as is the City's current diversion infrastructure.

Each of these projects, if implemented, would require its own environmental review, as well as compliance with all applicable regulatory requirements and restrictions. Construction and operation of these facilities could result in the following categories of potentially significant impacts:

- Exposure of soils to erosion and loss of topsoil during construction;
- Surface water quality degradation;
- Changes to natural drainage courses and hydrology;
- Construction-related air emissions;
- Construction and operations-related noise impacts;

- Visual and/or light and glare impacts;
- Loss of protected species and degradation or loss of their habitats;
- Conversion of existing agricultural lands or resources;
- Degradation of fisheries habitat; and
- Exposure to pre-existing listed and unknown hazardous materials contamination.

Any such project would be subject to CEQA review. The CEQA document would identify mitigation measures to reduce any potentially significant impacts to the extent feasible. Due to the timing uncertainties associated with the long-term water supply infrastructure necessary to overcome the cumulative maximum day demands deficit in 2030, project-specific mitigation measures would need to be tailored to the selected project. The following are illustrative of the types of mitigation measures that could be implemented to avoid or reduce those impacts listed above:

- Reduction in operational and construction air emissions as required by SMAQMD;
- Avoidance of surface water pollution through control of on-site stormwater flows, protection of top soils or stock piles from wind and water erosion, and implementation of related BMPs;
- Minimization of operational and construction noise through the use of noise attenuation measures;
- Avoidance and/or implementation of appropriate measures to restore, create, preserve or otherwise compensate for effects to biological resources;
- Avoidance of effects to buried cultural resources through investigation and pre-testing, and/or on-site archaeological monitoring and implementation of appropriate steps if cultural resources are discovered during earth moving activities;
- Avoidance of hazardous materials effects through appropriate investigation and remediation of any on-site hazards; and
- Avoidance, preservation or other appropriate compensation for loss of or adverse effects to important farmlands.

The City, as a lead or responsible agency, would be required to implement environmental review and mitigation measures identified for each individual project. The City would not be responsible for the actions taken by other local jurisdictions or agencies.

c) Implement Additional Groundwater Pumping

As discussed in the 2015 UWMP, in order to meet demands under Hodge Flow restrictions, the City could also construct new groundwater production capacity and employ a conjunctive use program in order to meet future demands.

The implementation of this mitigation measure would require environmental analysis to assess if the construction or operation of new wells would have any adverse environmental consequences; its implementation would require environmental evaluation. Any new wells, appurtenances and/or infrastructure could result in the following potentially significant environmental impacts:

- Exposure of soils to erosion and loss of topsoil during construction:
- Construction-related air emissions;
- Destruction of buried archeological or paleontological resources;
- Changes in natural drainage courses and hydrology;
- Construction and operations-related noise impacts;
- Visual and/or light and glare impacts;
- Conversion of existing agricultural lands or resources;
- Drawdown of groundwater in the North American Subbasin; and
- Exposure to pre-existing listed and unknown hazardous materials contamination.

In addition, although this groundwater pumping mitigation measure could supply potable water to meet proposed site demands and offset a service area capacity deficit, this mitigation measure could also cause rapid drawdown of a sustained groundwater basin. This would run counter to current groundwater management planning. Additionally, increasing groundwater withdrawals could adversely affect other groundwater pumping activities in the region, or cause notable changes to known and unknown groundwater contamination plumes in the subbasin.

Mitigation measures would be developed to reduce any potentially significant impacts to the extent feasible. Due to the timing uncertainties associated with the long-term water supply infrastructure necessary to maintain sufficient system capacity, project-specific mitigation measures would be responsive to and tailored to the design of the eventual project. The strategies identified above under (b) (new water diversion and/or treatment infrastructure) would be implemented as appropriate.

The City, as a lead or responsible agency, would be required to implement mitigation measures identified for each mitigation project. The City would not be responsible for the actions taken by other local jurisdictions or agencies.

Significance After Mitigation: Mitigation Measure 4.13-7 would result in implementation of water conservation measures by projects in the DSP, and actions for increasing diversion and treatment capacity. The timing and location of any such diversion and treatment capacity improvements are unknown. Nor can the effectiveness of the mitigation be known with certainty. The resulting impact, for these reasons, is **significant and unavoidable.**

Impact 4.13-8: Implementation of the proposed DSP would contribute to cumulative increases in demand for water conveyance in the vicinity of the DSP area.

The City's Downtown Specific Plan Infrastructure Analysis reviews existing infrastructure within the DSP area, and evaluates need for new infrastructure in light of planned growth within the downtown area.[37] The Infrastructure Analysis considers increases in water demand associated with planned increases in urban use in the DSP area.

The development implemented pursuant to proposed DSP would be consistent with the types and magnitude of development considered within the Infrastructure Analysis. Findings from the Infrastructure Analysis indicate that the existing water supply system is generally adequate, but would require strategic upgrades to serve anticipated development. Specifically, development of the RSP area will require relocation or replacement of large transmission lines located along that area's southern boundary. Development within other parts of the DSP area could require extensions of the existing main service system in order to reach certain specific developments. These would be installed on a project-by-project basis to serve a particular project or group of projects.

The existing system of 8-, 10-, and 12-inch service mains is not expected to require system-wide upgrading; however, localized upgrading at and near the connection points to the project could be required. The proposed DSP is located in an area that is capable of handling additional flows; as development proceeds, existing distribution lines would need to be extended on a project-by-project basis, with limited additional upgrading needed to ensure that distribution lines in the immediate vicinity of the DSP area would be appropriately sized. As discussed in Impact 4.13-2, the City requires that new development provide any needed upgrades to the local distribution system needed to serve the individual project in question, and to pay associated fees for any increase in use. Therefore, the cumulative increase in water conveyance would be less than significant, and the DSP contribution would be less than cumulatively considerable.

For the above reasons, the cumulative impact on the local water conveyance system would be **less than significant**.

Mitigation Measure

None required.

4.13.3 Solid Waste

This section of the EIR addresses potential effects related to solid waste collection and disposal. The section characterizes existing solid waste collection services in the proposed DSP area, and

[37] Nolte, 2011. *Downtown Infrastructure Study*. September 2011.

describes plans and policies relevant to solid waste issues associated with implementation of the proposed DSP. Potential physical environmental impacts that could occur as a result of solid waste collection and disposal services as a result of the implementation of the proposed DSP are evaluated based on analyses of service levels and plan data. The disposal of hazardous waste is discussed in Section 4.8, Hazards and Hazardous Materials.

The analysis included in this section was developed based on information included in the proposed DSP, data provided by the City of Sacramento and in the City of Sacramento 2035 General Plan MEIR, CalRecycle's Solid Waste Information System, and other published technical reports, as indicated in the footnoted references.

Environmental Setting

In the City of Sacramento, residential waste is collected by the City's Recycling and Solid Waste Division and commercial and multi-family waste is collected by private franchised haulers.[38,39] Solid waste collected by the commercial haulers is taken to either a transfer station and then transported to a landfill, or is taken directly to a landfill. Commercial wastes can be taken to a variety of landfills, as long as they are compliant with the Sacramento Regional Solid Waste Authority (SWA) Code for commercial waste hauling.[40] A majority of the residential solid waste collected in the City is taken to the Sacramento Recycling and Transfer Station or the North Area Recovery Station where it is sorted for transport to disposal facilities.[41] Construction and demolition waste is collected by either commercial franchise haulers or hauled by the contractor or permit holder. If construction and demolition debris is being hauled by anyone else, it must be source separated and sent to an authorized recycler or delivered to a certified construction and demolition debris sorting facility.[42]

On an annual basis, the residents and businesses in the City of Sacramento dispose of approximately 474,624[43] tons of solid waste. Approximately 50 percent of the waste is recycled and the other 50 percent is disposed of in a landfill.[44]

Several facilities provide solid waste disposal services to the City of Sacramento. These include the following, in order by the amount of waste the facility receives from commercial haulers and the City of Sacramento Recycling and Solid Waste Division.[45]

38 City of Sacramento, 2015. *About RSW.* Available: http://portal.cityofsacramento.org/General-Services/RSW/About-RSW.
39 City of Sacramento, 2015. *Commercial and Construction Service*s. Available: http://portal.cityofsacramento.org/General-Services/RSW/Collection-Services/Commercial-Services.
40 Sacramento Regional Solid Waste Authority, 2015. *Title II of SWA Code Regulating Commercial Solid Waste Collection, Transportation, or Disposal.*
41 City of Sacramento, 2015. City's 2014 CalRecycle Electronic Annual Report.
42 City of Sacramento, 2013, Construction & Demolition Management Plan. Available: http://portal.cityofsacramento.org/General-Services/RSW/Collection-Services/Recycling/Construction-and-Demolition.
43 City of Sacramento, 2015. City's 2014 CalRecycle Electronic Annual Report.
44 City of Sacramento, 2015. City's 2035 General Plan Background Report, Chapter 4: Utilities.
45 CalRecycle, 2015. Jurisdiction Disposal by Facility 2014 Reporting.

- Kiefer Landfill, located in Sloughouse, California, is operated by Sacramento County and maintains a permitted capacity of 10,815 tons per day. The landfill has nearly 113 million cubic yards of available capacity, and is estimated to have sufficient capacity to maintain operations through 2064.[46]

- Forward Landfill, located southeast of Stockton, California, is operated by Allied Waste North America. The landfill has a maximum daily throughput of over 8,668 tons per day, with a remaining capacity of approximately 22 million cubic yards and is estimated to have sufficient capacity to maintain operations through 2020.[47]

- L and D Landfill, located off of Fruitridge Road in Sacramento, California, is operated by L and D Landfill, LP. The landfill has a maximum capacity of 2,540 tons per day, with a maximum permitted capacity of 4 million cubic yards, sufficient to provide service through 2023. A large volume transfer facility is also located on site.[48]

- Yolo County Central Landfill, located north of Davis, California, is operated by the Yolo County Planning and Public Works Department. The facility maintains a maximum daily throughput of 1,800 tons per day, with a maximum permitted capacity of 49 million cubic yards. The facility is expected to have sufficient capacity to allow operations through 2081.[49]

- Lockwood Landfill, located in Sparks, Nevada, is operated by Waste Management.[50] The landfill currently receives approximately 5,000 tons per day of waste including municipal solid waste (MSW) and construction debris. It has a total capacity of 302.5 million cubic yards, including approximately 270 million cubic yards of available capacity.[51] Approximately 800 tons per day arrive from the City of Sacramento.

Regulatory Setting

Federal

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), Subtitle D, contained in Title 42 of the United States Code section 6901 et seq. contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design, groundwater monitoring, and closure or landfills. The US EPA waste management regulations are codified in 40 CFR 239-282. The RCRA Subtitle D is implemented by Title 27 of the PRC, approved by the US EPA.

46 CalRecycle, 2017. *Facility Site/Summary Details: Sacramento County Landfill (Kiefer).* Available: http://www.calrecycle.ca.gov/SWFacilities/Directory/34-AA-0001/Detail/.
47 CalRecycle, 2017. *Facility Site/Summary Details: Forward Landfill*. Available: http://www.calrecycle.ca.gov/SWFacilities/Directory/39-AA-0015/Detail/.
48 CalRecycle, 2017. *Facility Site/ Summary Details: L and D Landfill.* Available: http://www.calrecycle.ca.gov/SWFacilities/Directory/34-AA-0020/Detail/.
49 CalRecycle, 2015. *Facility Site/ Summary Details: Yolo County Central Landfill.* Available: http://www.calrecycle.ca.gov/SWFacilities/Directory/57-AA-0001/Detail/.
50 Waste Management, 2017. Available: https://www.wmsolutions.com/locations/details/id/210.
51 State of Nevada Bureau of Waste Management, 2013. *Lockwood Regional Landfill*. Available: http://ndep.nv.gov/bwm/landfill_lockwood.htm. Accessed October 16, 2013. p. 1.

State

Integrated Waste Management Act (Assembly Bill 939)

Regulation affecting solid waste disposal in California is embodied in PRC Title 14, known as the Integrated Waste Management Act originally adopted in 1989. AB 939 was designed to increase landfill life by diverting solid waste from landfills within the state and conserving other resources through increasing recycling programs and incentives. AB 939 requires that counties prepare Integrated Waste Management Plans to implement landfill diversion goals, and requires that cities and counties prepare and adopt Source Reduction and Recycling Elements (SRRE). The SRRE must set forth a program for management of solid waste generated with the jurisdiction of the respective city or county. Each source reduction and recycling element must include, but is not limited to, all of the following components for solid waste generated in the jurisdiction of the plan:

- A waste characterization component,
- A source reduction component,
- A recycling component,
- A composting component,
- A solid waste facility capacity component,
- A funding component, and
- A special waste component.

The SRRE programs are designed to achieve landfill diversion goals by encouraging recycling in the manufacture, purchase and use of recycled products. AB 939 also requires that California cities implement plans designed to divert the total solid waste generated within each jurisdiction by 50 percent based on a base year of 2000. The diversion rate is adjusted annually for population and economic growth when calculating the percentage achieved in a particular jurisdiction.

Public Resources Code 41780

The California State Legislature set the policy goal for the state that not less than 75 percent of solid waste generated be source reduced, recycled or composted by the year 2020. Furthermore, a 50 percent diversion rate will be enforced for local jurisdictions.

Assembly Bill 1220

The California Department of Resources Recycling and Recovery (CalRecycle) and the State Water Board completed a parallel rulemaking as a result of AB 1220 (Chapter 656, Statutes of 1993). AB 1220 required clarification of the roles and responsibilities of the two boards, the RWQCBs and CalRecycle's local enforcement agencies in regulating solid waste disposal sites. The approved Title 27 regulations combine prior disposal site/landfill regulations of CalRecycle and the State Water Board that were maintained in Title 14 CCR and Chapter 15 of Title 23 CCR (which contains requirements for disposal of hazardous waste).

The purpose for CalRecycle standards in this subdivision is to protect public health and safety and the environment. The regulations apply to active and inactive disposal sites, including facilities or equipment used at the disposal sites. These standards make clear that the primary responsibility for enforcing state minimum standards rests with the local enforcement agency in cooperation with the RWQCB or other oversight agency. Subchapters of Title 27 include operating criteria for landfills and disposal sites, requirements to have enough materials to cover waste to prevent a threat to human health and the environment, requirements for operations at solid waste facilities for the handling of waste and equipment needs of the site, requirements for controlling activities on site, requirements for controlling landfill gas that is created from the decomposition of wastes on site, and requirements of the owner/operator of a facility to properly operate the site to protect the site from fire threat.

Assembly Bill 341

In an effort to reduce greenhouse gas emissions from disposing of recyclables in landfills, AB 341 (Chapter 476, Statutes of 2011) requires local jurisdictions to implement commercial solid waste recycling programs. Businesses that generate four cubic yards or more of solid waste per week or multifamily dwellings of five units or more must arrange for recycling services. In order to comply with AB 341, jurisdictions' commercial recycling programs must include education, outreach and monitoring of commercial waste generators and report on the process to CalRecycle. Jurisdictions may enact mandatory commercial recycling ordinances to outline how the goals of AB 341 will be reached. For businesses to comply with AB 341, they must arrange for recyclables collection through self-haul, subscribing to franchised haulers for collection, or subscribing to a recycling service that may include mixed waste processing that yields diversion results comparable source separation.[52]

Assembly Bill 1826

In order to further reduce greenhouse gas emissions from disposing of organics materials in landfills, AB 1826 (Chapter 727, Statutes of 2014) requires businesses to recycle their organic waste beginning on April 1, 2016, depending on the amount of solid waste they generate per week. Similar to AB 341, jurisdictions are required to implement an organic waste recycling program that includes the education, outreach and monitoring of businesses that must comply. Organic waste refers to food waste, green waste, landscaping and pruning waste, nonhazardous wood waste, and food-soiled paper that is mixed with food waste.

Local

Sacramento Regional Solid Waste Authority

The SWA was initially formed in 1992 in order to oversee solid waste, recycling, and disposal needs in the greater Sacramento area. The SWA is a Joint Powers Authority that is funded by franchise fees. The SWA is overseen by a Board of Directors, which is composed of elected officials from member cities (currently the City of Sacramento) and Sacramento County. The

[52] Assembly Bill 341: Mandatory Commercial Recycling, 2011. Available: http://www.calrecycle.ca.gov/recycle/commercial/#Elements.

SWA regulates commercial solid waste collection by franchised haulers through ordinances. SWA ordinances include the requirement that franchised haulers achieve a 30 percent recycling rate and to offer recycling services to businesses and multi-family dwelling units.

City of Sacramento 2035 General Plan

The following policies of the Utilities Element of the 2035 General Plan are relevant to development in the DSP area and the provision of solid waste collection and disposal.

Goal U 5.1 **Solid Waste Facilities. Provide adequate solid waste facilities, meet or exceed State law requirements, and utilize innovative strategies for economic and efficient collection, transfer, recycling, storage, and disposal of refuse.**

Policies

U 5.1.5 **Residential and Commercial Waste Disposal.** The City shall continue to provide curbside trash and recycling collection service to single-family residential dwellings and offer collection service to commercial and multi-family residential development.

The proposed plan would be consistent with the 2035 General Plan goal and policy listed above.

Analysis, Impacts and Mitigation

Significance Criteria

The proposed plan would result in a significant impact on utilities if it would:

1. Require or result in either the construction of new solid waste facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects.

Methodology and Assumptions

The following impact analysis evaluates the potential for DSP-related development to result in changes to existing infrastructure and supply relating to solid waste. The analysis focuses on wastes generated by the development anticipated under the proposed DSP and potential impacts to solid waste handling and disposal facilities located outside of the DSP area. Potential changes in solid waste generation are evaluated using waste generation factors shown in **Table 4.13-6**. Estimated solid waste generation for the DSP was also calculated based on factors shown in Table 4.13-6. Existing waste generation was subtracted from anticipated waste generation to identify the net increase in waste associated with the DSP.

Impacts and Mitigation Measures

Impact 4.13-9: The collection or disposal of additional solid waste generated under the proposed DSP would result in adverse physical environmental effects.

Construction

Construction in the DSP area would result in the generation of various construction waste including scrap lumber, scrap finishing materials, various scrap metals, and other recyclable and non-recyclable construction related wastes.

TABLE 4.13-6
SOLID WASTE GENERATION FOR THE PROPOSED DSP

Land Use Type	Square Footage (sf)	Employees	Dwelling Units	Factor		Solid Waste Per Day (tons)	Solid Waste Per Year (tons)
Residential	-	-	13,401	8.5	lbs/day/unit	56.95	20,787.58
Food Service	280,030	560	-	6,528	lbs/year/employee	5.01	1,828.04
Government Office	435,837	1,557	-	1,998	lbs/year/employee	4.26	1,555.00
Office	3,510,892	12,539	-	1,998	lbs/year/employee	34.32	12,526.36
Retail	1,295,875	2,592	-	7,798	lbs/year/employee	27.69	10,105.23
Service	1,007,169	3,357	-	3,714	lbs/year/employee	17.08	6,234.38
Medical Office	643,797	2,146	-	0.006	lbs/day/sf	1.93	704.96
Total	**7,173,600**	**22,750**				**147.24**	**53,741.55**

SOURCES:
1. CalRecycle 2006. Targeted Statewide Waste Characterization Study: Waste Disposal and Diversion Findings for Selected Industry Groups. Available: https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates. June 2006. Table 2.
2. ESA 2016. *Sacramento Railyards Specific Plan Update* (RSPU). Utilities: Solid Waste. November 2016.
3. City of Murrieta. Kaiser Permanente Murrieta Medical Center Program EIR. April 2015. SCH #2014060132. Available: http://www3.murrieta.org/approved_projects/Draft%20PEIR%20for%20the%20Kaiser%20Permanente%20Murrieta%20Medical%20Center%20Project.pdf. Accessed June 29, 2017. p. 4.13-21. Table 4.13-5.

Construction waste would be managed in accordance with ordinances promulgated by the SWA – in particular, in accordance with SWA's requirement that haulers achieve a 30 percent recycling rate. Recyclable construction materials, including concrete, metals, wood, and various other recyclable materials would be diverted to recycling facilities.

The development and infrastructure improvements undertaken pursuant to the proposed DSP would comply with City requirements to divert a minimum of 50 percent of construction wastes to a certified recycling processor. The DSP proposes a requirement that future development recycle up to 75 percent of these materials. Adhering to these requirements would minimize the total volume of demolition and construction waste that would be landfilled, but would not avoid disposal of all construction waste in local landfills. Construction waste would be delivered to one or more of the following facilities: Lockwood Landfill, Kiefer Landfill, L and D Landfill, Yolo County Central Landfill, or Forward Landfill. In consideration of the large volume of landfill capacity available to serve the project, sufficient landfill capacity would be available to serve projects constructed pursuant to the proposed DSP. Because new or expanded solid waste management or disposal facilities would not be required to accommodate DSP-related construction, no adverse physical environmental effects would result and, as a result, potential operation period impacts on landfills would be **less than significant**.

Operation

Operation of development pursuant to the proposed DSP would result in the generation of municipal wastes in accordance with the proposed increase in use intensity on site. Waste from operations would include household, commercial, residential, and office wastes. As shown in

Table 4.13-6 in the Methodology above, the development anticipated under the proposed DSP would generate a total of approximately 53,741.55 tons of solid waste per year.

Waste generated by the DSP would be collected and transported to local landfills by the City and/or private haulers, and either recycled in accordance with City programs and requirements, or landfilled at Kiefer Landfill or transported and landfilled at the Lockwood Landfill in Sparks, Nevada. As noted previously, these facilities together currently have approximately 458 million cubic yards[53] in available capacity. DSP related wastes would represent less than one tenth of one percent (<0.01%) of total annual capacity for these two landfills. Sufficient landfill capacity would be available to serve the project and the proposed plan would not require new or expanded solid waste management or disposal facilities. Additionally, implementation of typical recycling rates and SWA recycling requirements would result a portion of the total waste stream being diverted to recycling. This would further minimize impacts to landfill capacity. Because there would be no need to expand or create new landfill or solid waste management facilities, there would be no related physical environmental effects. Therefore, the impact would be **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

The following discussion provides an analysis of cumulative level impacts that could occur as a result of the proposed plan. The cumulative context for solid waste includes all development within the SWA's service area, including the City of Sacramento.

Impact 4.13-10: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in solid waste.

As discussed therein, Lockwood Landfill, which is one of the primary landfills used for the City, is expected to have sufficient capacity to maintain operation for at least 100 years. Similarly, Kiefer Landfill, which is the other primary landfill used by the City, maintains approximately 51 years of available capacity.

Growth proposed under the 2035 General Plan would result in residences in the city producing an additional 69,300 tons of solid waste per year. Furthermore, using employment rates at buildout, it can be estimated that businesses would be producing an additional 112,080 tons of solid waste per year. Thus by 2035, the city would be producing an additional 181,380 tons of solid waste per year. This does not take into account mandatory reduction and diversion programs, which include diversion of at least 50 percent of waste, thus reducing the total to a conservative estimate of 90,690 tons per year. Available landfill capacity would be sufficient to accommodate these

[53] One cubic yard is equivalent to approximately 0.1125 tons uncompacted, or approximately 0.375 tons compacted, as waste would arrive at the landfill from trucks or other transport equipment.

increases, along with the additional estimated 53,741.55 tons per year from the proposed plan. For these reasons, the DSP would not be cumulatively considerable, and the solid waste impacts would be **less than significant**.

Mitigation Measure

None required.

CHAPTER 5
Other CEQA Considerations

5.1 Introduction

Section 15126 of the State CEQA Guidelines requires that all phases of a project must be considered when evaluating its impact on the environment, including planning, construction, and operation. Further, the evaluation of significant impacts must consider direct and reasonably foreseeable indirect effects of the project over the short-term and long-term.

Section 15126 of the State CEQA Guidelines also requires an EIR to identify (1) significant environmental effects of the proposed project, (2) significant environmental effects that cannot be avoided if the proposed project is implemented, (3) significant irreversible environmental changes that would result from implementation of the proposed project, (4) mitigation measures proposed to minimize significant effects, (5) growth-inducing impacts of the proposed project, and (6) alternatives to the proposed project. In addition, over the last 13 years California Courts of Appeal have established a requirement that EIRs consider potential urban decay effects indirectly caused by excess supply of retail uses.

The Summary and Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, of this Draft EIR provide a comprehensive presentation of the environmental effects of the proposed Downtown Specific Plan (DSP), proposed mitigation measures, and conclusions regarding the level of significance of each impact before and after mitigation.

Chapter 6, Alternatives, presents a comparative analysis of alternatives to the proposed DSP.

The other CEQA-required analyses described above are presented below.

5.2 Significant and Unavoidable Impacts

Section 15126.2(b) of the State CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. The environmental effects of the proposed DSP on various aspects of the environment are discussed in detail in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures. DSP-specific and cumulative impacts that cannot be avoided if the DSP is approved as proposed are identified below.

5.2.1 Significant and Unavoidable Impacts

Impact 4.2-3: The proposed DSP would result in long-term (operational) emissions of NO_X, ROG, PM_{10}, and $PM_{2.5}$.

Impact 4.2-5: Implementation of the proposed DSP could result in short-term and long-term exposure to Toxic Air Contaminants.

Impact 4.4-1: New construction in the proposed DSP area could cause a substantial adverse change in the significance of an archaeological resource, including human remains.

Impact 4.4-2: New construction in the DSP area could cause a substantial adverse change in the significance of a tribal cultural resource.

Impact 4.10-1: Construction of development allowed under the proposed DSP could generate noise that would conflict with City standards or result in substantial temporary or periodic increase in ambient noise levels.

Impact 4.10-2: Operations of development allowed under the proposed DSP could result in a substantial permanent increase in ambient exterior noise levels.

5.2.2 Cumulative Significant and Unavoidable Impacts

Impact 4.2-8: The proposed DSP could contribute to cumulative increases in long-term (operational) emissions of NO_X, ROG, PM_{10}, and $PM_{2.5}$.

Impact 4.2-10: Implementation of the proposed DSP could contribute to cumulative increases in short- and long-term exposures to Toxic Air Contaminants.

Impact 4.4-4: New construction in the proposed DSP area, in combination with other cumulative development, could contribute to the cumulative loss or alteration of archaeological resources, including human remains.

Impact 4.10-5: Implementation of the proposed DSP would result in exposure of people to cumulative increases in construction noise levels.

Impact 4.10-6: Operations of development allowed under the proposed DSP would contribute to cumulative increases in ambient exterior noise levels.

Impact 4.10-8: Construction of buildings pursuant to the proposed DSP would contribute to cumulative construction that could expose existing and/or planned buildings, and persons within, to significant vibration.

Impact 4.13-7: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in demand for water supply.

5.3 Significant and Irreversible Environmental Effects

Under CEQA, this EIR must analyze the extent to which the proposed DSP directly or indirectly would commit future generations to the allocation of nonrenewable resources and to irreversible environmental damage [State CEQA Guidelines section 15126.2(c); 15127]. Specifically, section 15126.2(c) states:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Generally, a project would result in significant irreversible environmental effects if:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The proposed plan would involve a large commitment of nonrenewable resources;
- The proposed plan would involve uses in which irreversible damage could result from any potential environmental accidents associated with the plan; or
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

The proposed DSP would facilitate development of the DSP area with a range of residential and non-residential uses consistent with growth levels evaluated in the City's 2035 General Plan. The DSP area is the City's highly urbanized central core and consists of many complementary uses such as office, residential, commercial/retail, recreation, and entertainment. Proposed development in the DSP would include development of vacant properties as well as redevelopment of existing underutilized sites. These new developments would be consistent with the land uses, densities, and intensities proposed in the DSP.

The State CEQA Guidelines require a discussion of the potential for irreversible environmental damage caused by an accident associated with the proposed DSP. While the proposed DSP could result in the use, transport, storage, and disposal of hazardous wastes during construction and operation, as described in Section 4.8, Hazards and Hazardous Materials, all activities would comply with applicable state and federal laws related to hazardous materials, which reduces the likelihood and severity of accidents that could result in irreversible environmental damage.

Implementation of the proposed DSP would result in the long-term commitment of resources to urban development. The most notable significant irreversible impacts are increased generation of pollutants from vehicle travel and stationary operations, and the short-term commitment of non-renewable and/or slowly renewable natural and energy resources, such as water resources during

construction activities. Operations associated with future uses would also consume natural gas and electrical energy. The unavoidable consequences of the proposed project are described in the appropriate sections in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures.

Resources that would be permanently and continually consumed by project implementation include water, electricity, natural gas, and fossil fuels; however, the amount and rate of consumption of these resources would not result in the unnecessary, inefficient, or wasteful use of resources. As described in Section 4.12, Transportation and Circulation, the location and density of development in the DSP area would result in reduced trip lengths and per capita vehicle miles traveled compared to regional averages, with concomitant reductions in congestion, air pollutant emissions, greenhouse gas emissions, and transportation energy consumption compared to equivalent amounts of development at suburban or other locations less central in the region.

With respect to operational activities, compliance with all applicable building codes, including the 2016 (and future) Title 24 Energy Efficiency Standards, as well as mitigation measures, planning policies, and standard conservation features, would ensure that natural resources are conserved to the maximum extent possible. It is also possible that, over time, new technologies or systems will emerge, or will become more cost-effective or user-friendly, to further reduce the reliance upon nonrenewable natural resources. Nonetheless, construction activities associated with implementation of the proposed DSP would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel oil), natural gas, and gasoline for automobiles and construction equipment.

Over the past decade our understanding of global climate change and the role that communities can play in addressing it has grown tremendously. There is overwhelming scientific consensus that recent increases in global temperatures are associated with corresponding increases of greenhouse gases (GHGs). This temperature increase is affecting regional climates and is expected result in impacts to our region and the world. Climate change has profound implications for the availability of the natural resources on which economic prosperity and human development depend. This issue is further explored in Section 4.7, Global Climate Change.

5.4 Growth-Inducing Effects

As required by section 15126.2(d) of the State CEQA Guidelines, this EIR must discuss ways in which the proposed DSP could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. The EIR must also discuss the characteristics of the proposed plan that could encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Growth can be induced in a number of ways, such as through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through the establishment of policies or other precedents that directly or indirectly encourage additional growth.

The purpose of this section is to evaluate the potential indirect growth-inducing effects resulting from the implementation of the proposed DSP in the City of Sacramento and throughout the Sacramento Area Council of Governments (SACOG) region. The direct effects of the proposed DSP to facilitate growth within the DSP area are the subject of the analyses contained in Chapter 4 of this EIR. For the purposes of this EIR, induced growth is considered to be (1) additional growth in the DSP area beyond the amount of growth anticipated in the 2035 General Plan, or (2) additional growth outside the DSP area not previously anticipated under the 2035 General Plan. Additional analysis of the growth-inducing effects of the proposed plan is provided in Chapter 3, Land Use, Population, and Housing.

In general, a project may foster spatial, economic, or population growth in a geographic area if the proposed plan removes an impediment to growth (e.g., the establishment of an essential public service, the provision of the new access to an area, a change in zoning or general plan amendment approval), or economic expansion or growth occurs in an area in response to the proposed plan (e.g., changes in revenue base, employment expansion.). These circumstances are further described below:

- **Elimination of Obstacles to Growth:** This refers to the extent to which a proposed plan removes infrastructure limitations or provides infrastructure capacity, or removes regulatory constraints that could result in growth unforeseen at the time of plan approval.

- **Economic Effects:** This refers to the extent to which a proposed plan could cause increased activity in the local or regional economy. Economic effects can include such effects as the Multiplier Effect. A “multiplier” is an economic term used to describe inter-relationships among various sectors of the economy. The multiplier effect provides a quantitative description of the direct employment effect of a proposed plan, as well as indirect and induced employment growth. The multiplier effect acknowledges that the onsite employment and population growth of each plan is not the complete picture of growth caused by the proposed plan.

5.4.1 Elimination of Obstacles to Growth

The elimination of physical obstacles to growth is considered a growth-inducing effect. The proposed DSP area would be redeveloped in a built-out, highly urbanized area in downtown Sacramento; however, some physical constraints to growth currently exist in the vicinity of the DSP area. The primary growth obstacles in the DSP area include:

- Limited capacity of the wastewater system serving the DSP area, including limited capacity of wastewater treatment facilities;

- Limited circulatory access connecting the DSP area to surrounding areas;

Implementation of the proposed DSP would not result in the elimination of growth obstacles. The storm drainage and wastewater systems serving the DSP area are at or beyond capacity during severe storm events. Implementation of the proposed DSP would increase development within the DSP area, thereby increasing wastewater flows to the City’s combined sewer system (CSS), and to the Sacramento Regional Wastewater Treatment Plant (SRWTP). As described in Chapter

4.13, Utilities, the SRWWTP currently has excess treatment capacity of 66 million gallons per day (mgd), which would be available for a substantial portion of growth in the region, including all development in the City anticipated under the 2035 General Plan, which includes all assumed growth in the DSP area through 2035. Although the CSS is at capacity and remains subject to a Cease and Desist Order issued by the Central Valley Regional Water Quality Control Board (CVRWQCB), developer contributions along with City investments are anticipated to continue the implementation of the CSS Improvement Project, which has been constructed incrementally over the last two decades to create additional capacity in the system to avoid CSS overflows and to accommodate increased development in the CSS service area. The improvements in the CSS that are called for in the proposed DSP would support growth in the DSP area that was planned for and anticipated in the 2035 General Plan and would not induce growth beyond that which has been planned for by the City, SACOG, and the Sacramento Regional County Sanitation District (Regional San).

The proposed DSP calls for one new one-block section of roadway between Broadway and X Street and would otherwise rely upon the existing regional and local roadway system to provide circulation access to the DSP area. The one-block section of a new one-way street couplet, located between Broadway and X Street, would provide access to and from the existing half interchange at Highway 99/Broadway. This would provide vehicles traveling to and from the south via Highway 99 the option of using X Street rather than traveling along Broadway. This would shift through-commute traffic, traveling to destinations in South Sacramento and beyond, away from Broadway to X Street, which would be critical if the proposed Broadway Complete Streets Project is implemented and reduces travel lanes from four to two. Other than minor changes to improve multimodal transportation uses, including improved safety for pedestrian and bicycle travel, and improved transit integration, no offsite roadway improvements would be constructed, nor would the proposed DSP expand the capacity of the circulation system in the DSP area.

Conclusions

The DSP area is currently developed with and surrounded by urban uses. The City has planned for incremental growth in the DSP area, as well as those areas in the City surrounding the DSP area. Implementation of the proposed DSP would be served by transportation infrastructure and utilities that already exist, and which are planned to be incrementally improved and expanded to accommodate growth called for in the 2035 General Plan. Because the proposed DSP would not foster growth beyond that called for in the 2035 General Plan, it would not eliminate any obstacles to growth in the City.

5.4.2 Economic Effects

As presented in Chapter 3, Land Use, Population, and Housing, under future conditions it is anticipated that the total employment within the DSP area would be increased by an estimated 22,750 employees as a result of implementation of the proposed DSP.

In addition to the employment growth generated by the proposed DSP, additional local employment could be generated through what is commonly referred to as the "multiplier effect." The multiplier effect refers to the secondary economic effects caused by spending from project-generated residents and employees. The multiplier effect tends to be greater in regions with larger diverse economies due to a decrease in the requirement to import goods and services from outside the region, as compared to the effects of spending in smaller economies where goods and services must be imported from elsewhere.

Two different types of additional employment are tracked through the multiplier effect. *Indirect* employment includes those additional jobs that are generated through the expenditure patterns of residents and direct employment associated with the proposed DSP. For example, future residents and workers in the proposed hotels, commercial retail, or offices within the DSP area would spend money in the local economy, and the expenditure of that money would result in the creation of additional jobs. Indirect jobs tend to be in relatively close proximity to the places of employment and residence.

The multiplier effect also calculates *induced* employment. Induced employment follows the economic effect of employment beyond the expenditures of the employees within the proposed project area to include jobs created by the stream of goods and services necessary to construct the proposed projects and support businesses within the DSP area. For example, when a manufacturer buys products or sells products, the employment associated with those inputs or outputs are considered induced employment. As an additional example, when an employee who works in non-residential space developed pursuant to the proposed DSP goes out to lunch, the person who serves the employee lunch holds a job that was indirectly caused by the proposed DSP. When that server then goes out and spends money in the economy, the jobs generated by this third-tier effect are considered induced.

The multiplier effect also considers the secondary effect of employee expenditures. Thus, it includes the economic effect of the dollars spent by those employees who purchase goods and services in support of the jobs created by implementation of the proposed DSP.

In Chapter 3, Land Use, Population and Housing, it is estimated that implementation of the DSP would result in an increase in direct employment of 22,750 jobs in the food, government, office retail, service, and medical components of the proposed DSP.

Increased employment in the DSP area would support increased purchases of supplies, equipment, and services from businesses in Sacramento and nearby cities and from businesses located elsewhere in the region and beyond the Sacramento area. The increased spending also would initiate subsequent rounds of additional business spending by those and other businesses. Increased employment in the DSP area would provide increased wage and salary incomes that would support additional household spending for a wide variety of goods and services.

Increased future employment generated by resident and employee spending ultimately results in physical development of space to accommodate those employees. It is the characteristics of this

physical space and its specific location that determine the type and magnitude of environmental impacts of this additional economic activity. Although the economic effect can be predicted, the actual environmental consequences of this type of economic growth are too speculative to predict or evaluate, since they can be spread throughout the Sacramento region and beyond. Some of the increased employee spending would occur in proximity of the DSP area and more of it would occur near employee places of residence, many of which would be in Sacramento and nearby cities, and elsewhere in the Sacramento region. The additional employee spending would support business activity and jobs and initiate subsequent rounds of additional spending.

The future cumulative context of citywide and regional growth used for the cumulative analyses in the City of Sacramento's 2035 General Plan Master EIR (MEIR) and the cumulative analyses in SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) EIR includes the multiplier effects of the proposed growth in the Sacramento region. The proposed DSP would not facilitate growth beyond the growth assumptions included in the MEIR and MTP/SCS. Consequently, the cumulative impact analyses in the MEIR and the MTP/SCS EIR account for additional growth beyond the DSP area that would be generated by the proposed DSP.

5.4.3 Environmental Effects of Induced Growth

While economic and employment growth in the DSP area is an intended consequence of the proposed DSP, growth induced directly and indirectly by the proposed DSP could also affect the greater Sacramento region. The precise nature, location, and magnitude of effects of indirect and induced growth is speculative. To the extent that induced growth is accommodated at higher densities, in transit-oriented development that support or improve upon the per capita and per employee vehicle miles traveled (VMT) rates anticipated in the MTP/SCS, then that additional growth could have effects which improve traffic congestion, decrease per capita air pollutants and greenhouse gas emissions, avoid loss of habitat and open space, and the like. However, if induced growth occurs at locations and densities consistent with past practices in the region, the potential effects caused by indirect and induced growth could include increased traffic congestion; increased air pollutant emissions; loss of agricultural land and opens space;, loss of habitat and associated flora and fauna; increased demand on public utilities and services, such as fire and police protection, water, recycled water, wastewater, solid waste, energy, and natural gas; and increased demand for housing.

Specifically, an increase in housing demand in the greater Sacramento region could cause significant environmental effects as new residential development would require governmental services, such as schools, libraries, and parks. Indirect and induced employment and population growth could further contribute to the loss of open space because it could encourage conversion to urban uses for housing, commercial space, and infrastructure.

5.5 Urban Decay

5.5.1 Economic and Social Effects

Under CEQA, economic or social effects are not considered significant effects on the environment. Rather, these effects are considered in the context of their potential linkage or indirect connections between the proposed plan and physical environmental effects. More specifically, the direction for treatment of economic and social effects is stated in section 15131(a) of the State CEQA Guidelines:

> Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on physical changes.

A social or economic change also may be considered in determining whether the physical change is significant (State CEQA Guidelines section 15382).

5.5.2 Urban Decay

As used in CEQA, the term "urban decay" was introduced by the California Court of Appeal in the case entitled *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184 (Bakersfield Citizens). In that decision, the court required the City of Bakersfield to revise and recirculate two EIRs for two proposed Wal-Mart stores because the documents both failed to address the possible indirect physical effects flowing from the direct economic effects of the two projects. Though the court did not expressly define "urban decay," the court seemed to equate the concept with a "chain reaction of store closures and long-term vacancies, ultimately destroying existing neighborhoods and leaving decaying shells in their wake."[1]

For the purposes of this assessment and consistent with the above-described court decision, "urban decay" is not simply a condition in which buildings become vacant as businesses compete with each other in the normal course of the market-based economy, nor is it a condition where a building may be vacated by one business or use and reused by a different business or for alternative purposes. Rather, under CEQA "urban decay" is defined as physical deterioration of properties or structures that is so prevalent, substantial, and lasting a significant period of time that it impairs the proper utilization of the properties and structures, and the health, safety, and welfare of the surrounding community. Physical deterioration includes abnormally high business vacancies, abandoned buildings, boarded doors and windows, parked trucks and long-term

[1] City of Bakersfield, 2004. *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, p. 1204.

unauthorized use of the properties and parking lots, extensive or offensive graffiti painted on buildings, dumping of refuse or overturned dumpsters on properties, dead trees and shrubbery, and uncontrolled weed growth or homeless encampments.

At present, the retail environment within the City does not exhibit conditions that would be conducive to urban decay. While some retail spaces may become or remain vacant, such properties are generally maintained to attract new tenants or subjected to re-use for non-retail purposes. Many aged retail properties throughout the region have undergone renovation increasing the value and occupancy of those properties and adding to the stability of the City's retail environment as a whole.

Under existing conditions, the DSP area has approximately 4.7 million square feet of retail space, which represents approximately 22.5 percent of total retail within the City of Sacramento.[2] Of that space there is an approximately 5.4 percent vacancy rate, which is slightly lower than the citywide rate of 6.0 percent.[3] Net absorption figures indicate that between 2010 and 2016, the amount of occupied retail space declined by 664,004 square feet of vacant space, with 20,351 square feet of that decline logged in the first half of 2016.[4] As described in the housing market analysis prepared for the DSP,[5] some of the negative absorption may have been attributable to demolition of the Downtown Plaza in order to construct the Golden 1 Center, which is spurring new retail and restaurants around the arena. Although there has been no new retail development since 2015, a number of developments underway in the DSP area are expected to come on-line in the near future, including approximately 350,000 square feet of retail in the Downtown Commons,[6] as well as approximately 12 to 15 retail spaces along the 700 block of K Street.[7] The redevelopment of the K Street corridor, corresponding with development of the Golden 1 Center, represents the reuse of some of the City's long-term vacant retail stock, which contributes significantly to the identified decrease in retail vacancy.

The proposed DSP anticipates the addition of approximately 1,756,948 square feet of retail/ service space to the DSP area, which would represent an approximately 37 percent increase in retail square footage above existing conditions. Additional retail and restaurant square footage allowed for under the proposed DSP would meet the increased demand for neighborhood-serving retail commercial uses resulting from the regional population growth described in the City's 2035 General Plan and the SACOG MTP/SCS. Retail and residential infill development would occur as

2 CoStar, 2016; as cited in BAE Urban Economics, 2016. *Sacramento Downtown Specific Plan Draft Housing Market Analysis, Phase I and Phase II*. November 2016. pp. 68-69.
3 *Ibid*.
4 *Ibid*.
5 BAE Urban Economics, 2016. *Sacramento Downtown Specific Plan Draft Housing Market Analysis, Phase I and Phase II*. November 2016. pp. 68-69.
6 Downtown Sacramento Partnership. 2016. Golden 1 Center. Available at http://downtownsac.org/project/golden-1-center/; as cited in BAE Urban Economics, 2016. *Sacramento Downtown Specific Plan Draft Housing Market Analysis, Phase I and Phase II*. November 2016. pp. 68.
7 Downtown Sacramento Partnership. 2016. 700 Block of K Street. Available: http://downtownsac.org/project/g700-block-of-k-street/; as cited in BAE Urban Economics, 2016. *Sacramento Downtown Specific Plan Draft Housing Market Analysis, Phase I and Phase II*. November 2016. pp. 68.

backfill in existing underutilized buildings or as other sites in the DSP area are redeveloped to maximize development potential. Retail development within the DSP area would not be of sufficient size to attract regionally-serving retail centers, with the exception of retail uses in the Downtown Commons.

Consistent with SACOG growth projections, implementation of the DSP would be anticipated to develop approximately 13,400 new residential units within the DSP area, an approximately 64 percent increase in housing units from the approximately 20,928 housing units existing in the DSP area as of 2014.[8]

Proximity to neighborhood-serving retail is a desired community amenity within the DSP area and would be better accommodated by Grid 3.0 transportation network improvements implemented by the DSP. Development of new residential units would be an attractant for the development of neighborhood-serving retail, especially along commercial corridors. Retail growth would be anticipated to occur in response to the growing market for neighborhood-serving retail within the DSP area and would complement the pace of anticipated residential growth. As an example of projected gradual growth, SACOG projected an above-average rate of employment growth for retail within the DSP area, with approximately 1.9 percent in annual growth from 2012 to 2020 and approximately 1.4 percent in annual growth from 2020-2036.[9] Overall this would represent an approximately 30 percent growth in retail employment over the planning horizon. While employment is not a direct indicator of retail development, anticipated growth in retail employment generally follows an employee-per-square-footage model.

Employee spending would also increase with the development of approximately 3.8 million square feet of non-residential square footage, anticipated under the DSP. The DSP would be anticipated to create an estimated 22,750 jobs in a variety of employment sectors, all of which would add spending potential to the DSP areas retail sales requirements. Estimates from the urban decay analysis conducted for the retail development associated with the Golden 1 Center, estimated that office workers in urban locations spend between $6,226 and $8,970 annually in retail spending, in the vicinity of office buildings.[10]

Development of retail uses within the DSP area would not be anticipated to substantially divert existing or projected residential or employee spending from neighborhood-serving retail uses outside of the DSP area because those uses would be subject to similar market conditions. While some retail spending may be diverted from areas outside of the DSP area to expanded retail within the DSP area, it is not anticipated that such diversion would be to such an extent that it

8 U.S. Census Bureau, 2016. 2010-2014 American Community Survey; as cited in BAE Urban Economics, 2016. *Sacramento Downtown Specific Plan Draft Housing Market Analysis, Phase I and Phase II*. November 2016. pp. 38.

9 Sacramento Area Council of Governments, Draft Modeling Projections for 2012, 2020, and 20136, 2016; as cited in BAE Urban Economics, 2016. *Sacramento Downtown Specific Plan Draft Housing Market Analysis, Phase I and Phase II*. November 2016. pp. 80.

10 ALH Urban & Regional Economics, 2013. *Sacramento Entertainment and Sports Center & Related Development Urban Decay Analysis*. October 24, 2013. Exhibit 11.

would be detrimental to retail uses outside of the DSP area. Further, some retail expenditures by DSP area households would take place outside of the DSP area, as was described in a previous urban decay study for the retail development associated with the Golden 1 Center.[11]

As described above, areas outside of the DSP area are also anticipated to experience moderate population growth and infill development, but would not be anticipated to reach the peak development assumptions projected in the City's 2035 General Plan and the SACOG MTP/SCS. However, the retail environment is generally stable, with an approximately 6 percent vacancy rate, in those areas and would be subject to growth as permitted by market conditions and population growth.[12] Therefore, projected population growth for those areas would be anticipated to be adequate for support of existing and projected retail sales requirements for retail uses outside of the DSP area.

For these reasons, the proposed DSP would not be anticipated to contribute to or cause conditions that would facilitate urban decay.

11 *Ibid*.
12 CoStar, 2016; as cited in BAE Urban Economics, 2016. *Sacramento Downtown Specific Plan Draft Housing Market Analysis, Phase I and Phase II*. November 2016. pp. 68-69.

CHAPTER 6
Project Alternatives

6.1 Overview

Pursuant to State CEQA Guidelines section 15126.6, this EIR must describe a range of alternatives to the proposed DSP that might feasibly accomplish most of the basic objectives of the proposed DSP and could avoid or substantially lessen one or more of the significant effects. The feasibility of an alternative is determined by the lead agency based on a variety of factors including, but not limited to, site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and site accessibility and control (State CEQA Guidelines section 15126.6(f)(1)).

The chapter discloses the comparative effects of each of the alternatives relative to the proposed plan, and evaluates the relationship of the alternatives to the plan objectives. As required under section 15126.6(e) of the State CEQA Guidelines, an environmentally superior alternative is identified and addressed at the end of this chapter.

6.2 Factors in the Selection of Alternatives

6.2.1 Plan Objectives

The objectives of the proposed plan are used to effectively evaluate the reasonableness and feasibility of each alternative. As presented in Chapter 2, Project Description, the plan objectives are as follows:

1. Encourage future growth in the City inward into existing urbanized areas and the central business district to foster infill development, as well as encourage density of development and integration of housing with commercial, office, and entertainment uses that fosters increased walking and reduced automobile use;

2. Accommodate growth that protects important environmental resources as well as ensures long-term economic sustainability and health, and equity or social wellbeing for the entire community;

3. Facilitate the creation of new places to live in Downtown consistent with the City's Downtown Housing Initiative and General Plan;

4. Develop varied and unique housing options that appeal to a wide range of residents and reflect the diversity of Sacramento;

5. Maximize livability and quality of life by expanding community amenities to meet the everyday needs of those who live and work in Downtown;

6. Solidify Downtown's status as the regional destination for the arts, culture and entertainment;

7. Diversify employment opportunities by increasing Downtown's attractiveness to new, emerging and innovative businesses and industries;

8. Preserve and enhance Downtown's unique character, buildings and streetscapes by requiring new development to contribute high standards of urban design and incorporate environmental best practices;

9. Celebrate Downtown's rich historic, cultural, recreational, open space and riverfront assets;

10. Create a connected, layered transportation network that serves all modes of travel and supports transit oriented development including along the Downtown / Riverfront Streetcar line.

11. Achieve the goals of the Grid 3.0 planning process to create: (1) defined mode priority on key street segments; (2) sustained regional network access for downtown gateways; (3) new opportunities for economic development; (4) a complete bicycle network in downtown; (5) an enhanced pedestrian network, especially where multiple modes interconnect; (6) expanded transit network with improved operational efficiency; (7) improved transportation system reliability; and (8) a system of managing travel and parking demand of the anticipated high growth within the DSP area;

12. Focus public and private investments to bring equitable levels of public services and enhanced utility infrastructure to meet the needs of existing a new development; and

13. Remove barriers to new housing and increase certainty for investment by streamlining the development and environmental review processes.

6.2.2 Significant Effects of the Proposed Plan

The following significant and unavoidable impacts were identified for the proposed DSP:

Impact 4.2-3: The proposed DSP would result in long-term (operational) emissions of NO_X, ROG, PM_{10}, and $PM_{2.5}$.

Impact 4.2-5: Implementation of the proposed DSP could result in short-term and long-term exposure to Toxic Air Contaminants.

Impact 4.2-8: The proposed DSP could contribute to cumulative increases in long-term (operational) emissions of NO_X, ROG, PM_{10}, and $PM_{2.5}$.

Impact 4.2-10: Implementation of the proposed DSP could contribute to cumulative increases in short- and long-term exposures to Toxic Air Contaminants.

Impact 4.4-1: New construction in the proposed DSP area could cause a substantial adverse change in the significance of an archaeological resource, including human remains.

Impact 4.4-2: New construction in the DSP area could cause a substantial adverse change in the significance of a tribal cultural resource.

Impact 4.4-4: New construction in the proposed DSP area, in combination with other cumulative development, could contribute to the cumulative loss or alteration of archaeological resources, including human remains.

Impact 4.10-1: Construction of development allowed under the proposed DSP could generate noise that would conflict with City standards or result in substantial temporary or periodic increase in ambient noise levels.

Impact 4.10-2: Operations of development allowed under the proposed DSP could result in a substantial permanent increase in ambient exterior noise levels.

Impact 4.10-5: Implementation of the proposed DSP would result in exposure of people to cumulative increases in construction noise levels.

Impact 4.10-6: Operations of development allowed under the proposed DSP would contribute to cumulative increases in ambient exterior noise levels.

Impact 4.10-8: Construction of buildings pursuant to the proposed DSP would contribute to cumulative construction that could expose existing and/or planned buildings, and persons within, to significant vibration.

Impact 4.13-7: Implementation of the proposed DSP, in combination with other cumulative development, would contribute to cumulative increases in demand for water supply.

6.3 Alternatives Considered but Dismissed from Further Evaluation

In identifying alternatives to the proposed plan, primary consideration was given to alternatives that could reduce significant unavoidable impacts resulting from the proposed plan while still obtaining the plan's objectives. Certain impacts that are identified as being significant and unavoidable under the proposed plan (e.g., increase in air pollutants from project construction and operation) are due primarily to developing an area that is currently undeveloped or intensifying development activity beyond current levels. These impacts would not be possible to eliminate, but could be reduced, for example, by limiting the scope of the proposed plan, reconfiguring uses, or implementing mitigation measures. Alternatives that reduce the intensity of development in the DSP area are addressed later in this chapter.

The following plan alternatives were considered but rejected for the reasons discussed below:

No Project/No Development Alternative

The no project/no development alternative would prevent future growth by prohibiting new development within the DSP area, establishing a de facto moratorium on development. This alternative was dismissed from consideration because it would be inconsistent with State CEQA Guidelines section 15126.6(e)(3)(A), which states that "When the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the 'no project' alternative will be the continuation of the existing plan, policy or operation into the future."

More importantly, this alternative was dismissed from further consideration because it would fail to meet any of the basic objectives of the DSP, including to encourage future growth in the City inward into existing urbanized areas. Implementation of the No Project/No Development Alternative would prohibit development of existing vacant or underutilized sites within the DSP area, which would direct growth into areas outside of the DSP area. In addition, this alternative would fail to meet the growth projections in the City's 2035 General Plan or the SACOG MTP/SCS, which envisions high-density residential development in the Central City. As required by State CEQA Guidelines section 15126.6(f), an EIR need examine in detail only the alternatives that the lead agency determines could feasibly attain most of the basic objectives of the project.

Because this alternative would fail to meet the all of the basic objectives of the DSP and is inconsistent with the guidance provided by State CEQA Guidelines section 15126.6(e)(3)(A), it was dismissed from further consideration.

Smaller/Less Growth Alternative

A smaller/less growth alternative would implement policies that would limit development within the DSP area to lower levels than have been anticipated for the proposed DSP, the 2035 General Plan, or the SACOG MTP/SCS growth assumptions. This alternative would tend to reduce several impacts of the proposed DSP, including construction-related air quality and noise effects on locations in the DSP area.

However, similar to the No Project/No Development Alternative, the Smaller/Less Growth Alternative would fail to accommodate the amount of growth projected under the 2035 General Plan and SACOG 2016 MTP/SCS, which would tend to push growth outward from the City core into more suburban areas. This growth would result in higher vehicle miles traveled (VMT), relative to the per capita and per employee VMT estimated under the proposed DSP, and would be inconsistent with DSP objectives. Concomitant effects triggered by increased per capita and per employee VMT would be increased criteria pollutant emissions and greenhouse gas emissions, increased loss of prime farmland and habitat for special status species, increased water demand, increased energy demand, and the like.

The Smaller/Less Growth Alternative would be inconsistent with some of the most basic objectives of the proposed DSP, including (1) encouraging growth in the City inward and fostering infill development, (2) protecting important environmental resources and ensuring long-

term economic sustainability and health, (3) creating housing in downtown consistent with the 2035 General Plan, and (4) diversifying downtown employment opportunities. Because the Smaller/Less Growth Alternative would fail to meet some of the most basic objectives of the proposed DSP and would exacerbate a wide range of environmental effects on a regional basis, it was dismissed from further consideration.

Larger/Higher Growth Alternative:

The larger/higher growth alternative would implement policies directing development of a substantially higher number of residential units. The larger residential growth proposed by this Alternative would exceed the growth assumptions of the 2035 General Plan and the SACOG 2016 MTP/SCS. For several reasons this alternative was eliminated from further consideration. Housing demand studies undertaken during the preparation did not indicate an available demand to support housing or non-residential development beyond that identified for the proposed DSP.[1] In addition, this alternative would tend to exacerbate many, if not all, of the environmental impacts disclosed for the proposed DSP, including all construction-related impacts, criteria and greenhouse gas emissions, traffic congestion, water demand, and related effects. Thus, this alternative would not be consistent with State CEQA Guidelines section 15126.6(a) which states that an alternative in an EIR must "avoid or substantially lessen any of the significant effects of the project," Because the evidence suggests that this alternative would not be economically feasible, would be inconsistent with the 2035 General Plan, and would exacerbate environmental impacts, it was dismissed from further consideration.

Transportation Network Option A Alternative

Transportation Network Option A, considered as part of the Grid 3.0 planning process, evaluated a substantially lower level of investment in transportation improvements relative to the level of investment included as part of the proposed DSP. Key differences between Option A and the transportation network included in the proposed DSP are summarized below.

Roadway Network

Transportation Network Option A would include fewer changes to the DSP area's existing roadway network. This option would preserve more of the existing system of three-lane one-way roadways, and includes fewer lane reductions and fewer two-way conversions. As described in Section 4.12, lane reductions would be necessary to provide space for additional bicycle facilities and dedicated transit lanes; two-way conversions improve access for bicycles and automobiles, while slowing traffic and improving safety for bicyclists and pedestrians.

More specifically, key differences between Transportation Network Option A and the proposed DSP include the following:

- 5th Street – No two-way conversion between Capitol Mall and Q Street;

[1] Bay Area Economics, Sacramento Downtown Specific Plan Draft Housing Market Analysis, Phase I and Phase II, November 2016.

- 8th Street – No lane reduction between G Street and P Street;
- 10th Street – No lane reduction between I Street and N Street;
- 15th Street – No lane reduction between G Street and Broadway;
- 16th Street – No lane reduction between N Street and X Street;
- G Street – No two-way conversion between 12th Street and 16th Street;
- H Street – No two-way conversion between 5th Street and 8th Street and no two-way conversion between 12th Street and 16th Street;
- I Street – No lane reduction between 12th Street and 16th Street and no two-way conversion between 16th Street and 21st Street;
- J Street – No lane reduction between 5th Street and 9th Street and no lane reduction between 16th Street and 30th Street;
- L Street – No lane reduction between 11th Street and 15th Street;
- Capitol Mall – No lane reduction between 5th Street and 9th Street;
- N Street – No two-way conversion between 3rd Street and 21st Street (however, this option does include a lane reduction on N Street between 3rd Street and 10th Street); and
- Broadway – No lane reduction between 9th Street and SR-99.

Bicycle Network

Transportation Network Option A would include fewer new on-street bicycle facilities than the proposed DSP, and no upgrades to existing bicycle facilities to improve safety and comfort for bicyclists. Key differences between Transportation Network Option A and the proposed DSP include the following:

- 10th Street – No on-street bicycle lanes between L Street and N Street;
- 15th Street – No on-street bicycle lanes between C Street and Broadway;
- 16th Street – No on-street bicycle lanes between N Street and X Street;
- H Street – No on-street bicycle lanes between 13th Street and 15th Street;
- I Street – No on-street bicycle lanes between 12th Street and 21st Street;
- J Street – No on-street bicycle lanes between 19th Street and 30th Street;
- N Street – No on-street bicycle lanes between 10th Street and 15th Street;
- S Street – No on-street bicycle lanes between 13th Street and 21st Street; and
- Broadway – No on-street bicycle lanes between 9th Street and SR-99.

Transit Network

Transportation Network Option A would include fewer transit investments than the proposed DSP. Key differences between Transportation Network Option A and the proposed DSP include the following:

- 7th Street – No bus stop enhancements between I Street and P Street;
- 8th Street – No dedicated transit lane between G Street and P Street;
- 15th Street – No bus stop enhancements between L Street and N Street;
- J Street – No bus stop enhancements between 9th Street and 12th Street, no dedicated transit lane between 5th Street and 9th Street, and no dedicated transit lane between 16th Street and 19th Street;
- L Street – No dedicated transit lane between 11th Street and 15th Street;
- P Street – No bus stop enhancements between 5th Street and 15th Street; and
- Broadway – No bus stop enhancements/transit investments between 19th Street and 21st Street.

Transportation Network Option A was dismissed from further consideration as it did not meet the basic objective of DSP to create a connected walk- and transit-first mobility network that serves all modes of travel and supports transit oriented development including along the Downtown-Riverfront Streetcar line. Because this option would preserve a higher level of automobile capacity, less space would be made available for expanding the network of on-street bikeways and implementing future dedicated transit lanes that would help to increase the percentage of trips made by bicycle and transit, and to accommodate higher levels of trip making within the DSP area.

Transportation Network Option B Alternative

Transportation Network Option B, originally considered in the Grid 3.0 planning process, included a lower level of investment in transportation improvements relative to the level of investment included as part of the proposed DSP, although more than included in Network Option A. Key differences between this option and the proposed DSP are summarized below.

Roadway Network

Transportation Network Option B would include fewer changes to the DSP area's existing roadway network. This option would preserve more of the existing system of three-lane one-way roadways, and includes fewer lane reductions and fewer two-way conversions. As described in Section 4.12, lane reductions are necessary to provide space for additional bicycle facilities and dedicated transit lanes; two-way conversions improve access for bicycles and automobiles, while slowing traffic and improving safety for bicyclists and pedestrians.

Key differences between Transportation Network Option B and the proposed DSP include the following:

- 10th Street – No lane reduction between I Street and L Street;
- 15th Street – No lane reduction between G Street and Broadway;
- 16th Street – No lane reduction between N Street and X Street;

- G Street – No two-way conversion between 12th Street and 16th Street;
- H Street – No two-way conversion between 5th Street and 8th Street and no two-way conversion between 12th Street and 16th Street;
- I Street – No lane reduction between 12th Street and 16th Street;
- J Street – No lane reduction between 16th Street and 30th Street;
- L Street – No lane reduction between 11th Street and 15th Street;
- Capitol Mall – No lane reduction between 5th Street and 9th Street;
- N Street – No two-way conversion between 3rd Street and 16th Street (however, this option does include a lane reduction on N Street between 3rd Street and 15th Street); and
- Broadway – No lane reduction between and 21st Street and SR 99.

Bicycle Network

Transportation Network Option B would include fewer new on-street bicycle facilities than the proposed DSP, and no upgrades to existing bicycle facilities to improve safety and comfort for bicyclists. Key differences between Transportation Network Option B and the proposed DSP include the following:

- 15th Street – No on-street bicycle lanes between C Street and Broadway;
- 16th Street – No on-street bicycle lanes between N Street and X Street;
- H Street – No on-street bicycle lanes between 13th Street and 15th Street;
- J Street – No on-street bicycle lanes between 19th Street and 30th Street; and
- Broadway – No on-street bicycle lanes between 21st Street and SR-99.

Transit Network

Transportation Network Option B would include fewer transit investments than the proposed DSP. Key differences between Transportation Network Option B and the proposed DSP include the following:

- 7th Street – No bus stop enhancements between I Street and P Street;
- 15th Street – No bus stop enhancements between L Street and N Street;
- J Street – No bus stop enhancements between 9th Street and 12th Street and no dedicated transit lane between 16th Street and 19th Street;
- L Street – No dedicated transit lane between 11th Street and 15th Street;
- P Street – No bus stop enhancements between 5th Street and 15th Street; and
- Broadway – No bus stop enhancements/transit investments between 19th Street and 21st Street.

Transportation Network Option B was ultimately rejected as an alternative for further consideration as part of the DSP EIR because it did not meet the basic objective of the DSP to

create a connected walk- and transit-first mobility network that serves all modes of travel and supports transit oriented development including along the Downtown-Riverfront Streetcar line. Because this option would preserve a higher level of automobile capacity relatively to the proposed DSP, less space would be made available for expanding the network of on-street bikeways and implementing future dedicated transit lanes that would help to increase the percentage of trips made by bicycle and transit, and to accommodate higher levels of trip making within the DSP area.

6.4 Alternatives Selected for Further Consideration

This section describes the range of alternatives to the proposed plan that are analyzed in this Draft EIR and presents how specific environmental impacts would differ in severity compared to those associated with the proposed DSP. For the most part, significant impacts of the alternatives can be mitigated to less than significant levels through adoption of mitigation measures identified in Chapter 4, which contains the environmental analysis of the proposed DSP. To varying degrees, the following alternatives would also avoid and/or lessen impacts, including some or all of the significant and unavoidable impacts, of the proposed DSP. The alternatives considered in this section include:

- Alternative 1: No Project/Existing General Plan
- Alternative 2: Reduced Height Alternative
- Alternative 3: Transportation Network Option C Alternative

The evaluation of alternatives is organized to facilitate a clear comparison between the effects of the alternative and the effects of the proposed DSP. First there is a discussion of those impacts of the alternative that would be the same or similar to those of the proposed DSP. Then there is a discussion of those effects of the alternative that would be less severe than those of the proposed DSP, followed by those effects of the alternative that would be more severe than those of the proposed DSP. Each discussion concludes with a discussion of the relationship between the alternative and the basic objectives of the proposed DSP.

Alternative 1: No Project/Existing General Plan

Description

Alternative 1, the No Project/Existing General Plan Alternative, assumes that the DSP area would be subject to infill and redevelopment consistent with the land use designations and allowable uses identified in the existing 2035 General Plan and Central City Community Plan, developed consistent with the guidance of the existing Central City Urban Design Guidelines, and physically located consistent with the assumptions made in the 2035 General Plan Master EIR and the SACOG 2016 MPT/SCS.

Growth and Development Assumptions

The City's 2035 General Plan Master EIR made growth assumptions consistent with the SACOG MTP/SCS, which projected growth in the region to include 811,000 more people, 285,000 new

homes and 439,000 new jobs.[2] SACOG projected that the City will have roughly 261,000 housing units and 397,000 employees by 2035, an increase of approximately 165,000 residents relative to the estimated population of 475,000 in 2012.[3] To accommodate predicted growth, the City would need to add approximately 68,000 new housing units over that time period. As identified in the 2035 General Plan, the City anticipates that Sacramento's employee base in 2035 would be 386,215, with a total of 260,699 housing units within the City.

As described in Chapter 3, under both the 2035 General Plan and the DSP the number of housing units within the DSP area would be anticipated to increase by an estimated 13,401 units over the next 20 years. The employee-per-unit ratio assumed within the DSP area for the 2035 General Plan would be 2.1. Increases in allowed building heights under the proposed DSP would facilitate increases in development densities on Opportunity Sites and in commercial corridors within the DSP area. Consistent with a more concentrated urban setting, it is expected that unit sizes under the proposed DSP would be smaller than was assumed under the 2035 General Plan and the number of persons per household would be anticipated to be lower under the proposed DSP. For the reasons described above, the DSP area would be anticipated to have an employee-per-unit ratio to 1.62 under the proposed DSP.

Under the proposed DSP, the land use and zoning designations for DSP area parcels would be the same as established in the 2035 General Plan, however the physical alignment of future development would be varied to reflect the more detailed understanding of Opportunity Sites and changes to development regulations (e.g. building height) in the C-2, RMX, or OB zones.

Alternative 1 would implement the 2035 General Plan and Central City Community Plan in their present form. Development parameters would not be increased within the zones specified above; therefore, growth throughout the DSP area would be anticipated to proceed in a less-concentrated way than would be anticipated to occur under the DSP.

The proposed DSP anticipates the addition of two hotels including a 350-room hotel at 13th Street and J Street and a 400-room hotel at 15th Street and K Street. The proposed hotels would also be constructed under Alternative 1.

Transportation Network

The proposed DSP transportation network would include the implementation of the Grid 3.0 preferred transportation network for the DSP area, focusing on investments in pedestrian, bicycle and transit facilities. The proposed DSP network would concentrate vehicular traffic on arterial and collector streets. The proposed DSP would add 80 blocks of two-way streets (68 blocks of two-way conversions and 12 blocks of two-way conversions with contra-flow lanes) and 185

2 Sacramento Area Council of Governments, 2016. Metropolitan Transportation Plan / Sustainable Communities Strategy (MTP/SCS). Adopted February 18, 2016. p. 21.

3 U.S. Census Bureau, 2012. American Fact Finder Community Facts – Sacramento City, California. As cited in City of Sacramento, 2015. City of Sacramento 2035 General Plan Master Environmental Impact Report. Certified March 3, 2015.

blocks with on-street bike lanes. In addition, the proposed DSP would add up to 24 blocks with exclusive transit lanes and accommodation for improved bus layover.

These improvements would accomplish the Grid 3.0 goals of (1) defined mode priority on key street segments; (2) sustained regional network access for downtown gateways; (3) new opportunities for economic development; (4) a complete bicycle network in downtown; (5) an enhanced pedestrian network, especially where multiple modes interconnect; (6) expanded transit network with improved operational efficiency; (7) improved transportation system reliability; and (8) managing travel and parking demand of the anticipated high growth within the DSP area.

Alternative 1 would not include the improvements intended to meet the Grid 3.0 goals described above. The transportation grid would develop as described in the 2035 General Plan. The system would have less emphasis on corridors to and from surrounding areas. The pedestrian and bicycle networks would have less connectivity and roadways would have less integration of pedestrian and bicycle facilities throughout the DSP area. Thus, under Alternative 1 pedestrian and bicycle conditions would continue as existing, which would not fulfill the DSP objective of creating a transportation network that supports all modes of travel.

The proposed DSP would add street lights to areas throughout the DSP area to improve resident and visitor safety. Alternative 1 would maintain the existing levels of neighborhood lighting, and improvements to resident and visitor safety from implementation of the proposed DSP would not be realized.

The proposed DSP provides criteria and guidance for the selection and placement of public art. Alternative 1 would have less emphasis on the integration of public art into public spaces.

Comparative Analysis of Environmental Effects

Impacts Identified as Being the Same or Similar to the Proposed DSP

The acreage that would be developed under Alternative 1 would be similar to the proposed DSP, so impacts related to ground disturbance would be essentially the same. Specifically, impacts would be the same for biological resources, including raptors and other protected species (Impacts 4.3-1, 4.3-2, 4.3-5, 4.3-9, 4.3-11, 4.3-12, and 4.3-14), Valley elderberry longhorn beetle (Impacts 4.3-4 and 4.3-13), bat species (Impacts 4.3-6 and 4.3-15), special status plant species (Impacts 4.3-7 and 4.3-16), wetlands and riparian vegetation (Impacts 4.3-8 and 4.3-17), fish (Impacts 4.3-3 and 4.3-18) and trees (Impacts 4.3-10 and 4.3-19). Similarly, impacts on archaeological (Impacts 4.4-1 and 4.4-4), tribal cultural (Impact 4.4-2), and paleontological resources (Impact 4.6-4) would be unchanged, as would the risk of exposure to or interference with contaminated groundwater or soils during construction (Impacts 4.8-1, 4.8-2, 4.8-3, 4.8-4, 4.8-6, 4.8-7, 4.8-8, 4.8-9, and 4.8-10). In addition, development under Alternative 1 would commence in compliance with state, regional and local regulations and would not be anticipate to conflict with an emergency response plan or emergency evacuation plan (Impact 4.8-5). Impacts related to soil type, including erosion and seismic hazards would be the same (Impacts 4.6-1, 4.6-2, 4.6-3, 4.6-5, and 4.6-6). Impacts to water quality during construction would be similar

(Impacts 4.9-1 and 4.9-5). Development under Alternative 1 would. Implementation of Alternative 1 would generate similar levels of polluted runoff (Impact 4.9-2), impacts to groundwater (Impacts 4.9-4 and 4.9-7), and exposure to risk of flood hazards (Impacts 4.9-3 and 4.9-6).

While the proposed DSP would be anticipated to better facilitate residential development within the DSP area, the No Project/Existing General Plan Alternative would be anticipated to result in the same overall level of construction within the DSP area by 2035. Thus, the level of construction activity on a daily basis would be similar to the levels anticipated for the proposed DSP, although under Alternative 1 much of the development activity could be later in the 2035 General Plan planning horizon. As construction levels would be similar, concomitant short term construction emissions and release of criteria air pollutants from construction would be similar under Alternative 1 to the effects anticipated for the DSP (Impact 4.2-1 and 4.2-2). For both the proposed DSP and Alternative 1, short-term Toxic Air Contaminants (TAC) emissions would be significant even with mitigation (Impact 4.2-5 and Impact 4.2-10 [Air Quality]). In addition, for both the proposed DSP and Alternative 1 construction and operation would be anticipated to result in similar levels of objectionable odors (Impact 4.2-6).

The type of development that would occur under Alternative 1 and the DSP would use similar construction equipment and have similar intensity and duration, as discussed above. Thus, development under both Alternative 1 and the DSP would have similar noise and vibration impacts from construction on existing and future residences and other sensitive users (Impacts 4.10-1 and 4.10-4 [Noise and Vibration]).

As it is anticipated that similar levels of development would take place within the DSP area under Alternative 1, aesthetic impacts would be similar to impacts of the proposed DSP. Further, there would be a similar likelihood that scenic resources would be subject to adverse impacts (Impact 4.1-1 and 4.1-4) and that development would degrade existing visual quality within the DSP area (Impact 4.1-2 and 4.1-5) resulting in similar new sources of substantial light and glare (Impact 4.1-3 and 4.1-6).

Both Alternative 1 and the proposed DSP would be anticipated to support similar levels of development between today and 2035. Therefore, Alternative 1 would contribute similarly to increases in operational criteria air pollutants (Impacts 4.2-3 and 4.2-8 [Air Quality]). Cumulative short term air emissions would be anticipated to be similar under both the proposed DSP and Alternative 1 because regional growth projections are the same for both scenarios. Therefore, while growth between the two alternatives could be geographically different and somewhat delayed under Alternative 1, cumulative increases in short-term (construction) emissions and construction noise and vibration (Impacts 4.10-5 and 4.10-6) would be similar. Alternative 1 would require similar levels of public services, as populations and uses would be similar (Impacts 4.11-1, 4.11-2, 4.11-3, 4.11-4, 4.11-5, 4.11-6, and 4.11-7). Similarly, the demand for public utilities, including wastewater and drainage (Impacts 4.13-1 and 4.13-2), water supply (Impacts 4.13-5 and 4.13-6), solid waste (Impact 4.13-9), and energy (Impact 4.5-1) would be the same

within the DSP area, though localized differences in development may require different sets of improvements to individual infrastructure components, between alternatives.

Regional growth projections would be similar under Alternative 1 and the proposed DSP, thus, cumulative demand for schools would be similar (Impact 4.11-6). In addition, cumulative demand for public utilities, including wastewater and drainage (Impacts 4.13-3 and 4.13-4), water supply (Impacts 4.13-7 and 4.13-8), solid waste (Impact 4.13-9), and energy (Impacts 4.5-2 and 4.5-3) would also be similar to levels required under the DSP.

Impacts Identified as Being Less Severe than the Proposed Plan

Under Alternative 2, impacts to historic resources would be anticipated to be less severe than under the proposed DSP (Impacts 4.4-3 and 4.4-5), as limited allowable heights along commercial corridors would reduce the intensity of development adjacent to historic structures in those zones, lessening the potential degradation of site context.

Impacts Identified as Being More Severe than the Proposed Plan

Under Alternative 1, development would be anticipated to take place in a less concentrated way, decreasing densities in proximity to the Streetcar line and major transit stops, and maintaining the existing DSP area transportation network, with the result being an increase in per capita and per employee VMT. This effect would increase traffic congestion with population growth, leading to higher queuing delays at freeway off-ramps and DSP area intersections (Impacts 4.12-1, 4.12-2, 4.12-3, 4.12-8, 4.12-9, 4.12-10, and 4.12-11) and additional roadway noise (Impacts 4.10-2, 4.10-3, 4.10-7, and 4.10-8). The subsequent air quality impact would be increased carbon monoxide (CO) concentrations within the DSP area, relative to anticipated CO concentrations under the DSP (Impact 4.2-4 and 4.2-9).

Under Alternative 1 the planning policies and transportation network proposed in the DSP would not be approved. The anticipated result would be that Alternative 1 would not result in a concentration of development and a lowering of per capita and per employee VMT, both of which would be anticipated to lower greenhouse gas (GHG) emissions for the region under the proposed DSP. While it is reasonable to assume that development under Alternative 1 would be in compliance with the City's CAP, since per capita and per employee VMT would be higher than under the proposed DSP, it is also reasonable to conclude that overall levels of GHG emissions would be higher under Alternative 1 than under the proposed DSP. Thus, impacts to GHG emissions under Alternative 1 would be more severe (Impact 4.7-1).

Under Alternative 1, facilities for alternate modes of travel, including pedestrian, bicycle, and transit, would not be subject to the improvements proposed under the proposed DSP transportation network. With anticipated increased VMT and fewer improvements to the transportation network within the DSP area, under Alternative 1 conditions for alternate modes of travel would be more severe (Impacts 4.12-5, 4.12-6, 4.12-7, 4.12-12, 4.12-13, and 4.12-14).

Relationship to Plan Objectives

Alternative 1 would not meet most of the basic objectives of the proposed DSP, because it would maintain the existing mix of uses, transportation network configurations, infrastructure, street lighting, and public art policies. As such, Alternative 1 would fail to achieve the DSP objective to (1) foster infill development, (2) support the City's Downtown Housing Initiative, (3) maximize livability and quality of life by expanding community amenities, create a connected walk- and transit-first mobility network that serves all modes of travel and supports transit oriented development along the Streetcar line, (4) achieves the goals of the Grid 3.0 planning process, and (5) removes barriers to new housing by streamlining the development and environmental review processes. The DSP objectives are intended to improve upon existing conditions, which would be sustained by the No Plan/Existing General Plan Alternative.

Alternative 2: Reduced Heights Alternative

Description

Land Use and Zoning

The purpose of the Reduced Heights Alternative (Alternative 2) is to reduce those impacts associated with the height of development that would occur within the commercial corridors in the DSP area. By reducing the number of residential units and the square footage for retail, commercial and other uses in the commercial corridors, the resident, employee and visitor population within those portions of the DSP area would drop, resulting in a greater concentration of development in the C-3 zone and potentially in residential zones in the DSP area.

The Reduced Heights Alternative would retain the same distribution of land use and zoning designations as are described in the proposed DSP, but would not increase allowable heights in the SPD area for C-2, RMX, or OB zones. **Table 6-1** provides the existing maximum allowable heights for the zones above, and maximum allowable heights for the proposed SPD, as described in Chapter 2, Project Description.

TABLE 6-1
ALLOWABLE DEVELOPMENT HEIGHTS BY ALTERNATIVE

Zone	Existing Maximum Height (Alternative 1)	Maximum Height Under Alternative 2 (Same as Existing)	Maximum Height Under DSP
C-2	65 feet	65 feet	85 feet
RMX	45 feet	45 feet	65 feet
OB	35 feet	35 feet	65 feet

Development under Alternative 2 would be consistent with the growth assumptions of the DSP and the 2035 General Plan, with similar residential units and non-residential square footage, overall. As such, taller development that would be incentivized by the increased allowable heights within the C-2, RMX, and OB zones and other incentives under the DSP, would be less concentrated along those commercial corridors. Instead, that development would be anticipated to

occur in other zones throughout the plan area. Lower height limits in commercial corridors may affect future residential development and commercial uses. Fewer new residents within those zones would impact retail uses that rely on residential spending. Many developments would be required to develop above a certain number of residential units, below which some developments may become financially infeasible, and those sites would remain underutilized or undeveloped.

Infrastructure Improvements

Alternative 2 would require infrastructure improvements to serve new development, but would require differing localized capacity to accommodate a similar but different distribution of growth within the DSP area, relative to the proposed DSP. As discussed above, Alternative 2 would result in lower density development within commercial corridors, requiring less infrastructure capacity in those areas. Under Alternative 2, vacant and under-utilized sites would still be developed, so the amount of impervious surfaces within the DSP area would be similar to the amount anticipated under the proposed DSP, placing the same drainage requirements on the CSS and Basin 52. Overall, development under Alternative 2 would be similar to the proposed DSP, so demand for utilities, including natural gas and electrical services within the DSP area would be similar.

Transportation Network

The transportation improvements under Alternative 2 would be the same as would occur under the proposed DSP. Increased allowable development height in commercial corridors (C-2, RMX, and OB zones) under the proposed DSP would facilitate the concentration of residential and development along transit corridors, which would be anticipated to increase transit ridership and utilization of nearby bicycle network improvements. Under Alternative 2, new residential development in commercial corridors would be less dense along some of the key transit and bicycle network improvements, which would be anticipated to result in lower utilization of transit and bicycle transportation, relative to the proposed DSP.

Comparative Analysis of Environmental Effects

Impacts Identified as Being the Same or Similar to the Proposed Plan

The acreage that would be developed under Alternative 2 would be similar to the proposed DSP, so impacts related to ground disturbance would be essentially the same. Specifically, impacts would be the same for biological resources, including raptors and other protected species (Impacts 4.3-1, 4.3-2, 4.3-5, 4.3-9, 4.3-11, 4.3-12, and 4.3-14), Valley elderberry longhorn beetle (Impacts 4.3-4 and 4.3-13), bat species (Impacts 4.3-6 and 4.3-15), special status plant species (Impacts 4.3-7 and 4.3-16), wetlands and riparian vegetation (Impacts 4.3-8 and 4.3-17), fish (Impacts 4.3-3 and 4.3-18) and trees (Impacts 4.3-10 and 4.3-19). Similarly, impacts on archaeological (Impacts 4.4-1and 4.4-4), tribal cultural (Impact 4.4-2), and paleontological resources (Impact 4.6-4) would be unchanged, as would the risk of exposure to or interference with contaminated groundwater or soils during construction (Impacts 4.8-1, 4.8-2, 4.8-3, 4.8-4, 4.8-6, 4.8-7, 4.8-8, 4.8-9, and 4.8-10). In addition, development under Alternative 2 would commence in compliance with state, regional and local regulations and would not be anticipate to conflict with an emergency response plan or emergency evacuation plan (Impact 4.8-5). Impacts

related to soil type, including erosion and seismic hazards would be the same (Impacts 4.6-1, 4.6-2, 4.6-3, 4.6-5, and 4.6-6). Impacts to water quality during construction would be similar (Impacts 4.9-1 and 4.9-5). Development under Alternative 2 would. Implementation of Alternative 2 would generate similar levels of polluted runoff (Impact 4.9-2), impacts to groundwater (Impacts 4.9-4 and 4.9-7), and exposure to risk of flood hazards (Impacts 4.9-3 and 4.9-6).

The proposed DSP would be anticipated to better facilitate residential development within the DSP area, because increased minimum height requirements in commercial corridors would allow for the development of a greater number of units in proximity to transportation improvements.

Alternative 2 would be anticipated to result in the same overall level of construction within the DSP area by 2035. Thus, the level of construction activity on a daily basis would be similar to the levels anticipated for the proposed DSP, although under Alternative 2 much of the development activity could be later in the 2035 General Plan planning horizon. As construction levels would be similar, concomitant short term construction emissions and release of criteria air pollutants from construction would be similar effects anticipated for the proposed DSP (Impact 4.2-1 and 4.2-2). For both the proposed DSP and Alternative 2, short-term TAC emissions would be significant even with mitigation (Impact 4.2-5 and 4.2-10 [Air Quality]). In addition, for both the proposed DSP and Alternative 2 construction and operation would be anticipated to result in similar levels of objectionable odors (Impact 4.2-6).

The type of development that would occur under Alternative 2 and the proposed DSP would use similar construction equipment and have similar intensity and duration, as discussed above. Thus, development under both Alternative 2 and the proposed DSP would have similar noise and vibration impacts from construction on existing and future residences and other sensitive users (Impacts 4.10-1, 4.10-4, 4.10-5 and 4.10-6 [Noise and Vibration]).

Aesthetic impacts would be similar to impacts under the proposed DSP, however lower allowable heights in commercial corridors would tend to concentrate taller development into C-3 zone, which would be anticipated to result in a more abrupt transition between zones in the DSP area. Nonetheless, there would be a similar likelihood that scenic resources would be subject to adverse impacts (Impact 4.1-1 and 4.1-4) or that development would degrade existing visual quality within the DSP area (Impact 4.1-2 and 4.1-5) resulting in similar new sources of substantial light and glare (Impact 4.1-3 and 4.1-6).

Similar levels of development would be anticipated under both Alternative 2 and the proposed DSP. In addition, Regional growth projections would be similar under both alternatives. Therefore, Alternative 2 would contribute similarly to increases in operational criteria air pollutants (Impacts 4.2-3 and 4.2-8). Alternative 2 would require similar levels of public services, as the number of residential units and non-residential square footage would be similar (Impacts 4.11-1, 4.11-2, 4.11-3, 4.11-4, 4.11-5, 4.11-6, 4.11-7, and 4.11-8). Similarly, the demand for public utilities, including wastewater and drainage (Impacts 4.13-1, 4.13-2, 4.13-3, and 4.13-4), water supply (Impacts 4.13-5, 4.13-6, 4.13-7 and 4.13-8), solid waste (Impact 4.13-9), and energy

(Impact 4.5-1, 4.5-2 and 4.5-3) would be the same, though localized differences in development may require different sets of improvements to individual infrastructure components, between alternatives.

Impacts Identified as Being Less Severe than the Proposed Plan

Under Alternative 2, impacts to historic resources would be anticipated to be less severe than under the proposed DSP (Impacts 4.4-3 and 4.4-5), as limited allowable heights along commercial corridors would reduce the intensity of development adjacent to historic structures in those zones, lessening the potential degradation of site context.

Impacts Identified as Being More Severe than the Proposed Plan

The Reduced Heights Alternative would be anticipated to result in less development within the C-2, BO, and RMX zones, which would divert a portion of projected regional growth into the C-3 and residential zones. As such, it is anticipated that, relative to the proposed DSP, fewer residents would be located in close proximity to transportation improvements under Alternative 2. Thus, fewer residents within and in the vicinity of the plan area would be anticipated to utilize bicycle, pedestrian or transit improvements, such that VMT would be higher, and there would be increased vehicle traffic within the DSP area (Impacts 4.12-1, 4.12-2, 4.12-3, 4.12-8, 4.12-9, 4.12-10, and 4.12-11) and additional roadway noise (Impacts 4.10-2, 4.10-3, 4.10-7, and 4.10-8). A subsequent impact would be increased queuing at DSP area intersections, which would have increased CO concentrations as a result (Impact 4.2-4 and 4.2-9) and an increase in GHG emissions (Impact 4.7-1). In addition, with anticipated cumulative increases in vehicular traffic within the DSP area, under Alternative 2, conditions for alternate modes of travel would be more severe (Impacts 4.12-5, 4.12-6, 4.12-7, 4.12-12, 4.12-13, and 4.12-14).

Relationship to DSP Objectives

Alternative 2 would be anticipated to meet DSP objectives to facilitate arts and culture in the DSP area (Objective 6) and cultivate high standards of urban design and best practices (Objective 8) which would celebrate the DSP area's various cultural and geographic assets (Objective 9). Improved amenities and development streamlining, provided under Alternative 2, would encourage growth in the City inward as well as encourage integration of housing with commercial, office, and entertainment uses (Objective 1). Under Alternative 2, the City would meet the City's housing initiative (Objective 3) and streamline housing development (Objective 13), however height limitations may hinder the development of varied and unique housing options (Objective 4) and may dampen attractiveness to new, emerging, and innovative businesses (Objective 7), relative to the proposed DSP. Under Alternative 2, expanded community amenities such as improvements to the transportation system would improve livability and quality life for DSP area residents (Objectives 5, 10, 11, and 12). Overall, relative to the proposed DSP, Alternative 2 would be less likely to meet all of the City's basic objectives.

Alternative 3: Transportation Network Option C Alternative

Description

The Transportation Network Option C Alternative (Alternative 3) includes all elements of the proposed DSP including updated land use and zoning, infrastructure improvements, street light improvements, proposed hotels, and public art. However, Alternative 3 would have an alternative transportation network that includes changes to the roadway, bicycle, and transit networks included as part of the proposed DSP. The pedestrian infrastructure investments evaluated as part of Network Option C are consistent with the investments included in the proposed DSP. Key differences between this Alternative 3 and the proposed DSP are summarized below.

Roadway Network

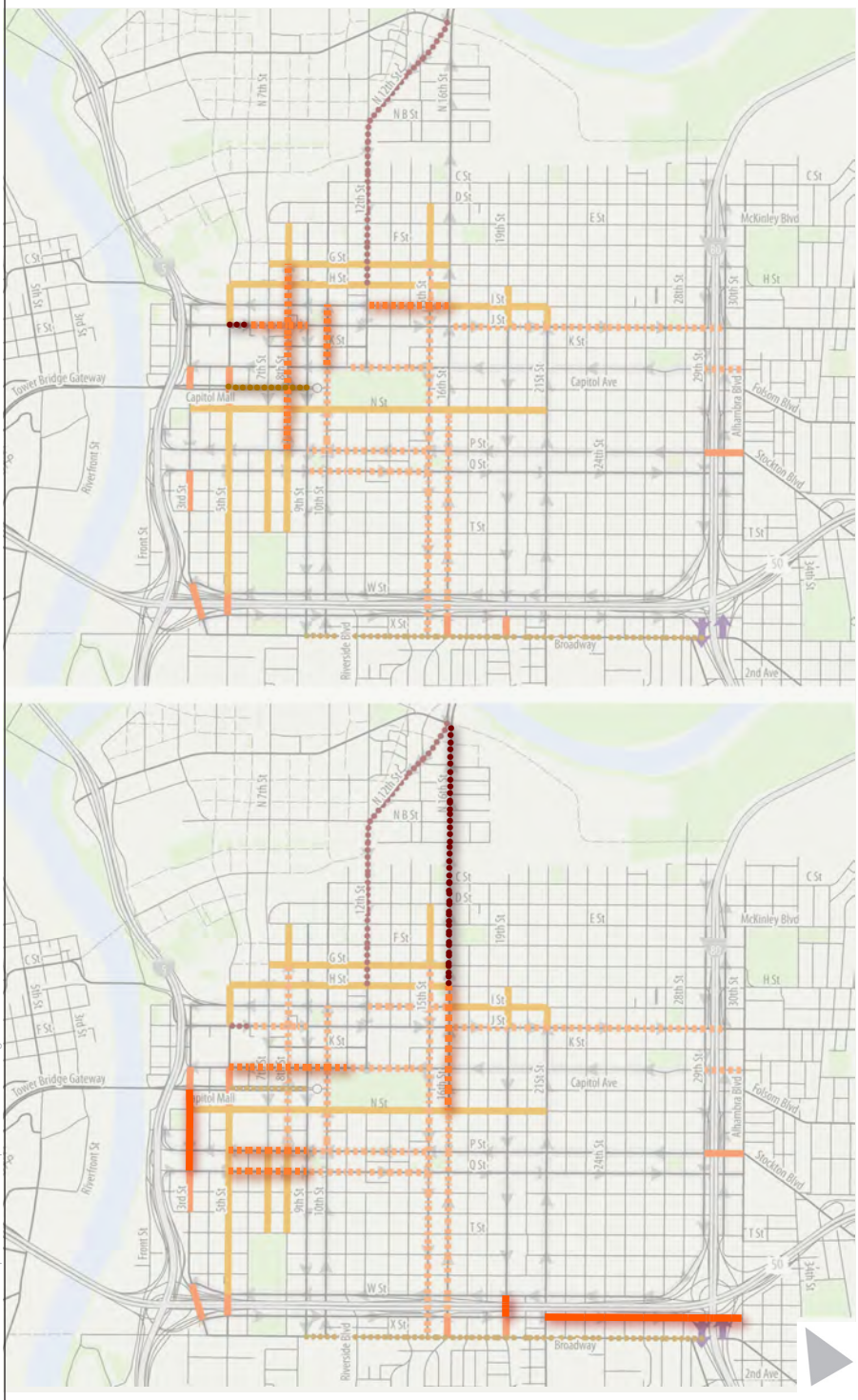
Alternative 3 would include modifications to the DSP area roadway network. **Figure 6-1** displays key roadway network differences between Alternative 3 and the proposed DSP, which include the following:

- 3rd Street – Includes two-way conversion between Capitol Mall and Q Street;
- 8th Street – No lane reduction between G Street and P Street;
- 10th Street – No lane reduction between I Street and L Street;
- 16th Street – Includes lane reduction between Richards Boulevard and N Street;
- I Street – No lane reduction between 12th Street and 16th Street;
- J Street – No lane reduction between 5th Street and 9th Street;
- L Street – Includes lane reduction between 5th Street and 11th Street;
- Capitol Mall – No lane reduction between 5th Street and 9th Street;
- P Street – Includes lane reduction between 5th Street and 9th Street;
- Q Street – Includes lane reduction between 5th Street and 9th Street; and
- X Street – Includes two-way conversion between 21st Street and Alhambra Boulevard.

Bicycle Network

Alternative 3 would include additional on-street bicycle facilities beyond those included in the proposed DSP, but would not include upgrades to existing bicycle facilities to improve safety and comfort for bicyclists on select commercial/transit streets. **Figure 6-2** displays key bicycle network differences between Alternative 3 and the proposed DSP, which include the following:

- 16th Street – Includes on-street bicycle lanes between Richards Boulevard and N Street;
- H Street – No on-street bicycle lanes between 13th Street and 15th Street;
- I Street – No on-street bicycle lanes between 12th Street and 16th Street;
- L Street – Includes on-street bicycle lanes between 5th Street and 15th Street;
- P Street – Includes on-street bicycle lanes between 5th Street and 9th Street; and
- Q Street – Includes on-street bicycle lanes between 5th Street and 9th Street.

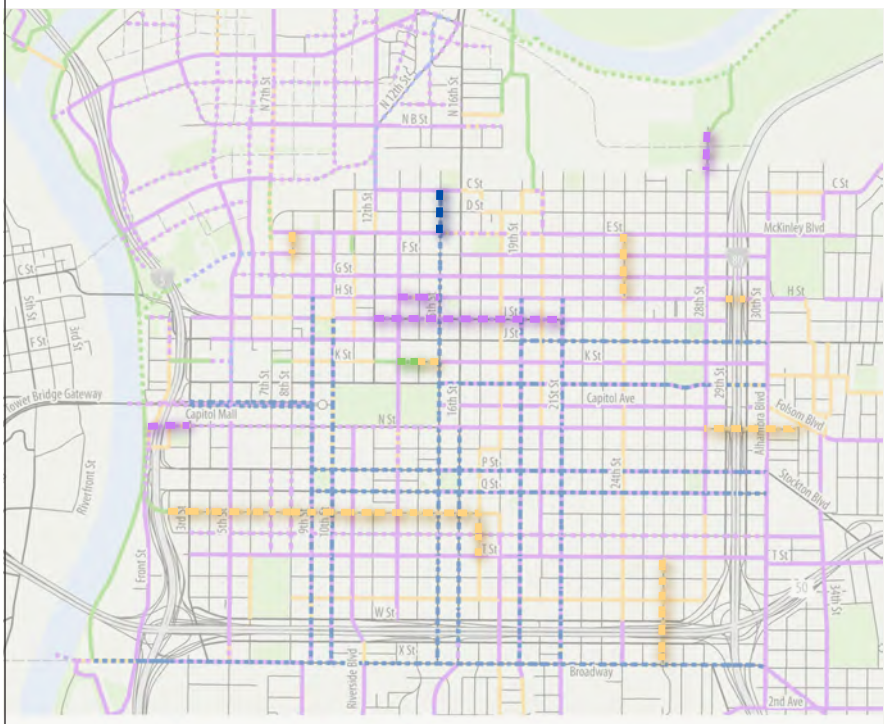


SOURCE: Fehr & Peers, 2017

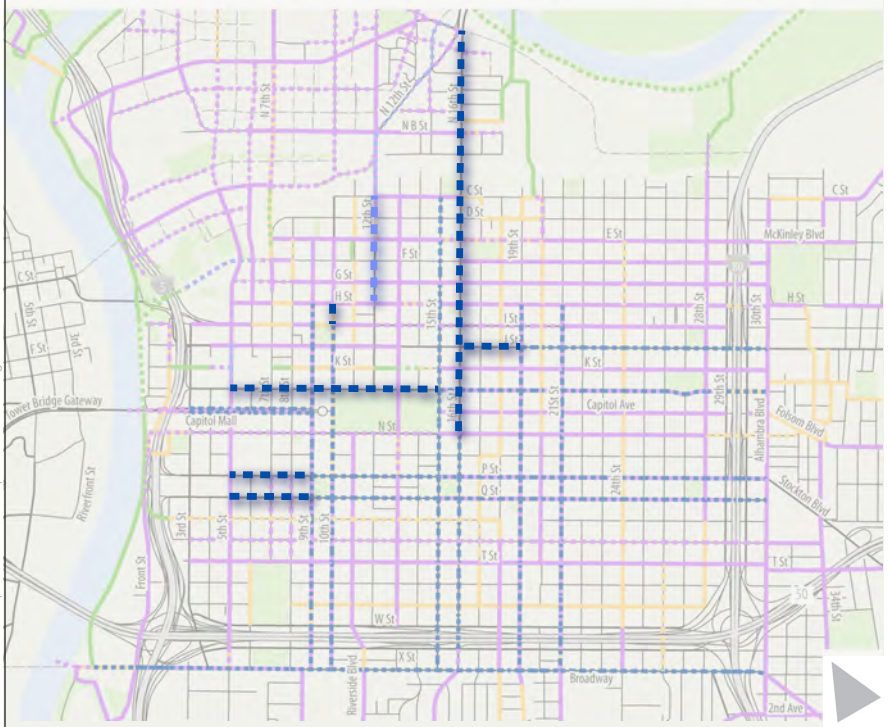
City of Sacramento Downtown Specific Plan EIR

Figure 6-1
Roadway Network – Differences Between Alternative 3 and Proposed DSP

ESA



Removed Bicycle Facilities
(Relative to Proposed DSP)



Additional Bicycle Facilities
(Beyond Proposed DSP)

Existing Bike Classification
- Bike Path (Class I)
- Bike Lane (Class II)
- Bike Route (Class III)

Proposed Bike Classification
- Bike Path (Class I)
- Bike Lane (Class II)
- Bike Route (Class III)
- Separated Bikeway (Class IV)
- Buffered Bike Lane (Class II Enhanced)

Not to scale

D150842 - City of Sacramento Downtown Specific Plan\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Fehr & Peers, 2017

City of Sacramento Downtown Specific Plan EIR

Figure 6-2
Bicycle Network – Differences Between Alternative 3 and Proposed DSP

ESA

Transit Network

Alternative 3 would include fewer transit investments than the proposed DSP. Key differences between Alternative 3 and the proposed DSP include the following:

- 7th Street – No bus stop enhancements between I Street and P Street;
- 8th Street – No dedicated transit lane between G Street and P Street;
- 15th Street – No bus stop enhancements between L Street and N Street;
- J Street – No bus stop enhancements between 9th Street and 12th Street and no dedicated transit lane between 5th Street and 9th Street;
- L Street – No dedicated transit lane between 11th Street and 15th Street;
- P Street – No bus stop enhancements between 5th Street and 15th Street; and
- Broadway – No bus stop enhancements/transit investments between 19th Street and 21st Street.

Comparative Analysis of Environmental Effects

Relative to the proposed DSP transportation network, Alternative 3 includes a somewhat higher number of vehicle lane reductions, more on-street bicycle lanes, and lower levels of dedicated transit lanes and transit stop enhancements. While additional vehicle lane reductions beyond those included in the proposed DSP would allow for the implementation of additional on-street bicycle lanes, the additional lane reductions would substantially increase vehicular delay and queuing in a manner that is inconsistent with General Plan Policy M 1.2.2.

Specifically, the additional lane reductions on L Street, P Street, and Q Street beyond those included in the proposed DSP would allow for the extension of on-street bicycle lanes on these segments, but would result in substantially higher levels of delay as vehicular volumes generally increase on these streets as they approach I-5. Similarly, Alternative 3 would also extend the lane reduction on 16th Street further to the north to allow for the extension of on-street bicycle lanes beyond those identified in the proposed DSP. However, 16th Street serves as a primary commute corridor between the DSP area and the River District, and ties into SR 160 at the northern edge of the Central City. Modeling indicated that a vehicle lane reduction north of N Street would result in substantially higher levels of vehicular delay than would occur with implementation of the proposed DSP. Additionally, dedicating fewer lanes for transit would increase delays to transit beyond the levels that would occur with implementation of the proposed DSP.

As described in Section 4.12, General Plan Policy M 1.2.2 intersections within the Central City area that operate at level of service (LOS) F are considered acceptable, but such conditions should not be detrimental toward other General Plan circulation policies pertaining to provision of high-quality transit, walkable neighborhoods and business districts, continuous and connected bikeways, transportation demand management, emergency response, and other circulation considerations (including but not limited to policies M 1.2.1, 1.2.4, 1.3.3, and 1.3.5). Modeling of Alternative 3 indicates that it would increase congested VMT (LOS F) by approximately 40

percent over existing conditions, and would degrade overall roadway system operation to the extent that it would not be consistent with General Plan Policy M 1.2.2.

Impacts Identified as Being the Same or Similar to the Proposed Plan

Under the Transportation Network Option C Alternative (Alternative 3) development would be anticipated to be the same as would occur under the proposed DSP, but with a different transportation network. The exception would be pedestrian facilities, for which, improvements would be the same as would take place under the proposed DSP (Impacts 4.12-5 and 4.12-12). Effects of development related to building height, density, massing, or design would be similar to the proposed DSP (Impacts 4.1-1, 4.1-2, 4.1-3, 4.1-4, 4.1-5, and 4.1-6). Effects related to construction and noise (Impacts 4.10-1, 4.10-4, 4.10-5, and 4.10-6) and construction emissions (Impacts 4.2-2 and 4.2-7) would be anticipated to be the same. Odor effects would be anticipated to be similar (Impacts 4.2-6). As development would be anticipated to be the same under Alternative 3, impacts on the implementation of the City's CAP would be similar (Impact 4.7-1).

Operational emissions, with the exception of traffic-related emissions, would also be similar and would not be anticipated to conflict with an applicable air quality plan (Impacts 4.2-1, 4.2-3 and 4.2-8). Implementation of Alternative 3 would have a two-fold effect on traffic-related emissions. Additional alternative transportation improvements, relative to the DSP, would encourage more people to utilize alternative transportation, thereby reducing VMT and concomitant vehicle emissions. However, those same transportation improvements would be anticipated to result in a substantial increase in queueing at plan area intersections, which would increase the duration of trips thereby increasing vehicle emissions for those trips. Thus, while fewer in number, remaining vehicle trips would be anticipated to have increased idling at DSP area intersections leading to increased CO concentrations in those areas.

The acreage that would be developed under Alternative 3 would be similar to the proposed DSP, so impacts related to ground disturbance would be the same. Specifically, impacts would be the same for biological resources, including raptors and other protected species and their habitat (Impacts 4.3-1, 4.3-2, 4.3-5, 4.3-9, 4.3-11, and 4.3-12), Valley elderberry longhorn beetle (Impacts 4.3-4 and 4.2-13), bat species (Impacts 4.3-6 and 4.3-15), special status plant species (Impacts 4.3-7 and 4.3-16), wetlands and riparian vegetation (Impacts 4.3-8 and 4.3-17), fish (Impacts 4.3-3 and 4.3-18) and trees (Impacts 4.3-10 and 4.3-19). Similarly, impacts on archaeological (Impacts 4.4-1 and4.4-4), tribal cultural (Impact 4.4-2), historical (Impacts 4.4-3 and 4.4-5), and paleontological resources (Impacts 4.6-4) would be unchanged, as would the risk of exposure to or interference with contaminated groundwater or soils during construction (Impact 4.8-1, 4.8-2, 4.8-3, 4.8-4, 4.8-6, 4.8-7, 4.8-8, and 4.8-9). Impacts related to soil type, including erosion and seismic hazards would be the same (Impacts 4.6-1, 4.6-2, 4.6-3, 4.6-5, and 4.6-6). Impacts to water quality during construction would be similar (Impacts 4.9-1 and 4.9-5). Development under Alternative 3 would. Implementation of Alternative 3 would generate similar levels of polluted runoff (Impact 4.9-2), impacts to groundwater (Impacts 4.9-4 and 4.9-7), and exposure to risk of flood hazards (Impacts 4.9-3 and 4.9-6).

Alternative 3 would develop similar numbers of residential units and non-residential square footage through both new development and backfill of existing uses. Therefore, impacts associated with the number of residential units and non-residential square footage would be similar. These include police protection (Impacts 4.11-1 and 4.11-2), fire protection (Impacts 4.11-3 and 4.11-4), schools (Impacts 4.11-5 and 4.11-6), parks and open space (Impacts 4.11-7 and 4.11-8), wastewater (Impacts 4.13-1, 4.13-2, 4.13-3, and 4.13-4), water supply (Impacts 4.13-7 and 4.13-8), solid waste (Impacts 4.13-9 and 4.13-10), and energy (Impacts 4.5-1, 4.5-2, and 4.5-3).

Impacts Identified as Being Less Severe than the Proposed Plan

Alternative 3 would include additional improvements to on-street bicycle facilities, which may attract a greater number of individuals to opt for bicycle travel over vehicle travel within and into the DSP area, thereby removing those vehicle trips from the transportation network (Impacts 4.12-7 and 4.12-14). This result could improve VMT relative to the proposed DSP, as Alternative 3 would be anticipated to have fewer vehicle trips (Impacts 4.12-4 and 4.12-11).

Impacts Identified as Being More Severe than the Proposed Plan

As described above, additional improvements to the transportation system would increase delay and queueing within the DSP area at intersections and freeway off-ramps (Impacts 4.12-1, 4.12-2, 4.12-3, 4.12-8, 4.12-9, and 4.12-10). increased delay at DSP area intersections would be anticipated to generate higher concentrations of CO and TACs relative to the anticipated performance of the same variables under the proposed DSP (Impacts 4.2-4, 4.2-5, 4.2-9, and 4.2-10). Increased queueing and congestion would be more likely to interrupt the performance of emergency response and emergency evacuation plans (Impacts 4.8-5 and 4.8-10). Under Alternative 3, higher levels of congestion would contribute to increases in ambient exterior and interior noise and railway noise levels (Impacts 4.10-2, 4.10-3, 4.10-7 and 4.10-8).

Under Alternative 3, there would be fewer improvements to transit facilities, including fewer lanes converted to transit-only lanes, within the DSP area. In combination with increased delay and queueing under Alternative 3, impacts to transit facilities would be more severe (Impacts 4.12-6 and 4.12-13).

Relationship to Plan Objectives

Alternative 3 is similar to the proposed DSP and would meet the majority of the City's objectives, with the exception of Objectives 5 and 10. The City's goal of maximizing livability and quality of life through expanded community amenities would be less satisfied by Alternative 3, as transit investments would be fewer and traffic conditions would be subject to greater congestion. Furthermore, the lesser investment in transit facilities would fail to meet the City's objective of creating a transit-first mobility network.

6.5 Environmentally Superior Alternative

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. Section 15126.6 (e)(2) of the State CEQA Guidelines requires that an environmentally superior alternative be designated and states that if the environmentally superior alternative is the No Project alternative, the EIR also is required to identify an environmentally superior alternative among the other alternatives.

From the alternatives evaluated in this EIR, the environmentally superior alternative would be the proposed DSP. The proposed DSP would encourage future growth in the City inward which would best minimize impacts associated with the dedication of previously undeveloped land to urban uses around the urban edges of the Sacramento region. Implementation of the proposed transportation network under the proposed DSP would best incentivize the use of alternative transportation while better integrating transit. The resulting effects would be best minimize potential air, noise, and traffic impacts on a region-wide level, among the available alternatives.

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CHAPTER 8
Acronyms and Abbreviations

A-OS	Agriculture-Open Space Zoning Designation
AB	Assembly Bill
ACM	Asbestos-Containing Material
ALS	Advanced Life Support
AQMP	Air Quality Management Plan
ARP-F	American River Parkway-Floodplain Zoning Designation
ASCE	American Society of Civil Engineers
Basin Plan	Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin
bgs	Below Ground Surface
BMPs	Best Management Practices
BDSP	Bridge District Specific Plan
BLS	Basic Life Support
Business 80	Capital City Freeway
C-1	Limited Commercial Zoning Designation
C-2	General Commercial Zoning Designation
C-3	Central Business District Zoning Designation
C-4	Heavy Commercial Zoning Designation
CAA	Clean Air Act
CADA	Capitol Area Development Authority
Cal/EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emission Estimator Model
CALGreen	California Green Building Standards Code
California Register	California Register of Historical Resources
CalSTRS	California State Teachers Retirement System
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CBD	Central Business District

CCAA	California Clean Air Act
CCCP	City of Sacramento's Central City Community Plan
CCR	California Code of Regulations
CCUDG	Central City Urban Design Guidelines
CDFW	California Department of Fish and Wildlife
CDHS	California Department of Health Services
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFC	California Fire Code
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CGS	California Geologic Survey
CH_4	Methane
CNDDB	California Department of Fish and Wildlife's Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CPTED	Crime Prevention Through Environmental Design
CPUC	California Public Utilities Commission
CRPR	California Rare Plant Rank
CRSIR	Cultural Resources Survey and Inventory Report
CSLC	California State Lands Commission
CSS	Combined Sewer System
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agency
CVFPB	Central Valley Flood Protection Board
CVFPP	Central Valley Flood Protection Plan
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Federal Clean Water Act
CWTP	Combined Wastewater Treatment Plant
dB	Decibel
Delta	Sacramento-San Joaquin Delta
DHA	Sacramento County Department of Human Assistance
DHS	California Department of Health Services

DOSH	Division of Occupational Safety and Health
DOT	United States Department of Transportation
DOU	Department of Utilities
DPM	Diesel Particulate Matter
DPS	Distinct Population Segment
Draft EIR	Draft Environmental Impact Report
DSH	Diameter at Standard Height
DSP	Downtown Specific Plan
DSP area	Downtown Specific Plan Area
DTSC	California Department of Toxic Substances Control
e21	Education for the 21st Century
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EMD	Sacramento County Environmental Management Department
EMFAC	California Air Resources Board's Emissions Factors
EMS	Emergency Medical Services
EMT	Emergency Medic al Technicians
ES	Elementary School
ESA	Environmental Science Associates
ESC	Entertainment and Sports Center
ESU	Evolutionary Significant Units
F	Flood Zone Zoning Designation
FAR	Floor Area Ratio
FCAA	Federal Clean Air Act
FCAAA	Federal Clean Air Act Amendments
FERC	Federal Energy Regulatory Commission
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FIP	Federal Implementation Plan
FIRM	Flood Insurance Rate Map
FPD	Fire Protection District
FR	Federal Register
FY	Fiscal Year
GHG	Greenhouse Gas
gsf	Gross Square Feet
GVW	Gross Vehicle Weight
GWP	Global Warming Potential
H	Hospital Zone Zoning Designation
HAP	Hazardous Air Pollutant
HFC	Hydroflourocarbon
HMBP	Hazardous Materials Business Plan

HPS	High Pressure Sodium
HS	High School
HSC	California Health and Safety Code
HVAC	Heating, Ventilation, and Air Conditioning
Hz	Hertz
I-5	Interstate 5
I-80	Interstate 80
IBC	International Building Code
IPCC	International Panel on Climate Change
kV	kilovolt
LBP	Lead-Based Paint
LED	light-emitting diodes
LID	Low Impact Development
LLMD	Lighting Landscaping and Maintenance District
LNG	liquefied natural gas
LOS	Level of Service
LVW	Loaded Vehicle Weight
M-1	Industrial Zoning Designation
M-2	Heavy Industrial Zoning Designation
MBTA	Migratory Bird Treaty Act
MDO	Medium Density Overlay
MEIR	Master Environmental Impact Report
mgd	Million Gallons Per Day
MLD	Most Likely Descendent
MMP	Mitigation Monitoring Plan
MOU	Memorandum of Understanding
mph	Miles Per Hour
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MS	Middle School
MSAA	Master Streambed Alteration Agreement
MTP/SCS	SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy
MVA	megavolt-ampere
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NESHAP	National Emission Standards for Hazardous Air Pollutant
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act

NO_2	Nitrogen Dioxide
NOI	Notice of Intent
NO_X	Nitrogen Oxides
NOP	Notice of Preparation
NPDES	National Pollution Discharge Elimination System
NPPA	California Native Plan Protection Act
NRCS	Department of Agriculture Natural Resources Conservation Service
O_3	Ozone
OB	Office Building Zoning Designation
OEHHA	Office of Environmental Health Hazard Assessment
OPR	Governor's Office of Planning and Research
ORMU	Office/Residential Mixed-Use
OSHA	Occupation Safety and Health Administration
OSHPD	California Office of Statewide Health Planning and Development
Parkway Plan	Sacramento River Parkway Plan
PBID	Property and Business Improvement District
PCB	Polychlorinated Biphenyl
PDC	Planning and Development Code
PFC	Perfluorocarbon
PGA	Peak Ground Acceleration
$PM_{2.5}$	Particulate Matter in Size Fractions of 2.5 Microns or Less in Diameter
PM_{10}	Particulate Matter in Size Fractions of 10 Microns or Less in Diameter
Porter-Cologne	Porter-Cologne Water Quality Control Act of 1969
POUs	Publicly Owned Utilities
ppd	Pounds Per Day
PPV	Peak Particle Velocity
PRC	Public Resource Code
PRMP	Parks and Recreation Master Plan
proposed plan	Downtown Specific Plan
PSI	per square inch
R-1	Standard Single Family Zoning Designation
R-1B	Single or Two Family Zoning Designation
R-2B	Multi-Family Zoning Designation
R-3A	Multi-Family Zoning Designation
R-4	Multi-Family Zoning Designation
R-4A	Multi-Family Zoning Designation
R-5	Multi-Family Zoning Designation
RCNM	FHWA's *Roadway Construction Noise Model*
RDSP	River District Specific Plan
REA	Railway Express Agency

REC	Recognized Environmental Condition
Regional San	Sacramento Regional County Sanitation District
Reporting Rule	U.S. EPA Greenhouse Gas Reporting Rule
RHNA	Regional Housing Needs Assessment
RHNP	Regional Housing Needs Plan
RMU	Residential Mixed-Use
RMX	Residential Mixed Use Zoning Designation
RO	Residential-Office Zoning Designation
ROG	Reactive Organic Gases
RPS	Renewable Portfolio Standard
RT	Regional Transit
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAB	State Allocation Board
Sac RT	Sacramento Regional Transit
SACOG	Sacramento Area Council of Governments
Sacramento DPR	City of Sacramento Department of Parks and Recreation
SACSIM	Sacramento Activity-Based Travel Simulation Model
SAFCA	Sacramento Area Flood Control Agency
SB	Senate Bill
SCC	Sacramento City College
SCS	Sustainable Community Strategy
SCUSD	Sacramento City Unified School District
SDC	Seismic Design Category
SEL	Single Event Noise Level
SF_6	Sulfur Hexafluoride
SFD	Sacramento Fire Department
SIP	State Implementation Plan
SITF	Sacramento Intermodal Transit Facility
SHRA	Sacramento Housing and Redevelopment Authority
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMARA	California Surface Mining and Reclamation Act of 1975
SMUD	Sacramento Municipal Utility District
SO_2	Sulfur Dioxide
SPD	Special Planning District
SQIP	Stormwater Quality Improvement Plan
SR	State Route
SRA	State Responsibility Area
SRFECC	Sacramento Regional Fire/EMS Communications Center
SRCSD	Sacramento Regional County Sanitation District
SRWTP	Sacramento Regional Wastewater Treatment Plan

SSF	Sacramento Steps Forward
SVAB	Sacramento Valley Air Basin
SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TC	Transportation Corridor Zoning Designation
tpy	Tons Per Year
TPZ	Tree Protection Zone
TRUSD	Twin Rivers Unified School District
UFC	Uniform Fire Code
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
US EPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank
VdB	vibration decibels
VELB	Valley Elderberry Longhorn Beetle
VMT	vehicle miles traveled
VOC	Volatile Organic Compound
WDR	Waste Discharge Requirement
WQF	water quality flow
WSA	Water Supply Assessment
WWTP	Wastewater Treatment Plant
ZNE	Zero Net Energy

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CHAPTER 9
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1. Introduction

No References

2. Project Description

No References

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