

City of
SACRAMENTO

ADDENDUM TO A CERTIFIED ENVIRONMENTAL IMPACT REPORT

The City of Sacramento, California, a municipal corporation, does hereby prepare, make declare, and publish the Addendum to a certified Environmental Impact Report (EIR) for the following described project:

Project Name and Number: **Broadway Complete Streets (T15175300)**

Environmental Impact Report: Central City Specific Plan (SCH# 2017022048)

The City of Sacramento, Community Development Department, has reviewed the proposed changes to the prior approved project and on the basis of the whole record before it, has determined that there is substantial evidence to support the determination that the attached original Environmental Impact Report (EIR) remains relevant in considering the environmental impacts of the proposed project changes and that there is no substantial evidence to support a fair argument that the changes to the project, as identified in the attached Addendum, may have a significant effect on the environmental beyond that which was evaluated in the referenced certified EIR. A subsequent EIR is not required pursuant to the California Environmental Quality Act of 1970 (Public Resources Code Sections 21000, et seq. California).

This Addendum to the certified EIR has been prepared pursuant to Title 14, Sections 15162-15164 of the California Code of Regulations, and the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento.

A copy of this document and all supportive documentation may be reviewed or obtained at the City of Sacramento, Community Development Department, Planning Division, 300 Richards Boulevard, Third Floor, Sacramento, California 95811 and on the City's web site for environmental documents at <http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports.aspx>.

Environmental Services Manager, City of Sacramento,
California, a municipal corporation

By: _____

Date: _____

Broadway Complete Streets Project (T15175300)
Addendum to a Certified Environmental Impact Report
SCH No. 2017022048

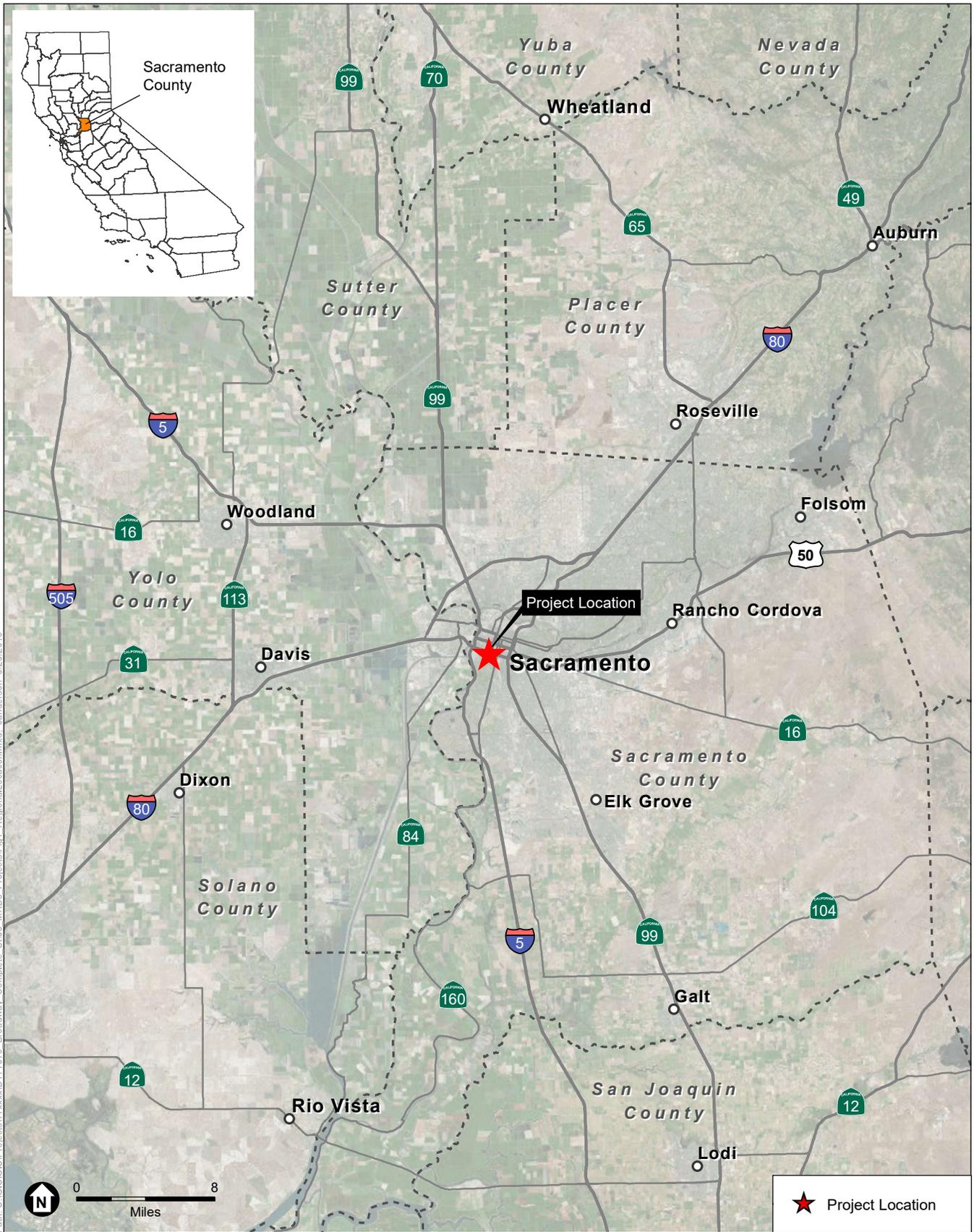
File Number/Project Name: Broadway Complete Streets Project (T15175300)

Environmental Impact Report: Central City Specific Plan (SCH# 2017022048)

Project Location: The project site is located in the City of Sacramento, California. Regionally located approximately 80 miles east of San Francisco and 85 miles west of Lake Tahoe, Sacramento is a major transportation hub. The City is a point of intersection of transportation routes that connect to the San Francisco Bay area to the west, the Sierra Nevada mountains and Nevada to the east, Los Angeles to the south, and Oregon and the Pacific Northwest to the north. The City is bisected by major freeways, including Interstate 5 (I-5) that 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. Two railroads, the Union Pacific (UP) Railroad and the BNSF Railway transect Sacramento.

The project site is located on Broadway and adjoining roadways, between 3rd Street and State Route 99 (SR 99), near downtown Sacramento. The project site includes areas that could potentially be affected by proposed demolition of existing streetscape facilities or construction of proposed road and streetscape improvements. Land uses surrounding the project site are commercial, mixed use, public and residential. The project site corresponds to the Sacramento West and Sacramento East U.S. Geological Survey (USGS) 7.5 Minute topographic quadrangle maps and is located in Township 8 North, Ranges 4 East and 5 East. Elevation at the project site ranges from 15 to 25 feet above mean sea level (msl). A regional location map and map showing the area of potential effects are included as **Figures 1 and 2**.

Existing Plan Designations and Zoning: The project site consists of Broadway and adjoining streets within the City's existing right of way, and a section of State-controlled land between X Street and Broadway along the former alignment of 29th Street (see **Figure 3**). The primary Sacramento 2035 General Plan land use designation for parcels along Broadway is Urban Corridor Low, with an area between 6th and 8th Streets designated as Parks and Traditional Neighborhood High, and an area between 18th and 23rd Streets designated as Urban Center Low. Zoning designations in the project area include mostly General Commercial (C-2), with Heavy Commercial (C-4) along the western end of Broadway and a small amount of Standard Single Family Residential (R-1), Multi-Family (21) Residential (R-3A), and Limited Commercial (C-3) dispersed across the Broadway Corridor. **Figures 4 and 5** illustrate the existing 2035 General Plan land use and zoning designations, respectively, for the project area.

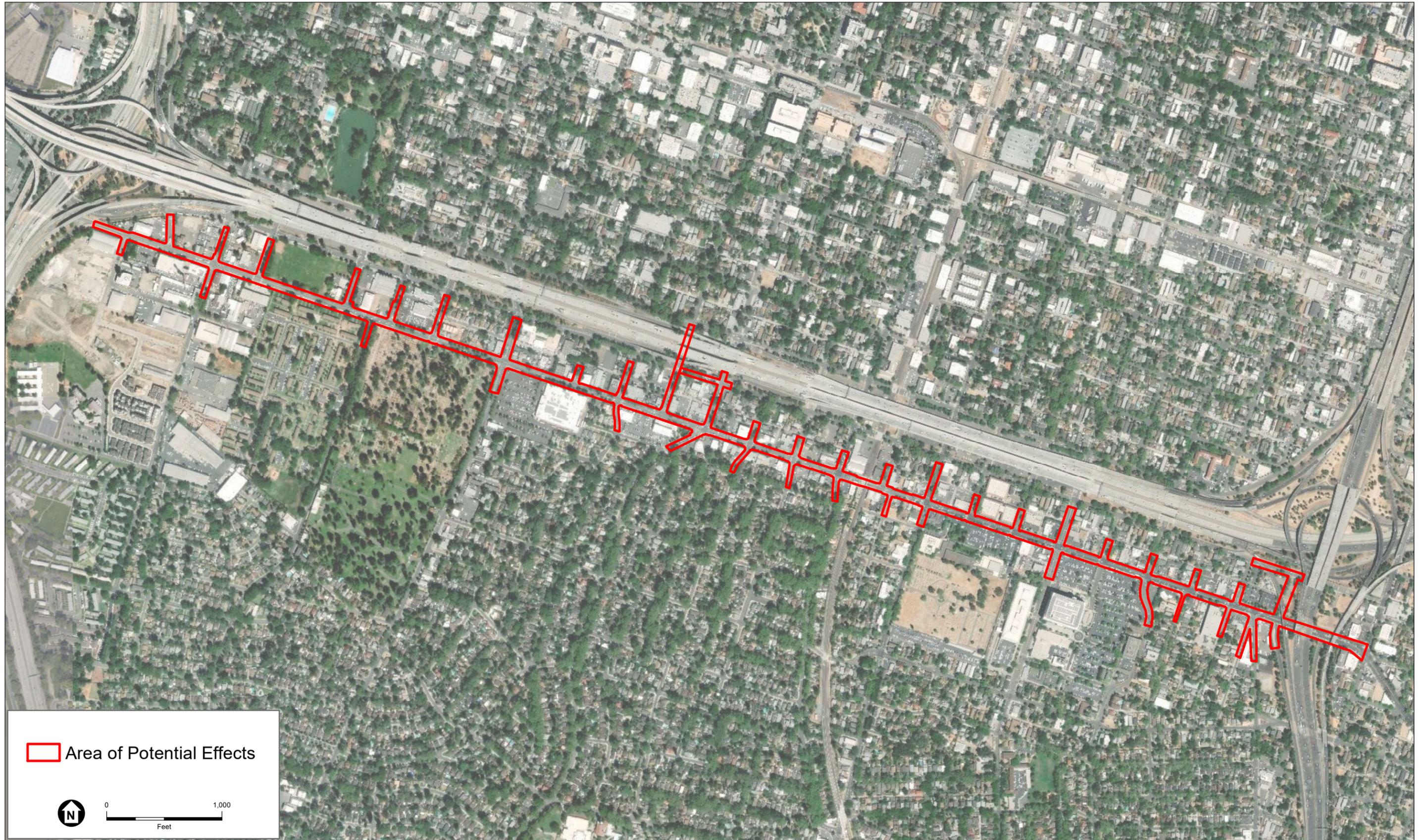


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SOURCE: Esri, 2015; ESA, 2017

Broadway Complete Streets

Figure 1
Regional Location



SOURCE: USDA, 2016; ESA, 2018

Broadway Complete Streets . 171079

Figure 2
Project Location



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SOURCE: Mark Thomas, 2019; City of Sacramento, 2019

Broadway Complete Street

Figure 3a
Project Features

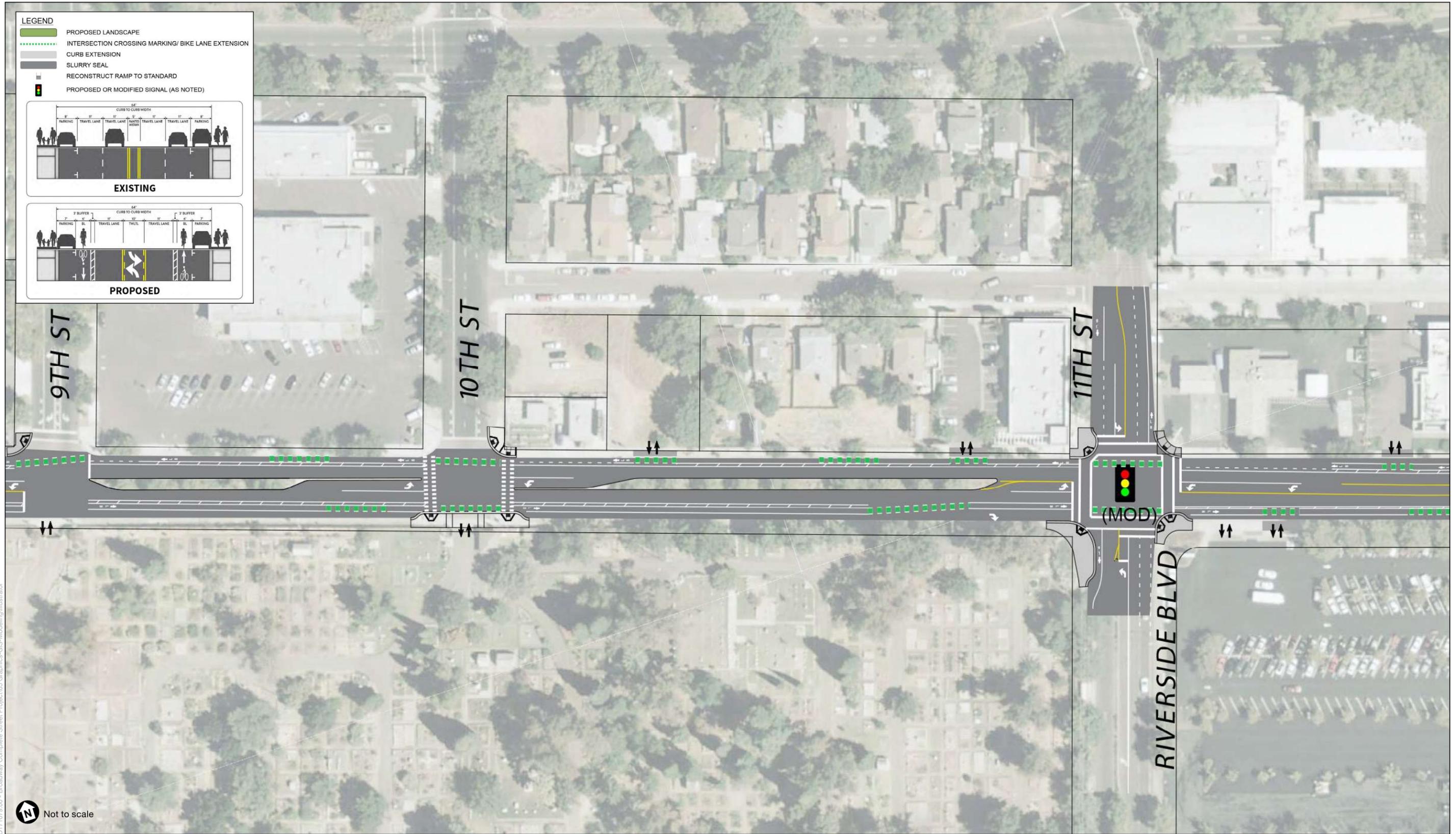


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SOURCE: Mark Thomas, 2019; City of Sacramento, 2019

Broadway Complete Street

Figure 3b
Project Features



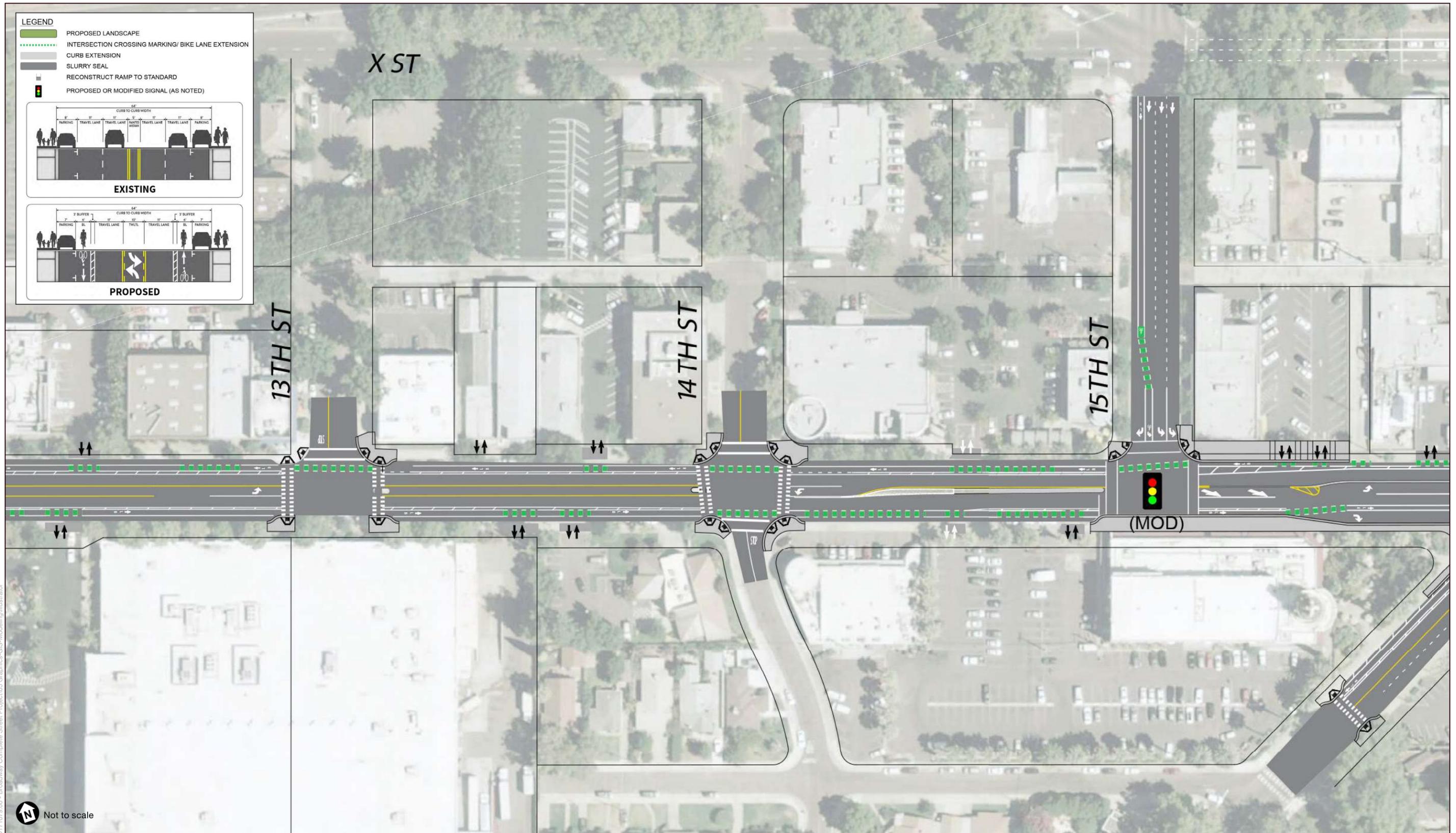
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SOURCE: Mark Thomas, 2019; City of Sacramento, 2019

Broadway Complete Street

Figure 3c
Project Features





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SOURCE: Mark Thomas, 2019; City of Sacramento, 2019

Broadway Complete Street

Figure 3d
Project Features

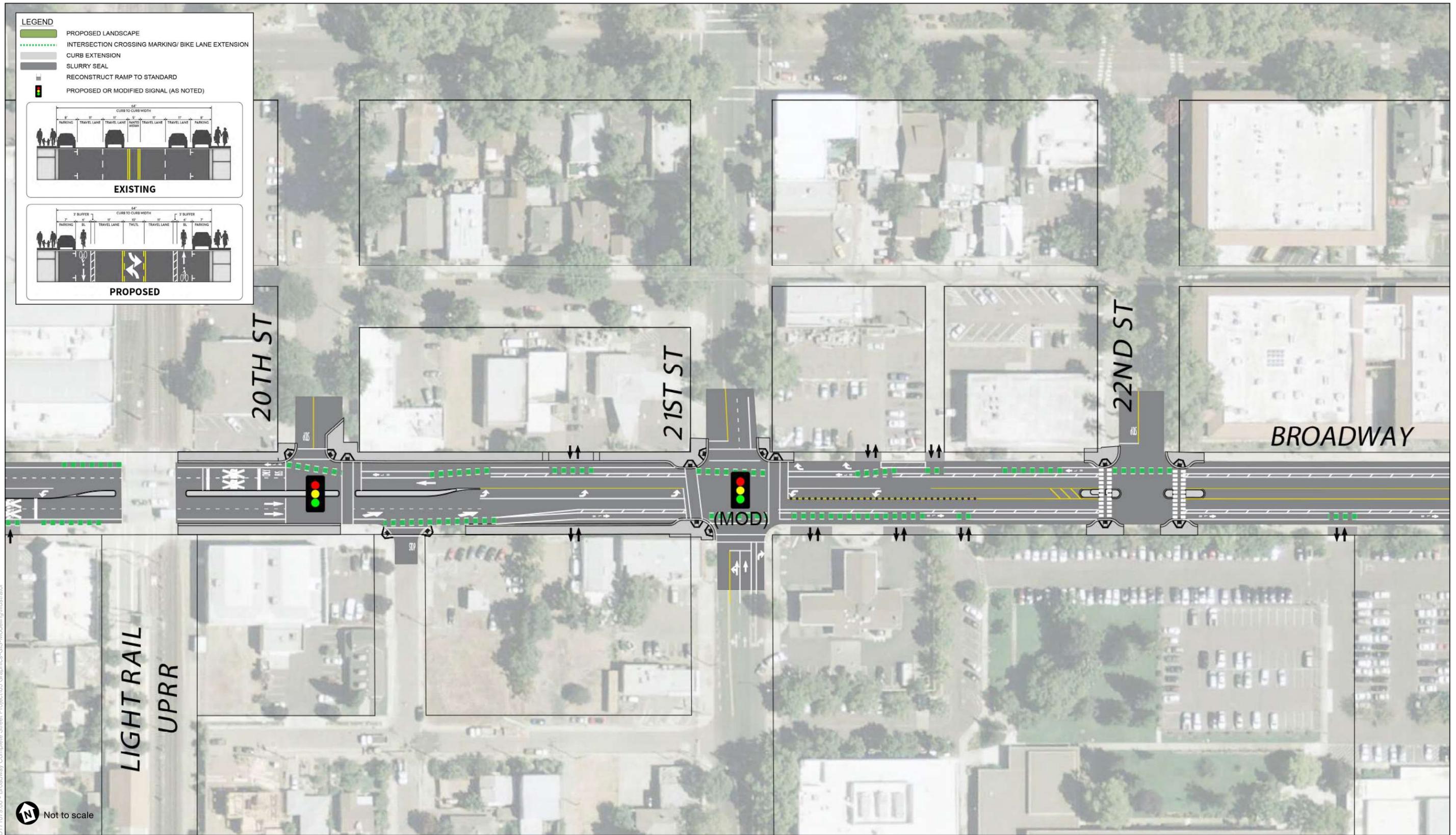




SOURCE: Mark Thomas, 2019; City of Sacramento, 2019

Broadway Complete Street

Figure 3e
Project Features



SOURCE: Mark Thomas, 2019; City of Sacramento, 2019

Broadway Complete Street

Figure 3f
Project Features

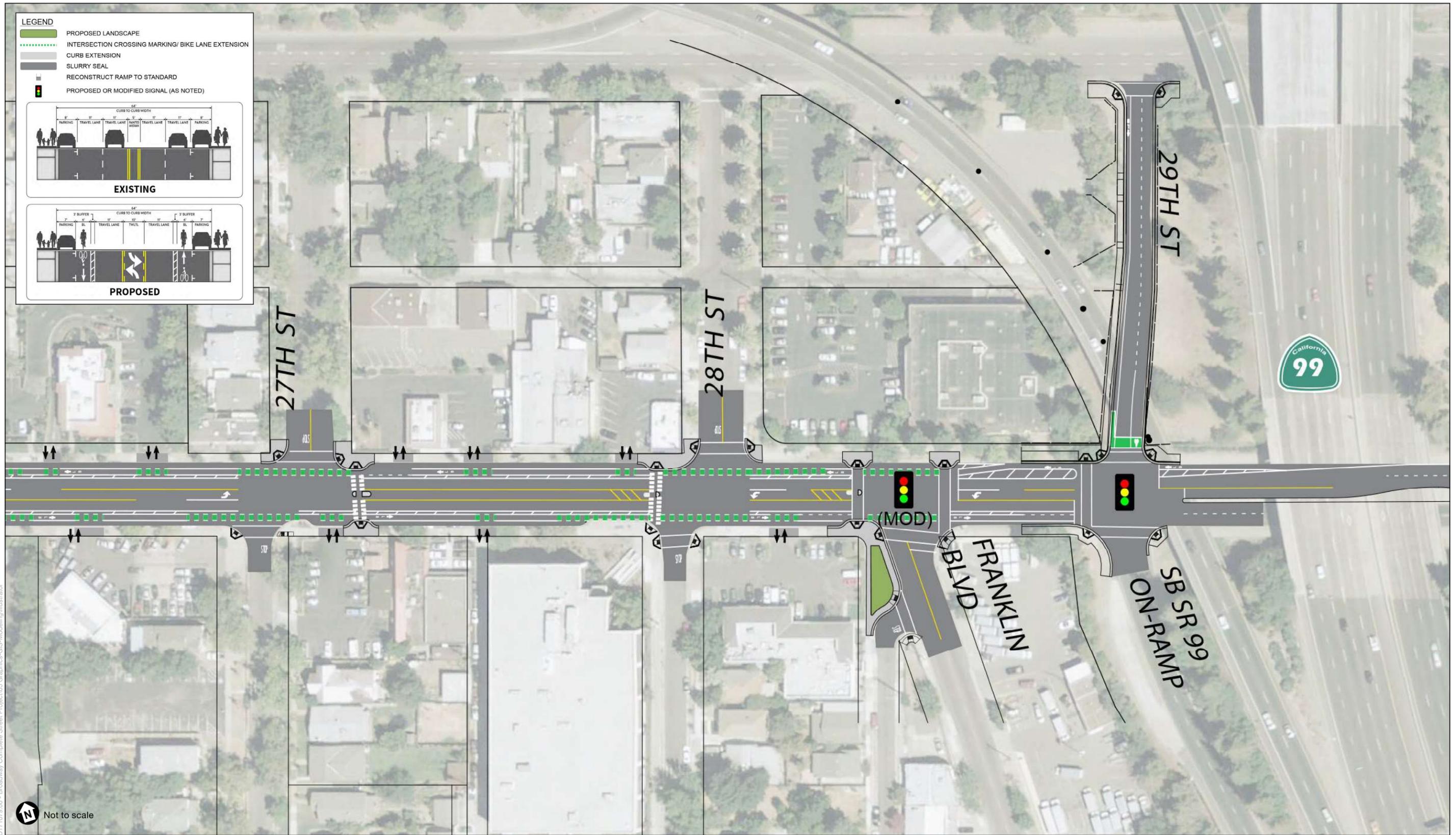


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SOURCE: Mark Thomas, 2019; City of Sacramento, 2019

Broadway Complete Street

Figure 3g
Project Features



SOURCE: Mark Thomas, 2019; City of Sacramento, 2019

Broadway Complete Street

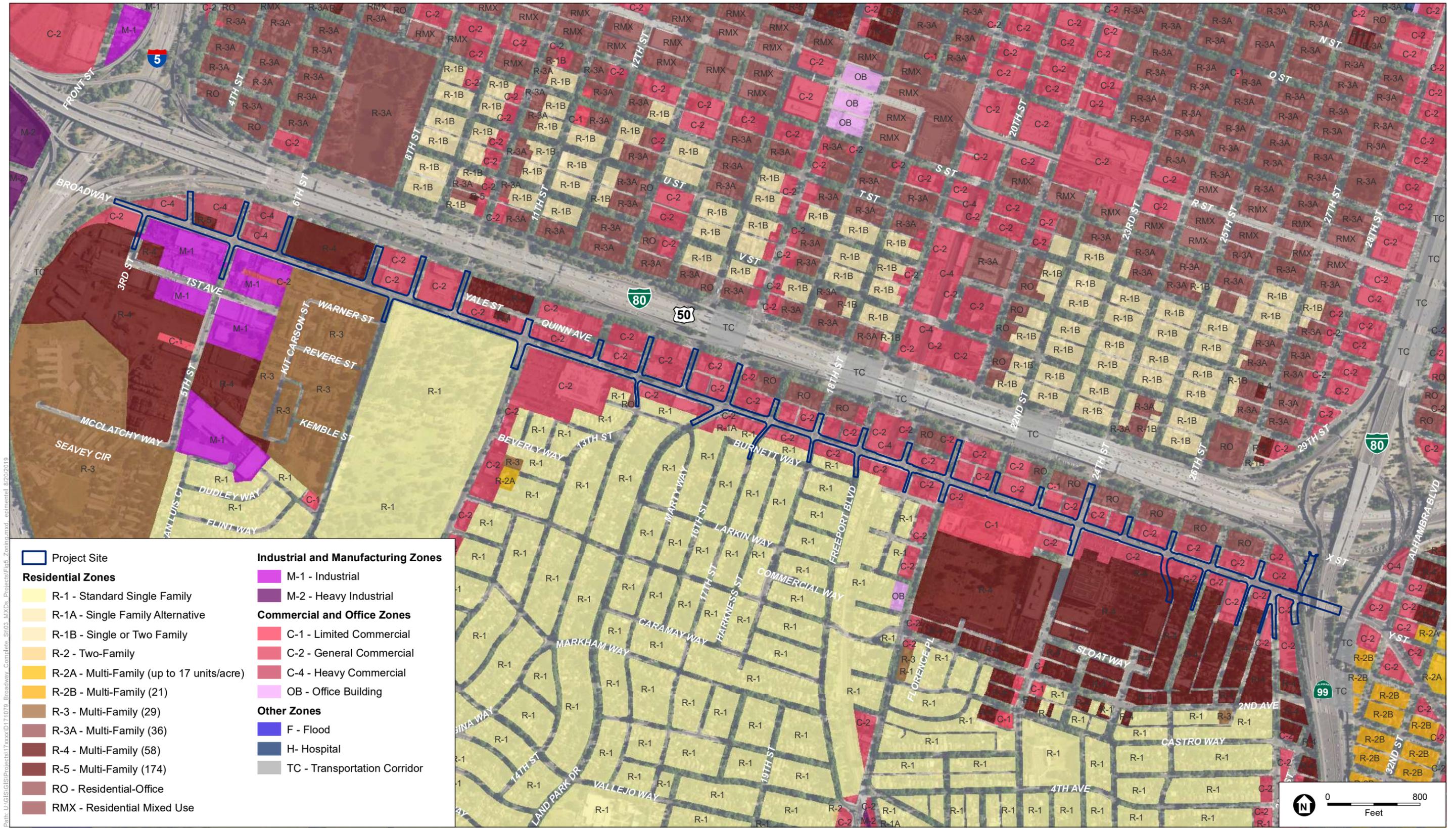
Figure 3h
Project Features



SOURCE: City of Sacramento, 2019; ESA, 2019

Broadway Complete Streets Project

Figure 4
General Plan Land Use Designations



SOURCE: City of Sacramento, 2019; ESA, 2019

Broadway Complete Streets Project

Figure 5
Zoning Designations



Project Background

Central City Specific Plan and Central City Specific Plan EIR

The project site is located in the City of Sacramento, along the southern boundary of the Central City Specific Plan (CCSP) Area, and includes City right of way along Broadway and adjoining roadways and sidewalks. The area along the southern boundary of the CCSP area is commonly referred to as the Broadway Corridor, which is generally bounded by the Sacramento River on the west, 28th Street to the east, the W/X Freeway (US 50) on the north and one parcel south for the length of Broadway on the south.

The CCSP was designed to prepare Sacramento's Central City to effectively accommodate projected growth through the planning horizon of the 2035 General Plan and forthcoming 2040 General Plan, improving housing densification, streamlining infill development and redevelopment of underutilized parcels, and improving multimodal transportation within the CCSP Area and links to surrounding areas. The transportation elements of the CCSP 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 CCSP 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.

Specific to multi-modal transportation network improvements, the CCSP incorporated Grid 3.0 improvements that provided for protected and buffered bicycle lanes and improving bicycle safety, vehicle lane reductions, lane restriping, 1- and 2-way road conversions, and improvements to pedestrian facilities.

On April 19, 2018, the City certified then Environmental Impact Report for the CCSP (CCSP EIR) (SCH# 2017022048), which analyzed the potential physical environmental effects that would result from implementation of CCSP policies and construction of project pursuant to the CCSP. The CCSP EIR analyzed the impacts of multimodal improvements along the Broadway Corridor, which included the following:

Roadway Improvements

- Reduction from 4 lanes to 2 along Broadway, between 9th Street and the SR 99 South intersection;
- Reduction from 3 lanes to 2 lanes on 15th Street from Broadway to G Street;
- New one-way road connections at the previous routes of 29th Street and 30th Streets between Broadway and X Street, providing access to SR 99 South from X Street and access to X Street and subsequently Alhambra Boulevard from the SR 99 North off-ramp at Broadway;

- Conversion of 16th Street and 19th Street, between Broadway and X Street, from 1-way to 2-way, adding 1 lane contra-flow along each roadway segment;
- Conversion of 3rd and 5th Streets from 1-way to 2-way, between W and X Streets;

Bicycle Network Improvements

- Buffered bike lane (Class II Enhanced) or separated bikeway (Class IV) along Broadway from west of I-5 to Alhambra Boulevard;
- Buffered bike lane (Class II Enhanced) or separated bikeway (Class IV) extending north from Broadway, into the Central City, along 9th, 10th, 15th, 19th, and 21st Streets, and extending north from X Street along 16th Street;
- Class II bike lanes on 5th Street and 16th Street, between Broadway and X Street;
- Class III bike route along 26th Street between Broadway and T Street;

Pedestrian Network Improvements

- Streetscape improvements along Broadway, between 3rd Street and 24th Street;
- Connector street enhancement projects extending north from Broadway along 5th, 6th, 8th, 9th, 10th, 11th, 15th, 16th, 19th, 21st, and 24th Streets;
- Ornamental street lights along select blocks and at nearby parcels along Broadway;

Transit Network Improvements

- Bus stop enhancements on Broadway, between 19th Street and 20th Street; and
- Transit investments on Broadway, between 19th Street and 21st Street and between 26th Street and 30th Street.

Project Description

The proposed project would construct bicycle lanes, pedestrian facilities, landscaping and lighting along a two-mile segment on Broadway from 3rd Street to Franklin Boulevard. The proposed project would reconfigure the existing 4-lane roadway along Broadway to a 3-lane facility, which would consist of two travel lanes (one lane in each direction), a two-way left-turn lane, buffered bicycle lanes, and on-street parking. In addition to the construction of bicycle lanes, other proposed project features include intersection and signal modifications at key locations, pedestrian improvements, conversion of 16th Street to a two-way street, and construction of a one-way 29th Street extension between X Street and the SR 99/Broadway intersection, with signal installation. These improvements would be implemented within the existing City and Caltrans right-of-way. The proposed project would enhance pedestrian safety by providing mid-block crossings at critical locations and bulb-outs to shorten pedestrian crossings. The proposed typical cross-section on Broadway would consist of 11-foot travel lanes, 6-foot bike lanes with a 2 or 3-foot buffer, 7-foot on-street parking, 8-foot sidewalks, and a 10-foot two-way-left-turn lane.

The proposed project would be constructed in two sequential phases: Phase 1 would construct improvements from 3rd Street to 16th Street and the 29th Street extension. Phase 2 encompasses improvements from 16th Street to 29th Street. Construction is anticipated to begin in 2022 and would be completed by 2023. The following project features would be constructed:

Drainage Improvements

Drainage improvements would be limited to the construction of new curb and gutter and adjusting or reconstructing into existing drainage systems to conform to the proposed improvements. An extension of the drainage system would be required along the proposed 29th Street extension. The depth of excavation is estimated between 6 and 8 feet.

Pavement

A mix of slurry seal or microsurfacing and hot mix asphalt overlay is anticipated along Broadway from 3rd Street to Franklin Boulevard and slurry seal or microsurfacing would also be required along 15th Street and 16th Street between X Street and Broadway. Overlays would improve existing and proposed pedestrian crossing to standard requirements. In certain locations along Broadway, overlay and pavement reconstruction would be required to correct existing grades at intersections or pedestrian crossings. New pavement would be required for the proposed 29th Street extension and would result in excavation of two feet and approximately 5,400 square feet of new impervious surface area.

Sidewalks

The existing sidewalks would be maintained in most locations except for locations where bulb-outs would be constructed at pedestrian crossings. In select areas along Broadway, such as the Tower Theatre (2508 Land Park Drive), sidewalks would be widened to meet Americans with Disability Act (ADA) requirements and accommodate street trees and planters in front of the theatre. Where standard vertical curbs will be installed to replace rolled curbs, sidewalk reconstruction may be required to conform to the new curb elevation. Other sidewalk areas along Broadway may be widened or replaced based on assessment of existing sidewalk conditions to determine whether sidewalks comply with ADA standards and/or are in need of repairs. This determination would be made during the development of preliminary design plans.

Medians

Landscaped medians would be installed on Broadway from 6th Street to Muir Way. All other existing medians would be maintained unless, during final design, median removal is determined to be required.

Bicycle Facilities

The existing roadway facility has no designated bicycle lanes. Class 2 buffered bicycle lanes would be constructed along the Broadway Corridor. The bicycle lanes would be generally six feet wide with a striped buffer to separate vehicular traffic from the bicyclists. Bicycle facilities would be designed in accordance with City standards and Caltrans and national guidelines. Green colored pavement would be applied in conflict zones between vehicles and bicyclists to increase awareness of both the bicyclists and the motorists.

On-Street Parking

A mix of business and residential buildings have frontage on Broadway with the majority of the corridor providing existing on-street parking. The proposed project would maintain existing parking and implement additional stalls wherever feasible. On-street parking would be determined after consideration of available space required for clearances to existing driveways, sight distance, existing and relocated bus stops, and City guidelines.

Street and Pedestrian Lighting

Lighting would be installed along the corridor to increase visibility for pedestrians and bicyclists, particularly in areas where there is insufficient lighting. Improving the lighting would encourage an increased use of the proposed facilities for pedestrians and bicyclists.

Utilities

It is anticipated that some existing utilities may be adjusted and/or relocated to construct the project. Specific utility relocations will be identified during the final design phase.

Tree and Vegetation Removal

There is a limited amount of landscaping and vegetation along Broadway, located primarily in the existing medians and tree wells in the existing sidewalk. To the extent feasible, existing trees within the City right-of-way would be maintained and protected-in-place. However, the 29th Street extension may require the removal of nearby trees and vegetation to accommodate the connection to southbound SR 99 at the Broadway on-ramp. Final determination on the number of trees to be removed for the construction of this roadway feature, and compliance with City regulations regarding tree removals, would be determined when preliminary design plans are developed.

Right of Way

The proposed project would be constructed within the existing City right-of-way and no acquisitions are anticipated, with the exception of proposed 29th Street extension. The proposed 29th Street extension is within Caltrans Access Control and requires permission from Caltrans to encroach and construct the improvements. A maintenance agreement would be required for this segment of the project. Permission to enter and construct would

be required for construction purposes to conform existing driveways to the reconstructed roadway.

Signal Modifications

A signal would be installed at 29th Street/Broadway due to the new 29th Street connection to X Street. There would be three signal modifications at 15th Street/Broadway, 16th Street/Broadway and 16th Street/X Street. Minor traffic signal improvements would be implemented at all the other signalized intersections within the project limits to accommodate project features and pedestrian crossing. A new signal will be installed to facilitate a high-volume pedestrian crossing at the Broadway Light Rail Train station.

16th Street Conversion

16th Street between Broadway and X Street would be converted to a two-way street to provide a direct route to Land Park Drive from X Street. Currently, vehicles have to turn left onto Broadway from 15th Street and then turn right on to Land Park Drive.

29th Street Extension

Extending 29th Street from Broadway to X Street would provide an alternate route for vehicles to access the southbound SR 99 freeway without utilizing Broadway. A signal would be installed at the intersection of Broadway and the southbound SR 99 on-ramp.

Temporary Project Construction Elements

Construction Staging

The proposed project would be constructed in multiple construction stages to minimize impacts to traffic operations during the construction phase. Commercial parcels located along Broadway would be provided driveway access during construction. A construction staging plan would be developed to maintain traffic flow and access to homes and businesses.

Temporary Construction Easements

Permission to enter and construct would be required at various parcels along the corridor to construct the improvements.

Construction Vehicle Access and Staging

Construction vehicle access and staging of construction materials would occur within disturbed or developed areas inside of the existing right-of-way. If a location is chosen outside of the existing right-of-way, the location would need to be environmentally cleared by the construction contractor prior to start of construction.

Discussion

The proposed project seeks entitlements to construct complete streets improvements, lane reductions, lane realignments, and construction of a connector street along Broadway, which was evaluated in the Central City Specific Plan EIR (CCSP EIR). The changes to the prior project will occur within the same original parcel configuration and will retain many of the original features, rendering the previously certified EIR highly relevant to the environmental analysis of the changes to the project now proposed.

As described in CEQA Guidelines Section 15164, a lead agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions identified in CEQA Guidelines Section 15162 calling for the preparation of a subsequent EIR have occurred. The following identifies the standards set forth in CEQA Guidelines Section 15162, for which the preparation of a subsequent EIR would be required:

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.

The CCSP EIR provides CEQA coverage for existing entitlements on the project site. Because the Broadway Complete Streets project does not include substantial changes to

assumed improvements to the project site pursuant to the CCSP and no other circumstances have changed that would meet the criteria set forth in CEQA Guidelines Section 15162, requiring the preparation of a subsequent EIR, the City has determined that a subsequent EIR is not required for the proposed project. This document has been prepared as an addendum to the CCSP EIR. Differences in the potential impacts associated with the proposed project relative to those previously described in the CCSP EIR, are discussed below.

I. Land Use, Population and Housing

Land Use

The project site is located in an urbanized portion of the City, between I-5 and SR 99. Broadway is surrounded by commercial and mixed-use development. Development of the project site as proposed would improve the existing transportation system along the Broadway Corridor, as anticipated in the CCSP, 2035 General Plan and Planning and Development Code, and the proposed project is consistent with these planning policies and regulations.

The approximately 2-mile long project site comprises the Broadway right-of-way, varied lengths of adjoining streets and parcels under Caltrans control along the historic route of 29th Street, between X Street and Broadway. At the time of preparation of the CCSP EIR, the project site was under similar conditions to those that currently exist on and along the Broadway Corridor. Land uses surrounding the project site include commercial, industrial, office, public, and residential uses.

Since certification of the of the CCSP EIR, the physical conditions of the project site and surrounding areas have remained substantially similar to those analyzed in the EIR.

The CCSP EIR evaluated the CCSP 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 CCSP are discussed in applicable environmental resource sections in the EIR. The Land Use analysis in the EIR differs from impact discussions in that only compatibility and consistency issues are discussed, as opposed to environmental impacts and mitigation measures. As described in the CCSP EIR (page 3-28), new urban development that would result from implementation of the CCSP would tend to reinforce and support existing land use patterns, and would not be incompatible with existing and planned adjacent land uses. The CCSP would also be consistent with the 2035 General Plan and, by extension, would promote the ability of the Sacramento Area Council of Governments (SACOG) and the region to achieve the goals established in the 2016 MTP/SCS.

The proposed project would include construction of complete streets improvements, lane realignments, lane reductions, and reestablishment of a previously existing roadway. All project elements would take place within City right-of-way or within the Caltrans right-of-

way. The proposed project would not include the alteration of land uses, land use designations, or zoning designations.

Population, Employment and Housing

The CCSP EIR estimated and analyzed potential growth in population. The CCSP EIR anticipates that up to 13,401 new housing units would be constructed in the CCSP area over a 20-year period, including on opportunity sites and parcels along and near Broadway, where CCSP policies would allow for greater opportunities for residential development. The CCSP EIR anticipates that development of non-residential uses in the CCSP area would create an estimated 22,751 jobs in a variety of employment sectors. Based on the above housing unit and employment estimates, the CCSP EIR identified a jobs-housing ratio for new development under the CCSP as 1.7.

As discussed in the CCSP EIR (page 3-40), population increases and decreases are not, in and of themselves, considered physical environmental effects. Effects that would result from population growth and increased employment are analyzed in appropriate environmental resource sections within the CCSP EIR.

The proposed project would not include the creation of new residential or employment-generating uses. The proposed project would make improvements to the transportation system, which would facilitate improved multi-modal transportation within and near the CCSP area. The project would have a temporary impact on employment, from project construction jobs. However, there would be no permanent impact to employment from the proposed project.

The proposed changes would not add population or affect housing, and would not alter the anticipated effects on population and housing associated with the project described in the previous EIR. The proposed project would not have more significant effects related to population and housing that were not discussed in the previous EIR or increase the severity of impacts discussed in the EIR. For these reasons, impacts to population and housing from the proposed project would not require the preparation of a subsequent EIR.

II. Aesthetics, Light, and Glare

The CCSP EIR identified the Broadway Corridor as being generally bounded by the Sacramento River on the west, 28th Street to the east, the W/X Freeway on the north and one parcel south of Broadway on the south. The CCSP EIR identified visually prominent buildings and features along Broadway (page 4.1-16), including the recently renovated six-story postmodern concrete-and-glass-façade DMV headquarters building at 2415 1st Avenue; the neon-lighted 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 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). The EIR also

identified several visually distinctive open spaces along the Broadway Corridor, including the Sacramento Historic City Cemetery and O'Neil Park.

The CCSP EIR analyzed the aesthetic impacts from development pursuant to the CCSP, including Grid 3.0 improvements along the Broadway Corridor. The City determined that gradual physical changes within the CCSP area would occur, 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 CCSP 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 CCSP area.

Although the CCSP 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 CCSP 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 Central City Urban Design Guidelines guide design of public and private spaces, lighting, and orientation of design features. The CCSP EIR determined that new physical development that would occur under the CCSP 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 CCSP area, and limit new sources of light and glare. Consequently, the effects of the CCSP on scenic resources would be a less-than-significant impact.

The proposed project would make improvements to the existing transportation systems within the City's right of way, resulting in improved pedestrian and bicycle facilities and their interaction with transit. The proposed project would make updates to outdated pedestrian infrastructure, improving the aesthetic quality of those facilities. The project would also include the installation of lighting along sections of Broadway and adjoining streets, improving pedestrian visibility and safety. Improving the lighting would encourage pedestrian and bicycle activity in the area and foster a community identity for adjacent neighborhoods. The new lighting would follow the policies set for the in the CCSP and 2035 General Plan and would not constitute a new source of substantial light or glare that is substantially greater than typical urban sources, which could otherwise cause sustained annoyance or hazard for nearby sensitive receptors. The project would not increase traffic-related or other vehicle-related lights in the project vicinity. No public hazards or annoyance related to new light sources affecting residents or traffic would occur from implementation of the proposed project.

As described above, the CCSP EIR analyzed impacts from improvements to facilities along the Broadway Corridor, including the addition of lighting where existing lighting can be improved to foster greater pedestrian and bicycle usage. As with the project analyzed in the CCSP EIR, the proposed project 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 an urban setting. Consequently, the proposed project would not have more significant effects that were not discussed in the CCSP EIR or increase the severity of impacts discussed therein. Under existing conditions, the proposed project would not make feasible, mitigation measures that were found to be infeasible in the CCSP EIR. Further, there are no mitigation measures that were not considered in the CCSP EIR, that would more substantially reduce the potential effects of the proposed project on aesthetics, light, and glare. For these reasons, impacts related to aesthetics, light, and glare from the proposed project would not require the preparation of a subsequent EIR.

III. Air Quality

Implementation of Air Quality Plans

The CCSP EIR identified that the CCSP would be consistent with the growth projections for the CCSP area included in the City's 2035 General Plan and the SACOG MTP/SCS. The CCSP would generate unmitigated operational emissions of ROG and NO_x that would exceed the SMAQMD's significance thresholds and would be considered operationally significant for CEQA purposes. Because the CCSP 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 CCSP would facilitate higher-density, transit-oriented development, much of the reduction would be achieved by individual project design and location within the Sacramento urban core with access to a variety of transportation options. Thus, the CCSP is consistent with the land use parameters established for the CCSP area in the SACOG MTP/SCS and would incorporate provisions that would reduce unmitigated emissions by at least 15 percent. For those reasons this impact was determined to be less than significant.

The proposed project would include the improvements to the transportation system analyzed in the CCSP EIR and limits proposed improvements to the existing transportation system right-of-way. No land use changes are proposed as part of the proposed project. The proposed project would facilitate access for pedestrian, bicycle, and transit use, consistent with the goals of local and regional air quality plans. For these reasons the project would have a less-than-significant impact related to the implementation of air quality plans. No mitigation is required.

The proposed project would not alter the impacts to the implementation of emissions reduction plans, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are

substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to the implementation of emissions-reduction plans resulting from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Short Term Construction Emissions

The CCSP EIR analyzed the potential for construction of development pursuant to the CCSP to result in short-term emissions of NO_x, PM₁₀, and PM_{2.5}. Projects that do not implement the District's BMPs must meet a zero peak daily and annual emission threshold for PM₁₀ 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 PM₁₀ 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 CCSP would result in emissions of PM₁₀ and PM_{2.5} that would be below the SMAQMD significance thresholds. Construction of development pursuant to the CCSP would generate NO_x emissions that would exceed SMAQMD's thresholds through at least 2021. Consequently, implementation of the CCSP would result in a short-term significant impact due to NO_x emissions. The CCSP EIR identifies Mitigation Measure 4.2-2(a), requiring compliance SMAQMD rules and implementation of SMAQMD Basic Construction Emissions Control Practices on all grading improvement plans, and Mitigation Measure 4.2-2(b), requiring screening of projects using SMAQMD screening criteria, emissions modeling, and the incorporation of SMAQMD Enhanced Exhaust Control Practices for qualifying projects. The implementation of Mitigation Measures 4.2-2(a) and 4.2-2(b) were anticipated to control fugitive dust, reduce exhaust emissions on-site, and offset project NO_x emissions through mitigation fees, resulting in a less-than-significant impact for project construction pursuant to the CCSP.

Site preparation and roadway construction for the proposed project will involve clearing, cut-and-fill activities, grading, removing or improving existing roadways, and paving roadway surfaces. During construction, short-term degradation of air quality is expected from the release of particulate emissions (airborne dust) generated from excavation, grading, hauling, and other activities related to construction. Emissions from construction equipment powered by gasoline and diesel engines are also anticipated and would include CO, NO_x, VOCs, directly emitted PM₁₀ and PM_{2.5}, and toxic air contaminants (TACs) such as diesel exhaust particulate matter. Construction activities are expected to

increase traffic congestion in the area, resulting in an increase in emissions from traffic delays. These emissions would be temporary and limited to the immediate area surrounding the construction site. The proposed project would be constructed in two sequential phases. Construction is anticipated to begin in 2021 and would be completed by 2023, with each phase lasting approximately 18 months.

The proposed project is comprised of improvements that were included in the Grid 3.0 improvements incorporated into the CCSP and analyzed in the CCSP EIR. The short-term construction emissions from the proposed project are included in the short term construction emission analyzed in the CCSP EIR and the emissions from construction of the proposed project would be the same as those analyzed in the CCSP EIR. For this reason, the proposed project would be required to implement Mitigation Measure 4.2-2, the implementation of which, would result in a **less-than-significant** impact from short-term construction emissions, consistent with the findings of the CCSP EIR.

The proposed project would not alter the short-term construction emissions impacts, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts from short-term construction emissions generated by the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Operational Emissions

The CCSP EIR identified that implementation of the CCSP 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 incremental development of residential and non-residential uses pursuant to the CCSP would result in peak daily and annual emissions of ROG, NO_x, PM₁₀, and PM_{2.5} that would exceed the significance thresholds specified by the SMAQMD, resulting in significant impact. The CCSP EIR determined that no feasible mitigation is available that would prevent operational mobile source emissions of ROG, NO_x, PM₁₀, and PM_{2.5} from exceeding the SMAQMD threshold. For this reason, this impact was determined to be significant and unavoidable.

The proposed project would make improvements to the transportation system that would calm traffic, improve safety, and make the corridor more inviting for pedestrian and bicycle travel. A supplemental air quality analysis has been conducted to assess changes in air quality created by the operation of the project on the surrounding area. Potential air quality impacts from the operation of the project are primarily associated with the redistribution of vehicles within the project area due to the road diet. Impacts generated from the redistribution of traffic include incremental changes to VMT and average daily traffic (ADT). Changes in these traffic patterns along the roadway could potentially change the overall concentrations of pollutant levels from vehicle exhaust emissions throughout the project area.

Operation-related emissions have been assessed on a regional and project level. Operational emissions take into account long-term changes in emissions due to the project (excluding the construction phase). The operational emissions analysis compares forecasted emissions for existing/baseline, No-Build, and Build alternatives. CT-EMFAC was used to calculate operational emissions. CT-EMFAC is a California-specific project-level analysis tool for modeling emissions of criteria pollutants, MSATs, and CO₂ from on-road vehicles. This model reflects CARB's current understanding of how vehicles travel and how much they pollute. Detailed air analysis information is provided in **Appendix A** and supplemental traffic analysis information is provided in **Appendix B**. The results of the comparative emissions analysis are provided in **Table 1**.

TABLE 1
SUMMARY OF COMPARATIVE EMISSIONS ANALYSIS.

Scenario/ Analysis Year	CO (tons/day)	PM ₁₀ (tons/day)	PM _{2.5} (tons/day)	NO _x (surrogate for NO ₂) (tons/day)
Baseline (Existing Conditions) 2019	9.03	0.33	0.14	1.84
No-Build 2021	7.15	0.34	0.15	1.44
Build Alternative 2021	6.82	0.32	0.14	1.38
No-Build 2041	4.17	0.41	0.17	0.72
Build Alternative 2041	3.41	0.34	0.14	0.59
NOTES: 1. Detailed modeling results are provided in Appendix A. Source: ESA, 2019				

Existing (2017) emissions in the project corridor were estimated using CT-EMFAC2014 emission factors, for comparison to the No Build and Build Alternatives. The conditions under the No Build Alternative would provide no improvements to the corridor. Under the Build Alternative the VMT marginally decreases, likely due to capacity constraints along Broadway that push vehicles to find alternative routes, outside of the project boundary. As shown Table 1, the Build Alternative emissions would be less than existing and future

No Build emissions for all evaluated pollutants. This decrease is due to the decrease in VMT and ADT within the corridor and local roadway intersections, which generally result in lower emission rates. Therefore, the proposed project is shown to have a net positive effect on operational emissions, and this impact would be **less than significant**. No mitigation is required.

Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts from operational emissions generated by the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Objectionable Odors

The CCSP EIR identified that none of the proposed activities or uses included within CCSP 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 CCSP, these odors would be temporary and would not affect a substantial number of people. Therefore, this impact was determined in the CCSP EIR to result in a **less-than-significant impact**.

The proposed project is comprised of transportation system improvements that were included in the transportation improvements analyzed in the CCSP EIR. The project does not include new uses that were not previously analyzed in the CCSP EIR. For this reason, as with implementation of the CCSP, the proposed project would not be anticipated to add objectionable odors to the project area, and would result in a **less than significant impact**.

Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts from objectionable odors as a result of the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Cumulative Short-Term Construction Emissions

The CCSP EIR determined that construction of the CCSP would result in significant emissions of NO_x, PM₁₀ and PM_{2.5}, which could combine with emissions generated by other existing and future development within the Sacramento Valley Air Basin to contribute to an air quality impact in the region. Since the CCSP exceeds the SMAQMD significance thresholds, they would also be considered significant contributors to cumulative emissions. Consequently, the CCSP would have a cumulatively considerable contribution to a significant cumulative impact. Implementation of Mitigation Measure 4.2-7, which would implement Mitigation Measure 4.2-2, would reduce onsite exhaust emissions and mitigation fees would be provided to SMAQMD to offset project NO_x emissions that exceed the SMAQMD significance threshold. With implementation of Mitigation Measure 4.2-2 the contribution of the CCSP would be reduced to a level that would result in a less than considerable contribution to the significant cumulative impact.

The proposed project is comprised of improvements that were included in the Grid 3.0 improvements incorporated into the CCSP and analyzed in the CCSP EIR. The short-term construction emissions from the proposed project are included in the short term construction emission analyzed in the CCSP EIR and the emissions from construction of the proposed project would be the same as those analyzed in the CCSP EIR. For this reason, the proposed project would be required to implement Mitigation Measure 4.2-2, the implementation of which, would result in a **less-than-significant** cumulative impact from short-term construction emissions, consistent with the findings of the CCSP EIR.

The proposed project would not alter the cumulative short-term construction emissions impacts, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR

would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, cumulative impacts from short-term construction emissions generated by the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Cumulative Operational Emissions

The evaluation of cumulative operational emissions in the CCSP EIR identified that all other mobile, area, and energy sources in the SVAB that would operate concurrently with the development under the CCSP would contribute to cumulative operational-related ROG and NO_x emissions. As described for project-specific operational emissions, the CCSP would result in substantial emissions of ROG, NO_x, PM₁₀ 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, resulting in a significant cumulative impact. The CCSP EIR further described that even with achievement of the SMAQMD-required 15 percent reduction in operational mobile source emissions, NO_x and ROG emissions associated with the CCSP would exceed the SMAQMD threshold of 65 ppd, contributing to significant cumulative air emissions. Consequently, this cumulative impact would remain significant. With no feasible mitigation, this cumulative impact was found to be **significant and unavoidable**.

As previously described, the proposed project would have a net positive effect on operational emissions, resulting in a **less than cumulatively considerable** contribution to the cumulative significant and unavoidable impact.

The proposed project would not alter the cumulative operational emissions impacts, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, cumulative impacts from operational emissions generated by the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

IV. Biological Resources

The project site along the Broadway Corridor is developed roadway, pedestrian, bicycle, and curb and gutter facilities. Land uses surrounding the project site include commercial, mixed use, and residential development with ornamental landscape trees. The Sacramento River is approximately 0.3 miles west of the project site.

A reconnaissance-level field survey was conducted for the project site on December 10, 2018. The majority of the project site is developed and consists of paved roads, with the exception of the proposed footprint of the 29th Street extension, which is a combination of paved alley and open area. Ornamental street trees occur within or immediately adjacent to the project site. Ornamental landscape trees include: eucalyptus (*Eucalyptus* sp.), London plane (*Platanus x acerifolia*), lemon (*Citrus* sp.), fan palm (*Washingtonia filifera*), magnolia (*Magnolia* sp.), valley oak (*Quercus lobata*), interior live oak (*Quercus wislizeni*), and she-oak (*Casuarina* sp.).

Several species known to occur on or in the vicinity of project site are protected pursuant to federal and/or State endangered species laws, or have been designated as species of special concern by the CDFW. In addition, Section 15380(b) of the CEQA Guidelines provides a definition of rare, endangered, or threatened species that are not included in any listing. For example, vascular plants listed as rare or endangered or as List 1 or 2 by the CNPS are considered to meet Section 15380(b) requirements. Species recognized under these terms are collectively referred to as “special-status species.”

The CCSP EIR found that portions of the CCSP area may support nesting bird species, migratory fish species, and habitat for certain beetle, turtle, and bat species. Although the CCSP area is a largely urbanized area within the downtown of Sacramento, natural and semi-natural habitats can occur within the CCSP 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.

Construction of new development under the CCSP 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 CCSP. Compliance with regulatory permitting requirements and implementation of mitigation measures would reduce impacts resulting from habitat loss to a **less-than-significant** level. Migratory birds could nest within the ornamental landscape trees within and in the vicinity of the project site during the nesting season. Migratory birds and other birds of prey including the state listed Swainson’s hawk (*Buteo swainsoni*), the state fully protected white-tailed kite (*Elanus leucurus*), and the species of special concern purple martin (*Progne subus*)

could nest within the mature trees in the vicinity of the project site. The generally accepted nesting season that encompasses the extent of all potentially occurring birds extends from February 15 to September 15. If project construction were to occur during the nesting season, disturbance to nesting birds would be a potentially significant impact. The CCSP EIR provides Mitigation Measure, 4.3-2(a through c), which includes measures for preconstruction surveys and protocols for consultation with the City and CDFW and the establishment of no-disturbance zones, the implementation of which would reduce impacts to nesting birds during project construction to a **less-than-significant** level.

The proposed project would not alter the impacts to special status species or migratory birds, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to special status species or migratory birds from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Development pursuant to the CCSP was determined in the CCSP EIR to have potential to result in the removal of habitat for valley elderberry longhorn beetle (VELB), during construction. Elderberry shrubs within riparian habitat associated with the Sacramento and American rivers may provide suitable habitat for VELB. The EIR describes Mitigation Measures 4.3-4 (a through c), which would protect elderberry shrubs and require compensatory mitigation for any shrubs that require removal. The implementation of Mitigation Measure 4.3-4 (a through c) would reduce impacts to VELB from construction pursuant to the CCSP to a **less-than-significant** level. The site survey conducted for the proposed project did not identify the existence of elderberry shrubs within the project site. Therefore, the proposed project would not result in an adverse effect to VELB habitat and this impact is **less than significant**.

The proposed project would not alter the impacts to VELB, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not

previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to VELB from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

The CCSP EIR considered the potential for development pursuant to the CCSP to remove habitat for western pond turtle. The EIR determined that suitable habitat for western pond turtle within the CCSP area would not be impacted by projects constructed pursuant to the CCSP, resulting in **no impact** to western pond turtle. There is not suitable habitat for western pond turtle in the project site or in the project vicinity. The project would result in **no impact** to western pond turtle.

The potential for development pursuant to the CCSP to impact special-status bat species was also analyzed in the CCSP EIR. Special-status bat species potentially present in the CCSP 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.

Bat tree-roosting habitat is present along the Sacramento and American rivers, within mature riparian trees. Although the likelihood is low, it is possible that trees along the rivers could support a maternity colony of tree-roosting bats. Removal, redevelopment, or reconfiguration of buildings and structures in the CCSP 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 pursuant to the CCSP could result in the loss of a cavity-roosting bat maternity colony. The CCSP EIR referenced goals and policies in the 2035 General Plan, including Policy ER 2.1.10, which requires 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. With consideration of existing general plan policy, this impact remained potentially significant. The CCSP EIR described Mitigation Measure 4.3-6, requiring surveys and avoidance measures, the implementation of which would reduce the impact to special-status bat species to **less than significant**. The project site does not include mature riparian trees or structures that would be anticipated to provide suitable maternity roosting areas for special-status bat species. This impact would remain **less than significant**.

The proposed project would not alter the impacts to bat species, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to bat species from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

The CCSP EIR identified that development pursuant to the CCSP could result in land-disturbing activities such as grading, excavation, and trenching for utility and infrastructure installation. When portions of the CCSP 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 pursuant to the CCSP 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 CCSP 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. Therefore, the impact on special-status fish species of construction activities pursuant to the CCSP would be **less than significant**. The transportation system improvements included in the proposed project are among the system improvements that were evaluated and analyzed in the CCSP EIR. Construction of the proposed project would be subject to the same water quality and erosion control requirements as were assumed in the CCSP EIR. The proposed project would implement all such measures where applicable, resulting in a **less-than-significant** impact.

The increase in impervious surfaces that would result from implementation of the CCSP was determined in the CCSP EIR to have the potential to generate stormwater that would be discharged to the Sacramento and American rivers. Development within the CCSP 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 CCSP would be **less than significant**. The transportation system improvements included in the proposed project are among the system improvements that were evaluated and analyzed in the CCSP EIR. Construction of the proposed project would be subject to the same regulations as were assumed in the CCSP EIR. The proposed project would implement all such requirements, where applicable, resulting in a **less-than-significant** impact.

The proposed project would not alter the impacts to special-status fish species, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to special-status fish species from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

The CCSP EIR determined that suitable habitat for special-status plant species potentially occurring within the CCSP area would not be impacted by projects constructed pursuant to the CCSP, due to the highly urbanized nature of the CCSP plan area, resulting in **no impact** to special-status plant species. The project site provides no value for special-status plant species since the project site is completely developed by existing structures, impermeable paving, or heavily disturbed areas. The proposed project would also result in **no impact** to special-status plant species.

Potentially jurisdictional wetlands and other waters of the U.S. were identified in the CCSP EIR as occurring within the CCSP area. The CCSP EIR determined that those waters could be and other sensitive habitat could be reduced as a result of implementation of the CCSP, resulting in a significant impact. The CCSP EIR identified Mitigation Measure 4.3-8, which would require impacts to potentially jurisdictional waters to be avoided or mitigated to the extent feasible. The implementation of Mitigation Measure 4.3-8 would reduce the impacts to potentially jurisdictional waters to **less than significant**. No potentially jurisdictional wetlands or waters occur within or in the vicinity of the project site. No wetland, riparian, aquatic, or other sensitive natural habitat occurs within the project site. Therefore, the proposed project would result in **no impact** to potentially jurisdictional waters or sensitive natural habitats.

The CCSP EIR concluded that the majority of terrestrial habitats within the CCSP area do not serve as significant wildlife corridors or linkages for special-status 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. However, no changes in land use or other development provisions would be allowed within the river corridors under the CCSP, and the City determined that implementation of the CCSP would result in a **less-than-significant** impact to the contiguity of existing habitat, movement or migration of fish and wildlife species, or the use of native wildlife nurseries. The proposed project would not be constructed in areas adjacent to aquatic resources or in areas known to provide migratory or movement corridors, or nursery sites for wildlife. The impact of the project on these areas would be **less than significant**.

The proposed project would not alter the impacts to wildlife corridors or linkages, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to wildlife corridors or linkages from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Development of planned uses and infrastructure pursuant to the CCSP would be anticipated to result in impacts to locally protected trees and street trees. The CCSP EIR determined that implementation of Mitigation Measure 4.3-10, which requires compliance with the City's established requirements for avoidance and mitigation of the loss of protected trees, would reduce this potentially significant impact to a **less-than-significant** level. City street trees are planted within and adjacent to the project site. The proposed project would make improvements to the transportation system that may impact existing street trees along the Broadway Corridor. If any City trees are proposed for removal, the City would follow existing City policy for any existing tree resource protected under City Code 12.56 and proposed for removal, consistent with the requirements of Mitigation Measure 4.3-10. With implementation of Mitigation Measure 4.3-10, the proposed project would have a **less-than-significant** impact on protected trees.

The proposed project would increase impacts to protected trees beyond those impacts disclosed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to protected trees from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

V. Cultural Resources and Tribal Cultural Resources

Supplemental analysis was conducted for the project site to further characterize the potential for the presence of archeological resources, historical resources, or tribal cultural resources. Identification efforts included a records search conducted by the staff of the North Central Information Center (NCIC) of the CHRIS, at California State University, Sacramento (File # SAC-18-207); review of historical topographic maps and aerial photographs; consultation with the Native American Heritage Commission (NAHC); informal consultation and outreach to the Native American contacts identified by the NAHC; and a surface survey of the project area, conducted by qualified archaeologist.

No prehistoric archaeological resources were identified in the area of potential effect (APE) for the proposed project through background research, the records search, or the field survey. Based on the distribution of nearby sites, the fact that the APE has been

heavily disturbed by historic-era and modern activities, and the limited nature of ground disturbance associated with the proposed project, the overall sensitivity is low for both surficial and buried prehistoric archaeological deposits in the APE. In addition, no historic-era archaeological resources were identified in the APE through background research, the records search, or the field survey. The paved, established roadway that constitutes the majority of the APE is not conducive for historic-era archaeological deposits related to privies or wells. The overall sensitivity is low for both surficial and buried historic-era archaeological deposits in the APE.

As described in Section 4.4, Cultural Resources, of the CCSP EIR, implementation of the CCSP would have a potentially significant impacts regarding a substantial adverse changes in the significance of an archaeological resource, including human remains and tribal cultural resources. Mitigation Measure 4.4-1(a) provides an unanticipated discovery protocol for archaeological resources and human remains. Mitigation Measure 4.4-1(b) required the City to identify sensitive areas. Mitigation Measure 4.4-1(c) requires worker training and archaeological monitoring of project ground-disturbing activities in sensitive areas. Even with the implementation of these measures, these impacts remain **significant and unavoidable** because damage could still occur even with all the precautions present in the mitigation. The project parcels and roadway improvements included in the proposed project have the same footprint as was previously analyzed and no additional ground disturbance is anticipated to occur that was not previously analyzed in the CCSP EIR. The supplemental site survey affirms that no archaeological resources have been identified in the project area, in addition to those considered in the CCSP EIR. No additional mitigation is feasible to reduce this impact. Therefore, similar to the conclusions in the CCSP EIR, the proposed project would have a **significant and unavoidable** impact related to archaeological resources.

The proposed project would not alter the impacts to archaeological resources, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to archaeological resources from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

The CCSP EIR found a **less-than-significant** impact related to a substantial adverse change in the significance of historical resources because design review processes are currently in place to ensure CCSP-related development is designed in a manner that avoids impacts to historic resources. No mitigation is required. The project would not change the footprint of the transportation system improvements analyzed in the CCSP EIR; therefore, the analysis contained within the CCSP EIR would remain valid. There are not historic properties located within the project site, as has been affirmed by supplemental site analysis. Therefore, the proposed project would have a **less-than-significant** impact on historic resources.

The proposed project would not alter the impacts to historic resources, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to historic resources from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

The CCSP EIR determined that development pursuant to the CCSP EIR would have potentially significant impacts regarding a substantial adverse change in the significance of tribal cultural resources. Mitigation Measure 4.4-1(a) provides an unanticipated discovery protocol for archaeological resources and human remains. Mitigation Measure 4.4-1(b) required the City to identify sensitive areas. Mitigation Measure 4.4-1(c) requires worker training of and archaeological monitoring of project ground-disturbing activities in sensitive areas. Even with the implementation of these measures, these impacts remain **significant and unavoidable** because damage could still occur even with all the precautions present in the mitigation. The project parcels and transportation system improvements included in the proposed project are the same as were previously analyzed as transportation system improvements in the CCSP EIR, and no additional ground disturbance is anticipated to occur. The supplemental site survey and identification efforts have not revealed the presence of tribal cultural resources, in addition to those considered in the CCSP EIR. No additional mitigation is feasible to reduce this impact. Therefore, the proposed project would result in a significant and unavoidable impact to tribal cultural resources, consistent with the findings of the CCSP EIR.

The proposed project would not alter the impacts to tribal cultural resources, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to tribal cultural resources from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

VI. Energy Demand

The CCSP EIR concluded that SMUD and PG&E would be able to serve the CCSP area without additional requirements for offsite electricity or natural gas supply or conveyance facilities, respectively, and SMUD and PG&E would be able to expand their facilities to accommodate projects constructed pursuant to the CCSP. The CCSP EIR determined that increased use of fuel as a result of the CCSP would not result in the requirement for additional facilities, and would not create new significant impacts not otherwise addressed in the EIR. The CCSP EIR also concluded that 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. Energy consumption, including electricity, natural gas, and fuel, for construction and operation of the CCSP would be accomplished without the addition of energy infrastructure that could result in adverse environmental effects. Therefore, this impact was found to be **less than significant**. The roadway improvements and final alignment included in the proposed project are consistent with the improvements that were assumed and evaluated in the CCSP EIR and would not include additional project features that were not previously considered as part of the CCSP. Therefore, no new impacts related to energy consumption of the construction of new energy conveyance facilities would occur as a result of the proposed project, and this impact would remain **less than significant**.

The proposed project would not alter the impacts to energy facilities, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial

importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to energy facilities from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Development and infrastructure improvements pursuant to the CCSP, would be designed and operated to minimize the use of electrical, natural gas, and transportation fuel energy to the extent feasible. As identified in the CCSP EIR, development proposed in the CCSP area would be required to 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. By meeting all sustainability features required under the future 2019 24 Title 24 energy standards, it was determined that residential development would be energy efficient and consistent with the City's CAP actions. Energy savings for non-residential buildings would be comparable. Therefore, the CCSP EIR determined that the CCSP would not result in wasteful, inefficient or unnecessary use of energy, and this impact would be considered **less than significant**. The proposed project would include transportation lighting and landscape improvements, all of which were included in the construction and operational energy-use assumptions analyzed in the CCSP EIR and determined not to result in the wasteful, inefficient, or unnecessary use of energy. The proposed project would not result in new or substantially more significant impacts than were analyzed in the CCSP EIR. This impact would remain **less than significant** and no new mitigation measures would be required.

The proposed project would not alter the impacts associated with the wasteful, inefficient, or unnecessary use of energy, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects,

but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts associated with wasteful, inefficient, or unnecessary use of energy from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

The CCSP EIR analyzed the potential for growth throughout SMUD's and PG&E's service areas to increase the cumulative demand for electricity and natural gas, to the extent that demand for those resources would exceed the capacity of existing and planned facilities, requiring the construction of additional facilities that may result in significant environmental effects. With respect to SMUD's capacity, 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. 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. 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 CCSP, could result in an overall increase in energy demand on suppliers, anticipated increases would be affected positively by these requirements. Based on these considerations, the City determined that impacts on energy production and transmission facilities therefore are **less than significant** and the CCSP contribution is not cumulatively considerable. The proposed project would include transportation lighting and landscape improvements, all of which were included in the construction and operational energy-use assumptions analyzed in the CCSP EIR and determined not to result in the wasteful, inefficient, or unnecessary use of energy. The proposed project would not result in new or substantially more significant impacts than were analyzed in the CCSP EIR. This impact would remain **less than significant** and no new mitigation measures would be required.

The proposed project would not alter the impacts to cumulative energy consumption, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce

one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to cumulative energy consumption from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

VII. Geology, Soils, and Seismicity

The seismic ground shaking conditions at the proposed project site would be the same as those of the proposed transportation network improvements along the Broadway Corridor in the CCSP, as described in the CCSP EIR. The CCSP EIR analyzed the potential for construction and operation of the CCSP 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. As analyzed in the CCSP EIR (page 4.6-20), no Alquist-Priolo Earthquake Fault Zones are present in the city of Sacramento. Therefore, the City concluded that no evidence exists to suggest that there is a reasonable chance of fault rupture within the CCSP area. Portions of the city, including the CCSP 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 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. The CCSP EIR found that while the CCSP would provide for the introduction of new population into this downtown Sacramento region, for the reasons provided above, development within the CCSP would result in a **less-than-significant** impact related to seismic ground shaking, unstable soil conditions, or substantial soil erosion.

The proposed project includes improvements to the transportation system, all elements of which were assumed and analyzed in the CCSP EIR. The proposed project does not include any homes or habitable structures that would be damaged during any seismic activity. The project components would not be constructed deep enough to interface with groundwater, would not add significant water to the environment, and would not change liquefaction conditions. The project area is flat and not subject to landslides or erosion. The soils within the project site are able to support construction and operation of the proposed project. Because the project would disturb more than one acre of ground, the project would be required to comply with the state Construction General Permit, which would require the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that would control run-on and runoff from the construction sites and

prevent erosion. Based on site conditions and assumed conformance to existing regulations, the proposed project would be anticipated to have a less-than-significant impact related to seismic ground shaking, unstable soil conditions, or substantial soil erosion, consistent with the findings of the CCSP EIR.

Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the improvements to the transportation system within the project site analyzed in the CCSP EIR, result in new significant impacts relating to unstable soils, subsidence, or topography, or result in significant impacts that are substantially more severe than significant impacts previously described in the EIR. No new mitigation measures would be required. In addition, there is no new information of substantial importance showing that the project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the previous EIR. Nor is there new information of substantial importance showing (i) that 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 (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts relating to geology, soils, or seismicity from the proposed project would not require the preparation of a subsequent EIR.

VIII. Global Climate Change

The assessment of effects on global climate change in the CCSP EIR focused on the consistency of the CCSP with the City of Sacramento's recently adopted Climate Action Plan (CAP). The evaluation considered development under the CCSP in comparison to the City's CAP Consistency Checklist. The CCSP would promote development that is designed and operated to minimize the use of electrical, natural gas, and transportation fuel energy to the extent feasible. 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 CCSP 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 was determined to be **less than significant**.

Traffic volumes are expected to increase under future conditions; however, operation of the proposed project would increase traffic speed and flow, decrease congestion, and improve LOS. With these improvements, CO₂ emissions are expected to decrease from the vehicles utilizing the roadway.

A quantitative analysis estimating CO₂ emissions for Existing and future No Build Alternative and Build Alternative was performed using Caltrans' CT-EMFAC, results of the emissions analysis are provided in Table 2. The results of the GHG emission analysis show that future CO₂ emissions will decrease from Existing (baseline) conditions. Furthermore, CO₂ emissions will decrease from No Build to Build conditions in both the year of opening (2021) and the design year (2041). Operation of the proposed project would improve air quality throughout the Basin, resulting in a **less-than-significant** impact.

TABLE 2
MODELED ANNUAL CO₂ EMISSIONS AND VEHICLE MILES TRAVELED, BY ALTERNATIVE.

Alternative	CO ₂ Emissions (Metric Tons/Year)	Annual Vehicle Miles Traveled ¹
Existing/Baseline [2017]	2,499	451,016,026
Open to Traffic [2021]		
No Build	2,646	472,470,689
Build Alternative	2,522	471,381,456
20-Year Horizon/Design-Year [2041]		
No Build	2,358	579,735,329
Build Alternative	1,940	577,147,750
NOTES: CO ₂ = carbon dioxide ¹ Annual VMT values derived from Daily VMT values multiplied by 347, per ARB methodology (ARB 2008). Source: ESA, 2019		

The proposed project would not alter the GHG emissions impacts, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts from GHG emissions generated by the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

IX. Hazards and Hazardous Materials

The CCSP EIR evaluated the potential for proposed development pursuant to the CCSP to result in adverse impacts associated with exposure of humans to hazards and hazardous materials from exposure to contaminated soil, contaminated groundwater, hazardous building materials, or inadvertent or accidental release of hazardous substances. The CCSP EIR also analyzed the potential for development pursuant to the CCSP to interfere with adopted emergency response or emergency evacuation plans.

Contaminated Soil or Groundwater

The City utilized existing land uses; a Phase I environmental site assessment (ESA) overview study, prepared as background for the CCSP; and publicly available environmental database resources; to identify known contaminated soil and/or groundwater sites in the CCSP area. The CCSP identified vacant or under-utilized sites where the City anticipated that development pursuant to the CCSP would be highly likely to occur, identifying them as “opportunity sites”, to be included in studies such as the Phase I ESA overview study.

The City’s Phase I ESA overview study surveyed those opportunity sites to determine where likely development would be anticipated to encounter impacts in soil, soil vapor, or groundwater from a release of hazardous materials. Results of the study were identified in Figure 4.8-1 and Table 4.8-1 of the CCSP EIR (pages 4.8-5 to 4.8-7). Along the Broadway Corridor, the Phase I ESA overview study identified 10 sites, classifying each as having low, moderate, and high potential to have a recognized environmental condition (REC), that might be encountered during construction pursuant to the CCSP. A Phase II study will also be conducted at critical locations, as part of the proposed project.

The CCSP EIR analyzed the potential for development pursuant to the CCSP to expose people to contaminated soil, groundwater, or vapor intrusion. The CCSP EIR analysis accounted for known active and inactive contamination sites. However, the EIR also noted that at future times when a 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. In those instances, the CCSP EIR requires the implementation of Mitigation Measure 4.8-1, the implementation of which would reduce impacts from potential exposure of humans to unknown or known contamination that may have shifted over time to **less-than-significant** levels.

Based on a review of the Cortese List and the California State Water Resource Board’s GeoTracker databases conducted in December 3, 2018, under existing conditions there are no active hazardous materials sites on the proposed project site. There are three

active hazardous materials sites within approximately 3,000 feet of the project site.^{1,2} There are 10 open cleanup sites and 7 LUST cleanup sites within approximately 3,000 feet of the project site, including sites along Broadway Boulevard.^{3,4}

The proposed project would make physical improvements to roadway, pedestrian, bicycle, transit, street lighting, and drainage facilities along the Broadway Corridor and segments of streets adjoining Broadway. The proposed project would include ground disturbance for the construction of sidewalk bulb-outs, curb and drainage construction, placement of signs, and the construction of roadway, curb, and sidewalk for the 29th Street extension. Much of the proposed project would be minor site improvements, for which excavation would not be anticipated to extend deeper than 18 inches, or would be anticipated to occur in previously disturbed sediment. However, some project elements, such as the installation of light posts and the construction of sidewalk bulb-outs could reveal contaminated soils or groundwater from previously unknown sites, or from sites that were not previously known to have spread into the area for which construction is taking place. This impact would be potentially significant. However, implementation of Mitigation Measure 4.8-1 from the CCSP EIR would ensure that sites where known RECs could be encountered would be subject to the appropriate analysis to identify and implement measures to reduce hazards from exposure to contaminated soils, groundwater, or vapor intrusion, to **less-than-significant** levels.

The proposed project would not alter the impacts related to hazards from exposure to contaminated soils, groundwater, or vapor intrusion, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new

- 1 U.S. Department of Toxic Substances Control, 2018. Envirostor Database. California Department of Toxic Substances Control. DTSC's Hazardous Waste and Substances Site List – Site Cleanup (Cortese List). Available:
https://www.envirostor.dtsc.ca.gov/public/map/?islink=true&federal_superfund=true&state_response=true&voluntary_cleanup=true&school_cleanup=true&evaluation=true&school_investigation=true&military_evaluation=true&tiered_permit=true&ca_site=true&historical=true&operating=true&post_closure=true&non_operating=true&geotrackerluft=true&geotracker_slic=true&geotracker_dod=true&status=ACT&zl=15&lat=38.56356553358738&lng=-121.48737451395668. Accessed December 3, 2018.
- 2 California State Water Resources Control Board, 2018. Geotracker Database. Available:
<https://geotracker.waterboards.ca.gov/map>. Accessed December 3, 2018.
- 3 U.S. Department of Toxic Substances Control, 2018. Envirostor Database. California Department of Toxic Substances Control. DTSC's Hazardous Waste and Substances Site List – Site Cleanup (Cortese List). Available:
https://www.envirostor.dtsc.ca.gov/public/map/?islink=true&federal_superfund=true&state_response=true&voluntary_cleanup=true&school_cleanup=true&evaluation=true&school_investigation=true&military_evaluation=true&tiered_permit=true&ca_site=true&historical=true&operating=true&post_closure=true&non_operating=true&geotrackerluft=true&geotracker_slic=true&geotracker_dod=true&status=ACT&zl=15&lat=38.56356553358738&lng=-121.48737451395668. Accessed December 3, 2018.
- 4 California State Water Resources Control Board, 2018. Geotracker Database. Available:
<https://geotracker.waterboards.ca.gov/map>. Accessed December 3, 2018.

information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts related to hazards from exposure to contaminated soils, groundwater, or vapor intrusion, from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Hazardous Building Materials

The CCSP EIR analyzed the potential hazards from exposure to asbestos-containing material (ACM) and other hazardous building materials, resulting from demolition of existing structures for development pursuant to the CCSP. The CCSP EIR determined that existing 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 and regulations are carried out prior to and during demolition. Thus, exposure to ACM, LBP and/or other hazardous building materials would be **less than significant**.

The proposed project would involve streetscape improvements to the Broadway Corridor and would not involve the removal or demolition of any existing structures that may contain asbestos or other hazardous building materials. Therefore, there would be **no impact** from development of the proposed project related to hazards from exposure to ACM.

The proposed project would not alter the impacts related to hazards from exposure to ACM, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts related to hazards from exposure to ACM, from the proposed project would not require the preparation of a subsequent EIR.

Accidental Release of Hazardous Substances

The CCSP EIR noted that construction activities pursuant to the CCSP would require the use of limited quantities of hazardous materials such as fuels, oils, lubricants for construction equipment, paints and thinners, and solvents and cleaners. Those materials would be transported to and from construction project sites within the CCSP area, the improper handling and transport of which could result in accidental release of hazardous materials, thereby exposing site occupants to hazardous materials contamination. The CCSP EIR determined that the numerous laws and regulations that govern the transportation and management of hazardous materials are sufficient to reduce the impacts from those potential hazards to **less-than-significant** levels.

Based on the uses within the proposed project, hazardous materials would not be used, stored, or transported in a manner that would cause a threat to public safety, either during construction or operation of the proposed project. The use and transportation of hazardous materials are subject to stringent local, state, and federal regulations, the intent of which is to minimize the public's risk of exposure. Therefore, the risk that the proposed project would cause an accidental release of hazardous materials that could create a public or environmental health hazard is unlikely, and the impact of construction and operation-related hazardous chemical use would be considered **less than significant** and no new or previously dismissed mitigation measures would be required.

The proposed project would not alter the impacts related to exposure to hazardous materials, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts related to exposure to hazardous materials, from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Emergency Evacuation Plan

The CCSP EIR determined that depending on the nature of a future project within the CCSP area, a future project could require temporary road closures that could restrict the movement of vehicular traffic. 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 CCSP EIR determined that compliance with the required traffic control plan would minimize impacts to emergency response or emergency evacuation plans and would be **less than significant**.

The proposed project would make improvements to transportation and lighting facilities along the Broadway Corridor and adjoin streets similar to anticipated improvements analyzed in the CCSP EIR. Development would not require substantial road closures or other elements that may impair the implementation of, or physically interfere with, an emergency response plan or emergency evacuation plan. This project impact would remain **less than significant** and no mitigation would be required.

The proposed project would not alter the impacts to the implementation of emergency response or evacuation plans, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to the implementation of emergency response or evacuation plans, from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

X. Hydrology and Water Quality

Construction-Related Impacts to Surface Water

The CCSP EIR analyzed impacts to surface waters from development pursuant to the CCSP, which would require grading, excavation, and other construction-related activities that could cause soil erosion at an accelerated rate during storm events. As described in the EIR, anticipated development on the project site would be required to comply with the requirements of the City's Stormwater Quality Improvement Plan (SQIP) and to obtain coverage under the NPDES Construction General Permit (CGP). Conformance with the CGP would require the preparation of erosion and sediment control plans to control pollutant discharges through the implementation of best available technology (BAT), that

is economically feasible, and best conventional pollutant control technology (BCT) to reduce pollutants. Construction contractors would also be required to prepare and submit a construction stormwater pollution prevention plan (SWPPP). In light of the existing combination of developed and undeveloped conditions in the CCSP area, 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. The CCSP EIR determined that adherence to applicable regulations and standards would reduce water quality impacts to a **less-than-significant** level.

The proposed project would be subject to and implement all of the stormwater and erosion prevention requirements described in the CCSP EIR. The proposed project would implement present-day best management practices (BMPs) for the prevention of impacts to surface waters from construction activities. For this reason, impacts to surface water from the proposed project would be **less than significant** with no mitigation required.

The proposed project would not alter the impacts to surface waters, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to surface waters, from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Operational Water Quality

The Hydrology, Water Quality, and Drainage Section of the CCSP EIR included analysis of potential impacts to water quality from urban runoff from the CCSP area. Development pursuant to the CCSP would increase impervious surfaces within the project site that would alter the types and levels of pollutants that could be present in project site runoff.

As described in the EIR, 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*. Development pursuant to the CCSP would be subject to City of Sacramento General Plan stormwater management policies, the City's stormwater ordinances, the SQIP, and the *Stormwater Quality Design Manual for the Sacramento Region*. The CCSP EIR determined that existing federal, state, and local policies and regulations are sufficient to ensure that development pursuant to the CCSP would not result in an impact to water quality, and that the impact would be **less than significant**. City review procedures would confirm that BMP implementation would comply with all applicable regulations.

The proposed project would develop the project site with impermeable surfaces to levels similar to those anticipated for development analyzed in the EIR. The proposed project would be designed to direct stormwater runoff to existing drainage facilities as well as establish curb and gutter facilities along the Broadway Corridor, to better manage drainage flows in the project area. Drainage flows through and from the project site would be directed into the City's combined sewer system (CSS), similar to existing drainage conditions along the project site. The proposed project would be subject to and implement all of the regulatory requirements described in the EIR, which would minimize potentially adverse impacts from urban runoff. With conformance to City, regional, and statewide stormwater runoff requirements, impacts to surface water from urban runoff originating from the project site would be **less than significant** and would not require mitigation, consistent with the City's conclusions regarding this type of impact in the CCSP EIR.

The proposed project would not alter the impacts to water quality, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to water quality, from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Risk of Flooding

The CCSP area is located within an area of the City under the Zone X FEMA Flood Zone designation, which applies to areas of minimal flood hazard outside of the 100-year flood hazard zone. Thus, the CCSP EIR concluded that development pursuant to the CCSP would not expose people or property to the risk of loss, injury, damage, or death resulting from exposure to flooding or the placement of structures that could impede or redirect flood flows during construction. Buildout of the CCSP would not involve activities that would affect levee maintenance or regional flood management planning, nor would ongoing flood planning and maintenance efforts conflict with development pursuant to the CCSP. For these reasons, the CCSP EIR determined that this impact would be **less than significant**.

The proposed project would include roadway, bicycle, and pedestrian improvements consistent with those assumed in the CCSP EIR, would not affect existing or planned flood management facilities or operations, and would not be constructed within a flood hazard zone. Therefore, the potential for the proposed project to exacerbate flood elevations or to be affected by flood conditions would be minimal, and this impact would be **less than significant**, consistent with the findings of the CCSP EIR.

The proposed project would not alter the impacts to flood protection, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to flood protection, from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Groundwater

Analysis of potential impacts to groundwater in the CCSP EIR, concluded that development pursuant to the CCSP would increase the amount of impervious surfaces resulting in a reduction of groundwater recharge from precipitation falling within the plan area. However, the City identifies that the CCSP area is a highly urbanized setting and is not considered a primary groundwater recharge area, due to the presence of shallow groundwater. The CCSP determined that buildout pursuant to the CCSP would not

adversely affect groundwater recharge because the main sources for groundwater recharge in the groundwater basin are the Sacramento and American Rivers.

The CCSP EIR concluded that project construction within the CCSP area could result in an adverse impact to groundwater quality. However, 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.

The proposed project would not be anticipated to excavate to depths where groundwater would be present. However, if groundwater is encountered during construction, dewatering would be necessary. Any required dewatering would be executed in compliance with application requirements established by the Central Valley Regional Water Quality Control Board (CVRWQB) to ensure that dewatering activities would not result in adverse changes to groundwater. Ground-disturbing construction activities would include trenching for utility connections, grading, and other minimally invasive earthmoving, and would not involve substantial excavation. The construction processes for the proposed project would be the same as those processes anticipated and analyzed in the EIR. Accordingly, this impact would be **less than significant**, and no mitigation would be required.

The proposed project would not alter the impacts to groundwater, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to groundwater, from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

XI. Noise and Vibration

As presented in Section 4.10 Noise of the CCSP EIR, construction activities within the plan area pursuant to the CCSP could expose nearby sensitive receptors to temporarily elevated noise levels. Construction activities would be required to comply with the City's construction exempt hours and would not conflict with the City's noise standards.

However, construction of new development pursuant to the CCSP, especially if impact pile driving activities are required, could expose nearby sensitive land uses to noise levels that would be considered a substantial temporary noise increase over the existing ambient levels. The CCSP EIR determined that this potentially significant impact would require the implementation of the following mitigation:

Mitigation Measure 4.10-1

For all projects in the CCSP 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.*

The CCSP EIR determined that implementation of Mitigation Measure 4.10-1 could reduce the magnitude of construction noise impacts to sensitive land uses, however project site conditions may limit the effectiveness of the measure, requiring impact pile driving. For this reason, this impact was determined to be **significant and unavoidable**.

The proposed project would include ground-level improvements to roadway, pedestrian, bicycle, and transit facilities that would not require the establishment of pile foundations. The improvements included in the proposed project are highly similar to those analyzed in the CCSP EIR, and would not include any structural elements or construction techniques that were not assumed and evaluated in the CCSP EIR. The differences in noise impacts of the proposed project, relative to those discussed in the CCSP EIR, would not be changed as no additional noise-generated uses or new sources of noise are proposed. Changes introduced by the proposed project and/or new circumstances relevant to the proposed project would not, as compared to the CCSP EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. No new mitigation measures would be required. In addition, there is no new information of substantial importance showing that the project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the CCSP EIR. Nor is there new information of substantial importance showing (i) that 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 (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the City declined to adopt the mitigation measure or alternative. For these reasons, impacts related to noise from the proposed project would not require the preparation of a subsequent EIR.

XII. Public Services

The Public Services section of the CCSP EIR described existing public services for the Central City, including the project site along the Broadway Corridor, and evaluated potential impacts of the project with respect to public resource use and available service for the project area. The CCSP EIR concluded that demand for police and fire protection services would increase, under the CCSP, but would be in line with the growth projections anticipated in the 2035 General Plan. The CCSP EIR also determined that development pursuant to the CCSP would not cause or accelerate the physical deterioration of existing park facilities. Although the CCSP proposes to provide 4.87 acres of community parks, 4.87 acres of neighborhood parks, and 34.56 acres of regional parks, additional land would be necessary to meet the City's parkland standards. Therefore, mitigation is required for development within the CCSP area to comply with the City's Quimby and Park Impact Fees (PIF) ordinances to offset the need for additional parkland and to comply with the City's parkland standards.

The proposed project would make improvements to existing roadway, pedestrian, bicycle, and transit facilities, as well reestablish the pre-existing roadway at 29th Street, between Broadway, and X Street. There are no residential uses or changes to existing land uses proposed as part of the proposed project. Therefore, the proposed project would not create additional need for public services. For these reasons, the proposed project would have **no impact** related to public services.

The proposed project would not alter the impacts to public services, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to public services, from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

XIII. Transportation

Existing Roadway System

The roadway components of the transportation system near the proposed project site include freeways and arterial, major and minor collector, and local roadways. The project area also includes mid-block alleys and one-way roadways.

Interstate 5

Interstate 5 (I-5), is a north/south freeway, situated on the west end of the Broadway Corridor, with an exit at Broadway, and an interchange with Interstate 80 Business/State Route 99 to the northwest of the project site.

Interstate 80 Business

Interstate 80 Business (Business 80) runs east/west across the southern portion of Central City, between W and X Streets, with interchanges with I-5 and State Route 99 on the west and east ends of the project area, respectively. Business 80 has eastbound entrances and exits along X Street at 5th Street, Riverside Boulevard, 15th Street, 16th Street, and 27th Street. Business 80 has entrances and exits along W Street at 26th Street, 16th Street, 15th Street 12th Street, and 5th Street.

State Route 99

State Route 99 (SR 99) runs north/south through Sacramento Valley. However, in the project vicinity, SR 99 runs north/south along the pathway of I-5, to the northwest of the project site, east/west along the Business 80, between I-5 and SR 99, and north/south along SR 99 from Business 80 to the south.

Broadway

Broadway runs east/west between Marina View Drive at the Sacramento River on its west end, to 65th Street on its east end. Within the project site, Broadway currently has two travel lanes in each direction with a central turning lane.

X Street

X Street is a one-way roadway that runs from west to east, between the northbound I-5 off-ramp at 3rd Street and Alhambra Boulevard. X Street is located one city block to the north of Broadway and immediately south of Business 80, and provides access to and from eastbound Business 80.

W Street

W Street is a one-way roadway that runs from east to west, between 27th Street and 5th Street in the Central City. W Street is located immediately to the north of Business 80 and provides access to and from westbound Business 80.

16th Street/Land Park Drive

Land Park Drive runs north and south through Land Park, between Sutterville Road to the south and Broadway to the north, where it becomes 16th Street, and continues north as a one-way northbound roadway through the Central City to the River District.

15th Street

Located one block west of 16th Street, 15th Street is a southbound one-way roadway that runs from the River District and ends at its intersection with Broadway.

19th Street/Freeport Boulevard

Freeport Boulevard runs as a two-way street north/south from Freeport to Broadway, where it becomes 19th Street, and provides southbound-only traffic from C Street to Broadway.

Riverside Boulevard

Riverside Boulevard runs north/south between W Street and the Pocket Neighborhood in Southern Sacramento.

21st Street

21st Street provides two-way vehicle travel lanes between Freeport Boulevard and W Street, where it continues north as a one-way road for northbound traffic to I Street, beyond which it accommodates vehicle travel in both directions to 1st Street.

Franklin Boulevard

Franklin Boulevard is a north/south roadway that runs from its southern end at Bilby Road, in the town of Franklin, to Broadway on its north end.

Analysis of Transportation Impacts

The analysis of transportation and circulation effects of the CCSP in the CCSP EIR involved an assessment of potential effects on roadways, freeways, transit facilities, and bicycle and pedestrian facilities. The transportation elements of the CCSP are based on the goals, objectives and transportation improvements developed for Sacramento “Grid 3.0.” Grid 3.0 improvements were incorporated into the CCSP, which now serves as the City’s plan to integrate planned transportation improvements and programs into the existing downtown street grid. The analysis of transportation impacts in the CCSP EIR included a forecast of vehicle miles traveled (VMT) and considered 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 supplemental transportation analysis prepared for the proposed project evaluated potential impacts to intersections and roadway segments from the project on roadways

and pedestrian, bicycle, and transit facilities and circulation.⁵ 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. While the analysis of the CCSP 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 a “typical” weekday. Thus the model predicted how the CCSP interacts with land uses region-wide and the entire regional transportation system.

The City has conducted supplemental transportation analysis for the proposed project which is included as Appendix B, and is referenced in the following discussion of potential impacts from the proposed project, as applicable.

Vehicle Miles Traveled (VMT)

The transportation analysis prepared for the CCSP EIR determined that at full buildout, the CCSP would have an average VMT per capita at 66 percent of the regional average, and the average VMT per employee at 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.

The proposed project includes project components that were analyzed in the CCSP EIR along with other Grid 3.0 improvements that were further analyzed in the supplemental transportation analysis included as Appendix B. The supplemental transportation analysis prepared for the proposed project analyzed the proposed project’s singular effect on VMT during the existing year (2017) and cumulative year (2041) conditions. A VMT analysis boundary was developed with consideration of the expected travel characteristics within the project vicinity, including the primary travel routes to/from the downtown core and neighborhoods south and east of the project.

When compared to existing conditions, the proposed project results in 6,691 fewer VMT, equivalent to an approximately 0.5% reduction. When compared to Cumulative No Project conditions, the project results in 16,721 fewer VMT, equivalent to a nearly 1% reduction. This is reflective of generally similar traffic patterns under Plus Project conditions and some marginal change associated with capacity constraints and alternative vehicle routing options using the grid network. Therefore, the proposed project would have a net positive effect on VMT, consistent with the conclusions of the transportation analysis in the CCSP EIR.

The proposed project would not alter the VMT impacts, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts

⁵ Fehr & Peers, 2019. *Lower Broadway Complete Streets PA ED Operations Analysis*, Prepared for the City of Sacramento. January 23, 2019.

previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, VMT impacts from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Intersections and Roadway Segments

The CCSP EIR determined that implementation of the CCSP 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). Because the project area is within the Core Area as defined in the 2035 General Plan, and because the City determined that LOS F is considered acceptable during peak hours within the Core Area, LOS impacts resulting from the proposed project would be **less than significant**.

Existing Conditions

Figure 6 shows the AM and PM peak hour intersection volumes, based on traffic data collection conducted as part of the transportation analysis prepared for the proposed project. **Table 3** summarizes the existing AM and PM peak hour intersection operations at the study intersections. As shown in Table 3, all intersections operate at LOS D or better.

Existing Plus Project Conditions

The AM and PM peak hour intersection volumes, under existing plus project conditions, are shown in **Figure 7** and summarized in **Table 4**. As displayed in Table 4 below, most intersections continue to operate at LOS D or better under Existing Plus Project conditions. Key travel patterns include high volumes of vehicles diverting from Broadway to parallel routes available on X Street and W Street. During the PM peak hour, the high volume of eastbound traffic on X Street and westbound traffic on W Street causes congestion at these US 50 off-ramps intersection locations: 15th Street / X Street and 16th Street / W Street. Operations degrade from LOS C to LOS E at the 16th Street / W Street / US 50 Off-Ramp intersection, partially due to signal timing coordination issues which



SOURCE: Fehr & Peers, 2019

Broadway Complete Street

Figure 6
Peak Hour Traffic Volumes and Lane Configurations – Existing Conditions



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**TABLE 3
INTERSECTION OPERATIONS – EXISTING CONDITIONS**

ID	Intersection	Control Type	Peak Hour	Existing Conditions	
				Delay	LOS
1	5 th St / W St / I-5 NB On Ramp	Signal	AM	3	A
			PM	7	A
2	15 th St / W St	Signal	AM	12	B
			PM	38	D
3	16 th St / W St / US 50 Off Ramp	Signal	AM	29	C
			PM	33	C
4	19 th St / W St	Signal	AM	18	B
			PM	42	D
5	21 st St / W St	Signal	AM	16	B
			PM	18	B
6	26 th St / W St	Signal	AM	21	C
			PM	17	B
7	3 rd St / X St / I-5 Off Ramp	Signal	AM	3 (8)	A (A)
			PM	3 (9)	A (A)
8	5 th St / X St / US 50 Off Ramp	Signal	AM	17	B
			PM	33	C
9	15 th St / X St / US 50 Off Ramp	Signal	AM	21	C
			PM	40	D
10	16 th St / X St	Signal	AM	16	B
			PM	15	B
11	19 th St / X St	Signal	AM	23	C
			PM	23	C
12	21 st St / X St	Signal	AM	13	B
			PM	15	B
13	5 th St / Broadway	Signal	AM	13	B
			PM	28	C

ID	Intersection	Control Type	Peak Hour	Existing Conditions	
				Delay	LOS
14	Riverside Blvd / Broadway	Signal	AM	18	B
			PM	19	B
15	16 th St-Land Park Dr / Broadway	Signal	AM	20	B
			PM	23	C
16	19 th St / Broadway	Signal	AM	20	B
			PM	22	C
17	21 st St / Broadway	Signal	AM	18	B
			PM	19	B
18	24 th St / Broadway	Signal	AM	15	B
			PM	18	B
19	SR 99 Off Ramp / Broadway	Uncontrolled	AM	2	A
			PM	23	C
20	SR 99 Off Ramp / Broadway	Signal	AM	7	A
			PM	22	C
21	Freeport Blvd / 2 nd Ave	Signal	AM	10	B
			PM	16	B
22	21 st St / 2 nd St	Signal	AM	11	B
			PM	11	B
23	15 th St / Broadway	Signal	AM	10	A
			PM	9	A

NOTES:

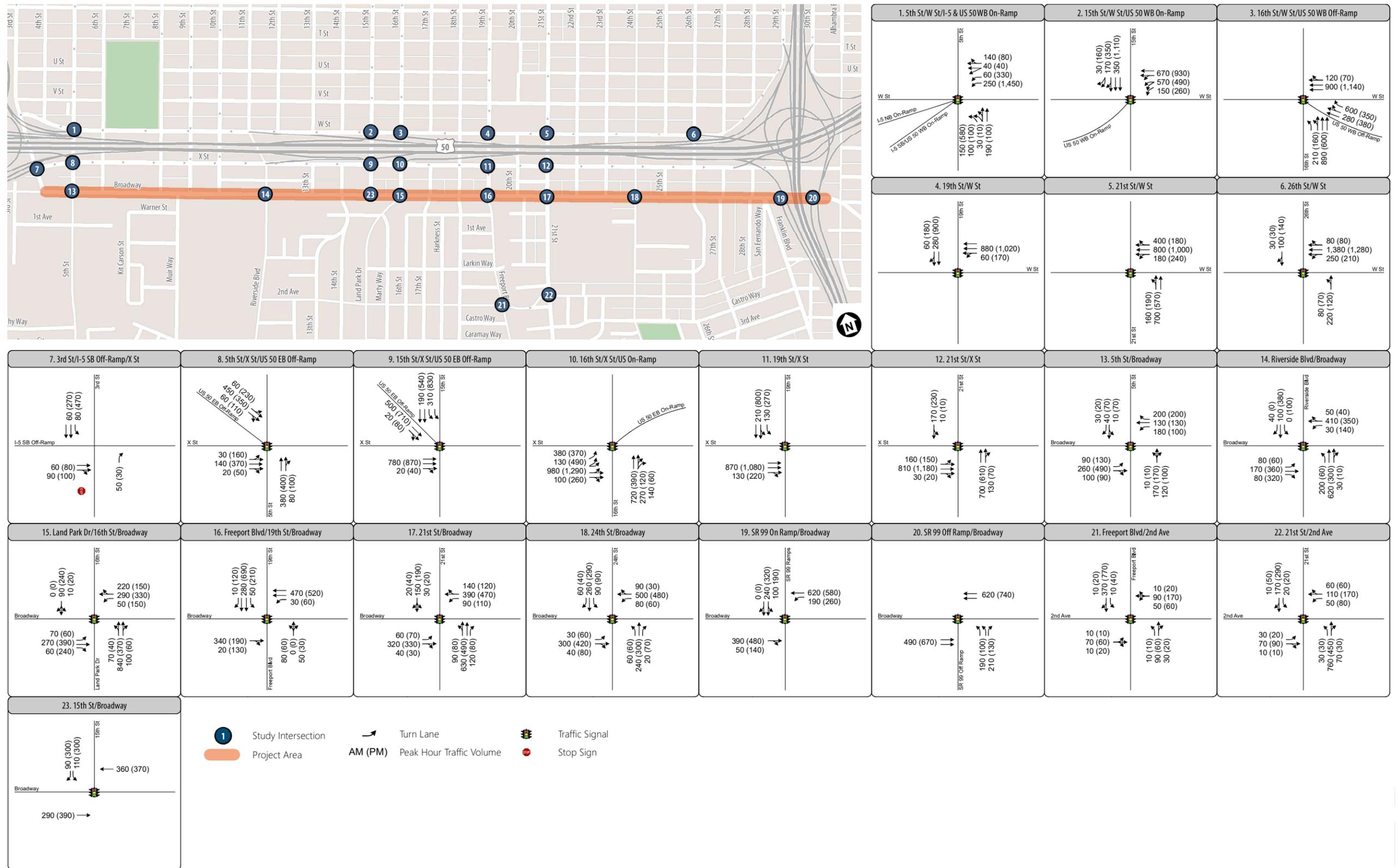
LOS = Level of Service. SSSC = Side Street Stop Controlled

For signalized and uncontrolled intersections, average intersections delay is reported in seconds per vehicle for all approaches. For SSSC intersections, the LOS and control delay for the worst movement is shown in parentheses next to the average intersection LOS and delay. Impacts to intersections are determined based on the overall LOS and average delay. All intersections were analyzed in SimTraffic.

1 Intersection is uncontrolled in Existing conditions and Signalized under Plus Project conditions

Source: Fehr & Peers, 2018.

D:\171079.00 - Broadway Complete Street Project\05 Graphics-GIS-Modeling\Illustrator



SOURCE: Fehr & Peers, 2019

Broadway Complete Street

Figure 7
Existing Plus Project Peak Hour Traffic Volumes and Lane Configurations



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**TABLE 4
EXISTING PLUS PROJECT INTERSECTION OPERATIONS**

ID	Intersection	Control Type	Peak Hour	Existing Conditions		Existing Plus Project Conditions	
				Delay	LOS	Delay	LOS
1	5 th St / W St / I-5 NB On-Ramp	Signal	AM	3	A	3	A
			PM	7	A	6	A
2	15 th St / W St	Signal	AM	12	B	11	B
			PM	38	D	35	D
3	16 th St / W St / US-50 Off-Ramp	Signal	AM	29	C	33	C
			PM	33	C	59	E
4	19 th St / W St	Signal	AM	18	B	16	B
			PM	42	D	39	D
5	21 st St / W St	Signal	AM	16	B	16	B
			PM	18	B	18	B
6	26 th St / W St	Signal	AM	21	C	3	A
			PM	17	B	17	B
7	3 rd St / X St / I-5 Off-Ramp	SSSC	AM	3 (8)	A (A)	3 (7)	A (A)
			PM	3 (9)	A (A)	3 (8)	A (A)
8	5 th St / X St / US 50 Off-Ramp	Signal	AM	17	B	17	B
			PM	33	C	30	C
9	15 th St / X St / US 50 Off-Ramp	Signal	AM	21	C	46	D
			PM	40	D	40	D
10	16 th St / X St	Signal	AM	16	B	28	C
			PM	15	B	29	C
11	19 th St / X St	Signal	AM	23	C	23	C
			PM	23	C	25	C
12	21 st St / X St	Signal	AM	13	B	13	B
			PM	15	B	15	B
13	5 th St / Broadway	Signal	AM	13	B	13	B
			PM	28	C	16	B

ID	Intersection	Control Type	Peak Hour	Existing Conditions		Existing Plus Project Conditions	
				Delay	LOS	Delay	LOS
14	Riverside Blvd / Broadway	Signal	AM	18	B	19	B
			PM	19	B	23	C
15	16 th St-Land Park Dr / Broadway	Signal	AM	20	B	37	D
			PM	23	C	24	C
16	19 th St / Broadway	Signal	AM	20	B	18	B
			PM	22	C	22	C
17	21 st St / Broadway	Signal	AM	18	B	34	C
			PM	19	B	28	C
18	24 th St / Broadway	Signal	AM	15	B	19	B
			PM	18	B	21	B
19	SR 99 On-Ramp / Broadway	Uncontrolled / Signal ¹	AM	2	A	14	B
			PM	23	C	14	B
20	SR 99 Off-Ramp / Broadway	Signal	AM	7	A	8	A
			PM	22	C	7	A
21	Freeport Blvd / 2 nd Ave	Signal	AM	10	B	15	B
			PM	16	B	21	C
22	21 st St / 2 nd St	Signal	AM	11	B	13	B
			PM	11	B	12	B
23	15 th St / Broadway	Signal	AM	10	A	10	A
			PM	9	A	8	A

NOTES:

LOS = Level of Service. SSSC = Side Street Stop Controlled

For signalized and uncontrolled intersections, average intersection delay is reported in seconds per vehicle for all approaches.

For SSSC intersections, the LOS and control delay for the worst movement is shown in parentheses next to the average intersection LOS and delay. Impacts to intersections are determined based on the overall LOS and average delay. All intersections were analyzed in SimTraffic.

1 Intersection is uncontrolled in Existing conditions and Signalized under Plus Project conditions

Source: Fehr & Peers, 2019

causes queues from upstream intersections to queue back and create delay.⁶ However, as discussed in the CCSP EIR, General Plan Policy M 1.2.2 was adopted to allow decreased levels of service (e.g., LOS E and/or 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 remain **less than significant**, consistent with the findings of the CCSP EIR. No new mitigation is required.

The proposed project would not alter the impacts to LOS, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to LOS, from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Freeway Mainline, Ramp Junction, and Ramp Queuing

The CCSP EIR analyzed impacts to the freeway mainline, ramp junctions, and ramp queuing resulting from implementation of the CCSP EIR. The transportation analysis for the CCSP EIR evaluated level of service for freeway segments based on daily volume-to-capacity comparisons. The CCSP EIR concluded that 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 CCSP conditions. Additionally, implementation of the CCSP would increase traffic volume on a segment of US 50 that operations unacceptably under existing conditions. The CCSP EIR included Mitigation Measure 4.12-3, which required projects developed pursuant to the CCSP that would generate more than 100 vehicular AM or PM peak hour trips, to pay into the Interstate 5 Freeway Subregional Corridor Mitigation Program (SCMP) to mitigate

⁶ Per Sacramento 2035 General Plan, Policy M 1.2.2, LOS standard, LOS F conditions are allowed in the Sacramento Core Area.

freeway impacts. The CCSP EIR determined that implementation of Mitigation Measure 4.12-3 would reduce freeway impacts to **less than significant**.

The supplemental transportation analysis prepared for the proposed project further evaluated freeway off-ramp queues under Existing Plus Project conditions. **Table 5** displays the freeway off-ramp queues under Existing Plus Project conditions with the lane reduction, conversion of one 16th Street northbound lane to southbound lane between Broadway and W Street, and 29th Street connection added between X Street and Broadway.

**TABLE 5
FREeway OFF-RAMP QUEUING – EXISTING CONDITIONS**

ID	Location	Available Storage (ft)	Peak Hour	Existing Conditions	Existing Plus Project
				Queue (ft)	Queue (ft)
3	US 50 Off-Ramp at 16 th St / W St	1,060	AM	375	500
			PM	325	500
6	US 50 WB Off-Ramp at 26 th St / W St	920	AM	525	500
			PM	250	375
7	I-5 SB Off-Ramp at 3 rd St / X St	890	AM	75	75
			PM	75	100
8	US 50 EB Off-Ramp at 5 th St / X St	1,280	AM	225	125
			PM	600	300
9	US 50 Off-Ramp at 15 th St / X St	1,150	AM	250	300
			PM	350	325
20	SR 99 Off-Ramp at Broadway	800	AM	175	150
			PM	125	100

NOTES:
The available storage length for off-ramp queuing is measured from the noted off-ramp terminal intersection to the freeway off-ramp gore point. Maximum queue length is based upon output from SimTraffic microsimulation software.

Source: Fehr & Peers, 2019

As shown in Table 5, freeway off-ramp queuing in the project area would not exceed available storage capacity under Existing Plus Project conditions during AM and PM peak hour periods. Consistent with the conclusions reached in the CCSP EIR, freeway facilities in the project area function well within their respective capacities, and impacts to those facilities from the proposed project would be **less than significant**.

The proposed project would not alter the impacts to freeway facilities relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be

substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to project area freeway facilities and freeway function from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Pedestrian Facilities

The CCSP EIR identified that the CCSP does not include any components that will adversely affect existing pedestrian facilities. Implementation of the CCSP would widen existing sidewalks, fill in gaps in existing sidewalks, and enhance the pedestrian environment with streetscape treatments such as pedestrian-scale lighting, landscaping, and street furniture, etc. The project also may include enhancements of uncontrolled crossings at critical intersections. 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 improvements 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 was anticipated to reduce travel speeds and therefore improve pedestrian and bicycle safety. For these reasons, the CCSP EIR determined that implementation of the CCSP would have a **less-than-significant** impact on pedestrian facilities.

The proposed improvements to pedestrian facilities along the Broadway Corridor are consistent with those described and analyzed in the CCSP EIR. Proposed improvements would include bulb outs and pedestrian-scale lighting. Other project roadway improvements would reduce potential for vehicle-pedestrian conflicts, maintaining pedestrian access to the corridor while improving travel conditions for pedestrians. Consistent with the findings of the CCSP EIR, the proposed project would result in a **less-than-significant** impact to pedestrian facilities, as project improvements would improve pedestrian access.

The proposed project would not alter the impacts to pedestrian circulation relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new

information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to project area pedestrian circulation from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Transit Facilities

The CCSP included 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 CCSP included several transit investments that could include transit signal priority or three-lane to two-lane conversions for dedicated transit lanes.

The CCSP EIR focused its analysis of impacts to transit facilities on buses, light rail, and vehicles that share travel lanes with vehicular and bicycle traffic. The CCSP EIR identified that the CCSP includes a variety of roadway network and transit network improvements that are intended to reduce transit vehicle delay resulting from traffic signals and slow-moving traffic. The CCSP EIR also identified the City's ability to monitor and adjust traffic signal timing to respond to conditions and help maintain traffic flow in the Central City. For these reasons, the CCSP determined that implementation of the CCSP would have a **less-than-significant** impact on transit from roadway congestion.

The CCSP EIR also evaluated the potential for transit delays due to friction with curbside activity. The analysis identifies that likely curbside activity to result in friction commonly occurs in the Central City and is likely to increase as population and employment grows in the future. Lastly, although there are some short segments of Class III bike routes that occur on roadways with transit, 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 substantial amount of delay for transit.

Analysis of dwell delay⁷ for transit in the Central City concluded that the CCSP 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. 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

⁷ Dwell delay is described on page 4.12-63 of the CCSP EIR as passenger stop delay 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.

time is expected. The CCSP does include expanding existing bus stops to accommodate the increased in transit ridership over time.

The CCSP does not include any changes to RT's existing service and therefore would not affect accessibility relating to the provision of transit service. For these reasons, the City determined that the CCSP would have a **less than significant** impact on transit facilities.

The improvements to the transportation system included in the proposed project are consistent with the transportation system improvements analyzed in the CCSP EIR. The proposed project would not eliminate existing transit facilities along the Broadway Corridor. The proposed project includes the creation of more robust infrastructure for people biking and people walking, which will benefit transit by improving the ease, comfort and safety of walking or biking to and from transit stops and stations. Consistent with the findings of the CCSP EIR, the proposed project would have a **less-than-significant** impact to transit facilities.

The proposed project would not alter the impacts to transit facilities relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the CCSP EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the CCSP EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the CCSP EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to project area transit facilities from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Bicycle Facilities

The CCSP did not include any projects that would adversely affect existing bicycle facilities. The CCSP EIR determined that implementation of the CCSP would 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 CCSP's bicycle facilities are consistent with those planned in the City's Bicycle Master Plan. As the improvements to the transportation system included in the CCSP would improve access for bicyclists in the Central City, the City determined that the CCSP would have a **less-than-significant** impact on bicycle facilities.

The proposed project would improve conditions for bicyclists along the Broadway Corridor, reducing the potential for conflicts with vehicular traffic. Consistent with the findings of the CCSP EIR, the proposed project would have a **less than significant** impact on bicycle facilities.

The proposed project would not alter the impacts to bicycle facilities relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the CCSP EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the CCSP EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the CCSP EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to project area bicycle facilities from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Cumulative VMT

The CCSP EIR analyzed the VMT impacts from implementation of the CCSP in combination with other cumulative development, identifying that the average VMT per capita and average VMT per employee for the CCSP are below the regional and countywide averages calculated by SACOG. In addition, the CCSP meets criteria established as part of SB 743 allowing for exemptions within Transit Priority Areas, and the transportation components of the CCSP fall within categories that are presumed to have a less-than-significant impact. For these reasons, the CCSP EIR determined that implementation of the CCSP would have a **less than cumulatively considerable contribution** to cumulative VMT impacts.

The proposed project includes project components that were analyzed in the CCSP EIR, resulting in the significance determination above. As described above, the proposed project would include transportation improvements that would improve access for pedestrian and bicycle travel, and improve access to transit, all of which would encourage non-vehicular travel along the Broadway Corridor. In addition, supplemental traffic analysis, conducted for the proposed project (see Appendix B), affirms that implementation of the proposed project would have a net positive effect on VMT under Cumulative Plus Project conditions relative to Cumulative No Project conditions. For these reasons the proposed project in combination with other development in the Central

City would result in a **less than cumulatively considerable contribution** to cumulative VMT impacts, consistent with the findings of the CCSP EIR.

Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the CCSP EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the CCSP EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the CCSP EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, contributions to cumulative VMT resulting from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Cumulative Impacts to Intersections and Roadway Segments

The CCSP EIR determined that under Cumulative Plus CCSP conditions, all intersections would result in most intersections operate acceptably at LOS D or better during both peak hours, with the exceptions of the 15th Street/X Street/US 50 Off-Ramp intersection, 16th Street/J Street intersection, and X Street/5th Street intersection, which would operate acceptably at LOS E in the PM peak hour. As described for project specific impacts, 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, cumulative LOS impacts would be **less than significant**.

Existing Cumulative Conditions

The supplemental traffic analysis conducted for the proposed project (see Appendix B) utilized the SACMET regional demand model (2041 MTP/SCS), developed and maintained by SACOG, to forecast expected changes in daily traffic and peak hour turning movement volumes under Cumulative No Project conditions. Additional roadway network changes were made in consideration of roadway improvement projects included in the CCSP and expected to be complete by cumulative year 2041. **Figure 8** shows the AM and PM peak hour intersection volumes under Cumulative No Project conditions. **Table 6** summarizes the existing Cumulative No Project AM and PM peak hour intersection operations at the study intersections. As shown in Table 6, some intersections operate at

LOS E or F conditions, reflective of increased levels of congestion due to future vehicle volume growth. High volume demand along X Street and W Street result in LOS F delay conditions at US 50 off-ramp intersections, particularly at locations that also serve key north and south connections to the downtown core and Land Park neighborhoods to the south.

Cumulative Plus Project Conditions

The AM and PM peak hour intersection volumes, under Cumulative Plus Project conditions, are shown in **Figure 9** and summarized in **Table 7**. Under Cumulative Plus Project conditions, reduced capacity along Broadway decreases both east/west and north/south demand along the corridor as vehicles move to parallel streets for connections to the downtown core and neighborhoods south of Broadway. Under Cumulative Plus Project conditions, vehicle volumes along W Street and X Street increase as vehicles shift from Broadway to parallel routes. As a result, intersections continue to experience LOS F conditions at intersections serving both critical north/south connections and freeway on- and off-ramp facilities. During the AM peak hour, operations at the US 50 Off-Ramp / 16th Street / W Street intersection improve by 15 seconds under Cumulative Plus Project conditions due to less northbound demand, which allows other approaches to be better served. Under Cumulative Plus Project conditions, operations improve from LOS F to LOS D conditions at the 15th Street / X Street / US 50 Off-Ramp during the AM peak hour due to less southbound demand, which allows the high-volume eastbound movement to be better served with increased signal time. During the PM peak hour, this same intersection experiences 25 seconds of increased delay during the Cumulative Plus Project conditions due to an approximately 10% increase in eastbound demand as vehicles move to X Street as a parallel eastbound route to Broadway. At 16th Street-Land Park Drive / Broadway, operations degrade from LOS D to LOS F conditions during the PM peak hour due to the addition of a signal phase to accommodate the 15th Street conversion into a two-way street between X Street and Broadway. However, as discussed in the CCSP EIR, General Plan Policy M 1.2.2 was adopted to allow decreased levels of service (e.g., LOS E and/or 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 remain **less than significant**, consistent with the findings of the CCSP EIR. No new mitigation is required.



SOURCE: Fehr & Peers, 2019

Broadway Complete Street

Figure 8
Cumulative No Project Peak Hour Traffic Volumes and Land Configurations

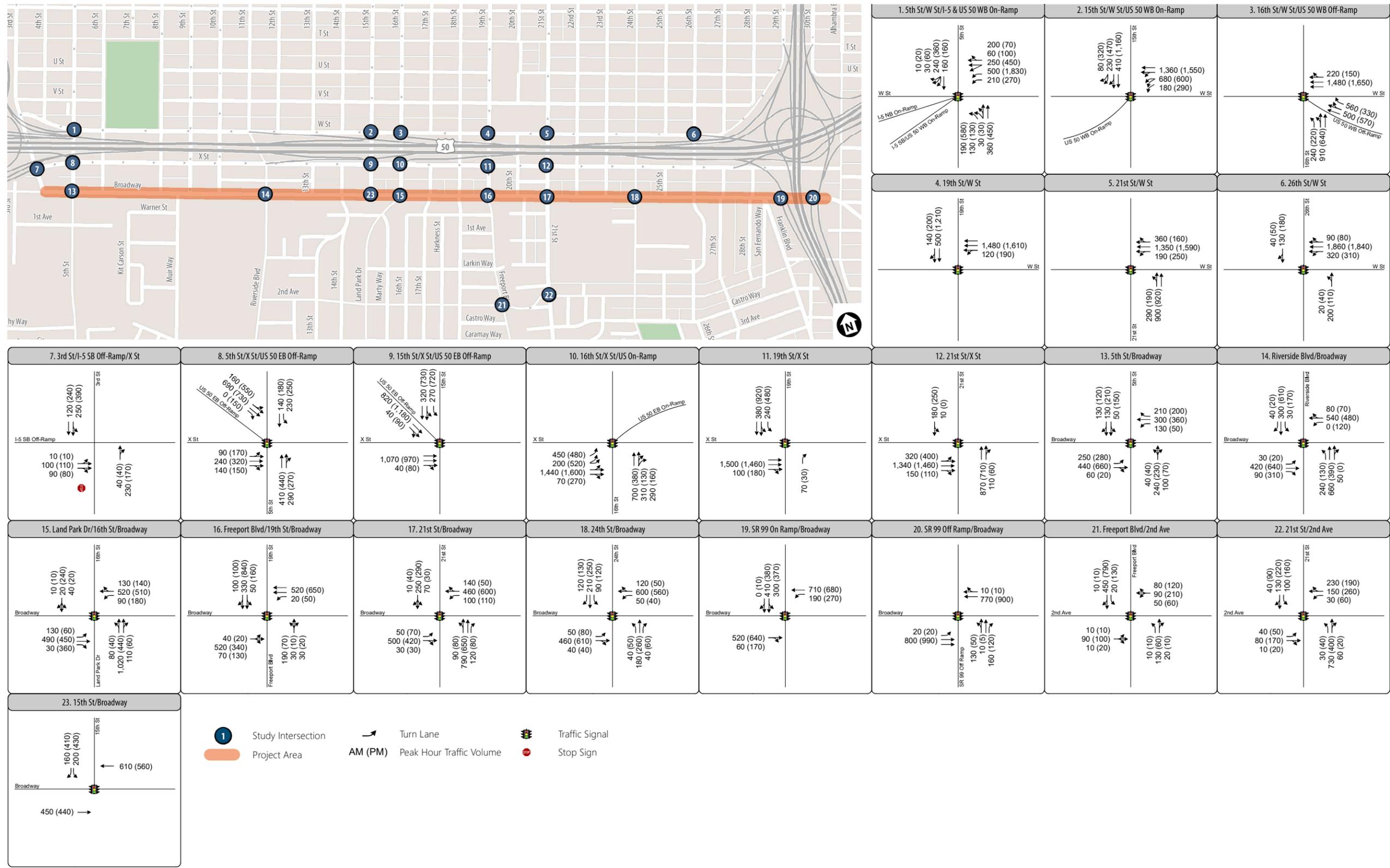
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**TABLE 6
INTERSECTION OPERATIONS – CUMULATIVE NO PROJECT CONDITIONS**

ID	Intersection	Control Type	Peak Hour	Existing Conditions	
				Delay	LOS
1	5 th St / W St / I-5 NB On Ramp	Signal	AM	19	B
			PM	84	F
2	15 th St / W St	Signal	AM	18	B
			PM	41	D
3	16 th St / W St / US 50 Off Ramp	Signal	AM	123	F
			PM	130	F
4	19 th St / W St	Signal	AM	20	B
			PM	45	D
5	21 st St / W St	Signal	AM	23	C
			PM	24	C
6	26 th St / W St	Signal	AM	85	F
			PM	67	E
7	3 rd St / X St / I-5 Off Ramp	SSSC	AM	4 (11)	A (B)
			PM	4 (14)	A (B)
8	5 th St / X St / US 50 Off Ramp	Signal	AM	43	D
			PM	132	F
9	15 th St / X St / US 50 Off Ramp	Signal	AM	93	F
			PM	92	F
10	16 th St / X St	Signal	AM	42	C
			PM	26	C
11	19 th St / X St	Signal	AM	15	B
			PM	34	C
12	21 st St / X St	Signal	AM	17	B
			PM	34	C
13	5 th St / Broadway	Signal	AM	49	D
			PM	76	E

ID	Intersection	Control Type	Peak Hour	Existing Conditions	
				Delay	LOS
14	Riverside Blvd / Broadway	Signal	AM	23	C
			PM	76	E
15	16 th St-Land Park Dr / Broadway	Signal	AM	116	F
			PM	42	D
16	19 th St / Broadway	Signal	AM	27	C
			PM	48	D
17	21 st St / Broadway	Signal	AM	57	E
			PM	38	D
18	24 th St / Broadway	Signal	AM	17	B
			PM	26	C
19	SR 99 Off Ramp / Broadway	Uncontrolled	AM	3	A
			PM	6	A
20	SR 99 Off Ramp / Broadway	Signal	AM	8	A
			PM	22	C
21	Freeport Blvd / 2 nd Ave	Signal	AM	17	B
			PM	52	D
22	21 st St / 2 nd St	Signal	AM	21	C
			PM	56	E
23	15 th St / Broadway	Signal	AM	14	B
			PM	18	B

NOTES:
LOS = Level of Service. SSSC = Side Street Stop Controlled
For signalized and uncontrolled intersections, average intersections delay is reported in seconds per vehicle for all approaches. For SSSC intersections, the LOS and control delay for the worst movement is shown in parentheses next to the average intersection LOS and delay. Impacts to intersections are determined based on the overall LOS and average delay. All intersections were analyzed in SimTraffic.
1 Intersection is uncontrolled in Existing conditions and Signalized under Plus Project conditions
Source: Fehr & Peers, 2018.



SOURCE: Fehr & Peers, 2019

Broadway Complete Street

Figure 9
Cumulative Plus Project Peak Hour Traffic Volumes and Lane Configurations



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**TABLE 7
CUMULATIVE PLUS PROJECT INTERSECTION OPERATIONS**

ID	Intersection	Control Type	Peak Hour	Cumulative No Project		Cumulative Plus Project	
				Delay	LOS	Delay	LOS
1	5 th St / W St / I-5 NB On-Ramp	Signal	AM	19	B	19	B
			PM	84	F	83	F
2	15 th St / W St	Signal	AM	18	B	28	C
			PM	41	D	47	D
3	16 th St / W St / US-50 Off-Ramp	Signal	AM	123	F	108	F
			PM	130	F	132	F
4	19 th St / W St	Signal	AM	20	B	21	C
			PM	45	D	53	D
5	21 st St / W St	Signal	AM	23	C	21	C
			PM	24	C	34	C
6	26 th St / W St	Signal	AM	85	F	90	F
			PM	67	E	70	E
7	3 rd St / X St / I-5 Off-Ramp	SSSC	AM	4 (11)	A (B)	3 (10)	A (B)
			PM	4 (14)	A (B)	12 (27)	A (D)
8	5 th St / X St / US 50 Off-Ramp	Signal	AM	43	D	39	D
			PM	132	F	113	F
9	15 th St / X St / US 50 Off-Ramp	Signal	AM	93	F	52	D
			PM	92	F	104	F
10	16 th St / X St	Signal	AM	42	C	32	C
			PM	26	C	28	C
11	19 th St / X St	Signal	AM	15	B	21	C
			PM	34	C	31	C
12	21 st St / X St	Signal	AM	17	B	19	B
			PM	34	C	31	C
13	5 th St / Broadway	Signal	AM	49	D	33	C
			PM	76	E	77	E

ID	Intersection	Control Type	Peak Hour	Cumulative No Project		Cumulative Plus Project	
				Delay	LOS	Delay	LOS
14	Riverside Blvd / Broadway	Signal	AM	23	C	36	D
			PM	76	E	79	E
15	16 th St-Land Park Dr / Broadway	Signal	AM	116	F	137	F
			PM	42	D	75	E
16	19 th St / Broadway	Signal	AM	27	C	34	C
			PM	48	D	35	D
17	21 st St / Broadway	Signal	AM	57	E	70	E
			PM	38	D	40	D
18	24 th St / Broadway	Signal	AM	17	B	25	C
			PM	26	C	24	C
19	SR 99 On-Ramp / Broadway	Uncontrolled / Signal ¹	AM	3	A	27	C
			PM	6	A	35	D
20	SR 99 Off-Ramp / Broadway	Signal	AM	8	A	33	C
			PM	22	C	17	B
21	Freeport Blvd / 2 nd Ave	Signal	AM	17	B	16	B
			PM	52	D	51	D
22	21 st St / 2 nd St	Signal	AM	21	C	25	C
			PM	56	E	55	D
23	15 th St / Broadway	Signal	AM	14	B	28	C
			PM	18	B	23	C

NOTES:

LOS = Level of Service. SSSC = Side Street Stop Controlled

For signalized and uncontrolled intersections, average intersection delay is reported in seconds per vehicle for all approaches. For SSSC intersections, the LOS and control delay for the worst movement is shown in parentheses next to the average intersection LOS and delay. Impacts to intersections are determined based on the overall LOS and average delay. All intersections were analyzed in SimTraffic.

¹ Intersection is uncontrolled in Existing conditions and Signalized under Plus Project conditions

Source: Fehr & Peers, 2019

The proposed project would not alter the impacts to intersection operations, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to intersection operations, from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Cumulative Freeway Mainline, Ramp Junction, and Ramp Queuing

The CCSP EIR analyzed cumulative impacts to the freeway mainline, ramp junctions, and ramp queuing, from implementation of the CCSP EIR. The transportation analysis for the CCSP EIR evaluated level of service for freeway segments based on daily volume-to-capacity comparisons. The CCSP EIR concluded that 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 CCSP conditions. The CCSP EIR included Mitigation Measure 4.12-10 (Implement Mitigation Measure 4.12-3), which requires projects developed pursuant to the CCSP that would generate more than 100 vehicular AM or PM peak hour trips, to pay into the Interstate 5 Freeway Subregional Corridor Mitigation Program (SCMP) to mitigate freeway impacts. The CCSP EIR determined that implementation of Mitigation Measure 4.12-10 would reduce cumulative freeway impacts to **less than significant**.

The supplemental transportation analysis prepared for the proposed project further evaluated freeway off-ramp queues under Cumulative and Cumulative Plus Project conditions. **Table 8** displays the freeway off-ramp queues under Cumulative and Cumulative Plus Project conditions, with the lane reduction, conversion of one 16th Street northbound lane to southbound lane between Broadway and W Street, and 29th Street connection added between X Street and Broadway.

**TABLE 8
FREEWAY OFF-RAMP QUEUING – CUMULATIVE CONDITIONS**

ID	Location	Available Storage (ft)	Peak Hour	Cumulative No Project	Exceeds Available Storage	Cumulative Plus Project	Change from Cumulative No Project Queue Length	Exceeds Available Storage
				Queue (ft)	No (ft Remaining) / Yes (ft Exceeded)	Queue (ft)	Queue (ft)	No (ft Remaining) / Yes (ft Exceeded)
3	US 50 Off-Ramp at 16 th St / W St	1,060	AM	900	No (160)	575	- 325	No (485)
			PM	550	No (510)	600	+ 50	No (460)
6	US 50 WB Off-Ramp at 26 th St / W St	920	AM	1,475	Yes (555)	1,475	N/A	Yes (555)
			PM	1,450	Yes (530)	1,450	NA	Yes (530)
7	I-5 SB Off-Ramp at 3 rd St / X St	890	AM	125	No (765)	100	- 25	No (790)
			PM	100	No (790)	100	N/A	No (790)
8	US 50 EB Off-Ramp at 5 th St / X St	1,280	AM	450	No (830)	425	- 25	No (855)
			PM	1,850	Yes (570)	1,900	+ 50	Yes (620)
9	US 50 Off-Ramp at 15 th St / X St	1,150	AM	450	No (700)	425	- 25	No (725)
			PM	775	No (375)	900	+ 125	No (250)
20	SR 99 Off-Ramp at Broadway	800	AM	200	No (600)	250	+ 50	No (550)
			PM	150	No (650)	125	- 25	No (675)
Net Available Storage (AM/PM)					2,500 / 1,225			2,850 / 850
Net Change in Queue Length (AM/PM)							- 350 / + 200	
<p>NOTES: The available storage length for off-ramp queuing is measured from the noted off-ramp terminal intersection to the freeway off-ramp gore point. Maximum queue length is based upon output from SimTraffic microsimulation software.</p> <p>SOURCE: FEHR & PEERS, 2019</p>								

As shown in Table 8, the proposed project would result in a net decrease in queue length under Cumulative Plus Project conditions, relative to Cumulative No Project conditions. The proposed project is shown to increase queue length at some off-ramps while decreasing queue length at others. Under Cumulative Plus Project Conditions, queuing continues to extend past the off-ramp capacity at the US 50 Off-Ramp at 26th Street/W Street and the US 50 Off-Ramp at 5th Street/X Street due to high east and west demand along X Street and W Street. However, the proposed project would not be anticipated to add to vehicle queuing at the US 50 Off-Ramp at 26th Street. During the PM peak hour, vehicle queues at the US 50 Off-Ramp at 5th Street/X Street would be increased by 50 feet (2 vehicle lengths). The operational improvements at the 16th Street/W Street-US 50 Off-Ramp during the AM peak hour are reflected in approximately 325 feet of shorter US 50 Off-Ramp queues under Cumulative Plus Project conditions, and will add an addition 50 feet to the queues during the PM peak hour, which will not exceed available storage. During the PM peak hour, the US 50 Off-Ramp at 15th Street / X Street experiences 125 feet of additional queueing, but would not exceed the capacity of the off-ramp. Overall the proposed project would be anticipated to result in a net decrease of queue lengths during the AM peak hour of 350 ft and a net increase of 200 ft in the PM peak hour. These operational elements are consistent the findings of the CCSP, which identified US-50 as operating unacceptably at LOS F under cumulative conditions and would continue to do so under Cumulative Plus CCSP conditions. However, the proposed project would benefit from the improvements proposed in the SCMP, as described above. The SCMP would reduce auto travel on study area freeways by providing funding towards a diverse list of multimodal transportation improvement projects. 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 freeway impacts from the proposed project, shown in Table 8, the City 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, consistent with the findings in the CCSP EIR for cumulative impacts to freeway facilities.

The proposed project would not alter the impacts to freeway facilities relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would

substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to project area freeway facilities and freeway function from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Cumulative Impacts to Pedestrian Facilities

The CCSP EIR determined that implementation of the CCSP and other proposed projects would result in the expansion of pedestrian facilities within the CCSP area and within other areas of the City. The CCSP included enhancements to pedestrian facilities in the Central City. For these reasons, the EIR found that the CCSP does not adversely affect any existing pedestrian facilities and would have a **less-than-significant** cumulative impact on pedestrian facilities.

The proposed project includes enhancements to the pedestrian facilities along the Broadway Corridor, that would improve pedestrian access while maintaining existing pedestrian travel pathways throughout the project area and to areas outside of the project site. The proposed project in combination with other proposed development in the City would have a net positive effect on pedestrian facilities, consistent with the findings of the CCSP. This impact would be **less than significant**.

The proposed project would not alter the impacts to pedestrian facilities relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to project area pedestrian facilities from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Cumulative Impacts to Transit Facilities

The CCSP included 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 CCSP included several transit investments that could include transit signal priority or three-lane to two-lane conversions for dedicated transit lanes.

The CCSP EIR focused its analysis of cumulative impacts to transit facilities on buses, light rail, and vehicles that share travel lanes with vehicular and bicycle traffic. The CCSP EIR identified that the CCSP includes a variety of roadway network and transit network improvements that are intended to reduce transit vehicle delay resulting from traffic signals and slow-moving traffic. The CCSP EIR also identified the City's ability to monitor and adjust traffic signal timing to respond to conditions and help maintain traffic flow in the Central City. For these reasons, the CCSP determined that implementation of the CCSP would have a **less-than-significant** cumulative impact on transit from roadway congestion.

The CCSP EIR also evaluated the potential for transit delays due to friction with curbside activity. The analysis identifies that likely curbside activity to result in friction commonly occurs in the Central City and is likely to increase as population and employment grows in the future. 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, 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 substantial amount of delay for transit.

Analysis of dwell delay for transit in the Central City concluded that the CCSP does not include reducing the area of any platforms or sidewalks that would increase dwell delay due to boarding and alighting. The CCSP and cumulative development does not include any changes to RT's vehicle fleet that would reduce the number and width of doors, so the CCSP and cumulative development will not increase dwell delay due to boarding and alighting. 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. The CCSP does include expanding existing bus stops to accommodate the increased in transit ridership over time.

The CCSP does not include any changes to RT's existing service and therefore would not affect accessibility relating to the provision of transit service. For these reasons, the City determined that the CCSP would have a **less than significant** impact on transit facilities.

The improvements to the transportation system included in the proposed project are consistent with the Grid 3.0 transportation system improvements related to transit analyzed in the CCSP EIR. The proposed project would not eliminate existing transit facilities along the Broadway Corridor. The proposed project includes the creation of more robust infrastructure for people biking and people walking, which will benefit transit by improving the ease, comfort and safety of walking or biking to and from transit stops and stations. Consistent with the findings of the CCSP EIR, the proposed project would have a **less-than-significant** cumulative impact to transit facilities.

The proposed project would not alter the impacts to transit facilities relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the CCSP EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the CCSP EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the CCSP EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to project area transit facilities from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Cumulative Impacts to Bicycle Facilities

The CCSP EIR determined that implementation of the CCSP and cumulative development in other areas of the City would 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 CCSP's bicycle facilities and development in other areas of the city are consistent with those planned in the City's Bicycle Master Plan. As the improvements to the transportation system included in the CCSP would improve access for bicyclists in the Central City, the City determined that the CCSP and cumulative development in other parts of the City would have a **less-than-significant** cumulative impact on bicycle facilities.

All of the components in the Broadway Complete streets project, were assumed and analyzed among other Grid 3.0 improvements in the CCSP EIR. The proposed project would improve conditions for bicyclists along the Broadway Corridor, reducing the potential for conflicts with vehicular traffic. Consistent with the findings of the CCSP EIR, the proposed project and other developments in the project area would have a **less than significant** impact on bicycle facilities.

The proposed project would not alter the impacts to bicycle facilities relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the CCSP EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the CCSP

EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the CCSP EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to project area bicycle facilities from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

XIV. Utilities and Service Systems

As described in Section 4.13, Utilities, of the CCSP EIR, there would be a potentially significant impact related to infrastructure capacity for the CCSP and cumulative conditions. Mitigation Measure 4.13-1 requires project applicants to pay the established CSS mitigation fee and to pay for a project's fair share costs for upgrading infrastructure. With implementation of this mitigation, the impact would be **less than significant**. This mitigation would be accomplished on a project-by-project basis and would address the potential impact of development in the CCSP, including any potential increases caused by the proposed project. The proposed project would not add additional demand for the use of drainage infrastructure, as the project is within an existing urbanized landscape. For this reason, the proposed project would have a **less-than-significant** effect on stormwater drainage. No additional mitigation is required.

The proposed project would not alter the impacts to drainage, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to drainage, from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

The CCSP EIR found a **less-than-significant** impact related to wastewater treatment as the wastewater treatment plant has sufficient capacity for 40 more years for the project and for cumulative conditions. No mitigation was required. In addition, the 2035 General Plan Master EIR also found a less-than-significant impact related to wastewater treatment

when considering a land use for the project parcels with a density that exceeds the project changes. No mitigation was required. The proposed project would not add demand for wastewater treatment or impact wastewater conveyance or treatment facilities. This impact would be **less than significant**.

The proposed project would not alter the impacts to wastewater conveyance and treatment, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to wastewater conveyance and treatment, from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Both the CCSP EIR and 2035 General Plan Master EIR found a **less-than-significant** impact related to water supply. The 2035 General Plan Master EIR found that, with implementation of the City's water conservation requirements, the City could provide adequate potable water to supply the needs within the City's Policy Area (which included CCSP and the project parcels). No mitigation was required.

The CCSP found that there would be a **less-than-significant** impact related to additional water conveyance and treatment for both the project and cumulative context. The City's policy is to require the developer to construct any infrastructure necessary to support the CCSP without compromising service or water quality to the CCSP area. Reimbursement agreements are available for construction of facilities included in the development impact fee program. No mitigation was required. These requirements would address the potential impacts on a project-by-project basis, including any developments undertaken pursuant to this project. The proposed project would not create new demand for water supply, treatment, or conveyance beyond water usage necessary for construction purposes and for irrigation of landscape features along the corridor. For this reason, the proposed project would result in a less-than-significant impact related to water supply. No additional mitigation is required.

The proposed project would not alter the impacts to water supply, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new

significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to water supply, from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

The CCSP EIR found that there is a potentially significant cumulative impact related to water supply. Mitigation Measure 4.13-7 would result in implementation of water conservation measures by projects in the CCSP, 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**. No additional mitigation is feasible to reduce this impact. The improvements to multi-modal transportation within the Broadway District would not exacerbate this impact. As previously described, the proposed project would could add limited requirements for water supply, which, in combination with existing and proposed development throughout the region, would be anticipated to result in impacts to cumulative water that are consistent with the findings of the CCSP EIR.

The proposed project would not alter the cumulative impacts related to water supply, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, cumulative impacts related to supply, from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

The CCSP EIR found that there would be a **less-than-significant** impact related to solid waste for both the project and cumulative context. No mitigation was required. The increase in the number of residential units, and subsequently residents, could result in a slightly increased demand for solid waste disposal. However, as discussed on page 4.13-43 of the CCSP EIR, the 2035 General Plan buildout provides the cumulative context for solid waste. As described previously, the 2035 General Plan allows a greater density for the project parcels and solid waste disposal demand resulting from the proposed project could be accommodated within existing facilities, as analyzed in the Master EIR. The proposed project would not generate solid waste volumes during construction or operation, that were not considered in the CCSP EIR as part of proposed Grid 3.0 improvements. Therefore, the impact to solid waste management from the proposed project would remain **less than significant**. No additional mitigation is required.

The proposed project would not alter the impacts to solid waste management, relative to those discussed in the CCSP EIR. Changes introduced by the proposed project and/or new circumstances relevant to the project would not, as compared to the EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the proposed project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) that 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 City declined to adopt the mitigation measure or alternative or (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative. For these reasons, impacts to solid waste management, from the proposed project would not require the preparation of a subsequent EIR. No new mitigation measures will be required.

Conclusion

As established in the discussions above regarding the potential effects of the proposed project, substantial changes are not proposed to the project, nor have any substantial changes occurred with respect to the circumstances under which the project is undertaken, that would require major revisions to the original CCSP EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects. The proposed project would not include any substantial new information, changes, or impacts that would require major revisions to the CCSP EIR and no new mitigation measures would be required.

In addition, there is no new information of substantial importance showing that the project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects

shown in the previous EIR. Nor is there new information of substantial importance showing (i) that 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 (ii) that mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative.

Having considered the analysis set forth in this Addendum, the City of Sacramento's Community Development Department has concluded that the analyses conducted, and the conclusions reached in the CCSP EIR remain relevant and valid. Based on the record, there is no substantial evidence to support a fair argument that the proposed project may result in significant environmental impacts not previously studied in the EIR and, accordingly, the project changes would not result in any conditions identified in CEQA Guidelines Section 15162. Thus, a subsequent EIR is not required for the changes to the project. The proposed project would remain subject to all applicable previously required mitigation measures from the CCSP EIR.

Based on the above analysis, this Addendum to the previously certified CCSP EIR for the project has been prepared.

Appendices:

- A. Air Quality
- B. Transportation

References Cited

- California State Water Resources Control Board, 2018. Geotracker Database. Available: <https://geotracker.waterboards.ca.gov/map>. Accessed December 3, 2018.
- Fehr & Peers, 2019. *Lower Broadway Complete Streets PA ED Operations Analysis*, Prepared for the City of Sacramento. September 6, 2019.
- U.S. Department of Toxic Substances Control, 2018. Envirostor Database. California Department of Toxic Substances Control. DTSC's Hazardous Waste and Substances Site List – Site Cleanup (Cortese List). Available: https://www.envirostor.dtsc.ca.gov/public/map/?islink=true&federal_superfund=true&state_response=true&voluntary_cleanup=true&school_cleanup=true&evaluation=true&school_investigation=true&military_evaluation=true&tiered_permit=true&ca_site=true&historical=true&operating=true&post_closure=true&non_operating=true&geotracker_luft=true&geotracker_slic=true&geotracker_dod=true&status=ACT&zl=15&lat=38.56356553358738&lng=-121.48737451395668. Accessed December 3, 2018.

Appendix A

Air Quality



Road Construction Emissions Model, Version 8.1.0

Daily Emission Estimates for -> Broadway Complete Streets - Phase 1														
Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	1.29	11.07	14.55	20.71	0.71	20.00	4.70	0.54	4.16	0.05	4,817.68	0.60	0.11	4,865.09
Grading/Excavation	6.15	52.95	64.52	23.12	3.12	20.00	6.93	2.77	4.16	0.11	11,011.35	2.85	0.14	11,123.52
Drainage/Utilities/Sub-Grade	3.34	32.23	31.52	21.60	1.60	20.00	5.63	1.47	4.16	0.06	5,665.86	1.18	0.05	5,711.25
Paving	1.40	17.59	13.28	0.74	0.74	0.00	0.66	0.66	0.00	0.03	2,868.30	0.75	0.03	2,896.00
Maximum (pounds/day)	6.15	52.95	64.52	23.12	3.12	20.00	6.93	2.77	4.16	0.11	11,011.35	2.85	0.14	11,123.52
Total (tons/construction project)	0.78	7.17	7.98	3.76	0.39	3.37	1.05	0.35	0.70	0.01	1,445.32	0.34	0.02	1,459.11

Notes:
 Project Start Year -> 2021
 Project Length (months) -> 18
 Total Project Area (acres) -> 10
 Maximum Area Disturbed/Day (acres) -> 2
 Water Truck Used? -> Yes

Phase	Total Material Imported/Exported Volume (yd ³ /day)		Daily VMT (miles/day)			
	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	500	0	750	0	280	40
Grading/Excavation	0	250	0	390	880	40
Drainage/Utilities/Sub-Grade	0	0	0	0	600	40
Paving	0	0	0	0	480	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Broadway Complete Streets - Phase 1														
Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.03	0.22	0.29	0.41	0.01	0.40	0.09	0.01	0.08	0.00	95.39	0.01	0.00	87.39
Grading/Excavation	0.49	4.19	5.11	1.83	0.25	1.58	0.55	0.22	0.33	0.01	872.10	0.23	0.01	799.22
Drainage/Utilities/Sub-Grade	0.23	2.23	2.18	1.50	0.11	1.39	0.39	0.10	0.29	0.00	392.64	0.08	0.00	359.06
Paving	0.04	0.52	0.39	0.02	0.02	0.00	0.02	0.02	0.00	0.00	85.19	0.02	0.00	78.03
Maximum (tons/phase)	0.49	4.19	5.11	1.83	0.25	1.58	0.55	0.22	0.33	0.01	872.10	0.23	0.01	799.22
Total (tons/construction project)	0.78	7.17	7.98	3.76	0.39	3.37	1.05	0.35	0.70	0.01	1,445.32	0.34	0.02	1,323.70

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Road Construction Emissions Model, Version 8.1.0

Daily Emission Estimates for -> Broadway Complete Streets - Phase 2														
Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	1.09	10.45	11.20	20.52	0.52	20.00	4.59	0.43	4.16	0.03	3,048.48	0.59	0.05	3,078.43
Grading/Excavation	5.39	50.80	54.13	22.58	2.58	20.00	6.47	2.31	4.16	0.10	10,060.96	2.85	0.11	10,163.68
Drainage/Utilities/Sub-Grade	3.06	31.58	28.28	21.39	1.39	20.00	5.44	1.28	4.16	0.06	5,651.14	1.17	0.05	5,696.18
Paving	1.31	17.48	12.25	0.66	0.66	0.00	0.58	0.58	0.00	0.03	2,855.70	0.75	0.03	2,883.25
Maximum (pounds/day)	5.39	50.80	54.13	22.58	2.58	20.00	6.47	2.31	4.16	0.10	10,060.96	2.85	0.11	10,163.68
Total (tons/construction project)	0.70	6.94	6.83	3.70	0.33	3.37	1.00	0.30	0.70	0.01	1,333.63	0.34	0.01	1,346.29

Notes:
 Project Start Year -> 2022
 Project Length (months) -> 18
 Total Project Area (acres) -> 10
 Maximum Area Disturbed/Day (acres) -> 2
 Water Truck Used? -> Yes

Phase	Total Material Imported/Exported Volume (yd ³ /day)		Daily VMT (miles/day)			
	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	150	0	240	0	280	40
Grading/Excavation	0	75	0	120	880	40
Drainage/Utilities/Sub-Grade	0	0	0	0	600	40
Paving	0	0	0	0	480	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Broadway Complete Streets - Phase 2														
Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.02	0.21	0.22	0.41	0.01	0.40	0.09	0.01	0.08	0.00	60.36	0.01	0.00	55.30
Grading/Excavation	0.43	4.02	4.29	1.79	0.20	1.58	0.51	0.18	0.33	0.01	796.83	0.23	0.01	730.26
Drainage/Utilities/Sub-Grade	0.21	2.19	1.96	1.48	0.10	1.39	0.38	0.09	0.29	0.00	391.62	0.08	0.00	358.11
Paving	0.04	0.52	0.36	0.02	0.02	0.00	0.02	0.02	0.00	0.00	84.81	0.02	0.00	77.69
Maximum (tons/phase)	0.43	4.02	4.29	1.79	0.20	1.58	0.51	0.18	0.33	0.01	796.83	0.23	0.01	730.26
Total (tons/construction project)	0.70	6.94	6.83	3.70	0.33	3.37	1.00	0.30	0.70	0.01	1,333.63	0.34	0.01	1,221.35

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Sacramento (SV) - 2017 - Existing.EC

File Name: Sacramento (SV) - 2017 - Annual.EC
 CT-EMFAC Version: 6.0.0.18677
 Run Date: 7/15/2019 10:25:15 AM
 Area: Sacramento (SV)
 Analysis Year: 2017
 Season: Annual

```

=====
Vehicle Category      VMT Fraction      Diesel VMT Fraction
                     Across Category   Within Category
Truck 1               0.014             0.507
Truck 2               0.016             0.915
Non-Truck             0.970             0.010
=====
  
```

```

=====
Road Length:         3 miles
Volume:              1,888,053 vehicles per hour
Number of Hours:     1 hours
Avg. Idling Time:    0.33 minutes per vehicle
Tot. Idling Time:    10,384.29 hours
=====
  
```

VMT Distribution by Speed (mph):

```

5           0.30%
10          0.30%
15          1.70%
20          8.00%
25         11.90%
30         13.80%
35         16.10%
40         12.00%
45         14.50%
50         11.30%
55          7.50%
60          2.10%
65          0.50%
70          0.00%
75          0.00%
  
```

```

=====
Summary of Project Emissions
  
```

Total Pollutant Name (grams)	Running Exhaust Total (US tons) (grams)	Idling Exhaust (grams)	Running Loss (grams)	Tire Wear (grams)	Brake Wear (grams)
807,285.0	HC 389,606.8 0.890	11,123.9	406,554.3	-	-
757,389.0	ROG 314,256.8 0.835	8,473.2	434,659.1	-	-
875,576.1	TOG 428,716.4 0.965	12,200.6	434,659.1	-	-
8,194,624.6	CO 8,109,856.7 9.033	84,767.9	-	-	-
1,667,177.9	NOx 1,644,311.5 1.838	22,866.4	-	-	-
2,266,921,409.6	CO2 2,235,571,949.8 2,498.853	31,349,459.8	-	-	-

Sacramento (SV) - 2017 - Existing.EC

102,198.7	CH4	98,911.9	3,286.8	-	-	-
		0.113				
296,780.6	PM10	20,965.5	423.7	-	46,961.5	228,429.9
		0.327				
129,705.4	PM2.5	19,669.6	394.7	-	11,741.8	97,899.3
		0.143				
15,386.5	Benzene	10,740.9	299.1	4,346.5	-	-
		0.017				
540.7	Acrolein	525.6	15.1	-	-	-
		<0.001				
5,940.1	Acetaldehyde	5,764.5	175.6	-	-	-
		0.007				
15,614.5	Formaldehyde	15,162.4	452.0	-	-	-
		0.017				
2,392.6	Butadiene	2,328.7	63.8	0.0	-	-
		0.003				
919.3	Naphthalene	302.5	8.2	608.5	-	-
		0.001				
440.9	POM	428.6	12.3	-	-	-
		<0.001				
10,264.6	Diesel PM	10,133.8	130.8	-	-	-
		0.011				
56,583.3	DEOG	54,805.4	1,777.9	-	-	-
		0.062				

=====
 =====END=====

Sacramento (SV) - 2021 - NoBuild.EC

File Name: Sacramento (SV) - 2021 - Annual.EC_NoBuild.EC
 CT-EMFAC Version: 6.0.0.18677
 Run Date: 7/15/2019 2:13:27 PM
 Area: Sacramento (SV)
 Analysis Year: 2021
 Season: Annual

```

=====
Vehicle Category      VMT Fraction      Diesel VMT Fraction
                     Across Category   Within Category
    Truck 1           0.012             0.546
    Truck 2           0.018             0.936
    Non-Truck         0.970             0.012
    
```

```

=====
Road Length:         3 miles
Volume:              1,992,764 vehicles per hour
Number of Hours:     1 hours
Avg. Idling Time:    2.96 minutes per vehicle
Tot. Idling Time:    98,309.70 hours
    
```

VMT Distribution by Speed (mph):

```

5           0.30%
10          0.60%
15          1.80%
20          8.80%
25         14.90%
30         14.60%
35         15.00%
40         11.80%
45         13.40%
50         10.10%
55          6.20%
60          2.10%
65          0.40%
70          0.00%
75          0.00%
    
```

```

=====
Summary of Project Emissions
    
```

Total Pollutant Name (grams)	Running Exhaust Total (US tons) (grams)	Idling Exhaust (grams)	Running Loss (grams)	Tire Wear (grams)	Brake Wear (grams)
711,975.6	HC 289,045.6 0.785	74,932.6	347,997.4	-	-
658,924.2	ROG 229,636.8 0.726	57,233.3	372,054.0	-	-
772,265.0	TOG 317,839.7 0.851	82,371.2	372,054.0	-	-
6,485,938.8	CO 5,935,848.4 7.150	550,090.4	-	-	-
1,308,675.6	NOx 1,142,491.1 1.443	166,184.5	-	-	-
2,400,087,964.2	CO2 2,138,476,897.4 2,645.644	261,611,066.8	-	-	-

Sacramento (SV) - 2021 - NoBuild.EC

98,680.3	CH4	76,578.4	22,101.9	-	-	-
		0.109				
308,364.3	PM10	15,986.1	3,656.5	-	49,799.2	238,922.4
		0.340				
133,107.5	PM2.5	14,868.4	3,396.1	-	12,446.8	102,396.2
		0.147				
13,289.9	Benzene	7,643.9	1,925.5	3,720.5	-	-
		0.015				
455.4	Acrolein	361.6	93.8	-	-	-
		<0.001				
5,376.2	Acetaldehyde	4,186.1	1,190.0	-	-	-
		0.006				
13,961.2	Formaldehyde	10,940.4	3,020.9	-	-	-
		0.015				
2,046.5	Butadiene	1,641.4	405.1	0.0	-	-
		0.002				
785.8	Naphthalene	212.2	52.7	520.9	-	-
		<0.001				
397.3	POM	313.8	83.6	-	-	-
		<0.001				
5,385.9	Diesel PM	4,484.9	901.0	-	-	-
		0.006				
53,037.6	DEOG	40,627.6	12,410.0	-	-	-
		0.058				

=====
 =====END=====

Sacramento (SV) - 2021 - Build.EC

File Name: Sacramento (SV) - 2021 - Annual.EC_Build.EC
 CT-EMFAC Version: 6.0.0.18677
 Run Date: 7/15/2019 2:15:16 PM
 Area: Sacramento (SV)
 Analysis Year: 2021
 Season: Annual

```

=====
Vehicle Category      VMT Fraction      Diesel VMT Fraction
                     Across Category   Within Category
Truck 1               0.012             0.546
Truck 2               0.018             0.936
Non-Truck             0.970             0.012
    
```

```

=====
Road Length:         3 miles
Volume:              1,902,733 vehicles per hour
Number of Hours:     1 hours
Avg. Idling Time:    2.96 minutes per vehicle
Tot. Idling Time:    93,868.16 hours
    
```

VMT Distribution by Speed (mph):

```

5           0.10%
10          0.40%
15          2.20%
20          9.10%
25         14.20%
30         16.90%
35         12.70%
40         11.40%
45         12.60%
50         11.50%
55          6.40%
60          2.10%
65          0.40%
70          0.00%
75          0.00%
    
```

```

=====
Summary of Project Emissions
    
```

Total Pollutant Name (grams)	Running Exhaust Total (US tons) (grams)	Idling Exhaust (grams)	Running Loss (grams)	Tire Wear (grams)	Brake Wear (grams)
671,151.7	HC 274,152.5 0.740	71,547.3	325,452.0	-	-
620,517.3	ROG 217,919.6 0.684	54,647.6	347,950.1	-	-
728,057.2	TOG 301,457.3 0.803	78,649.8	347,950.1	-	-
6,185,109.7	CO 5,659,871.7 6.818	525,237.9	-	-	-
1,247,318.4	NOx 1,088,642.0 1.375	158,676.4	-	-	-
2,287,480,536.9	CO2 2,037,688,785.4 2,521.516	249,791,751.5	-	-	-

Sacramento (SV) - 2021 - Build.EC

93,615.5	CH4	72,512.2	21,103.3	-	-	-
		0.103				
294,347.0	PM10	15,178.2	3,491.3	-	47,549.3	228,128.2
		0.324				
127,014.6	PM2.5	14,117.4	3,242.7	-	11,884.5	97,770.0
		0.140				
12,569.5	Benzene	7,251.5	1,838.5	3,479.5	-	-
		0.014				
432.8	Acrolein	343.3	89.6	-	-	-
		<0.001				
5,094.2	Acetaldehyde	3,957.9	1,136.3	-	-	-
		0.006				
13,237.7	Formaldehyde	10,353.3	2,884.4	-	-	-
		0.015				
1,944.5	Butadiene	1,557.7	386.8	0.0	-	-
		0.002				
738.8	Naphthalene	201.3	50.3	487.2	-	-
		<0.001				
377.0	POM	297.3	79.8	-	-	-
		<0.001				
5,132.8	Diesel PM	4,272.5	860.3	-	-	-
		0.006				
50,197.3	DEOG	38,348.0	11,849.4	-	-	-
		0.055				

=====
 =====END=====

Sacramento (SV) - 2041 - NoBuild.EC

File Name: Sacramento (SV) - 2041 - NoBuild.EC
 CT-EMFAC Version: 6.0.0.18677
 Run Date: 7/15/2019 2:18:22 PM
 Area: Sacramento (SV)
 Analysis Year: 2041
 Season: Annual

```

=====
Vehicle Category      VMT Fraction      Diesel VMT Fraction
                     Across Category   Within Category
Truck 1               0.007             0.659
Truck 2               0.023             0.961
Non-Truck             0.970             0.013
  
```

```

=====
Road Length:         3 miles
Volume:              2,516,310 vehicles per hour
Number of Hours:     1 hours
Avg. Idling Time:    2.96 minutes per vehicle
Tot. Idling Time:    124,138.00 hours
  
```

VMT Distribution by Speed (mph):

```

5           0.30%
10          1.60%
15          2.10%
20         11.60%
25         26.20%
30         17.80%
35         10.90%
40         11.20%
45          9.20%
50          5.40%
55          1.20%
60          2.00%
65          0.50%
70          0.00%
75          0.00%
  
```

```

=====
Summary of Project Emissions
  
```

Total Pollutant Name (grams)	Running Exhaust Total (US tons) (grams)	Idling Exhaust (grams)	Running Loss (grams)	Tire Wear (grams)	Brake Wear (grams)
464,755.7	HC 207,489.9 0.512	44,369.1	212,896.7	-	-
434,481.9	ROG 170,850.7 0.479	36,017.1	227,614.1	-	-
505,385.3	TOG 228,898.2 0.557	48,873.0	227,614.1	-	-
3,778,262.6	CO 3,469,152.7 4.165	309,109.9	-	-	-
651,514.9	NOx 560,350.8 0.718	91,164.1	-	-	-
2,139,016,418.3	CO2 1,926,131,634.0 2,357.862	212,884,784.4	-	-	-

Sacramento (SV) - 2041 - NoBuild.EC

60,785.5	CH4	49,716.0	11,069.5	-	-	-
		0.067				
370,707.3	PM10	7,954.4	1,717.7	-	63,577.1	297,458.0
		0.409				
152,341.2	PM2.5	7,366.1	1,590.7	-	15,898.0	127,486.3
		0.168				
9,162.6	Benzene	5,692.1	1,194.5	2,276.1	-	-
		0.010				
327.6	Acrolein	267.1	60.6	-	-	-
		<0.001				
4,077.3	Acetaldehyde	3,384.4	692.8	-	-	-
		0.004				
10,381.0	Formaldehyde	8,604.1	1,776.9	-	-	-
		0.011				
1,487.1	Butadiene	1,229.7	257.3	0.0	-	-
		0.002				
524.5	Naphthalene	170.9	34.9	318.7	-	-
		<0.001				
240.4	POM	197.8	42.6	-	-	-
		<0.001				
1,616.1	Diesel PM	1,318.0	298.1	-	-	-
		0.002				
39,409.7	DEOG	32,687.8	6,721.9	-	-	-
		0.043				

=====
 =====END=====

Sacramento (SV) - 2041 - Build.EC

File Name: Sacramento (SV) - 2041 - Build.EC
 CT-EMFAC Version: 6.0.0.18677
 Run Date: 7/15/2019 2:33:33 PM
 Area: Sacramento (SV)
 Analysis Year: 2041
 Season: Annual

```

=====
Vehicle Category      VMT Fraction      Diesel VMT Fraction
                     Across Category   Within Category
Truck 1               0.007             0.659
Truck 2               0.023             0.961
Non-Truck             0.970             0.013
  
```

```

=====
Road Length:         3 miles
Volume:              2,075,357 vehicles per hour
Number of Hours:     1 hours
Avg. Idling Time:    2.96 minutes per vehicle
Tot. Idling Time:    102,384.30 hours
  
```

VMT Distribution by Speed (mph):

```

5           0.40%
10          1.50%
15          3.00%
20         11.10%
25         23.10%
30         18.00%
35         12.10%
40          9.20%
45          9.60%
50          7.20%
55          1.70%
60          2.40%
65          0.70%
70          0.00%
75          0.00%
  
```

```

=====
Summary of Project Emissions
  
```

Total Pollutant Name (grams)	Running Exhaust Total (US tons) (grams)	Idling Exhaust (grams)	Running Loss (grams)	Tire Wear (grams)	Brake Wear (grams)
382,116.9	HC 170,365.0 0.421	36,594.0	175,157.9	-	-
357,203.6	ROG 140,231.5 0.394	29,705.6	187,266.5	-	-
415,481.0	TOG 187,905.9 0.458	40,308.6	187,266.5	-	-
3,096,920.3	CO 2,841,978.2 3.414	254,942.1	-	-	-
536,042.0	NOx 460,853.4 0.591	75,188.7	-	-	-
1,759,564,590.2	CO2 1,583,985,298.5 1,939.588	175,579,291.7	-	-	-

Sacramento (SV) - 2041 - Build.EC

49,972.0	CH4	0.055	40,842.3	9,129.7	-	-	-
305,715.0	PM10	0.337	6,530.2	1,416.7	-	52,436.0	245,332.1
125,617.2	PM2.5	0.138	6,047.3	1,312.0	-	13,112.1	105,145.9
7,531.6	Benzene	0.008	4,673.8	985.1	1,872.6	-	-
269.3	Acrolein	<0.001	219.4	50.0	-	-	-
3,342.0	Acetaldehyde	0.004	2,770.6	571.4	-	-	-
8,514.5	Formaldehyde	0.009	7,048.9	1,465.5	-	-	-
1,222.4	Butadiene	0.001	1,010.2	212.2	0.0	-	-
431.2	Naphthalene	<0.001	140.2	28.8	262.2	-	-
197.5	POM	<0.001	162.4	35.1	-	-	-
1,326.3	Diesel PM	0.001	1,080.5	245.8	-	-	-
32,262.4	DEOG	0.036	26,718.3	5,544.0	-	-	-

=====
 =====END=====

Appendix B

Transportation



MEMORANDUM

Date: September 6, 2019
To: James Pangburn, Mark Thomas & Company, Inc.
From: Adrian Engel and Chase McFadden, Fehr & Peers
Subject: Lower Broadway Complete Streets Plan PA ED Traffic Operation Analysis

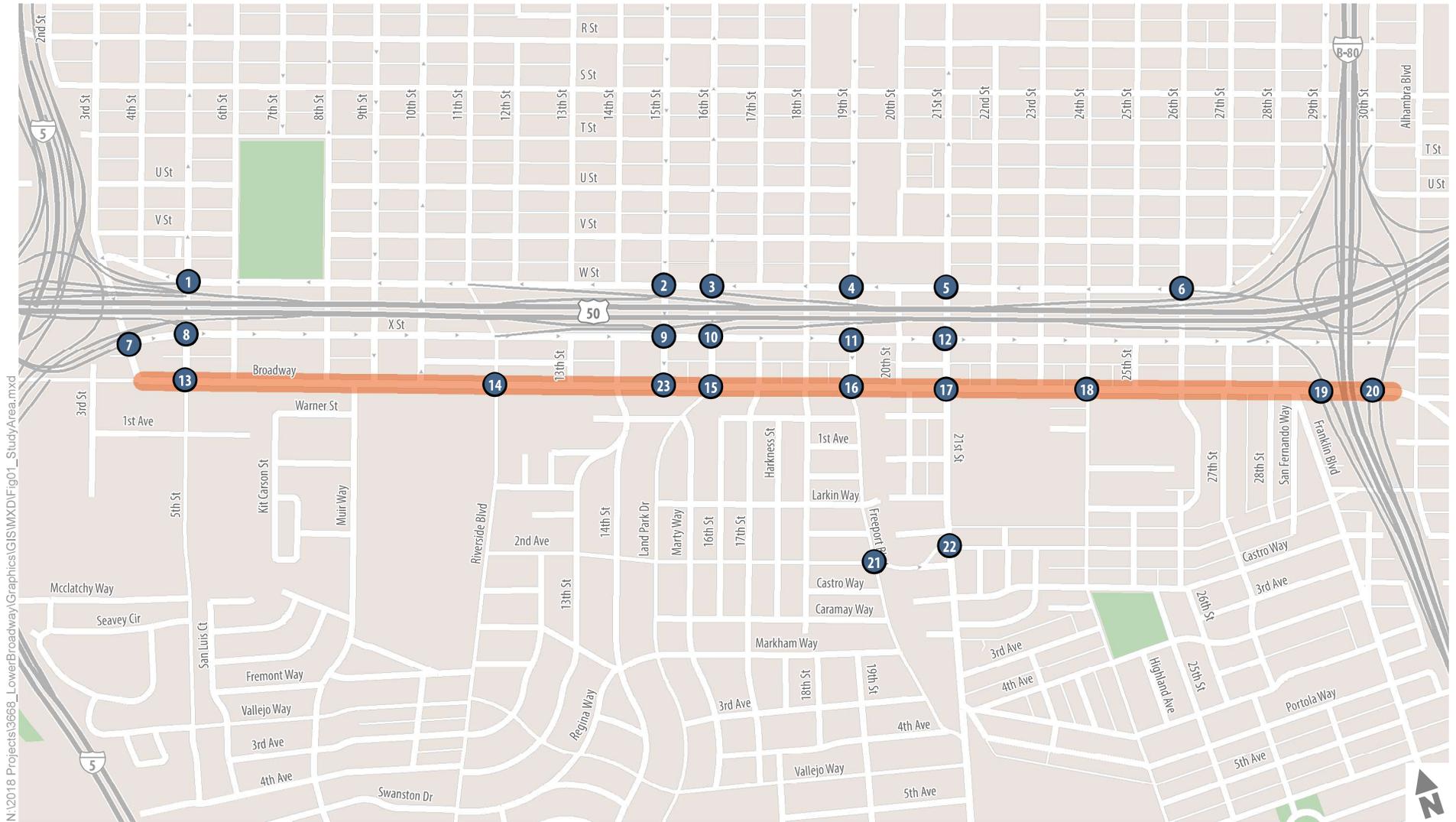
RS18-3668

Introduction

This study analyzes the transportation impacts of the proposed Lower Broadway Complete Streets Master Plan. The study analyzes transportation conditions under Existing (2017) and Cumulative (2041) conditions.

Study Area

An extensive study area was developed with consideration of project expected travel characteristics, primary travel routes to/from the project vicinity. Figure 1 shows the project area and 23 study intersections.



N:\2018 Projects\3668_LowerBroadway\Graphics\GIS\MXD\Fig01_StudyArea.mxd

- 1 Study Intersection
- Project Area



Figure 1
Study Area

Analysis Methodology

The analysis was conducted for AM and PM peak hour conditions following the prescribed methodology for each facility type contained in the *Highway Capacity Manual* (Transportation Research Board, 2010). Input variables were based on field observed data, estimates, and parameters specified by the City of Sacramento.

The *Highway Capacity Manual* procedures describe traffic operating conditions from a driver’s perspective based on 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 (the worst), is assigned. These grades provide 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. Perspectives from other roadway network users such as bicyclists and pedestrians are not accounted for in this methodology.

Table 1 displays the average control delay per vehicle for each LOS threshold for signalized and unsignalized intersections. For signalized and all-way stop-controlled intersections the LOS is based on the average control delay of all vehicles traveling through the intersection. For side-street stop-controlled intersections, the delay and LOS for the movement with the greatest average delay are reported along with the average delay for the entire intersection.

Table 1: Intersection Level of Service Definitions		
Level of Service	Average Delay (seconds/vehicle)	
	Signalized	Unsignalized
A	< 10	< 10
B	> 10 to 20	> 10 to 15
C	> 20 to 35	> 15 to 25
D	> 35 to 55	> 25 to 35
E	> 55 to 80	> 35 to 50
F	> 80	> 50

Source: *Highway Capacity Manual* (Transportation Research Board, 2010)

These methodologies were applied using the SimTraffic 10 microsimulation software program, that provides outputs consistent with the *Highway Capacity Manual*. SimTraffic 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 10 runs.

The following procedures and assumptions were applied in the development of the SimTraffic model.

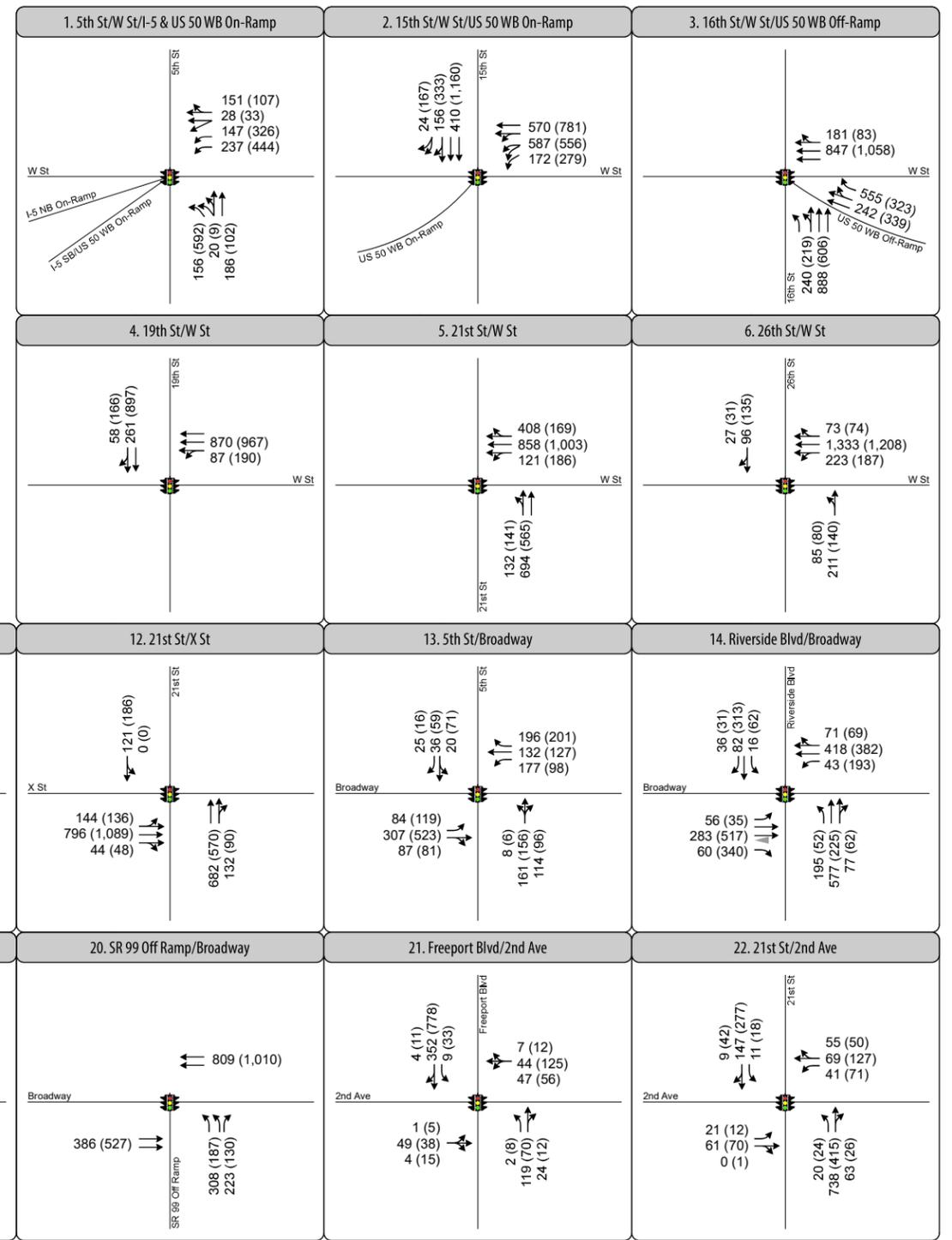
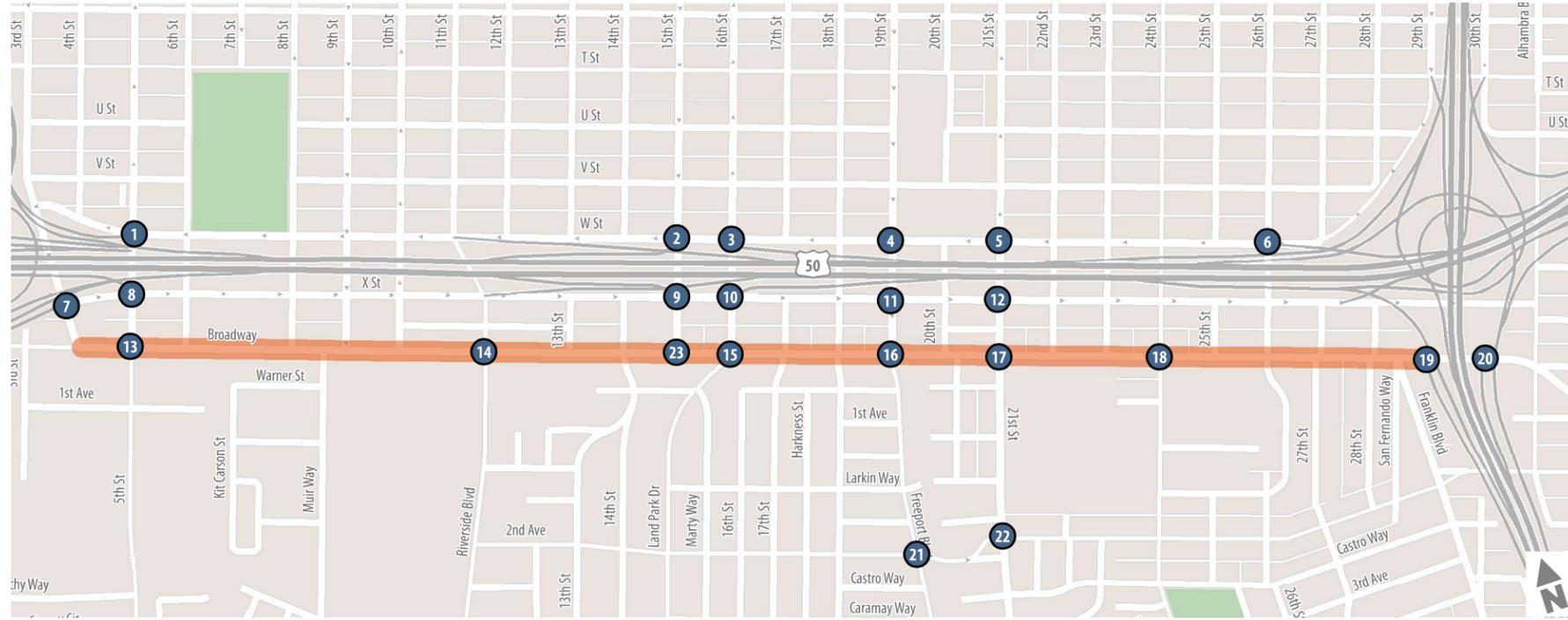
- Roadway geometric data were gathered using aerial photographs and field observations.
- Peak-hour traffic volumes were entered into the model according to the peak hour of the study area section. The AM peak hour occurs between 7:30 and 8:30 PM and the PM peak hour occurs between 4:30 and 5:30 PM.
- Signal phasing and timings were based on existing signal timing plans provided by the City of Sacramento.
- A network-wide peak hour factor (PHF) was entered for each study section. The City of Sacramento requires that a PHF of 1.0 be used for traffic and planning studies.
- The heavy vehicle percentage was entered for each study section. The value based on the traffic counts was used for all scenarios.
- Conflicting bicycle and pedestrian volumes match the count data collected.
- Speeds for the model network were based on the posted speed limits.

Existing Conditions

This section describes the physical and operational characteristics of the existing roadway transportation system within the study area.

Intersection Traffic Volumes

Based on the traffic data collection, the AM and PM peak hour intersection volumes are shown in Figure 2.



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Figure 2
 Peak Hour Traffic Volumes and Lane Configurations - Existing Conditions

Intersection Operations

Table 2 summarizes the Existing AM and PM peak hour intersection operations at the study intersections. As shown, all intersections operate at LOS D or better, reflective of generally light levels of congestion.

Table 2: Intersection Operations – Existing Conditions					
ID	Intersection	Control Type	Peak Hour	Existing Conditions	
				Delay	LOS
1	5 th St / W St / I-5 NB On-Ramp	Signal	AM	3	A
			PM	7	A
2	15 th St / W St	Signal	AM	12	B
			PM	38	D
3	16 th St / W St / US 50 Off-Ramp	Signal	AM	29	C
			PM	33	C
4	19 th St / W St	Signal	AM	18	B
			PM	42	D
5	21 st St / W St	Signal	AM	16	B
			PM	18	B
6	26 th St / W St	Signal	AM	21	C
			PM	17	B
7	3 rd St / X St / I-5 Off-Ramp	SSSC	AM	3 (8)	A (A)
			PM	3 (9)	A (A)
8	5 th St / X St / US 50 Off-Ramp	Signal	AM	17	B
			PM	33	C
9	15 th St / X St / US 50 Off-Ramp	Signal	AM	21	C
			PM	40	D
10	16 th St / X St	Signal	AM	16	B
			PM	15	B
11	19 th St / X St	Signal	AM	23	C
			PM	23	C
12	21 st St / X St	Signal	AM	13	B
			PM	15	B
13	5 th St / Broadway	Signal	AM	13	B
			PM	28	C
14	Riverside Blvd / Broadway	Signal	AM	18	B
			PM	19	B
15	16 th St-Land Park Dr / Broadway	Signal	AM	20	B

			PM	23	C
16	19 th St / Broadway	Signal	AM	20	B
			PM	22	C
17	21 st St / Broadway	Signal	AM	18	B
			PM	19	B
18	24 th St / Broadway	Signal	AM	15	B
			PM	18	B
19	SR 99 On-Ramp / Broadway	Uncontrolled	AM	2	A
			PM	23	C
20	SR 99 Off-Ramp / Broadway	Signal	AM	7	A
			PM	22	C
21	Freeport Blvd / 2 nd Avenue	Signal	AM	10	B
			PM	16	B
22	21 st St / 2 nd St	Signal	AM	11	B
			PM	11	B
23	15 th St / Broadway	Signal	AM	10	A
			PM	9	A
<p>Notes: LOS = Level of Service. SSSC = Side Street Stop Controlled For signalized and uncontrolled intersections, average intersection delay is reported in seconds per vehicle for all approaches. For SSSC intersections, the LOS and control delay for the worst movement is shown in parentheses next to the average intersection LOS and delay. Impacts to intersections are determined based on the overall LOS and average delay. All intersections were analyzed in SimTraffic. ¹ Intersection is uncontrolled in Existing conditions and Signalized under Plus Project conditions</p> <p>Source: Fehr & Peers, 2019</p>					

Freeway Off-Ramp Queuing

The freeway off-ramp queues under the Existing AM and PM peak hours are presented in Table 3. The queues were calculated using the SimTraffic Queue Post-Processor developed by Fehr and Peers. All off-ramp queues remain well below the available storage capacity in the existing condition.

Table 3: Freeway Off-Ramp Queuing – Existing Conditions

ID	Location	Available Storage (ft)	Peak Hour	Existing Conditions
				Queue (ft)
3	US 50 Off-Ramp at 16 th St / W St	1,060	AM	375
			PM	325
6	US 50 WB Off-Ramp at 26 th St / W St	920	AM	525
			PM	250
7	I-5 SB Off-Ramp at 3 rd St / X St	890	AM	75
			PM	75
8	US 50 EB Off-Ramp at 5 th St / X St	1,280	AM	215
			PM	600
9	US 50 Off-Ramp at 15 th St / X St	1,150	AM	250
			PM	350
20	SR 99 Off-Ramp at Broadway	800	AM	175
			PM	125

Notes: The available storage length for off-ramp queuing is measured from the noted off-ramp terminal intersection to the freeway off-ramp gore point. Maximum queue length is based upon output from SimTraffic microsimulation software.

Source: Fehr & Peers, 2019

Existing Plus Project Conditions

This section details the effects of the proposed project on the existing transportation infrastructure.

Traffic Forecasts

The SACMET regional travel demand model (2016 MTP/SCS), developed and maintained by SACOG, was used to forecast expected changes in daily traffic and peak hour turning movement volumes under Existing Plus Project conditions. The roadway network changes included in the Lower Broadway Complete Streets Project are listed below:

- Broadway 1 lane in each direction – between 8th St and SR 99 On-Ramp
- Broadway 2 lanes in each direction – between 19th St and 20th St
- Broadway 2 eastbound lanes, 1 westbound lane – between SR 99 On-Ramp and SR Off-Ramp
- A one-way north leg (29th St) addition with 2 SB lanes – at SR 99 On-Ramp/ Broadway
- 16th St conversion to two-way with 2 NB lanes and 1 SB lane – between X St and Broadway

- 15th St conversion to two-way with 2 SB lanes – between W St and Broadway
- Buffered bike lanes on both sides of Broadway between 3rd St and SR 99 On-Ramp

Modifications to the base year model were made as part of this project to enhance the ability to accurately forecast changes to travel patterns in the study area, which represents a sub-area of the SACOG region, described as follows:

- Additional Land Use Detail – Transportation analysis zones (TAZs) were added to the model to allow for more accurate loading of trips to the transportation network.
- Refined TAZ Loading – Connections between the TAZ network and the transportation network were reviewed and adjusted as necessary to ensure that trips accurately loaded onto the transportation network.
- Additional Transportation Network Detail – Detail was added to the transportation network to account for all study roadways and intersections.
- Transportation Network Coding – The coding of attributes in the model transportation network was reviewed for accuracy and adjusted as appropriate.

The proposed project roadway changes were then added to the base year model. The traffic forecasting procedure is known as the “difference method” calculation was used to develop the Existing Plus Project forecasts. The procedure adds the difference in traffic between the base year model without and with the project to the existing traffic counts, as displayed below:

$$\text{Existing Plus Project Forecast} = \text{Existing Volume} + (\text{Base Model Plus Project} - \text{Base Model})$$

Figure 3 shows the AM and PM peak hour turning movement volumes at the study intersections under Existing Plus Project conditions.

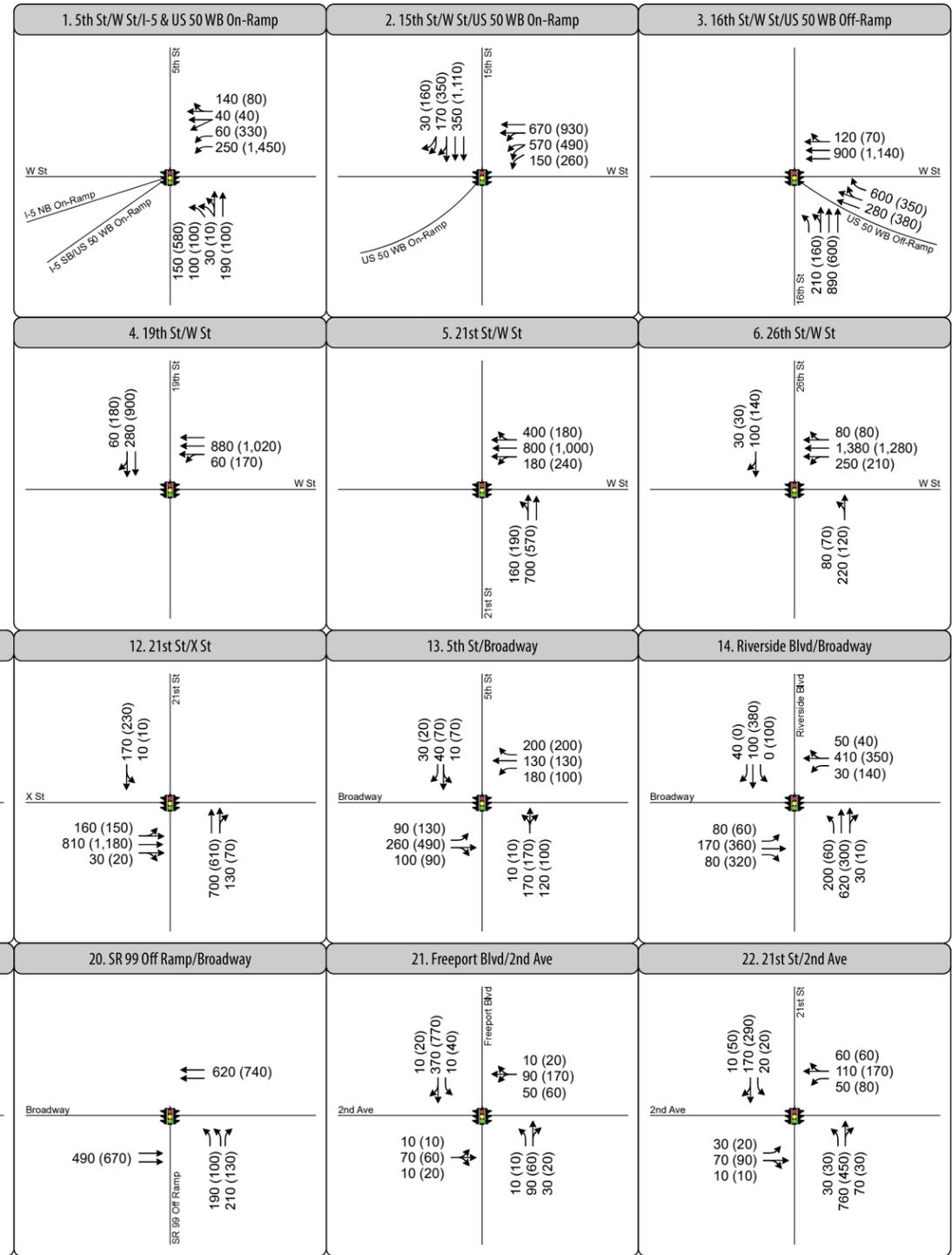


Figure 3
 Peak Hour Traffic Volumes
 and Lane Configurations -
 Existing Plus Project Conditions

Intersection Operations

As displayed in Table 4 below, most intersections continue to operate at D or better. The shaded cells represent delay LOS increases of E or F.¹ Key travel patterns include high volumes of vehicles diverting from Broadway to parallel routes available on X Street and W Street. During the PM peak hour, the high demand of eastbound traffic on X Street and westbound traffic on W Street causes congestion at the US 50 off-ramps intersection locations: 15th Street / X Street and 16th Street / W Street. Operations degrade from LOS C to LOS E at 16th Street / W Street / US 50 Off-Ramp intersection, partially to signal timing coordination issues which causes queues from upstream intersections to queue back and create delay. One potential mitigation measure could include signal timing coordination adjustments.

The free flow travel time² on the Broadway corridor in the Existing Plus Project conditions increases from 7.5 minutes to 9.5 minutes, due to a decrease in travel speed. An average daily delay of 50 seconds will be experienced by each vehicle due to lane reduction and increase in traffic in the Existing Plus Project conditions compared to 23 seconds in Existing conditions. These delays are listed in Table 10.

ID	Intersection	Control Type	Peak Hour	Existing Conditions		Existing Plus Project	
				Delay	LOS	Delay	LOS
1	5 th St / W St / I-5 NB On-Ramp	Signal	AM	3	A	3	A
			PM	7	A	6	A
2	15 th St / W St	Signal	AM	12	B	11	B
			PM	38	D	35	D
3	16 th St / W St / US 50 Off-Ramp	Signal	AM	29	C	33	C
			PM	33	C	59	E
4	19 th St / W St	Signal	AM	18	B	16	B
			PM	42	D	39	D
5	21 st St / W St	Signal	AM	16	B	16	B
			PM	18	B	18	B
6	26 th St / W St	Signal	AM	21	C	3	A
			PM	17	B	17	B
7	3 rd St / X St / I-5 Off-Ramp	SSSC	AM	3 (8)	A (A)	3 (7)	A (A)
			PM	3 (9)	A (A)	3 (8)	A (A)

¹ Per Sacramento 2035 Sacramento General Plan, Policy M 1.2.2. LOS Standard, LOS F conditions are allowed in the Sacramento Core Area.

² Free flow travel time is based on free flow speed. Free-flow speed is the term used to describe the average speed that a motorist would travel if there were no congestion or other adverse conditions (such as bad weather).

8	5 th St / X St / US 50 Off-Ramp	Signal	AM	17	B	17	B
			PM	33	C	30	C
9	15 th St / X St / US 50 Off-Ramp	Signal	AM	21	C	46	D
			PM	40	D	40	D
10	16 th St / X St	Signal	AM	16	B	28	C
			PM	15	B	29	C
11	19 th St / X St	Signal	AM	23	C	23	C
			PM	23	C	25	C
12	21 st St / X St	Signal	AM	13	B	13	B
			PM	15	B	15	B
13	5 th St / Broadway	Signal	AM	13	B	13	B
			PM	28	C	16	B
14	Riverside Blvd / Broadway	Signal	AM	18	B	19	B
			PM	19	B	23	C
15	16 th St-Land Park Dr / Broadway	Signal	AM	20	B	37	D
			PM	23	C	24	C
16	19 th St / Broadway	Signal	AM	20	B	18	B
			PM	22	C	22	C
17	21 st St / Broadway	Signal	AM	18	B	34	C
			PM	19	B	28	C
18	24 th St / Broadway	Signal	AM	15	B	19	B
			PM	18	B	21	B
19	SR 99 On-Ramp / Broadway	Uncontrolled/ Signal ¹	AM	2	A	14	B
			PM	23	C	14	B
20	SR 99 Off-Ramp / Broadway	Signal	AM	7	A	8	A
			PM	22	C	7	A
21	Freeport Blvd / 2 nd Avenue	Signal	AM	10	B	15	B
			PM	16	B	21	C
22	21 st St / 2 nd St	Signal	AM	11	B	13	B
			PM	11	B	12	B
23	15 th St / Broadway	Signal	AM	10	A	10	A
			PM	9	A	8	A

Notes: LOS = Level of Service. SSSC = Side Street Stop Controlled
 For signalized and uncontrolled intersections, average intersection delay is reported in seconds per vehicle for all approaches. For SSSC intersections, the LOS and control delay for the worst movement is shown in parentheses next to the average intersection LOS and delay. Impacts to intersections are determined based on the overall LOS and average delay. All intersections were analyzed in SimTraffic.
 Shaded cells indicate intersection is experiencing LOS E or F conditions.
¹ Intersection is uncontrolled in Existing conditions and Signalized under Plus Project conditions

Source: Fehr & Peers, 2019

Freeway Off-Ramp Queuing

Table 5 displays the freeway off-ramp queues under Existing Plus Project with the road diet, conversion of 15th Street to a two-lane road between Broadway and W Street, conversion of one 16th Street northbound lane to southbound lane between Broadway and W St, and 29th Street connection added between X Street and Broadway.

ID	Location	Available Storage (ft)	Peak Hour	Existing Conditions	Existing Plus Project
				Queue (ft)	Queue (ft)
3	US 50 Off-Ramp at 16 th St / W St	1,060	AM	375	500
			PM	325	500
6	US 50 WB Off-Ramp at 26 th St / W St	920	AM	525	500
			PM	250	375
7	I-5 SB Off-Ramp at 3 rd St / X St	890	AM	75	75
			PM	75	100
8	US 50 EB Off-Ramp at 5 th St / X St	1,280	AM	225	125
			PM	600	300
9	US 50 Off-Ramp at 15 th St / X St	1,150	AM	250	300
			PM	350	325
20	SR 99 Off-Ramp at Broadway	800	AM	175	150
			PM	125	100

Notes: The available storage length for off-ramp queuing is measured from the noted off-ramp terminal intersection to the freeway off-ramp gore point. Maximum queue length is based upon output from SimTraffic microsimulation software.

Source: Fehr & Peers, 2019

Cumulative No Project Conditions

This section details the expected physical and operational characteristics of the roadway transportation system in the cumulative year (2041).

Traffic Forecasts

The SACMET regional travel demand model (2041 MTP/SCS), developed and maintained by SACOG, was used to forecast expected changes in daily traffic and peak hour turning movement volumes under Cumulative No Project conditions. Additional roadway network changes were made in consideration of roadway improvement projects included in the Sacramento Downtown Specific Plan and expected to be complete by cumulative year (2041):

- 3rd Street conversion to two-way (1 NB lane and 2 SB lanes)– between W Street and X Street
- 5th Street conversion to 2-way (1 SB lanes and 2 NB lanes) – between X St and W St
- 5th Street conversion to two way (1 lane in each direction) – between W St and Capitol Mall and continuing to I St (already 2-way between L St and J St)
- 19th St conversion to two-way lane (2 SB lanes and 1 NB lanes) – between X St and W St
- A one-way north leg (30th St) addition with 2 NB receiving lanes – at SR 99 Off-Ramp/ Broadway

Figure 4 shows the AM and PM peak hour turning movement volumes and lane configurations at the study intersections under Cumulative No Project conditions.

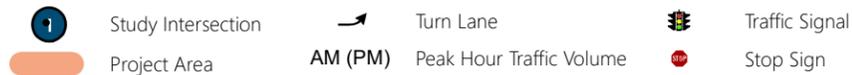
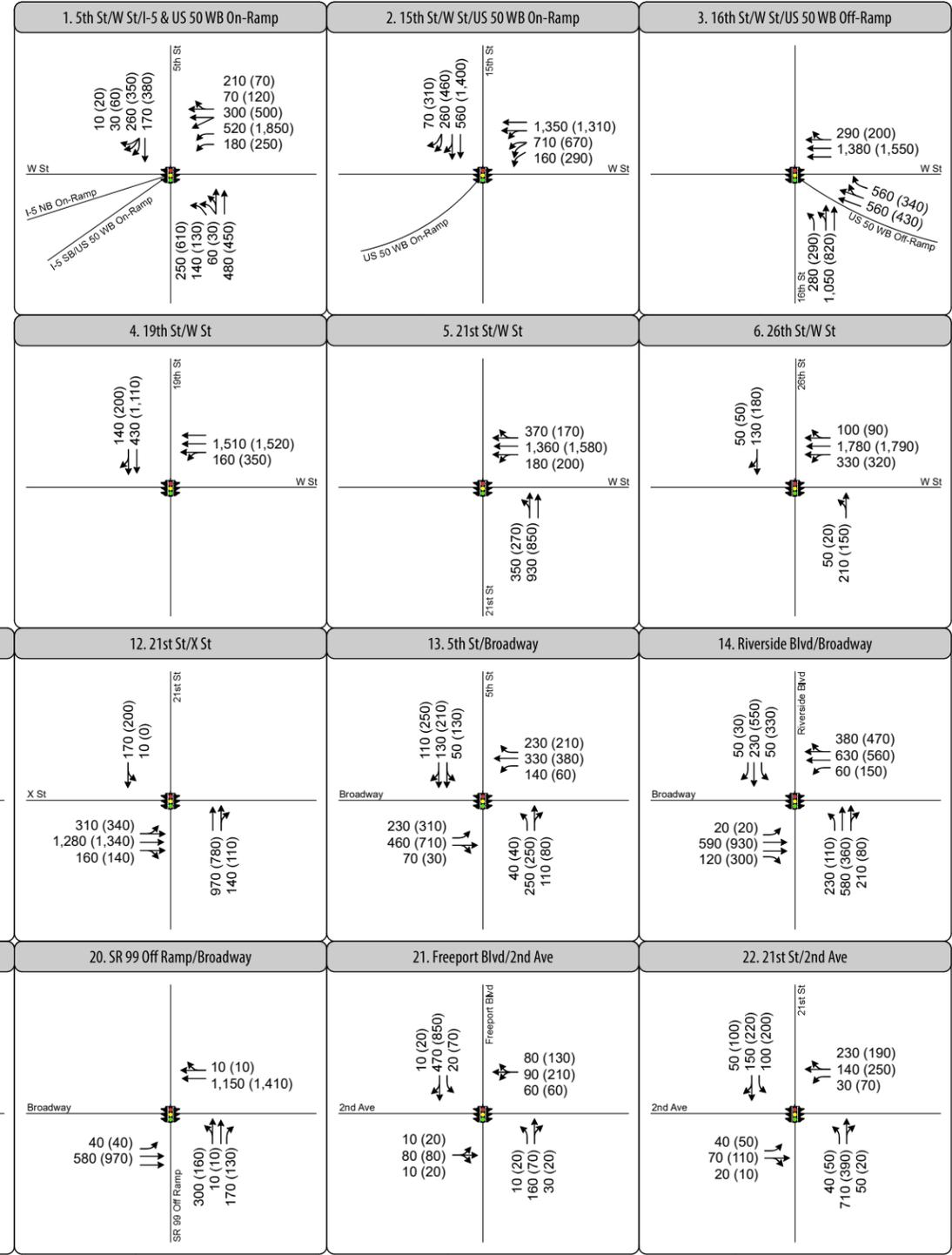


Figure 4
 Peak Hour Traffic Volumes
 and Lane Configurations -
 Cumulative No Project Conditions

Intersection Operations

Table 5 summarizes the Cumulative No Project AM and PM peak hour intersection operations at the study intersections. As shown, some intersections operate at LOS E or F conditions, reflective of increased levels of congestion due to future vehicle volume growth. High volume demand along X Street and W Street results in LOS F delay conditions at US 50 off-ramp intersections, particularly at locations that also serve key north and south connections to the downtown core and Land Park neighborhoods to the south.

ID	Intersection	Control Type	Peak Hour	Cumulative No Project	
				Delay	LOS
1	5 th St / W St / I-5 NB On-Ramp	Signal	AM	19	B
			PM	84	F
2	15 th St / W St	Signal	AM	18	B
			PM	41	D
3	16 th St / W St / US 50 Off-Ramp	Signal	AM	123	F
			PM	130	F
4	19 th St / W St	Signal	AM	20	B
			PM	45	D
5	21 st St / W St	Signal	AM	23	C
			PM	24	C
6	26 th St / W St	Signal	AM	85	F
			PM	67	E
7	3 rd St / X St / I-5 Off-Ramp	SSSC	AM	4 (11)	A (B)
			PM	4 (14)	A (B)
8	5 th St / X St / US 50 Off-Ramp	Signal	AM	43	D
			PM	132	F
9	15 th St / X St / US 50 Off-Ramp	Signal	AM	93	F
			PM	92	F
10	16 th St / X St	Signal	AM	42	C
			PM	26	C
11	19 th St / X St	Signal	AM	15	B
			PM	34	C
12	21 st St / X St	Signal	AM	17	B
			PM	34	C
13	5 th St / Broadway	Signal	AM	49	D
			PM	76	E

14	Riverside Blvd / Broadway	Signal	AM	23	C
			PM	76	E
15	16 th St-Land Park Dr / Broadway	Signal	AM	116	F
			PM	42	D
16	19 th St / Broadway	Signal	AM	27	C
			PM	48	D
17	21 st St / Broadway	Signal	AM	57	E
			PM	38	D
18	24 th St / Broadway	Signal	AM	17	B
			PM	26	C
19	SR 99 On-Ramp / Broadway	Uncontrolled	AM	3	A
			PM	6	A
20	SR 99 Off-Ramp / Broadway	Signal	AM	8	A
			PM	22	C
21	Freeport Blvd / 2 nd Avenue	Signal	AM	17	B
			PM	52	D
22	21 st St / 2 nd St	Signal	AM	21	C
			PM	56	E
23	15 th St / Broadway	Signal	AM	14	B
			PM	18	B

Notes: LOS = Level of Service. SSSC = Side Street Stop Controlled
 For signalized and uncontrolled intersections, average intersection delay is reported in seconds per vehicle for all approaches. For SSSC intersections, the LOS and control delay for the worst movement is shown in parentheses next to the average intersection LOS and delay. Impacts to intersections are determined based on the overall LOS and average delay. All intersections were analyzed in SimTraffic.
 Shaded cells indicate intersection is experiencing LOS E or F conditions.
¹ Intersection is uncontrolled in Existing conditions and Signalized under Plus Project conditions

Source: Fehr & Peers, 2019

Freeway Off-Ramp Queuing

Table 7 displays the freeway off-ramp queues under Cumulative No Project conditions. Queueing at freeway off-ramp facilities increases at every intersection under Cumulative conditions due to an overall increase in traffic volumes. The US 50 WB Off-Ramp at 26th St & W St and US 50 EB Off-Ramp at 5th St / X St experience queues that exceed capacity as they serve as the first westbound and eastbound connections from the freeway to W Street and X Street to access the Sacramento downtown core, Broadway district, and Land Park residential neighborhood.

Table 7: Freeway Off-Ramp Queuing – Cumulative Conditions

ID	Location	Available Storage (ft)	Peak Hour	Cumulative No Project
				Queue (ft)
3	US 50 Off-Ramp at 16 th St / W St	1,060	AM	900
			PM	550
6	US 50 WB Off-Ramp at 26 th St / W St	920	AM	1,475
			PM	1,450
7	I-5 SB Off-Ramp at 3 rd St / X St	890	AM	125
			PM	100
8	US 50 EB Off-Ramp at 5 th St / X St	1,280	AM	450
			PM	1,850
9	US 50 Off-Ramp at 15 th St / X St	1,150	AM	450
			PM	775
20	SR 99 Off-Ramp at Broadway	800	AM	200
			PM	150

Notes: The available storage length for off-ramp queuing is measured from the noted off-ramp terminal intersection to the freeway off-ramp gore point. Maximum queue length is based upon output from SimTraffic microsimulation software.
 Queue lengths exceeding the available off-ramp storage length are highlighted in gray.

Source: Fehr & Peers, 2019

Cumulative Plus Project Conditions

This section details the effects of the proposed project on cumulative year (2041) transportation infrastructure.

Roadway network changes based on the Lower Broadway Complete Streets Plan and roadway network assumptions in the project vicinity from the Downtown Specific Plan (previously detailed in Existing Plus Project and Cumulative No Project sections) were used to forecast expected changes in daily traffic and peak hour turning movements under Cumulative Plus Project conditions.

Figure 5 shows the AM and PM peak hour turning movement volumes and lane configurations at the study intersections under Cumulative Plus Project conditions.

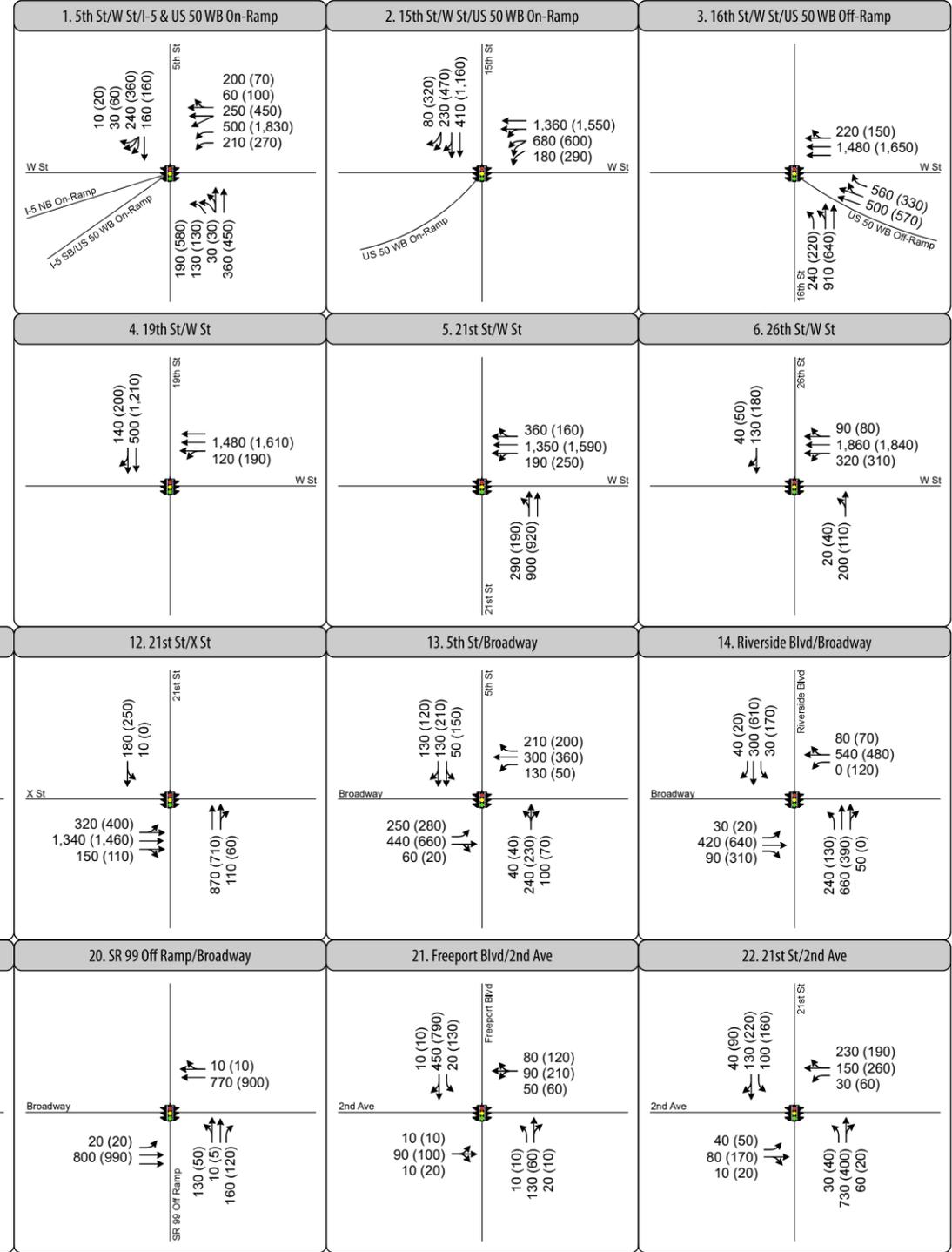
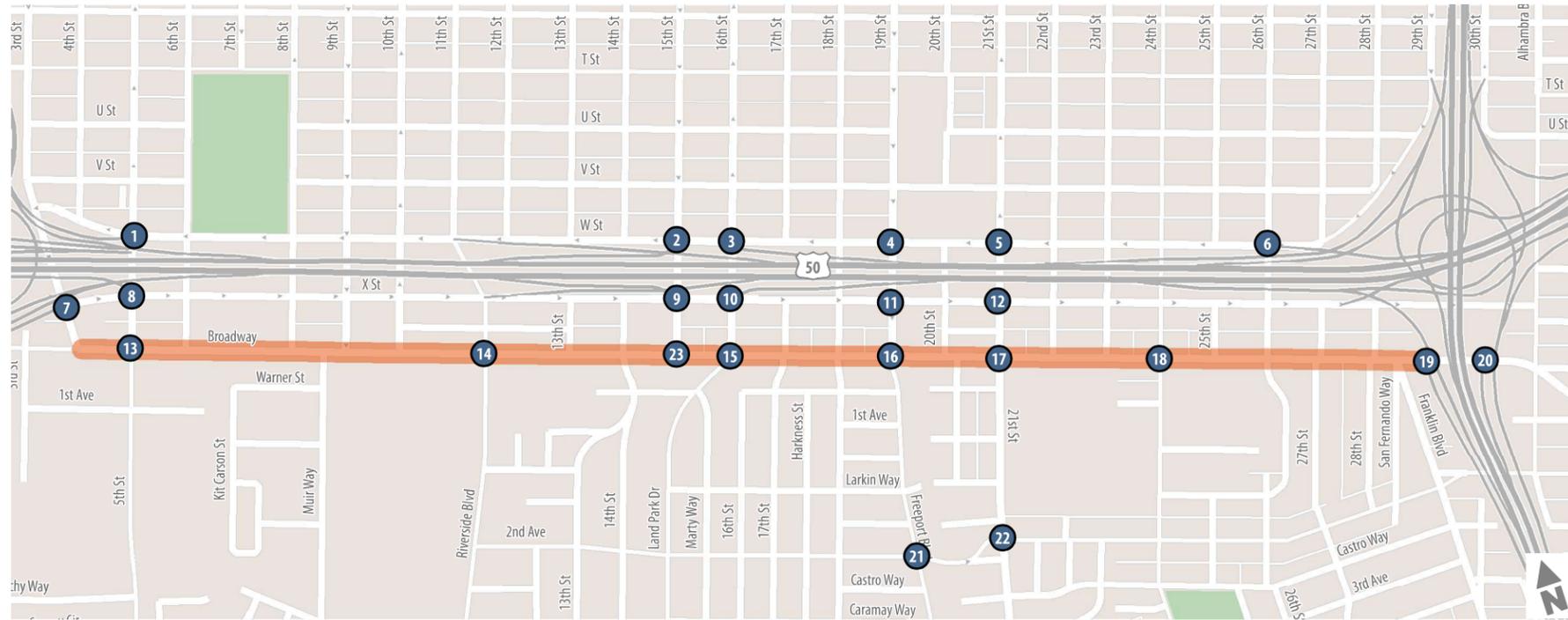


Figure 5
 Peak Hour Traffic Volumes
 and Lane Configurations -
 Cumulative Plus Project Conditions

Intersection Operations

Table 6 displays the intersection operations under Cumulative Plus Project conditions compared to Cumulative No Project conditions. The shaded cells indicate the intersections experiencing delay increases to E or F conditions.

Under Cumulative Plus Project, reduced capacity along Broadway decreases both east/west and north/south demand along the corridor as vehicles to move to parallel streets for connections to the downtown core and neighborhoods south of Broadway. Under Cumulative Plus Project conditions, vehicle demand along W Street and X Street increases as vehicles shift from Broadway to parallel routes. As a result, intersections continue to experience LOS F conditions at intersections serving both critical north/south connections and freeway on and off-ramp facilities. During the AM peak hour, operations at the US 50 Off-Ramp / 16th Street / W Street intersection improve by 15 seconds under Cumulative Plus Project conditions due to less northbound demand, which allows other approaches to be better served. Under Cumulative Plus Project conditions, operations improve from LOS F to LOS D conditions at 15th Street / X Street / US 50 Off-Ramp during the AM peak hour due to less southbound demand, with allows the high-volume eastbound movement to be better served with increased signal time. During the PM peak hour, this same intersection experiences about 10 seconds of increased delay under the Cumulative Plus Project conditions due to an approximately 10% increase in eastbound demand as vehicles move to X Street as a parallel eastbound route to Broadway. At 16th Street-Land Park Drive / Broadway, operations degrade from LOS D to LOS E conditions during the PM peak hour due to the addition of a signal phase to accommodate the 15th Street conversion into a two-way street between X Street and Broadway.

ID	Intersection	Control Type	Peak Hour	Cumulative No Project		Cumulative Plus Project	
				Delay	LOS	Delay	LOS
1	5 th St / W St / I-5 NB On-Ramp	Signal	AM	19	B	19	B
			PM	84	F	83	F
2	15 th St / W St	Signal	AM	18	B	28	C
			PM	41	D	47	D
3	16 th St / W St / US 50 Off-Ramp	Signal	AM	123	F	108	F
			PM	130	F	132	F
4	19 th St / W St	Signal	AM	20	B	21	C
			PM	45	D	53	D
5	21 st St / W St	Signal	AM	23	C	21	C
			PM	24	C	34	C

6	26 th St / W St	Signal	AM	85	F	90	F
			PM	67	E	70	E
7	3 rd St / X St / I-5 Off-Ramp	SSSC	AM	4 (11)	A (B)	3 (10)	A (B)
			PM	4 (14)	A (B)	12 (27)	A (D)
8	5 th St / X St / US 50 Off-Ramp	Signal	AM	43	D	39	D
			PM	132	F	113	F
9	15 th St / X St / US 50 Off-Ramp	Signal	AM	93	F	52	D
			PM	92	F	104	F
10	16 th St / X St	Signal	AM	42	C	32	C
			PM	26	C	28	C
11	19 th St / X St	Signal	AM	15	B	21	C
			PM	34	C	31	C
12	21 st St / X St	Signal	AM	17	B	19	B
			PM	34	C	31	C
13	5 th St / Broadway	Signal	AM	49	D	33	C
			PM	76	E	77	E
14	Riverside Blvd / Broadway	Signal	AM	23	C	36	D
			PM	76	E	79	E
15	16 th St-Land Park Dr / Broadway	Signal	AM	116	F	137	F
			PM	42	D	75	E
16	19 th St / Broadway	Signal	AM	27	C	34	C
			PM	48	D	35	D
17	21 st St / Broadway	Signal	AM	57	E	70	E
			PM	38	D	40	D
18	24 th St / Broadway	Signal	AM	17	B	25	C
			PM	26	C	24	C
19	SR 99 On-Ramp / Broadway	Uncontrolled/ Signal ¹	AM	3	A	27	C
			PM	6	A	35	D
20	SR 99 Off-Ramp / Broadway	Signal	AM	8	A	33	C
			PM	22	C	17	B
21	Freeport Blvd / 2 nd Avenue	Signal	AM	17	B	16	B
			PM	52	D	51	D
22	21 st St / 2 nd Ave	Signal	AM	21	C	25	C
			PM	56	E	55	D
23	15 th St / Broadway	Signal	AM	14	B	28	C
			PM	18	B	23	C

Notes: LOS = Level of Service. SSSC = Side Street Stop Controlled
 For signalized and uncontrolled intersections, average intersection delay is reported in seconds per vehicle for all approaches. For SSSC intersections, the LOS and control delay for the worst movement is shown in parentheses next to the average intersection LOS and delay. Impacts to intersections are determined based on the overall LOS and average delay. All intersections were analyzed in SimTraffic.
 Shaded cells indicate intersection is experiencing LOS E or F conditions.
¹ Intersection is uncontrolled in Existing conditions and Signalized under Plus Project conditions

Source: Fehr & Peers, 2019

Freeway Off-Ramp Queuing

Table 9 displays the freeway off-ramp queuing under Cumulative Plus Project conditions compared to Cumulative No Project conditions.

Under Cumulative Plus Project conditions, off-ramp queues continue to exceed the storage capacity at the US 50 Off-Ramp at 26th Street / W Street and US 50 Off-Ramp at 15th Street / X Street due to high east and west demand along X Street and W Street. The operational improvements at 16th Street / W Street-US 50 Off-Ramp during the AM peak hour result in approximately 300 feet of shorter US 50 Off-Ramp queues under Cumulative Plus Project conditions. During the PM peak hour, the US 50 Off-Ramp at 15th Street / X Street experiences about 225 feet longer queues due to stronger eastbound approach (X Street) and southbound approach (15th Street) demand under Plus Project conditions. At the east end of the Broadway corridor, operational deterioration is reflected by slightly longer (50 feet) SR 99 Off-Ramp queues due to capacity constraints along Broadway, despite vehicles diverting to other off-ramps and overall less off-ramp vehicle volume. Conversely, improved operations hour due to less off-ramp demand leading to slightly shorter (25 feet) off-ramp queues during the PM peak. Overall, the SR 99 Off-Ramp consistently stays well below the available storage under all scenarios and during both peak periods.

ID	Location	Available Storage (ft)	Peak Hour	Cumulative No Project	Cumulative Plus Project
				Queue (feet)	Queue (feet)
3	US 50 Off-Ramp at 16 th St / W St	1,060	AM	900	575
			PM	550	600
6	US 50 WB Off-Ramp at 26 th St / W St	920	AM	1,475	1,475
			PM	1,450	1,450
7	I-5 SB Off-Ramp at 3 rd St / X St	890	AM	125	100
			PM	100	100
8	US 50 EB Off-Ramp at 5 th St / X St	1,280	AM	450	425
			PM	1,850	1,900

9	US 50 Off-Ramp at 15 th St / X St	1,150	AM	450	425
			PM	775	900
20	SR 99 Off-Ramp at Broadway	800	AM	200	250
			PM	150	125
<p>Notes: The available storage length for off-ramp queuing is measured from the noted off-ramp terminal intersection to the freeway off-ramp gore point. Maximum queue length is based upon output from SimTraffic microsimulation software. Queue lengths exceeding the available off-ramp storage length are highlighted in gray.</p> <p>Source: Fehr & Peers, 2019</p>					

Delay Analysis

A link level delay analysis was performed in order to discuss the changes in congestion level and user experience on the Broadway corridor. Delay is defined in terms of observed travel time versus free-flow travel time. Vehicle Hours Delay and Average Delay Per vehicle are used as metrics to capture delay in no project and plus project scenarios. The Broadway corridor was divided into two segments: East and West side of the light rail station located at Broadway / 20th Street. The volume of traffic, congested speed and free-flow speed on different links of the corridor were calculated from the travel demand model in order to determine the total and average vehicle delay. Table 8 displays the delay observed from the model under different scenarios.

The Total Vehicle Delay (in hours) represents an increase between Existing and Existing Plus Project Conditions. When observed as Average Delay Per Vehicle (in seconds) the daily average delay is 26 seconds. The maximum increase in average delay per vehicle between these two scenarios is 19 seconds, which is experienced during the PM peak hour on the east side of 20th / Broadway.

During Cumulative Conditions, overall traffic volume along Broadway is assumed to increase due to overall population growth and land use development in the area. As a result, more delay is expected along the Broadway corridor. The Project adds an additional Daily Average Delay Per Vehicle of 37 seconds within the model. The maximum increase in average delay per vehicle between Cumulative No Project and Cumulative Plus Project scenario is 31 seconds, experienced during the PM peak hour on the west side of 20th street.

Table 10: Delay Analysis

	Total Vehicle Hours of Delay ¹				Average Delay Per Vehicle ² (seconds)			
	Existing	Existing Plus Project	Cumulative No Project	Cumulative Plus Project	Existing	Existing Plus Project	Cumulative No Project	Cumulative Plus Project

Daily	West of 20th St (6,500 ft)	20	27	129	137	11	17	41	53
	East of 20th St (3,600 ft)	36	82	132	175	12	33	31	56
	Total	56	109	261	312	23	50	72	109
AM Peak Hour	West of 20th St (6,500 ft)	2	2	12	12	12	17	47	58
	East of 20th St (3,600 ft)	3	5	8	12	10	25	23	52
	Total	5	7	20	24	22	42	70	110
PM Peak Hour	West of 20th St (6,500 ft)	4	5	22	17	20	29	75	81
	East of 20th St (3,600 ft)	4	7	12	16	15	33	36	67
	Total	8	12	36	33	35	62	111	148
<p>Notes: ¹Vehicle Hours of Delay (VHD) is the sum of all delay in hours on a segment of roadway experienced by all trips within a specific time period. VHD = Volume of traffic on a link * [Travel time during congested condition – Travel time during Free-flow condition] ²Average Delay Per vehicle = (VHD on a link / Volume of traffic on a link) * 3600 Volumes and speeds are observed from the model output</p> <p>Source: Fehr & Peers, 2019</p>									



-  Project Area
-  VMT Analysis Boundary (1/2 Mile From Project Area)



Figure 1
VMT Analysis Boundary