

RESOLUTION NO. 2016-0294

Adopted by the Sacramento City Council

August 16, 2016

DOWNTOWN TRANSPORTATION STUDY - GRID 3.0 (S15131700)

BACKGROUND

- A. The City Council of Sacramento directed staff to submit a grant application for Regional/Local Grant funding for the Downtown Sacramento Transportation Study ("Grid 3.0") in order to provide definition to a line item in the Metropolitan Transportation Plan broadly defined as "Downtown Sacramento Circulation".
- B. The Grid 3.0 was awarded grant funding in 2010 and work began on Plan in February of 2014.
- C. The agreed upon scope of work for the included tasks to perform stakeholder engagement and public outreach, develop visioning from adopted plans, utilize a panel of experts as needed, develop network alternatives, perform travel demand forecasts, conduct multimodal analysis of the alternatives, prepare planning level cost estimates for the preferred alternative, and develop rough prioritization of the project list for implementation.
- D. An extensive public outreach program was utilized to educate the public and to develop the proposed recommendation with the help of a robust and heavily used website.
- E. A diverse group of stakeholders was engaged representing property owners, community groups, neighborhood associations, developers, business interests, public transportation agencies, as well as advocates for walking and biking.
- F. Grid 3.0 was intended to use a "systems study approach" necessary to ensure that the most cost- effective and efficient multi-modal transportation system is created to meet Downtown goals and objectives.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVES AS FOLLOWS:

- Section 1. The Downtown Transportation Study is accepted as the City's guide for future circulation improvements in the Central City.

Section 2. Staff is directed to amend the appropriate local and regional plans to reflect the recommendations of Grid 3.0.

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Exhibit A - Final Report

Adopted by the City of Sacramento City Council on August 16, 2016, by the following vote:

Ayes: Members Ashby, Carr, Guerra, Hansen, Harris, Jennings, Schenirer, and Warren

Noes: None

Abstain: None

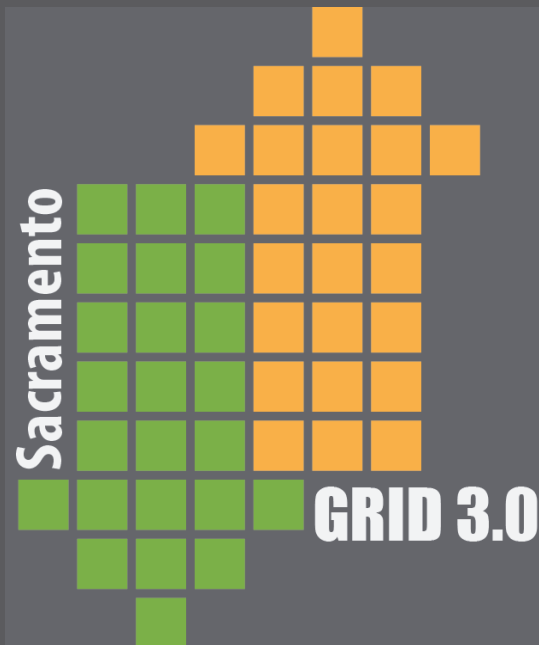
Absent: Mayor Johnson

Attest:

Shirley Concolino

Digitally signed by Shirley Concolino
DN: cn=Shirley Concolino, o=City of Sacramento, ou=City
Clerk, email=sconcolino@cityofsacramento.org, c=US
Date: 2016.08.25 14:45:32 -07'00'

Shirley Concolino, City Clerk



GRID 3.0

Planning the Future of Mobility
in the Sacramento Central City

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INTRODUCTION

GRID 3.0

INTRODUCTION

"The Grid" represents the single most defining aspect of the Central City's transportation system. Whether on foot, riding a bicycle, taking transit, or driving an automobile, the travel patterns of those who live, work, play, or visit Sacramento's Central City are shaped every day by the system of gridded streets that crisscross the area. In fact, many locals refer to the area bounded by the Sacramento River, Broadway, Alhambra Boulevard and the Union Pacific Railroad tracks simply as "the Grid."

The Grid is the employment and entertainment center of the City as well as home to neighborhoods where children, adults and seniors call home. The City of Sacramento recognizes that a first class, efficient, multi-modal transportation system is necessary to create a downtown that is a desirable place for people to work, live, learn, and play. The 2035 General Plan envisions that the Central City will capture a higher share of the region's growth over time, which will further increase the demands upon the Grid. The General Plan transportation policies specify the following approach to serving future transportation needs:

"create a well-connected transportation network, support increased densities and a mix of uses in multi-modal districts, help walking become more practical for short trips, support bicycling for both short- and long-distance trips, improve transit to serve highly frequented destinations, conserve energy resources, reduce greenhouse gas emissions and air pollution, and do so while continuing to accommodate auto mobility."



The General Plan also indicates a shift in investment will need to occur moving forward.

“Achieving a balanced transportation system will require a greater investment in transit, pedestrian, and bicycle infrastructure.

Sacramento “Grid 3.0” is the City’s plan to integrate a number of planned transportation improvements and programs and to further enhance the downtown grid. The Grid 3.0 plan has been shaped by significant input from community stakeholders, who identified the following overarching themes (please refer to p. 12 for additional information on community engagement):

- Create routes to important destinations and amenities
- Protect neighborhoods while enhancing connections
- Encourage revitalization efforts

Stakeholders developed the following objectives, based on the above themes, for transportation improvements and programs identified in Grid 3.0:

- Improve connections between neighborhoods and the downtown core, especially for biking, walking, and transit trips
- Create gateway and corridors worth visiting
- Protect neighborhood streets as places where parents feel safe for their children to walk and bike
- Improve transit circulation and efficiency with transit stops and stations that make rail and bus travel a pleasurable experience
- Enhance commercial corridors for safe walking and cycling and accommodating both through and local traffic

The improvements to the Central City transportation network described in this plan were developed using an integrated planning process known as a “layered network” approach. The layered network paradigm

of transportation systems planning focuses on elements that inform a more holistic view of the system. Most importantly, the systems approach focuses on providing a variety of transportation options, allowing people to select from a host of mode choices, routes, or environments. While conventional roadway planning focused on mobility for cars, the new systems approach shifts the focus from moving cars to moving people.

Although this approach aims to maximize the number of mode choices on each route, it is not always practical or feasible to provide optimum service across all mode types on every street. In fact, it is not unusual for one mode to negatively affect another mode in the following ways:

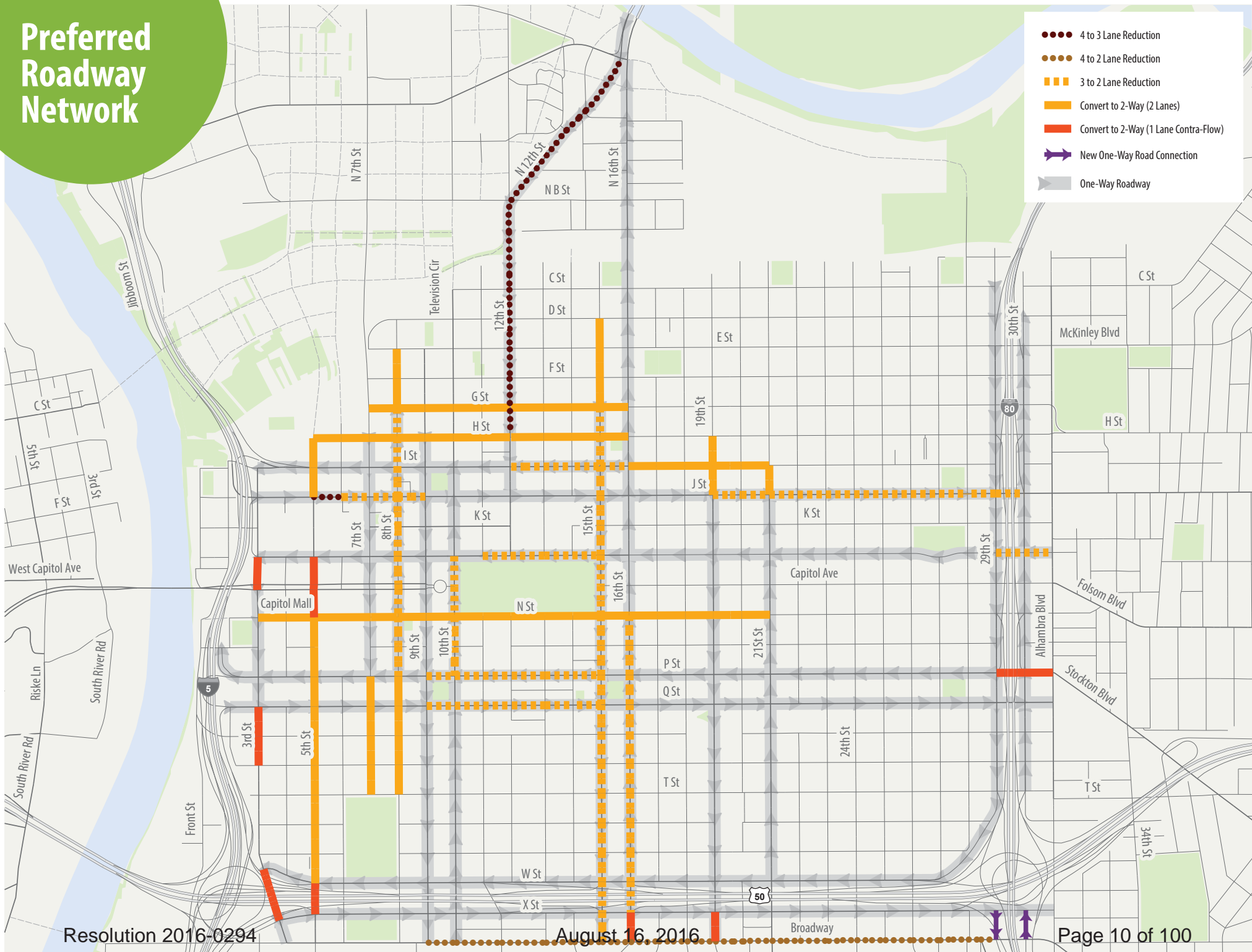
- Increased automobile speeds may reduce pedestrian and bicycle safety
- Light Rail Transit (LRT) and streetcar tracks can pose conflicts for turning vehicles and bicyclists
- Pedestrian-priority treatments can reduce capacity for vehicles including trucks and buses
- Roadway designs that accommodate trucks can result in wide intersections that increase pedestrian crossing times
- Creation of exclusive bicycle or bus facilities can reduce capacity for automobile travel or street parking

The layered network approach assures that all modes are addressed in the larger system of roadways, but acknowledges that trying to serve competing modes on individual streets sometimes fails to result in facilities for either. A layered network prioritizes certain modes on certain streets, providing continuity for the chosen mode while accommodating other modes or encouraging use on parallel streets. Providing select treatments for a prioritized mode on select streets can improve efficiency for that particular mode while ensuring increased safety for all modes.

The outcome of this planning process is a series of maps that illustrate these priorities across the Grid. The Preferred Transportation Network maps, shown on the following pages, summarize the various transportation improvements included in this plan.

Preferred Roadway Network

- 4 to 3 Lane Reduction
- 4 to 2 Lane Reduction
- 3 to 2 Lane Reduction
- Convert to 2-Way (2 Lanes)
- Convert to 2-Way (1 Lane Contra-Flow)
- ➡ New One-Way Road Connection
- ➡ One-Way Roadway



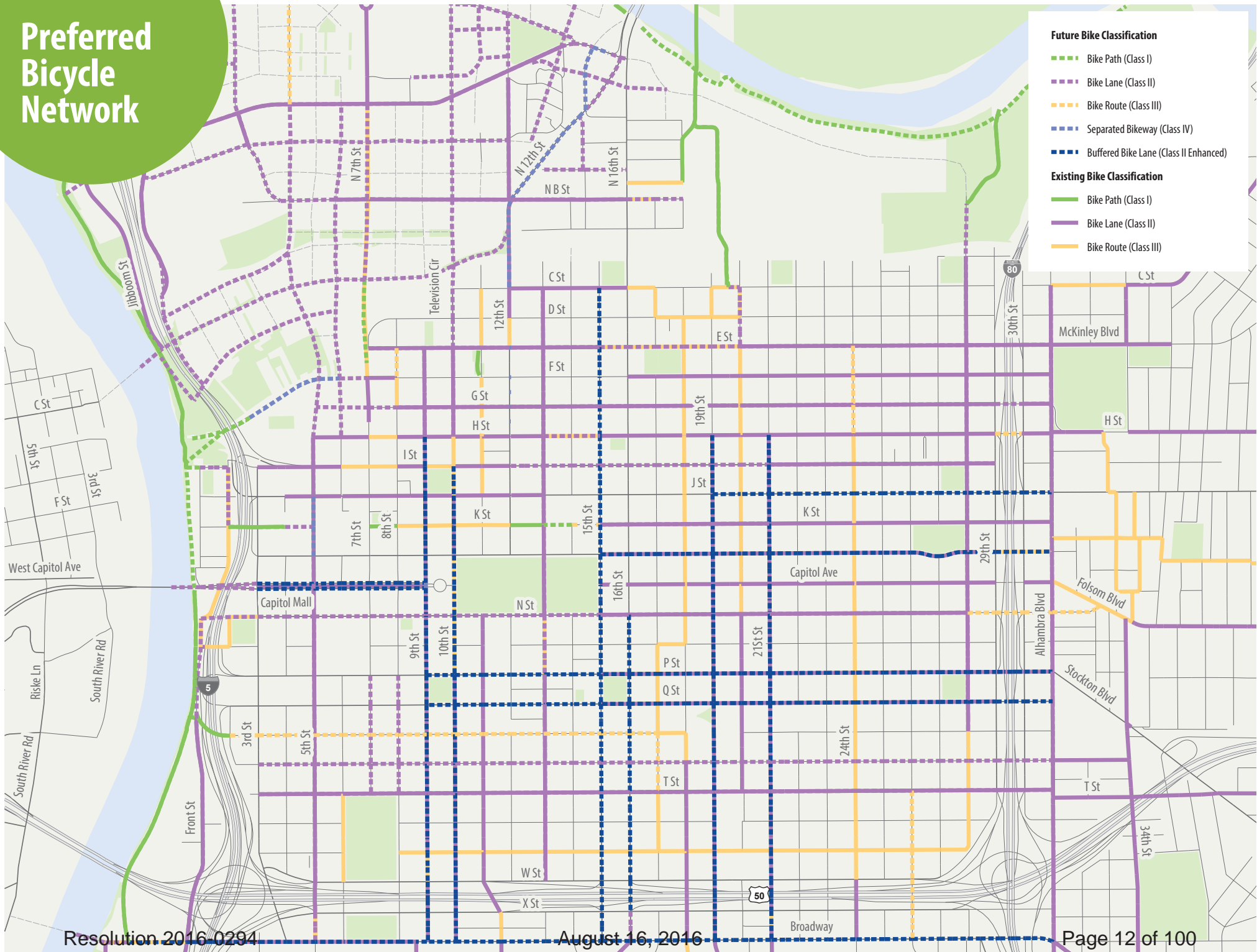
Preferred Bicycle Network

Future Bike Classification

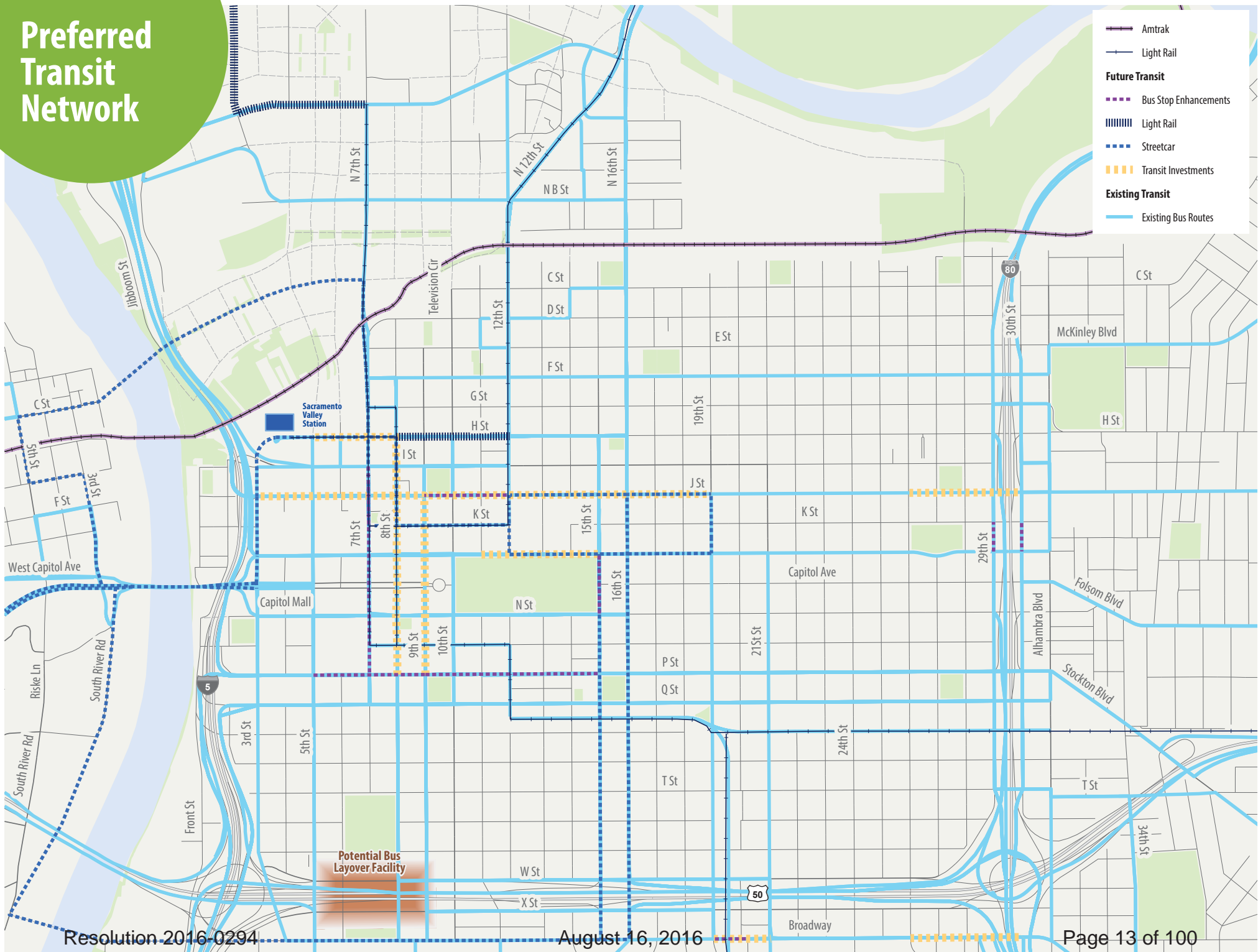
- Bike Path (Class I)
- Bike Lane (Class II)
- Bike Route (Class III)
- Separated Bikeway (Class IV)
- Buffered Bike Lane (Class II Enhanced)

Existing Bike Classification

- Bike Path (Class I)
- Bike Lane (Class II)
- Bike Route (Class III)



Preferred Transit Network





CONTEXT

GRID 3.0

Context

The Grid consists of an area of approximately 4.25 square miles, with numbered north-south streets starting from the west at the Sacramento River, and lettered east-west streets starting to the north at the Union Pacific Railroad tracks, which parallel the American River. Lettered and numbered streets on the Grid are spaced every 400 feet, and most portions of the Grid feature east-west running alleys located halfway between lettered streets, resulting in 200 foot north-south spacing of public roadways. These distances are easily traversed on foot, enhancing the Grid's walkability and pedestrian accessibility.

Within this area, comprised of existing districts such as Downtown, Midtown, Handle, R Street, and Broadway, as well as residential neighborhoods and the emerging Railyards and River District areas, all travel modes benefit from the ease of navigating the orderly pattern of uniformly spaced and named streets. Directions given on the Grid often consist of no more than the names of two cross streets, and some businesses on the Grid have even incorporated this level of simplicity into their names.



In addition to the ease of navigating the public street system, users also benefit from a high level of accessibility provided by the closely spaced streets. Moreover, the Grid provides a built-in redundancy, allowing for multiple potential travel routes between origins and destinations. This not only offers variety for trips within the area, but also provides for flexibility without significantly adding to overall trip lengths.

All users of the Grid experience these benefits, but the slower modes of travel experience them in greater proportions, as indirect travel paths may substantially increase an already lengthier trip time. People who walk and bike have a lower tolerance for circuitous travel paths, and the accessibility afforded by the Grid increases the desirability of this form of travel.

The Grid also serves as a resilient system that has the ability to spread out vehicle traffic as portions of the system experience congestion, whether caused by the daily rush of commuters, or a non-recurring event such as a traffic collision. Drivers benefit from the ability to easily adapt their travel path to a parallel route, lowering both the amount of delay experienced by the individual, as well as others using the system. The dispersion of vehicle traffic also benefits pedestrians and bicyclists, as fewer cars on a given street may increase their level of comfort.

Purpose

“The Grid needs to evolve to meet the City’s goals and complex future needs for the Central City.

Much of the historic perspective on roadway systems planning was centered on creating a hierarchical classification of roadway function focused upon vehicular capacity. Grid 3.0 takes a broader systems view in creating a future plan for the Central City’s transportation Grid that effectively accommodates more trips using multiple travel modes.

Designing individual roadways to meet the demands and expectations of all travel modes poses a difficult challenge, and doing so often results in a street serving all modes in a less than desirable fashion. To meet the complex future needs of the Central City, Grid 3.0 identifies enhancements to the Grid through a layered network perspective. In a system of layered networks, priority or enhanced facilities are identified for particular modes on different segments of the Grid to provide a safer and more efficient system.

FUTURE NEEDS FOR THE CENTRAL CITY

- » **Accommodate planned growth**
- » **Create opportunities for economic development**
- » **Accommodate new and enhanced gateways**
- » **Complete the bicycle network and enhance the pedestrian network**
- » **Coordinate transit network expansion and operation**
- » **Manage travel and parking demand**

Needs developed based on stakeholder input

Grid 3.0 identifies a future transportation network and a list of projects needed to provide improved mobility and access, protect residential neighborhoods, optimize the interaction of transportation modes, provide an appropriate amount of parking at the appropriate price levels, and provide safe and efficient connections to the surrounding areas.

GRID 3.0 OBJECTIVES

- » Define Which Modes Should Have Priority On Key Street Segments
- » Modify Downtown Gateways to Sustain Regional Network Access
- » Create Opportunities for Economic Development
- » Complete the Bicycle Network in Downtown to Accommodate a Wide Range of User Abilities
- » Provide an Enhanced Pedestrian Network, Especially Where Multiple Modes Interconnect
- » Coordinate Transit Network Expansion and Operation to Improve Efficiency and Frequency
- » Improve Transportation System Reliability
- » Manage Travel and Parking Demand

PROJECTS & PROGRAMS CONSIDERED

- » Pedestrian Enhancements
- » New Bicycle Facilities
- » Transit Priority Streets
- » Complete Street Projects
- » Alley Activation
- » Gateway Improvements
- » Parking
- » Wayfinding Plan

Relationship to Other Plans

Numerous planning efforts have been completed over the past 15 years that set the stage for Grid 3.0 including the 2035 General Plan, the Central City Community Plan, the City of Sacramento Pedestrian Master Plan, the City of Sacramento Bikeway Master Plan, the City of Sacramento Streetcar System Plan, the I-5 Riverfront Reconnection Study, the Railyards Specific Plan, the River District Specific Plan, the Docks Specific Plan, the Regional Transit Vision Plan, and the Downtown Sacramento Transit Circulation and Facilities Plan.

Grid 3.0 seeks to update and unify the recommendations presented in these plans, and present a coordinated plan of transportation infrastructure improvements for the Central City. The improvements will also be integrated into current and future planning efforts, several of which are described below.

The preferred bicycle network for the Central City area will be incorporated into the City's Bicycle Master Plan.

Grid 3.0 projects will be incorporated into the circulation system identified in the Downtown Specific Plan, an effort focused upon streamlining residential growth in the Central City and reaching the Mayor's goal of 10,000 new housing units.

Grid 3.0 projects will complement future transportation improvements identified in the Railyards Specific Plan, River District Specific Plan, and Docks Specific Plan – all of which cover portions of the Central City. The approved plans for each of these areas are incorporated into the Grid 3.0 transportation improvements.



November 2015 Press Conference



November 2015 Press Conference



December 2014 Stakeholder Meeting



November 2015 Community Workshop

Community Engagement

Grid 3.0 began at the height of several high visibility public discussions centered on mobility issues in Sacramento, including biking on sidewalks, public funding of streetcar, circulation around Golden 1 Center, initiating a bike share program, and the impacts of transit. The Grid 3.0 project team implemented an 18-month public engagement program using traditional and innovative strategies that created a successful collaboration with residents, business and property owners, major employers, and community-based organizations.

From the start, Grid 3.0 aimed to be more than just a transportation study, but a collaborative planning effort that resulted in an actionable, community-based plan. A major focus of the plan was implementing a robust community engagement program with traditional and innovative techniques that allowed the project team to work collaboratively and in-depth with diverse key stakeholders to learn, study, and create transportation solutions, and to garner the knowledge of the community through impactful crowdsourcing. Key elements of this highly coordinated community engagement plan included:

- Stakeholder Advisory Committee
- Technical Advisory Committee
- Grassroots guerrilla marketing campaign including extensive social media, and an interactive website

- Project posters and sidewalk chalk art
- Media relations, with a series of informational videos
- Online map-based community engagement surveys
- Stakeholder dialogue series
- Community workshop that allowed for additional online engagement

Throughout the 18-month effort, the community engagement process garnered attention and community interest, created an informed citizenry, and allowed diverse stakeholders to problem solve in an open and cooperative environment.

The stakeholder advisory committee consisted of more than 40 business and commercial property owners, residents, numerous diverse advocacy groups, and other community-based organizations. The project team facilitated five stakeholder dialogues about current challenges and improvement opportunities on the grid, identifying ways to create safe, efficient and enjoyable travel experiences for all modes within the context of community values and current and future land uses. The sessions created an opportunity to develop a shared understanding of the plan's objectives and community goals and also allowed for stakeholders with multiple viewpoints to sit at the same table and discuss their often differing perspectives. This not only provided valuable information for the plan, but also allowed stakeholders to educate each other and develop a common understanding of goals and objectives. This collaborative effort helped to inform the process of developing reality-based transportation solutions.

In addition to stakeholder advisory committee meetings, the project team hosted two focused meetings for business and property owners on the grid. Collaborating with the Midtown Business Association, the project team hosted a focused discussion on J Street in Midtown. The discussion allowed the project team and business owners to discuss trade-offs associated with potential changes to J Street. Following a community survey regarding potential locations to activate alleys on the grid, the project team hosted a focused discussion about alley activation with business owners. The discussion not only provided feedback for the plan, but also allowed business owners to discuss potential challenges and opportunities associated with alley activation.

A compelling public information campaign was developed to engage the community-at-large and educate the public on study objectives and best practices.

Community leaders participated in a six part informational video series featuring the transportation planning process, innovative ways to improve the transportation grid, and reasons and ways to get involved. Each video served as a call to action for a specific engagement strategy, such as participating in an online community survey or attending a meeting. The project website hosted four interactive, map-based online community engagement surveys to collect feedback on existing conditions and desired improvements to downtown for different modes of transportation. These surveys received nearly 700 responses from the community. A robust social media campaign made for additional

virtual dialogue and allowed the project team to share up-to-date information with more than 550 followers.

Near the conclusion of the study, the team held a community workshop to preview the draft transportation networks and demonstrate how their feedback shaped the plan. Despite inclement weather, more than 100 community members attended the workshop. The meeting was also live streamed through Periscope for those who could not attend in person. The open house featured graphic illustrations of all community feedback received through surveys, emails, and website responses as well as technical analysis results and stations to view the informational videos.

By incorporating the community's input throughout the planning process, the recommended improvements in Grid 3.0 reflect the perspectives and interests of the Sacramento community.



VISION

Vision

“The overarching goal of Grid 3.0 is to define an integrated package of transportation improvements that will enable the Central City to retain and reinforce its role as the Region’s primary hub as it experiences significant growth in housing, employment, entertainment, sports, and cultural uses over the next two decades.

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Grid 3.0 was developed with a layered network approach that looks beyond the individual components of the transportation network and focuses on the effectiveness of the system as a whole.

Grid 3.0 defines a transportation network for the Central City that provides improved access both internally and to surrounding areas, improves the interaction of transportation modes, protects residential neighborhoods, and supports an appropriate amount of parking at the appropriate price levels. Long-term economic benefits will be realized by matching transportation investments and policy with expected growth.

The transportation system will evolve to better serve multiple travel markets and modes with the implementation of Grid 3.0. Gateway and other key transportation projects will strengthen linkages to the regional network while enhancing accessibility to entertainment, cultural, and shopping venues. These improvements are needed to facilitate the Central City’s ultimate vision: an area that offers high-density living, premier office space for well-

CORE PRINCIPLES

- » **Establish a multimodal network that serves people who travel by walking, bicycling, taking transit, and driving**
- » **Create layered networks that serve all modes of travel**
- » **Provide a high degree of connectivity with multiple routing options for all users**
- » **Recognize the role of roadways as public spaces that help shape urban environments**
- » **Provide a network density appropriate to the land uses and urban forms that are served**
- » **Consider environmental, social and economic issues**

established professional services linked to the state as well as creative entrepreneurs, intra-regional transportation access, and a vibrant recreation and culture scene.

The Metropolitan Transportation Plan/Sustainable Communities Plan (MTP/SCS) includes \$100 million to fund improvements to the Central City transportation network. Grid 3.0 identifies and prioritizes packages of transportation improvements so they can be programmed and implemented in a phased manner, and provides recommendations on how to leverage the \$100 million in funds identified in the MTP/SCS with other federal, state, and local resources.

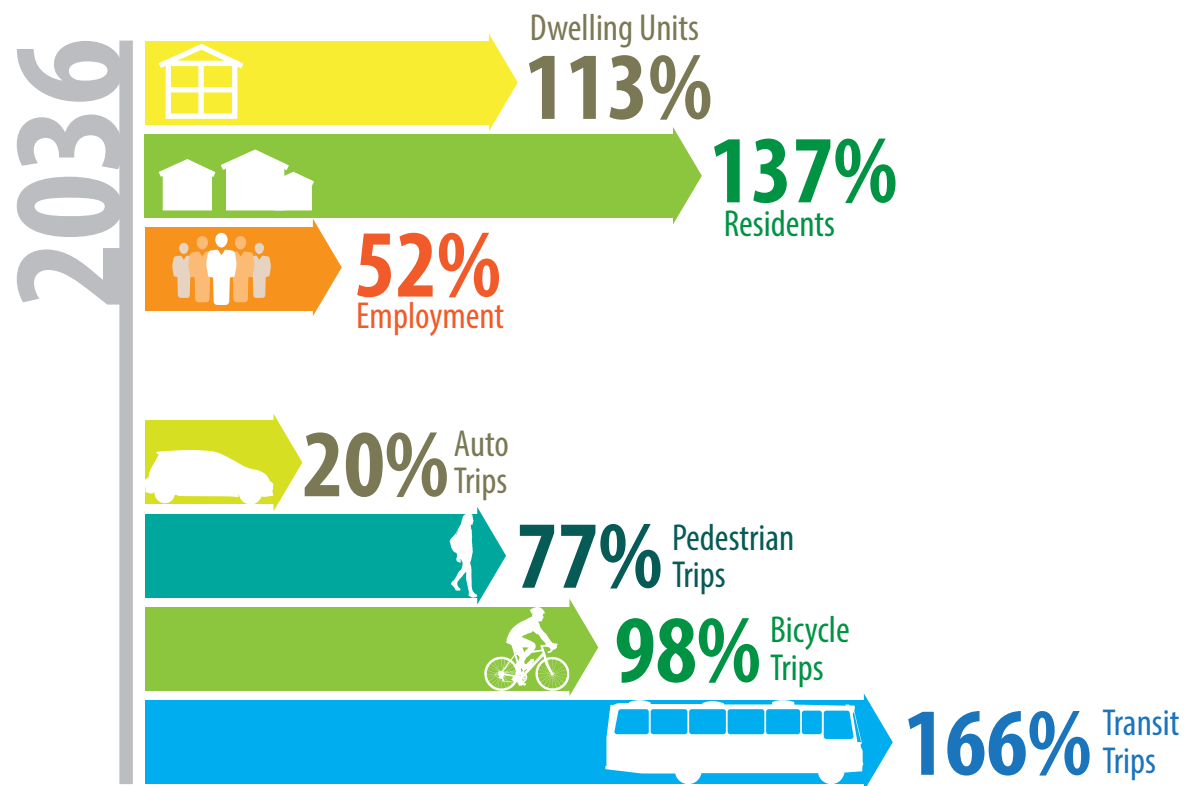
Note that the Preferred Networks comprise the ultimate set of improvements included in this plan; however, the City will implement these improvements in phases over many years. For this reason, 10-year investment goals are presented throughout this document, which are comprised of higher priority projects targeted for near-term implementation.

How will Grid 3.0 serve future growth in the Central City?

The Central City is growing and Grid 3.0 creates a balanced and integrated transportation system intended to support travelers. Forecasts indicate that the Central City will experience substantial growth over the next two decades including nearly 23,000 new dwelling units, over 37,000 new residents and 45,000 new employees by 2036.

With new residents & jobs comes a higher demand on the transportation system and also a higher percentage of short distance trips. Projections show that the growth in transit, walk, and bike trips will far outpace growth in automobile trips as the Central City matures.

How will the Central City change over the next 20 years?



GRID 3.0

What are the priorities of Grid 3.0?

Creating a safe and comfortable environment for pedestrians is a top priority for Grid 3.0, as all trips on the network start and end with a pedestrian component. The importance of pedestrian travel in Sacramento is illustrated by the fact that the City of Sacramento was one of the first in the state to complete a Pedestrian Master Plan in 2006. The Plan identified \$800 million in pedestrian improvements throughout the city. A recent action by the City Council to authorize the preparation of a Vision Zero Action Plan, the goal of which is to eliminate traffic deaths and severe injuries, reinforces the importance of safe pedestrian travel.

Other priorities that are described in more detail below are to complete the bicycle network, maintain auto access on key corridors, and support an efficient and reliable transit network.

How will Grid 3.0 complete the bicycle network?

Grid 3.0 proposes new bicycle facilities on 185 blocks in the Central City and an expanded Low Stress Bicycle Network, at a total cost of approximately \$18 million. More than half of the new bicycle facilities will be accomplished through removal of a travel lane. The other half of the bicycle investments involve enhancing existing on-street bike lanes to create buffered lanes and adding new bike paths (primarily along the Sacramento and American Rivers).

What is the role of one-way streets and couplets in Grid 3.0?

Although the Grid is a multimodal environment designed to comfortably accommodate pedestrians, bicyclists, and transit riders, automobiles are projected to remain a substantial part of the transportation mix for years to come – particularly for commute trips to/from the Central City. One-way streets provide for efficient automobile travel by allowing vehicles to pass one another and facilitating coordinated traffic signal timing plans. Grid 3.0 maintains a backbone of one-way arterial streets to handle vehicle traffic, especially commute trips. The goal is to efficiently balance the goals of all travel modes and, just like today, to allow these backbone streets to continue to carry the vast majority of the trips on the Grid.

One-way streets function best as couplets, or two closely spaced one-way streets traveling in opposing directions. This allows for balanced directional flows, and helps to provide for an intuitive system that is more easily navigable to drivers, particularly those that lack familiarity with the area. Maintaining ease of travel in this manner is especially important because the Central City serves as the regional center for business, tourism, and entertainment.

One-way streets and couplets are most beneficial in the vicinity of freeway on- and off-ramps as these provide high volume gateways in and out of the Central City. These facilities are also more beneficial in areas where there is less redundancy in the Grid (e.g., “superblocks”) as they help to compensate for missing streets by providing enhanced throughput on the remaining roadways.

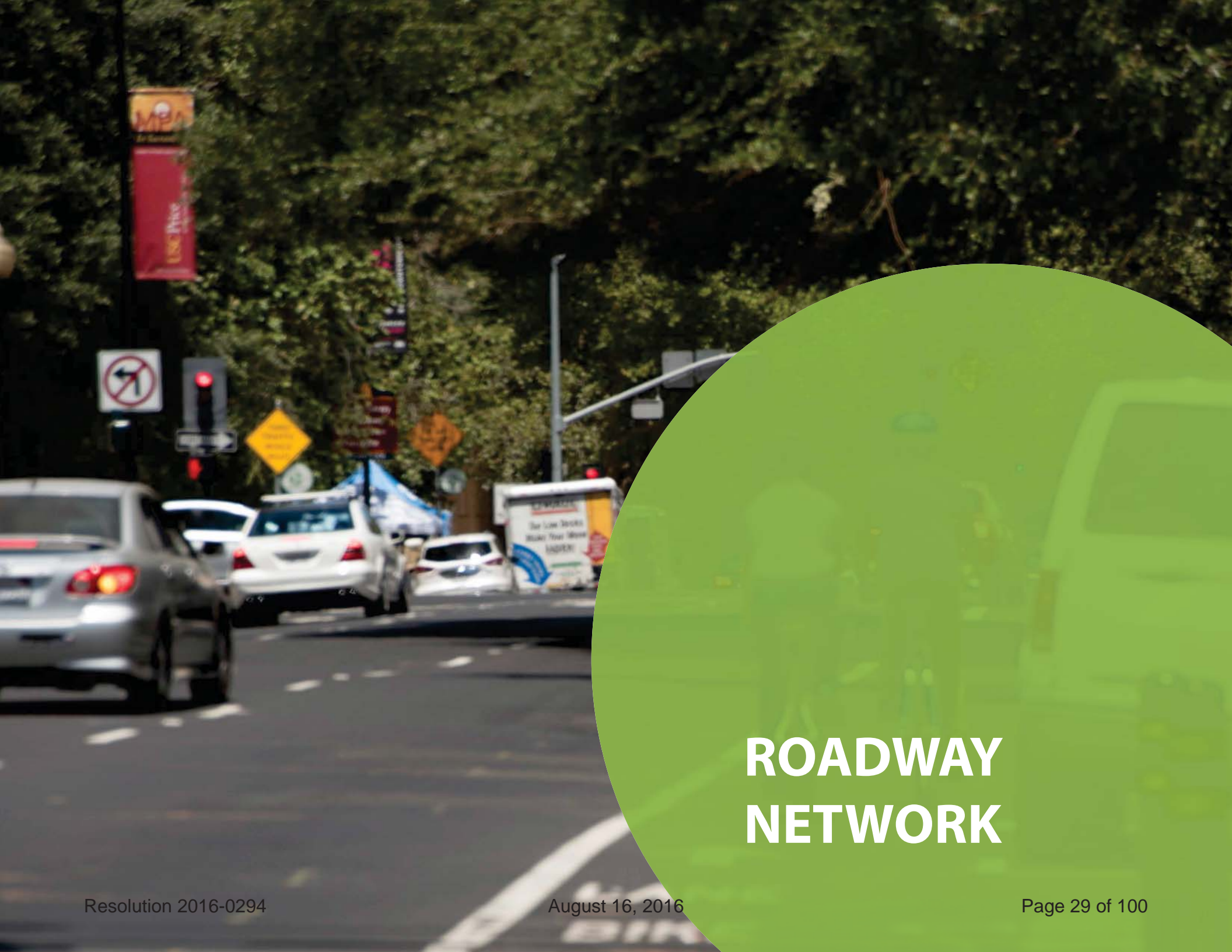
How will dedicated transit lanes function and when are they needed?

Rail and bus travel will serve a significant share of new Central City travel; almost 30 percent of all new trips over the next two decades. As such, facilitating efficient and reliable transit travel represents a key strategy in Grid 3.0. Transit is highly efficient at moving large groups of people as it allows for higher person throughput by carrying multiple people in one vehicle.

By 2036, the number of rail vehicles and buses entering the Grid during the peak hour is projected to increase by 66 percent and 75 percent, respectively. This level of service will significantly increase rail and bus travel on streets such as 5th Street, 7th Street, 8th Street, H Street, J Street, L Street, N Street, and P Street.

Transit lanes help to ensure that buses and future streetcars travel efficiently through the Grid, and are not caught in congestion. This improves on-time performance, reliability, and travel speed of transit, which all help transit to operate more efficiently and make it more attractive to riders.

The dedicated transit priority lanes are proposed to be “right side” travel lanes striped in red. This recommendation would not be implemented until the actual number of rail and/or bus vehicles occurring in peak periods increases to a level that justifies a dedicated lane. Vehicles will be prohibited from using these dedicated transit lanes unless they are turning right at an upcoming intersection or accessing a parking facility on the right side of the street. The restrictions for the dedicated transit priority lanes may be limited to peak hours during initial implementation periods.



ROADWAY NETWORK

Roadway Network



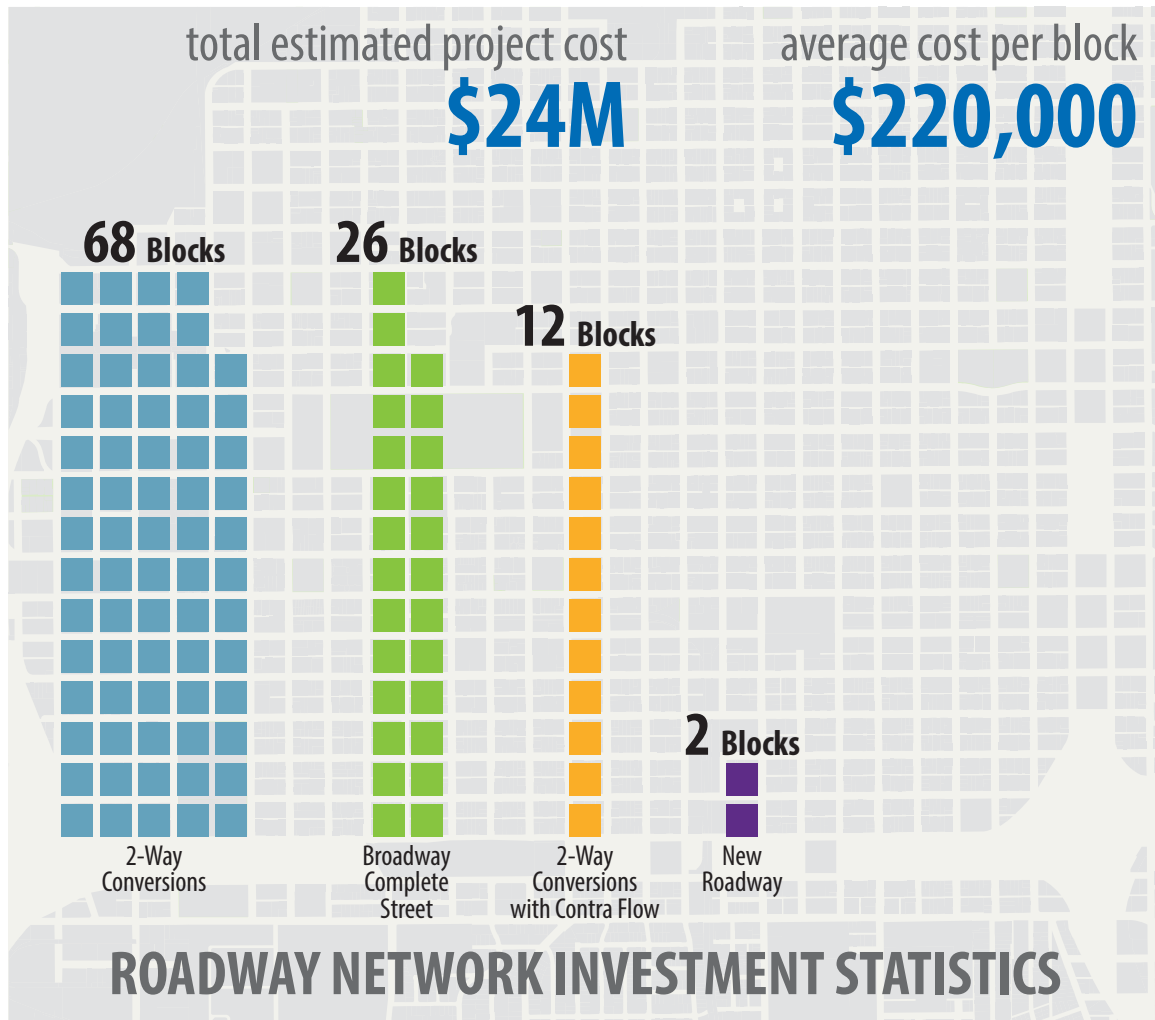
The 2035 General Plan calls for the provision of “complete streets that balance the diverse needs of users of the public right-of-way”. It also calls for the development of “pedestrian and bicycle-friendly streets” in areas with high pedestrian activity levels such as the Central City.

The Grid has significant gaps in the bicycle network. Future growth in population and employment will drive significant increases in transit ridership and pedestrian activity levels. The goal of the roadway network modifications is to address these existing and future needs, while preserving major one-way commute routes for auto travel.

Preferred Roadway Network

The projects described in the preferred roadway network primarily involve re-striping existing roadways. A few blocks of new roadway are also included. The roadway network projects accomplish the following objectives:

- Maintain a core system of one-way streets that will serve commute travel by autos
- Fill many of the gaps in the existing bicycle network by adding new facilities, and add dedicated transit lanes through travel lane reductions and conversions



Key Projects/Changes in Roadway Network

The projects described below will bring some of the most dramatic changes to the roadway network. A more detailed description of the roadway project types is provided at the end of this section.

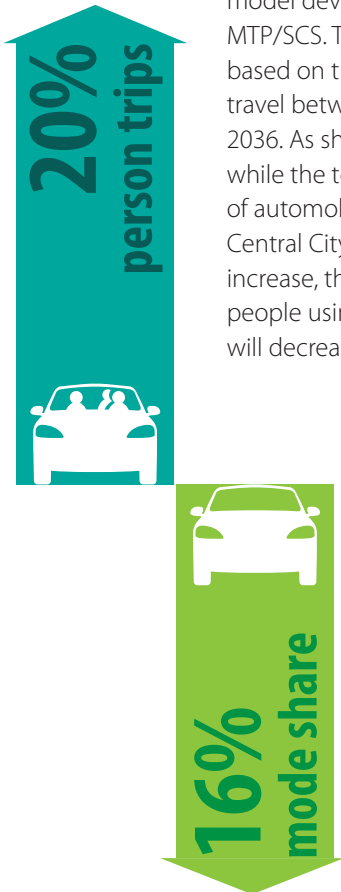
- 16th Street 3-lane to 2-lane conversion between N Street and X Street to allow for the installation of on-street bicycle lanes. Removing one vehicle travel lane on 16th Street allows for a better experience for people who want to walk and bike. On-street bicycle facilities improve the safety and comfort of bicyclists, and fewer vehicle lanes shortens the crossing distance for pedestrians at intersections.
- J Street 3-lane to 2-lane conversion between 19th Street and 30th Street to allow for the installation of on-street bicycle lanes. Removing one vehicle travel lane on J Street allows for a better experience for people who want to walk and bike. On-street bicycle facilities improve the safety and comfort of bicyclists, and fewer vehicle lanes shortens the crossing distance for pedestrians at intersections.
- 5th Street two-way conversion between H Street and J Street, as well as between L Street and X Street, to provide a continuous two-way street extending from the Railyards to Land Park. This will improve both vehicular and

GRID 3.0

bicycle access in the western portion of the Central City, and allow for the creation of a continuous bi-directional bicycle corridor that will provide access to the core of the Central Business District and the Golden 1 Center.

Vehicle Travel Performance Measures

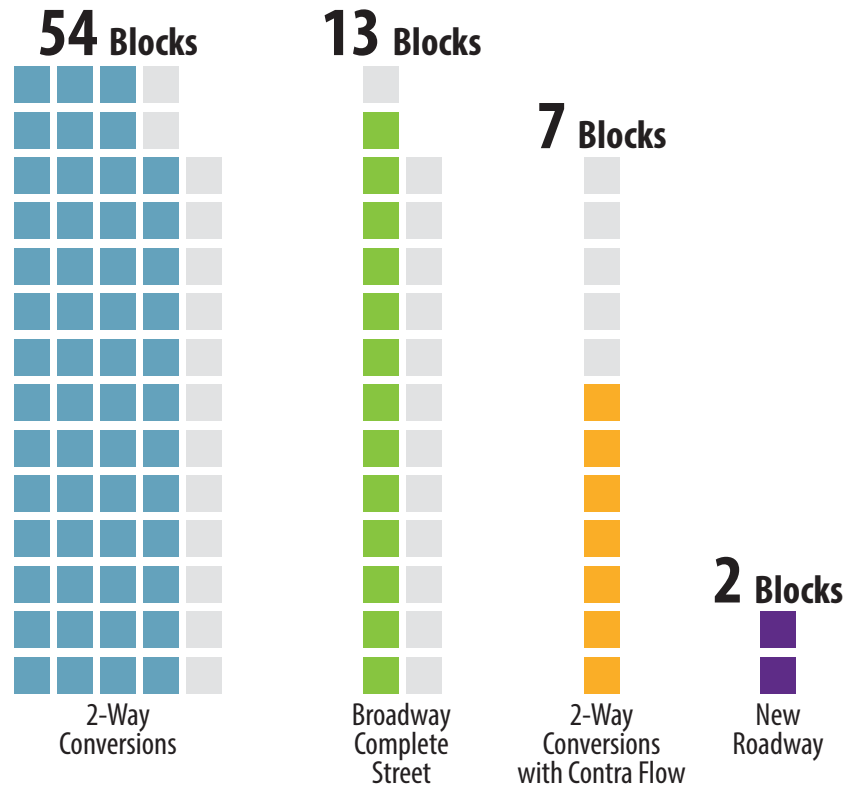
The following performance measures are based on travel data derived from SACOG's regional travel model developed for the MTP/SCS. The metrics are based on the change in travel between 2012 and 2036. As shown below, while the total number of automobile trips in the Central City will continue to increase, the percentage of people using automobiles will decrease.



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Prioritization of Roadway Network Projects

The 10-year investment goal is to implement approximately \$15 million in roadway improvements.



10 YEAR ROADWAY INVESTMENT GOAL **\$15M**

Description of Roadway Project Types

The preferred roadway network is shown at the end of this section. A description of roadway project types is provided below.

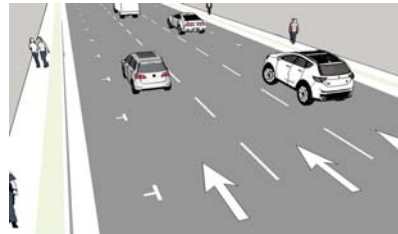
Two-Way Conversions

The two-way conversion projects involve transforming one-way streets with three travel lanes to two-way flow. The reduction from three to two travel lanes allows for the provision of on-street bike lanes on streets that currently have no bike facilities.

The conversion projects can be costly as they may require installation of new traffic signal equipment to provide indications for the direction of travel that is currently not served (i.e., opposition direction of existing one-way flow). If the street crosses the existing Union Pacific Railroad tracks that run between 19th and 20th Streets, new railroad crossing gates will be required. Conversion projects also require new signing and pavement striping.

Two-Way Conversions with Third "Contraflow" Lane

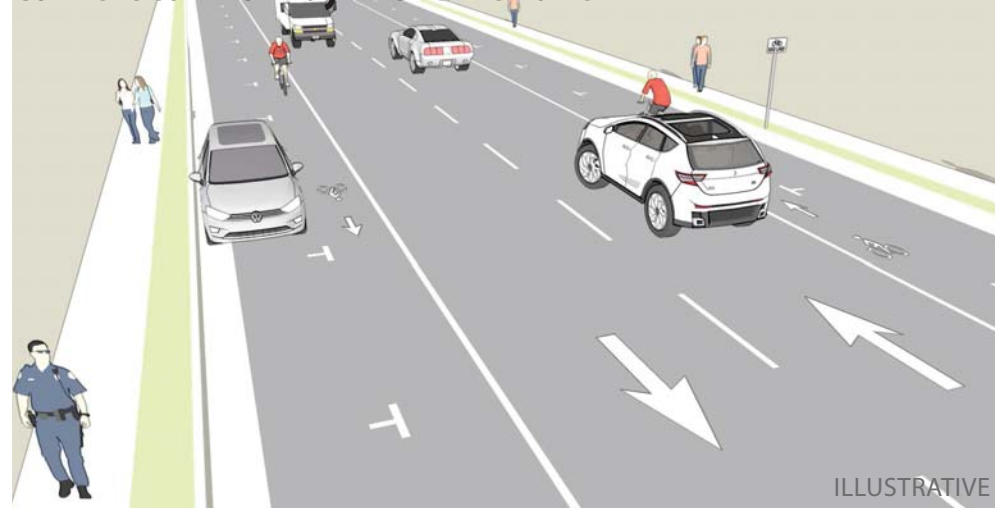
These project types are similar to the above two-way conversions of one-way streets, but differ in that they maintain a total of three travel lanes. Two travel lanes are maintained in the direction of the existing one-way travel flow, while one lane is converted to provide travel in the opposite direction. The purpose of these project types is to increase vehicle access by providing two-way flows. Since a lane reduction is not included in this project type, new bicycle or transit lanes are not included.



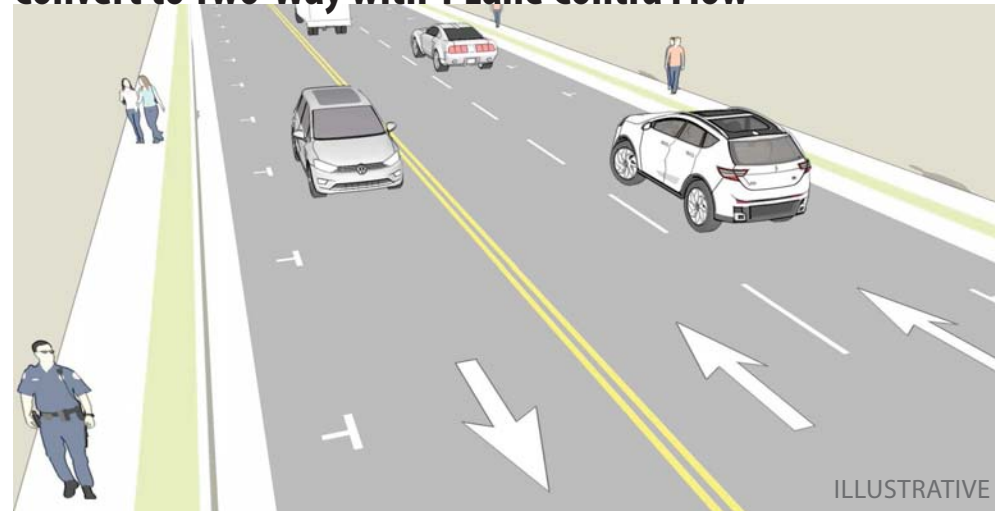
Two-Way Conversion

Convert one-way street to two-way travel.

Convert to Two-Way with Bike Lane



Convert to Two-Way with 1 Lane Contra Flow



GRID 3.0

New Roadways

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

One-Way Street Couplet

Provide new one-way single lane connections between X Street and Broadway adjacent to Highway 99.



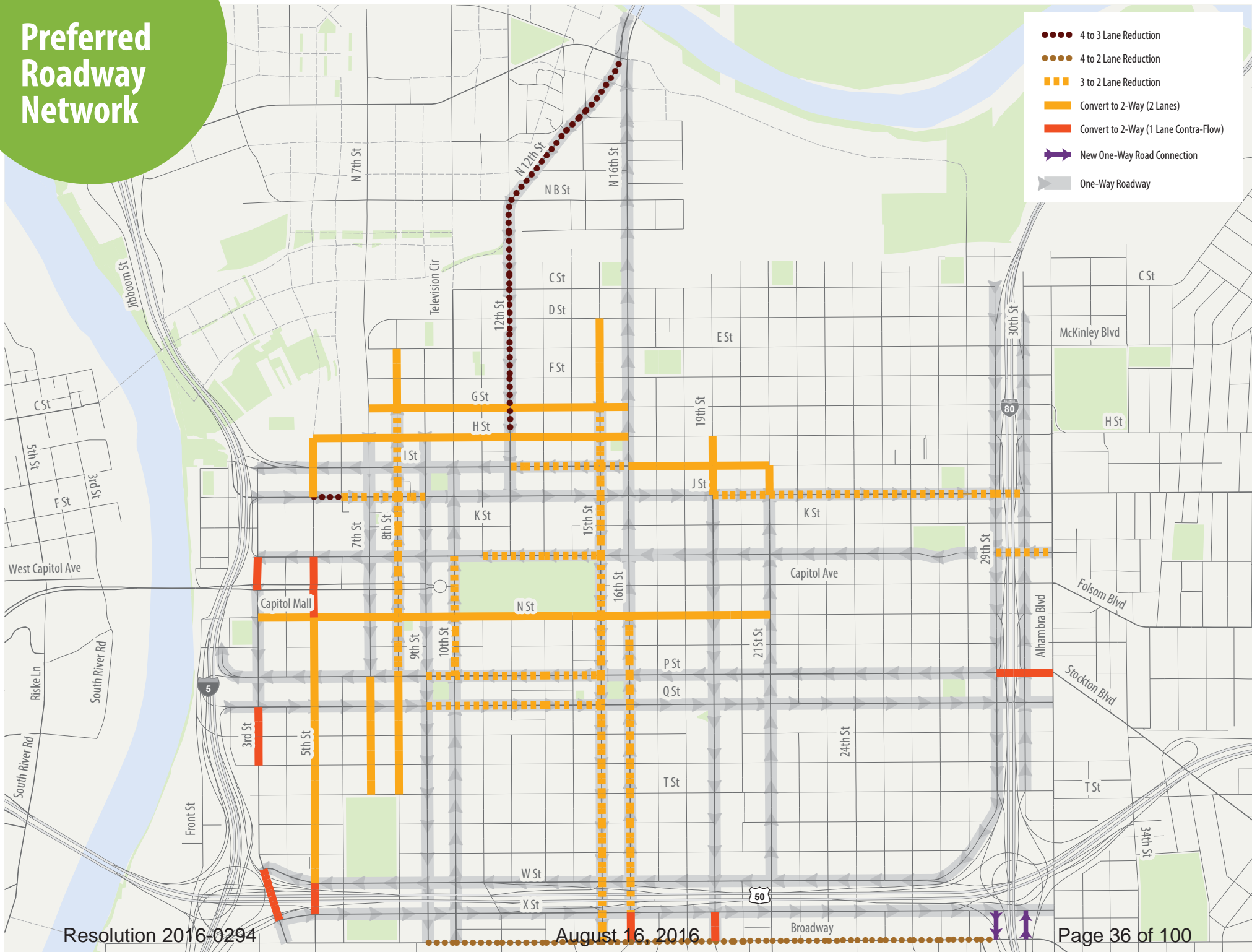
Broadway Complete Street Project

The Broadway Corridor is currently an automobile-dominated arterial with sidewalks of varying widths, complicated pedestrian crossings, and discontinuous bike lanes creating a less than optimal environment for anyone attempting to travel without a car. The Broadway Complete Streets Project will enhance comfort and safety for all travel modes, especially pedestrians and bicyclists.



Preferred Roadway Network

- 4 to 3 Lane Reduction
- 4 to 2 Lane Reduction
- 3 to 2 Lane Reduction
- Convert to 2-Way (2 Lanes)
- Convert to 2-Way (1 Lane Contra-Flow)
- ➡ New One-Way Road Connection
- ➡ One-Way Roadway



PARKING ON THE GRID

The supply, location, pricing, and operation of parking are important elements in the vitality and livability of the Downtown and Central City. Over the next twenty years, parking demand is expected to increase, not only mid-day on weekdays but also during evenings and weekends, as land use changes transform the Central City from an employment-oriented district to a mixed-use area with regional entertainment.

In concert with General Plan policies and the Central City Parking Master Plan, the City is implementing properly managed parking to assist economic development, improve the quality of life in neighborhoods, and address environmental concerns, all at the same time. Parking management can direct and control parking supply and demand to best balance the competing needs and desires of City residents, workers, business owners, and visitors. The key to management is the prioritization of parking by time and location, concentrating on the different types of parkers (e.g., Downtown workers, shoppers, event attendees, residents, tourists, delivery vehicles, etc.) to provide parking at an appropriate cost and location for each distinct group. Emerging smart parking technologies can facilitate that management and improve user satisfaction.

Strengths/Opportunities

Parking data shows that there is ample existing parking supply, in excess of demand in most areas of the Central City during most time periods. There are a number of emerging smart parking technologies:

- User interfaces (apps, online reservations, electronic wayfinding, etc.)
- Real-time data supporting parking management decisions, including the dynamic parking structure the City will be implementing

The City is working to facilitate sharing of parking supply by time of day for different user groups (e.g., daytime employees, evening event attendees).

Challenges

- Accommodating the automobile (parking) vs. encouraging non-automotive modes.
- Providing ample parking (at a reasonable cost) to encourage / support business and economic development.
- Acceptability of increased parking costs as demand increases relative to supply.
- Management of the system on a 24/7 basis, including expanding on-street metered areas and times.

- Public vs. private sector roles in parking supply and operations.
- Sufficient revenue to maintain parking structures and build new ones
- State laws requiring “free” unlimited parking for disabled placard holders.
- Preferential parking programs, such as EV parking / charging.
- Flexible parking management vs. City codes / regulations / review

In the future, it is anticipated that increases in the supply of parking will lag behind demand. The amount of on-street parking is essentially capped, and recent zoning changes require fewer parking spaces for development than what has been historically provided. Some existing and future demand will be ameliorated by shifts to non-automotive modes (transit, walk, bike), influenced by expanded more residences in the Central City, mixed-use development and the recommended improvements in alternative mode networks in Grid 3.0. The intent of Grid 3.0 is to provide additional on-street space for bicycles and transit in the Central City without a significant decrease in the City’s on-street parking supply.



PEDESTRIAN NETWORK

Pedestrian Network

“The 2035 General Plan calls for making Sacramento a model pedestrian-friendly city – the “Walking Capital.” An element of every trip made on the grid starts and/or ends on the pedestrian network regardless of whether you are a commuter, resident, or visitor. The dense urban environment and small block scale of the grid provide ample opportunity for short trips that are best accomplished on foot.

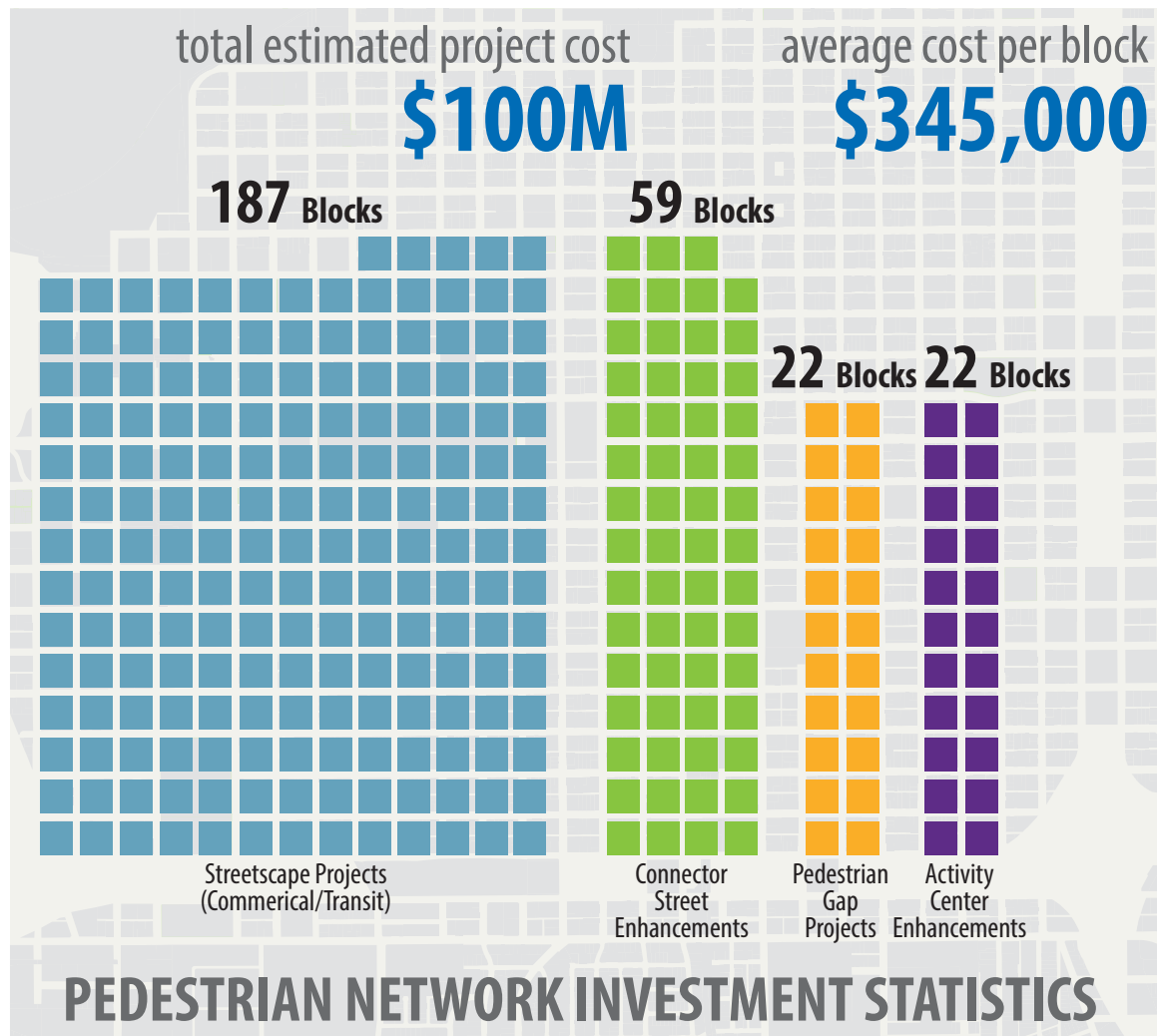
The Central City is already a highly walkable area due to its built-in connectivity, extensive sidewalk coverage, pedestrian-friendly traffic signal timings (i.e., short cycle lengths with automatic pedestrian walk signals that don’t require pedestrians to push a button to cross the street), and plethora of destinations within a short walking distance of one another.

An increased investment in pedestrian facilities is vital to serve the growing number of new residents and employees. SACOG estimates there will be almost 38,000 new residents and 45,000 new employees in the Central City by 2036, resulting in a nearly 80 percent increase of pedestrian trips.

Preferred Pedestrian Network

The projects described in the preferred pedestrian network will add new facilities and enhance existing ones, accomplishing the following objectives:

- **Streetscape** projects for commercial/transit streets to improve conditions for walking
- **Connector Street Enhancements** to improve connections between the Central City and surrounding neighborhoods
- **Pedestrian Gap Projects** to provide new sidewalks where they don’t currently exist
- **Activity Center Enhancements** to provide additional sidewalk capacity in areas with high pedestrian volumes



Key Projects/Changes in Pedestrian Network

A summary description of some of the key elements of the preferred pedestrian network is provided below. A more detailed description of the pedestrian project types is provided at the end of this section.

- New sidewalks and crosswalks on the east side of 29th Street to enhance pedestrian network connectivity and access to/from destinations including the Sutter Square Galleria Center, Sutter General Hospital parking facilities, and the 29th Street Light Rail Station.
- Wider sidewalks and crosswalks on key streets surrounding Golden 1 Center to serve high pedestrian flows before and after events.
- Improvements to freeway undercrossings to provide more inviting gateways that better accommodate pedestrian and bicycle trips between the Grid and surrounding neighborhoods – including East Sacramento, Curtis Park, and Land Park. Freeway undercrossing improvements will consist of multiple strategies, including enhanced lighting, new/enhanced crosswalks at adjacent intersections, buffered bicycle lanes, and public art. All of these features are aimed at creating a more inviting gateway for non-automobile trips and stitching together neighborhoods separated by freeways.

GRID 3.0

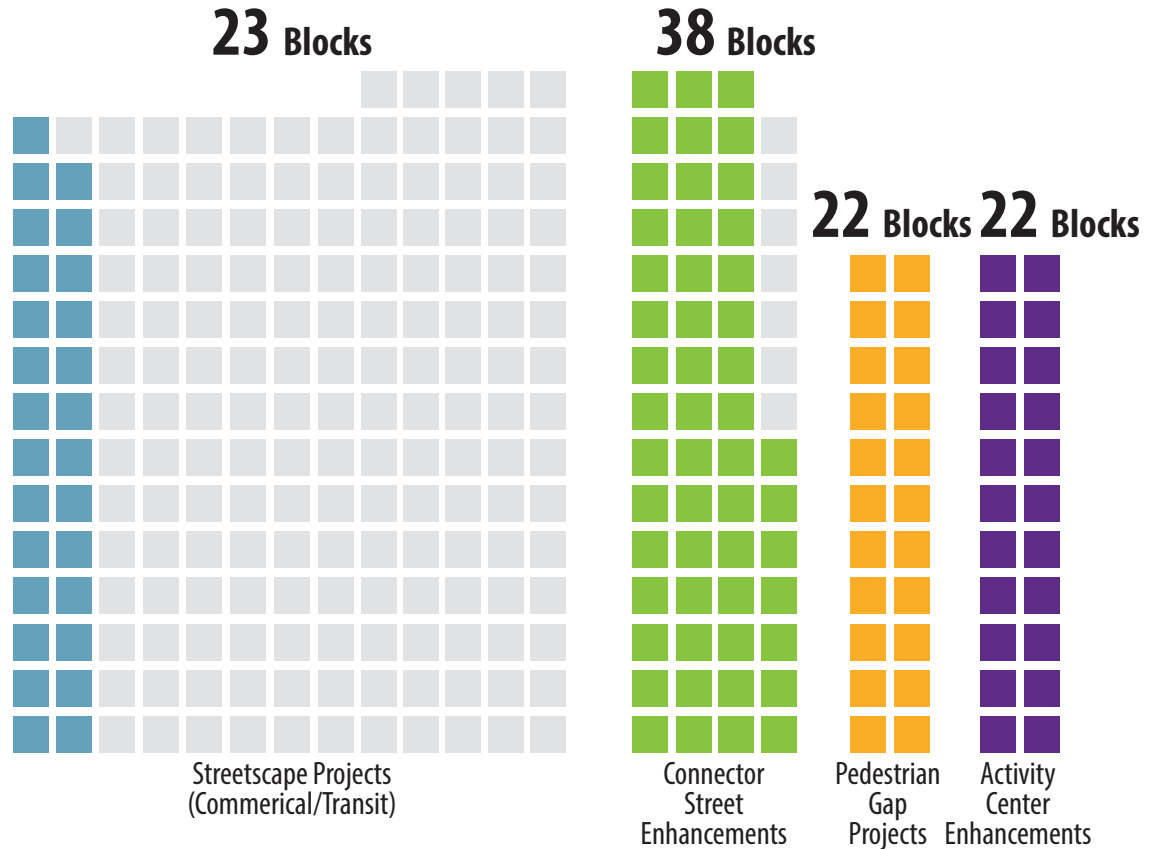
Pedestrian Travel Performance Measures

The following performance measures are based on travel data derived from SACOG's regional travel model developed for the MTP/SCS. The metrics are based on the change in travel between 2012 and 2036.



Prioritization of Pedestrian Projects

The 10-year investment goal is to implement approximately \$42 million in pedestrian improvements.



10 YEAR PEDESTRIAN INVESTMENT GOAL **\$42M**

Area-Wide Pedestrian Strategies

Pedestrian-Scale Street Lighting

The extent of pedestrian-scale street lighting varies substantially by neighborhood across the Grid. Large portions of the Grid currently lack pedestrian-scale street lighting, resulting in dark sidewalks at night between intersections. Grid 3.0 aims to cover the entire Grid with pedestrian-scale lighting to improve safety and create a more inviting environment for pedestrians after dark.

The estimated cost of street lighting improvements totals \$15 million (2015 \$).

Description of Pedestrian Project Types

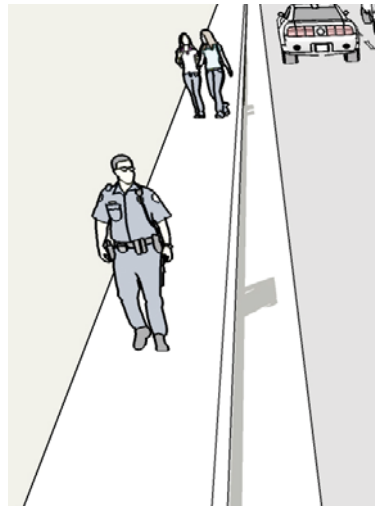
The preferred pedestrian network is shown at the end of this section. A description of the pedestrian project types is provided below.

Streetscape Projects (Commercial/Transit Streets)

The streetscape projects will be developed in the context of the individual street purpose and neighborhood setting. In general terms, the goal is to create streets that are dynamic public spaces that serve the needs and priorities of the community.

The desired outcome is a network of streets that provide safe pedestrian facilities including wider sidewalks and plazas at major activity locations and intersection crossings, enhanced crosswalk markings, new bicycle facilities as part of a comprehensive network, close integration with transit, and managed on-street parking.

Resolution 2016-0294



The streetscape projects are along segments of major corridors such as Capitol Mall, the J/L Street couplet, R Street, 3rd Street, the 9th/10th Street couplet, 12th Street, the 15th/16th Street couplet, and the 19th/21st Street couplets.

The streets will be designed to improve pedestrian safety and comfort by encouraging appropriate vehicle travel speeds. Environmentally sustainable design practices will be followed.

Streetscape Projects

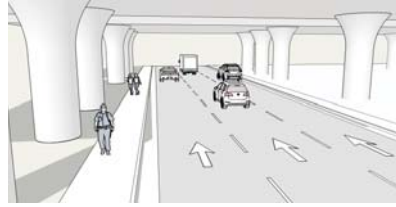
Wide variety of investment strategies targeted primarily along commercial streets. Strategies may include improved lighting, street furniture, widening of sidewalks, improved landscaping, crosswalk enhancements, etc.



GRID 3.0

Connector Street Enhancements

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



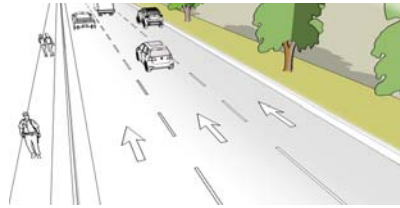
Connector Street Enhancement

Improve connections between the Central City and surrounding neighborhoods, particularly across perceived barriers such as freeways. Strategies may include public art, improved lighting, wider sidewalks and crosswalk enhancements.



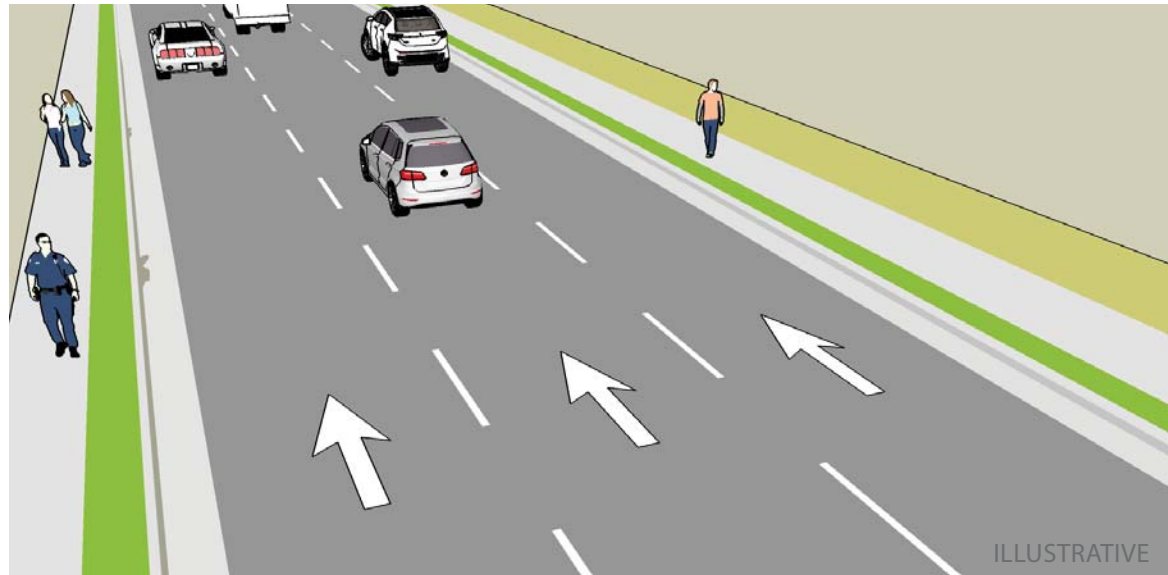
Pedestrian Gap Project

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



Gap Projects

Provide new sidewalks where they don't currently exist



GRID 3.0

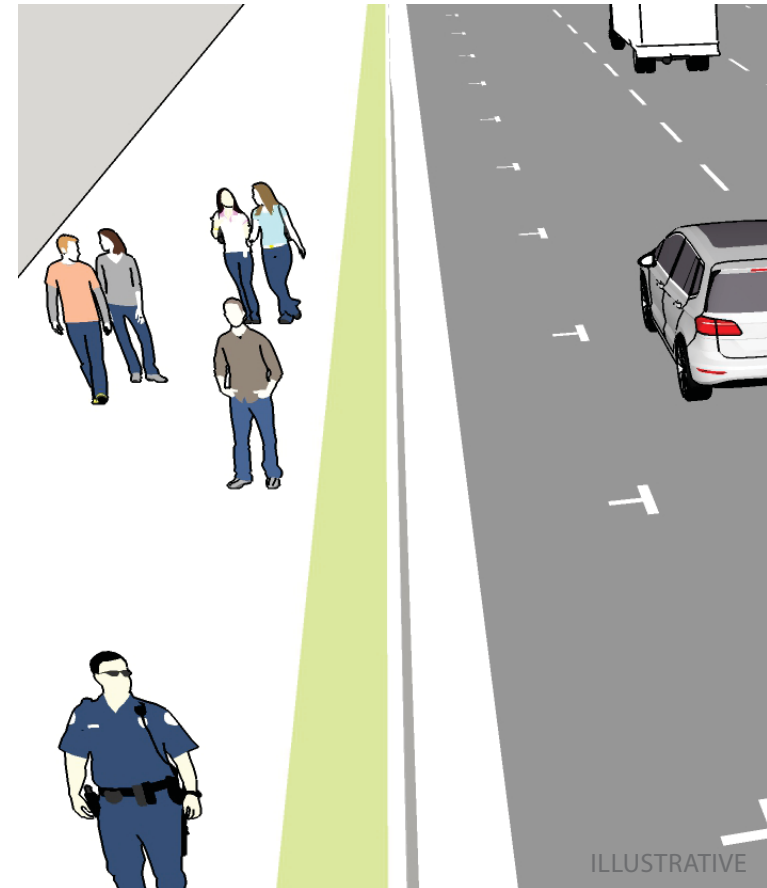
Activity Center Enhancements (Ensuring Adequate Capacity)

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



Activity Center Enhancement

Provide additional sidewalk capacity in areas with high pedestrian volumes, primarily accomplished by widening existing sidewalks.





BICYCLE NETWORK

Bicycle Network



The 2035 General Plan calls for the development of a comprehensive citywide bikeway network with support facilities such as convenient and secure bike parking. This shall include “safe and convenient bikeways that reduce conflicts between bicyclists and motor vehicles on streets, and bicycles and pedestrians on multi-use trails and sidewalks.”

A key goal of Grid 3.0 is to identify projects that fill existing gaps in the bicycle network in the Central City. The new Low Stress Bicycle Network described in this section identifies investments to create a network of low-volume, two-way streets for use by less experienced or active cyclists such as youth, families, and seniors.

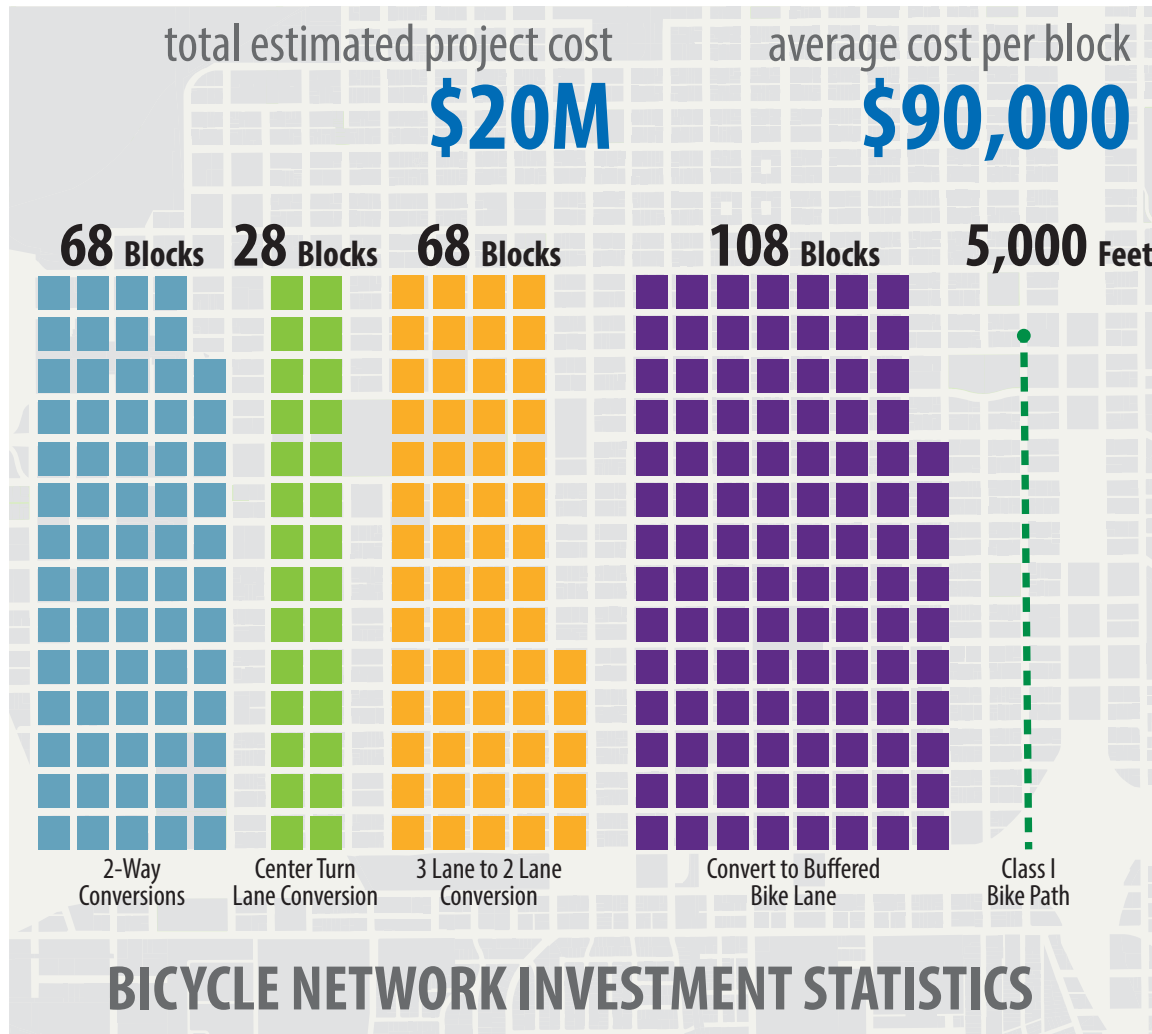
Network Integration

Virtually all of the new bicycle facilities identified in this section are created through a reduction in auto travel lanes, as acquisition of new right-of-way on streets in the Grid is not feasible. As such, there is a direct relationship between the preferred bicycle network and the preferred roadway network.

Preferred Bicycle Network

The projects described in the preferred bicycle network primarily involve re-stripping existing roadways. The bicycle network projects accomplish the following objectives.

- Fill many of the gaps in the existing bicycle network by adding new facilities through travel lane reductions and conversions
- Provide new buffered bike lanes
- Add new bike/pedestrian paths to provide a more complete system along the Sacramento and American Rivers consistent with adopted plans
- Establish a more complete Low Stress Bicycle Network



Key Projects/Changes in Bicycle Network

A summary description of some of the key elements of the preferred bicycle network is provided below. A more detailed description of the bicycle project types is provided at the end of this section.

- Addition of buffered bike lanes on portions of Capitol Mall, Broadway, J Street, L Street, P and Q Streets, 9th and 10th Streets, 15th and 16th Streets, and 19th and 21st Streets
- Addition of separated bikeways on portions of 12th Street and F Street (the new section west of 7th Street) and a portion of 5th Street
- Provision of new on-street bike lanes on portions of N Street (from 3rd to 15th Streets) and S Street (from 3rd Street to Alhambra)
- Addition of new on-street bike lanes in the Railyards and River District areas as new streets are constructed and existing streets are re-built
- Identification of a Low Stress Bicycle Network

GRID 3.0

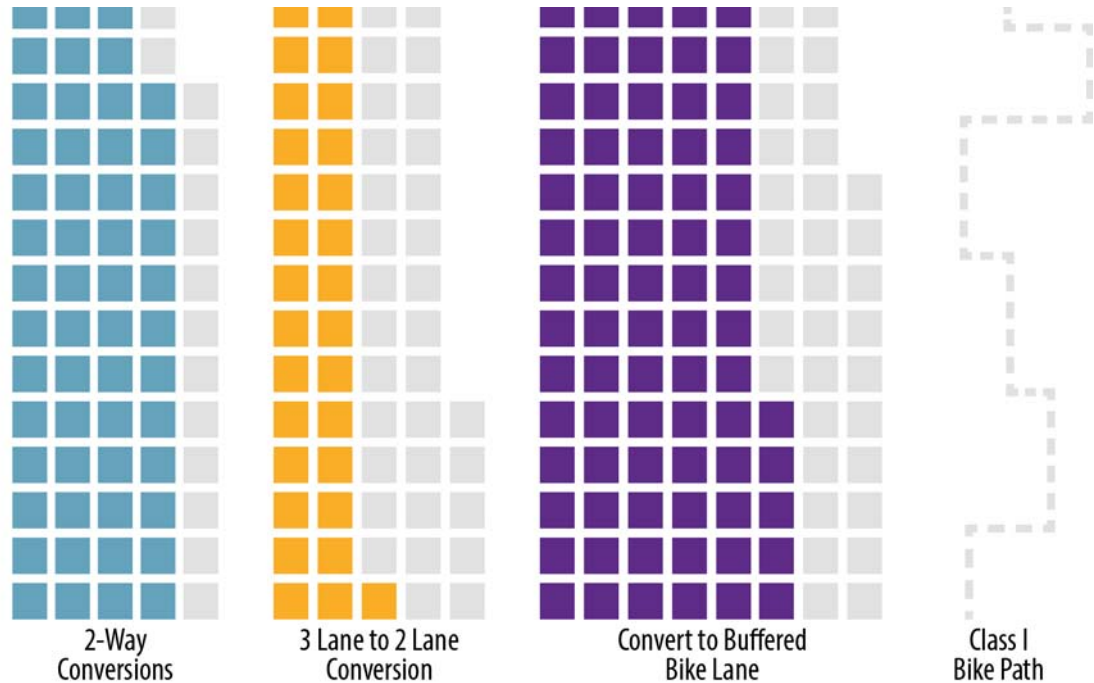
Bicycle Travel Performance Measures

The following performance measures are based on travel data derived from SACOG's regional travel model developed for the MTP/SCS. The metrics are based on the change in travel between 2012 and 2036.



Prioritization of Bicycle Network Projects

The 10-year investment goal is to implement approximately \$9 million in bicycle improvements.



10 YEAR BICYCLE INVESTMENT GOAL **\$9M**

Description of Bicycle Project Types

The preferred bicycle network is shown at the end of this section. A description of the bicycle project types is provided below.

Center Turn Lane Conversions for Bike Lanes

S Street is currently a low-volume, two-way street with a continuous center turn lane. This conversion project would eliminate the center turn lane, which is not needed for capacity purposes, and provide on-street bike lanes.

Three Lane to Two Lane Conversion for Bike lanes

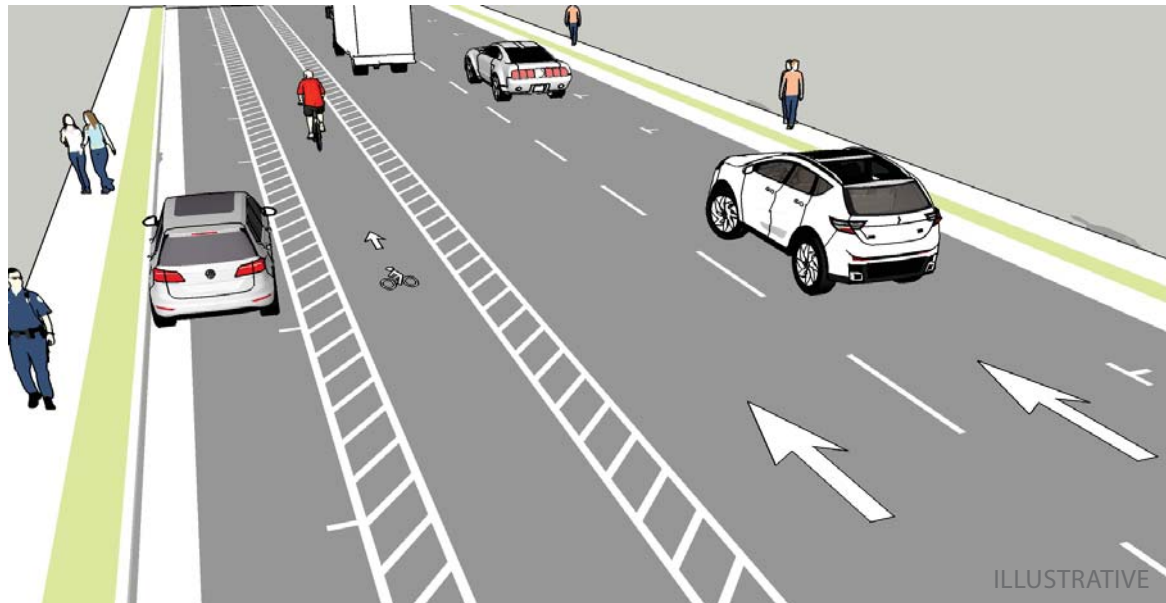
The conversion projects involve reducing the number of travel lanes on one-way streets from three lanes to two lanes. The reduction in travel lanes allows for the provision of on-street bike lanes on streets that currently have no bike facilities. These conversions are less costly than the two-way conversions, described previously in the roadway network section, as they typically only require new pavement striping and signing.

As shown in the image to the right, new buffered bike lanes would generally be provided along the left side of one-way streets. Most one-way streets on the Grid serve as bus routes, with stops located on right right-hand side of the roadway. Placing buffered bicycle lanes on the left side of the street reduces potential conflicts between bicycles and buses. Buffering on both sides of the bike lane would only be possible with sufficient right of way available.



Convert to Two Lane with Bike Lane

Convert one-way streets with three travel lanes to two travel lanes and one buffered bike lane on the left side.



GRID 3.0

Bike Lane Retrofit – Convert to Buffered Lanes

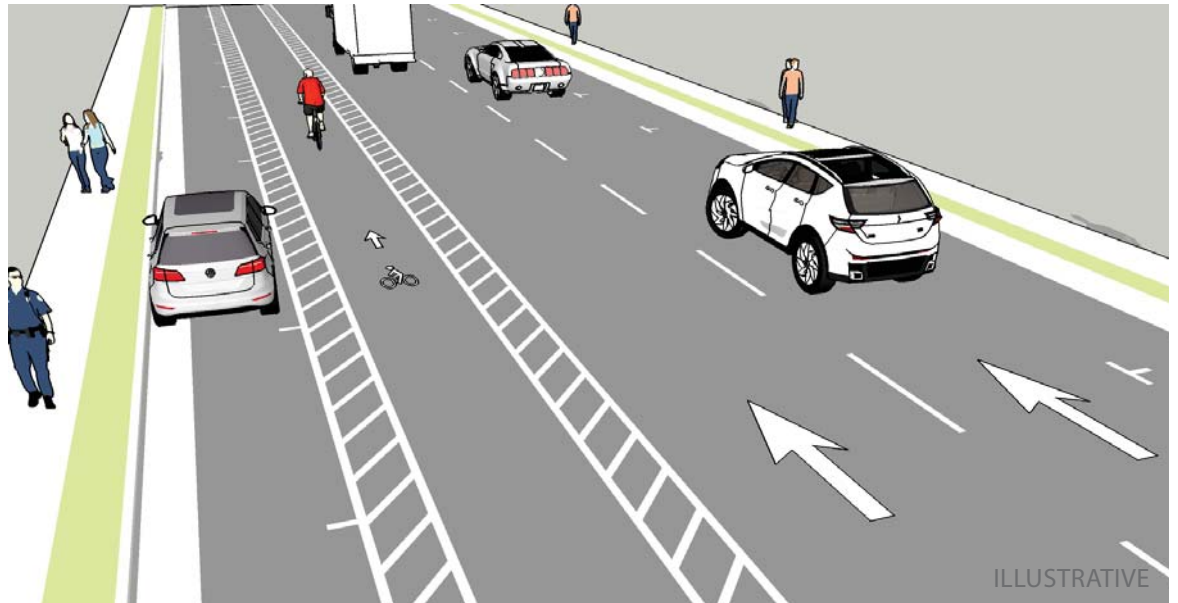
The retrofit projects involve providing buffered bike lanes by restriping one-way streets that were previously reduced from three to two travel lanes. The seven streets that would be affected have two on-street bike lanes, one on the left side and one on the right side. These bike lanes are not buffered from either parked cars or vehicle traffic. The retrofit projects would eliminate one of the two bike lanes to allow for the provision of a single buffered bike lane on the left side of the street.

As shown in the image to the right, new buffered bike lanes would generally be provided along the left side of one-way streets. Most one-way streets on the Grid serve as bus routes, with stops located on right right-hand side of the roadway. Placing buffered bicycle lanes on the left side of the street reduces potential conflicts between bicycles and buses.



Bike Lane Retrofit to Buffered Lane

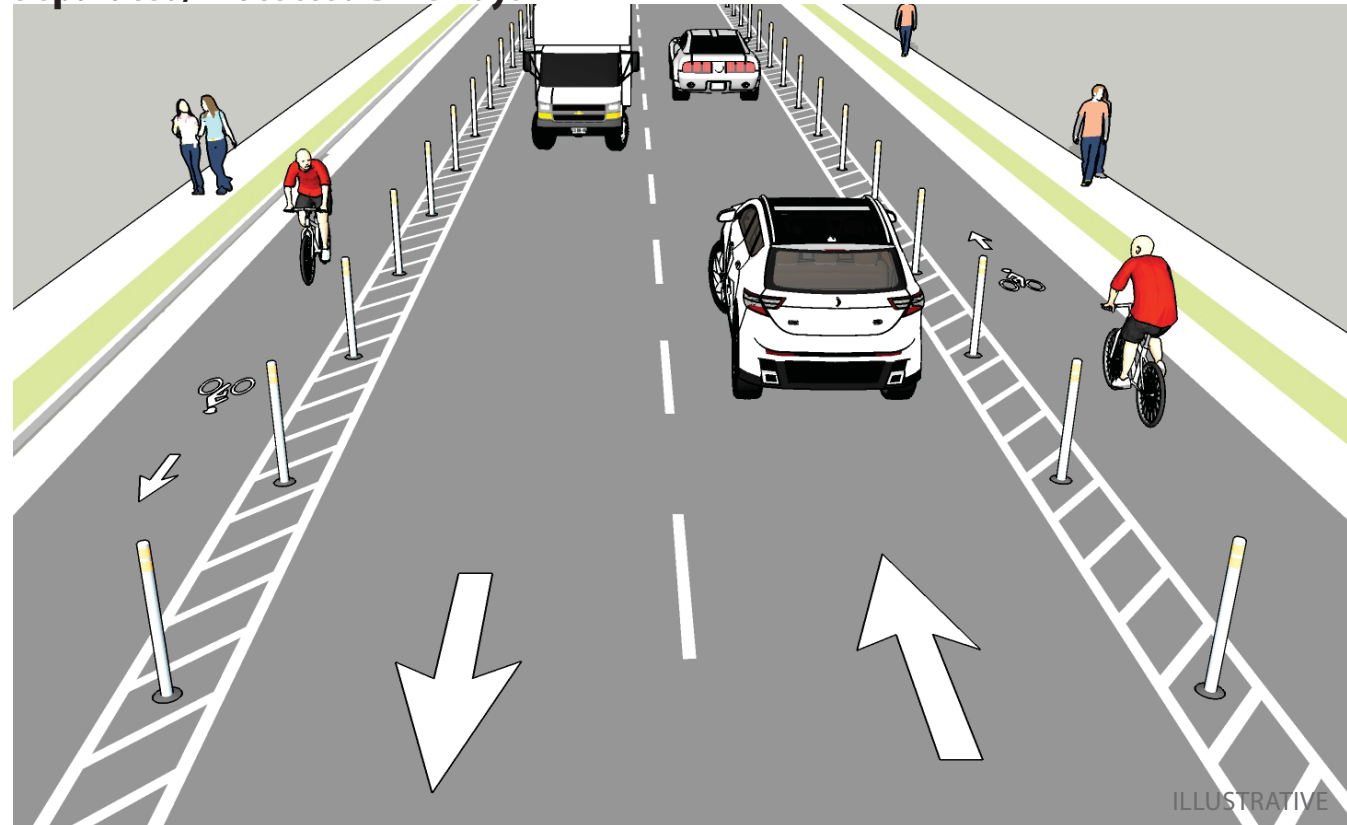
Retrofit one-way streets with two travel lanes and two bike lanes to one buffered bike lane on the left side.



Separated/Protected Bikeways

Separated/protected bikeway projects are planned for three streets. These facilities are similar to the previously discussed “buffered lanes,” but provide an added element of a vertical device to physically separate bicycles from automobile traffic.

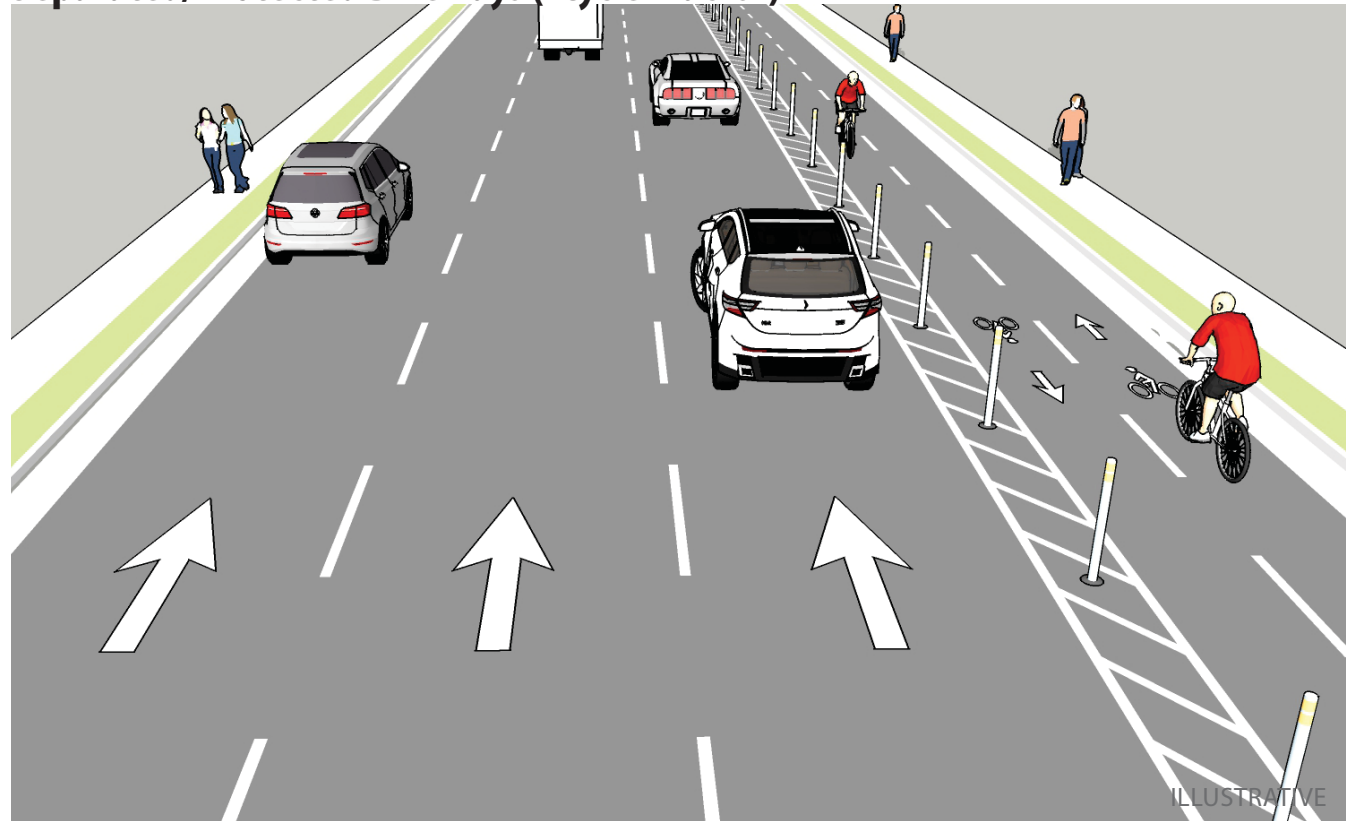
Separated/Protected Bikeways



GRID 3.0

Separated/protected bikeways include “cycle tracks,” which offer two-way travel along one side of the street, as well as single-direction lanes with physical separation.

Separated/Protected Bikeways (“Cycle Tracks”)



Shared Use Paths

Just under one mile of new bicycle/ pedestrian paths will provide a complete system along the Sacramento and American Rivers that form the western and northern boundary of the Central City.

It should be noted that recommendations for shared use paths come from the Bicycle Master Plan, and any potential modifications to that plan would affect these projects.

Shared Use Path



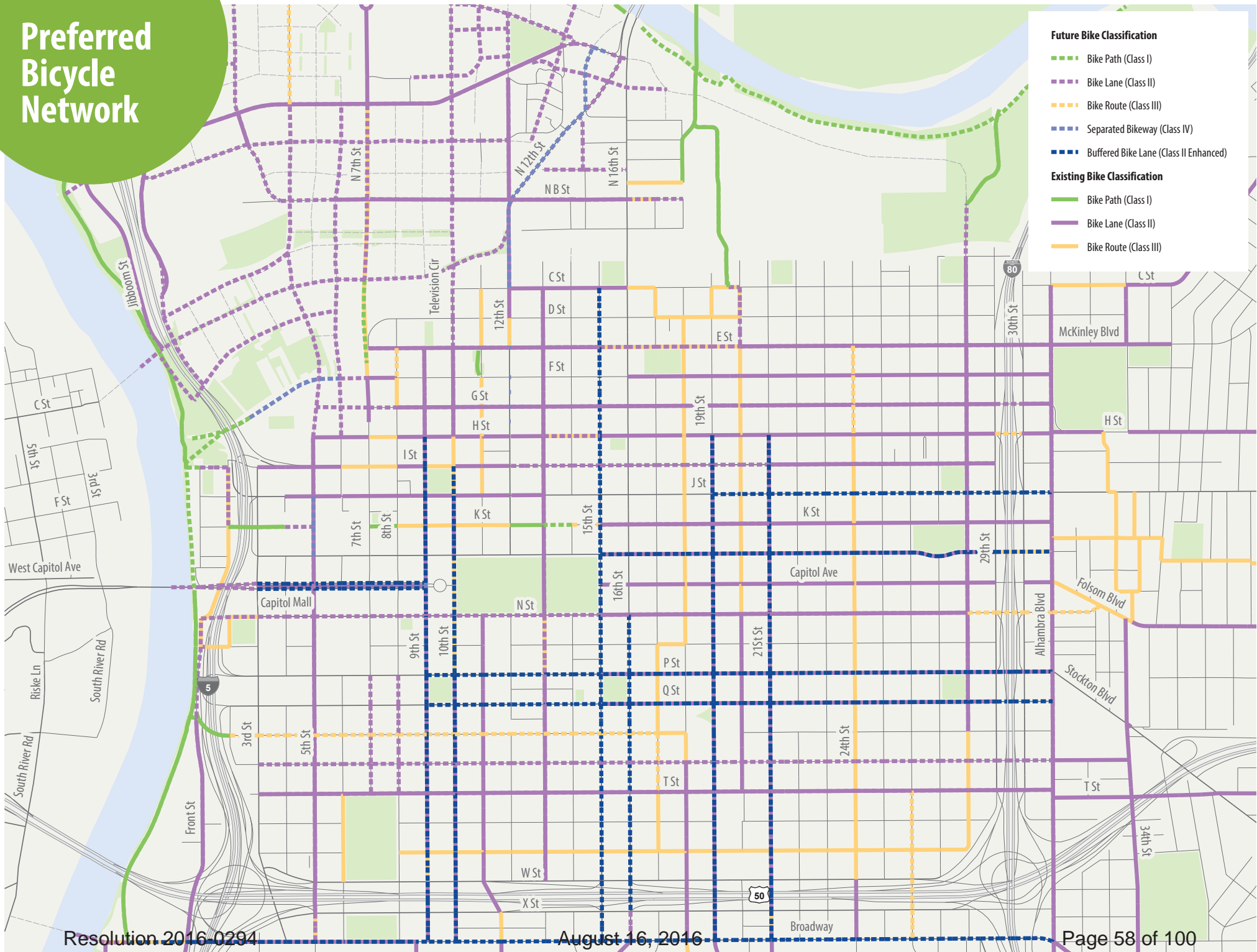
Preferred Bicycle Network

Future Bike Classification

- Bike Path (Class I)
- Bike Lane (Class II)
- Bike Route (Class III)
- Separated Bikeway (Class IV)
- Buffered Bike Lane (Class II Enhanced)

Existing Bike Classification

- Bike Path (Class I)
- Bike Lane (Class II)
- Bike Route (Class III)

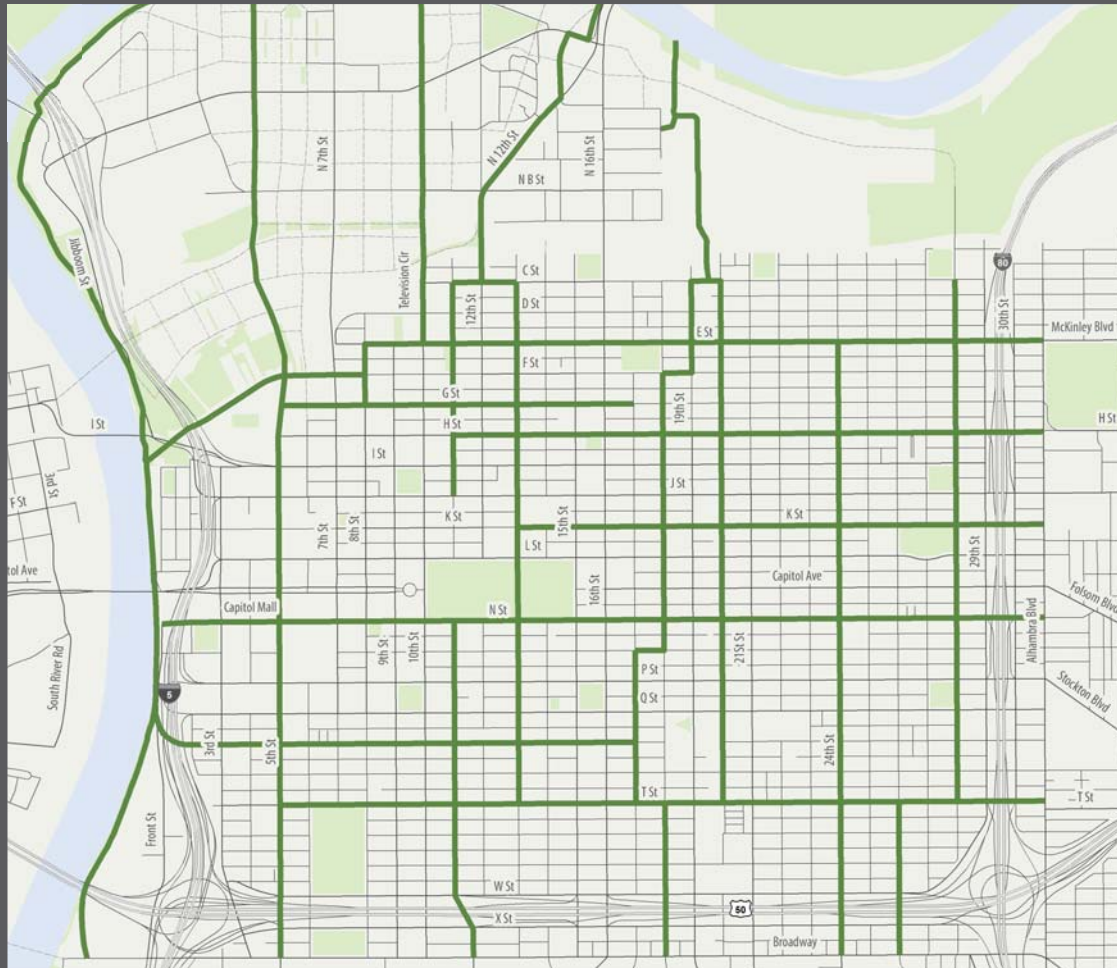


ILLUSTRATIVE LOW STRESS BICYCLE ROUTES

The map to the right displays the illustrative low stress routes, which are intended to inform the creation of a future low stress bicycle network. Implementation of the Grid 3.0 bicycle improvement projects will assist with the realization of this network. The low stress routes provide extensive access to many local and regional destinations within the Central City. Implementation efforts related to these facilities will include installation of signing, striping, and traffic control devices (i.e., traffic signals or all-way stops) at arterial or collector streets to facilitate crossings by cyclists.

Development of this map took into account existing bicycle stress levels, as well as the effects of future bicycle infrastructure projects (included in the Preferred Bicycle Network) upon bicycle stress levels. While not every segment included on the map to the right will offer equally low levels of stress, these routes encompass a core backbone of streets in all portions of the Grid with relatively low stress level compared to other nearby streets, providing a continuous network with access throughout the study area.

Implementation of low stress improvements will offer an opportunity to substantially increase the Grid's bicycle mode share. Low stress routes allow residents and visitors of all ages and abilities to complete many types of trips by bicycling, including trips to school, to work, errands, or for recreation.





TRANSIT NETWORK

Transit Network

“ Grid 3.0 focuses on the identification of Transit Priority Streets and Bus Stop Enhancement projects that will facilitate and serve the significant increase in transit service planned for the Central City.

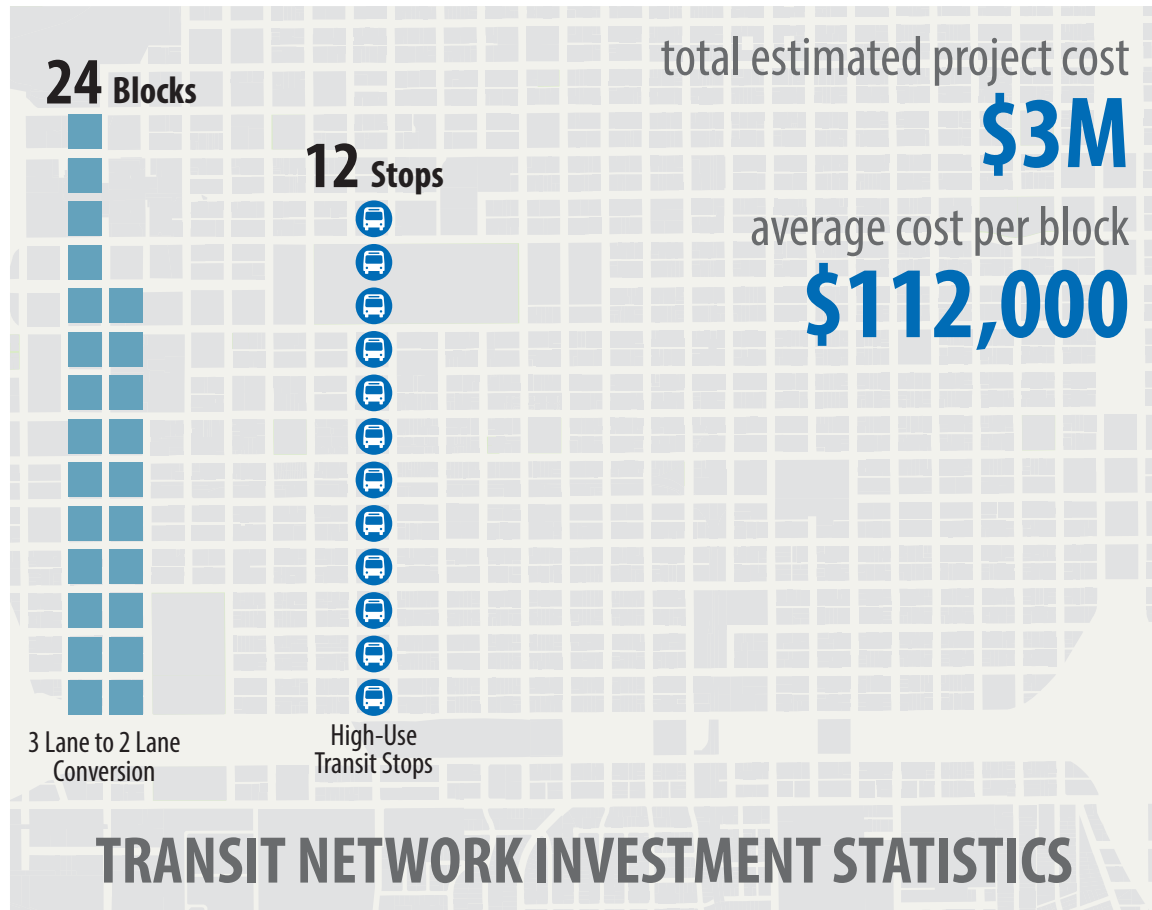
Transit Network

While the City does not operate or plan to operate transit, the projects proposed are intended to enhance the operation of existing and future transit service in an effort to improve overall mobility on the Grid.

The Green Line Light Rail (LRT) Extension to the Sacramento Airport and the Downtown/Riverfront Streetcar project are major planned rail projects that will significantly enhance transit access to the Central City. Relocation of the existing Blue Line LRT service from K Street to H Street is also planned.

By 2036, the number of rail vehicles and buses entering the Grid during the peak hour is projected to increase by 66 percent and 75 percent, respectively. This level of service will significantly increase rail and bus travel on streets such as 5th Street, 7th and 8th Streets, H Street, J Street, L Street, N Street, and P Street.





Transit Network Development

All of the new transit facilities identified in this section are being created through a reduction in auto travel lanes, as acquisition of new right-of-way on streets in the Central City is not feasible. As such, there is a direct relationship between the preferred transit network and the preferred roadway network.

Preferred Transit Network

The projects described in the preferred transit network primarily involve re-striping existing roadways. The transit network projects accomplish the following objectives:

- Provision of dedicated transit lanes through travel lane reductions
- Enlarging bus stop areas at high demand locations

Key Projects/Changes in Transit Network

A summary description of some of the key elements of the preferred transit network is provided below. A more detailed description of the transit project types is provided at the end of this section.

- Provision of dedicated transit lanes on portions of L Street, 8th Street, and 9th Street
- Enlarging bus stop areas at high demand locations by constructing bulb-outs, larger pedestrian waiting areas, and enhanced sidewalks

GRID 3.0

Transit Network Performance Measures

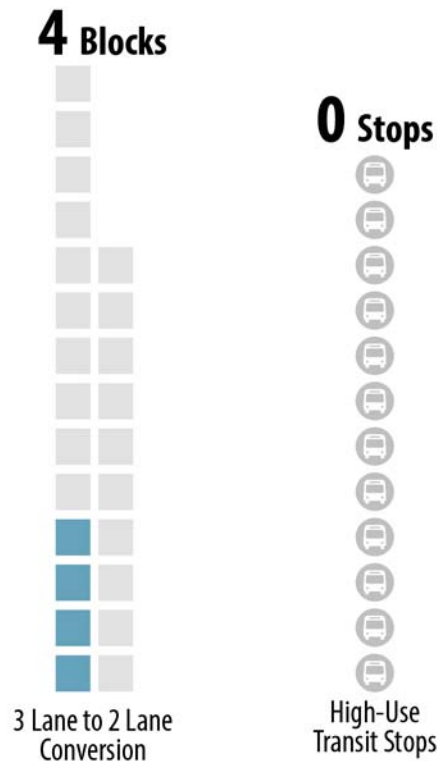
The following performance measures are based on travel data derived from SACOG's regional travel model developed for the MTP/SCS. The metrics are based on the change in travel between 2012 and 2036.



Prioritization of Transit Network Projects

The 10-year investment goal is to implement approximately \$0.4 million in transit improvements. Given that the City does not operate transit, the 10-year investment goal reflects a limited set of near-term improvements that would enhance transit

operations of other agencies. These agencies, including Regional Transit (RT), will continue to implement transit improvements as mode share increases.



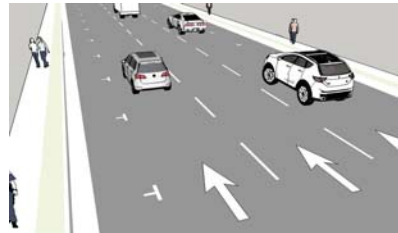
10 YEAR TRANSIT INVESTMENT GOAL \$0.4M

Description of Transit Project Types

The preferred transit network is shown at the end of this section. A description of the transit project types is provided below.

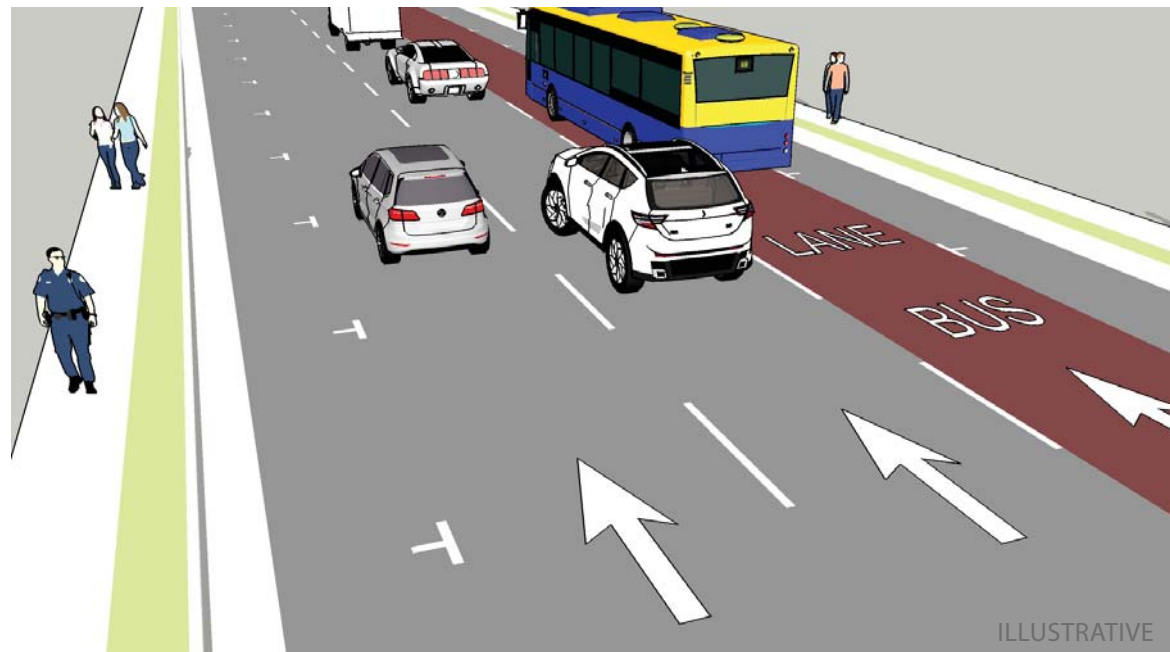
Three Lane to Two Lane Conversion for Transit

The conversion projects involve reducing the number of travel lanes on one-way streets from three lanes to two lanes. The reduction in travel lanes allows for the provision of dedicated transit lanes on streets where the number of transit vehicles is projected to exceed 70 during the peak hour. The dedicated transit priority lanes will all be "right side" travel lanes and are proposed to be striped in red. Non-transit vehicles will be prohibited from using these dedicated transit lanes unless they are turning right at an upcoming intersection or accessing a parking facility on the right side of the street. The restrictions for the dedicated transit priority lanes may be limited to peak hours during initial implementation periods.



Two-Lane Conversion for Transit

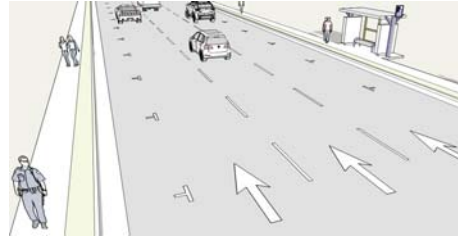
Convert one travel lane to a dedicated transit priority lane.



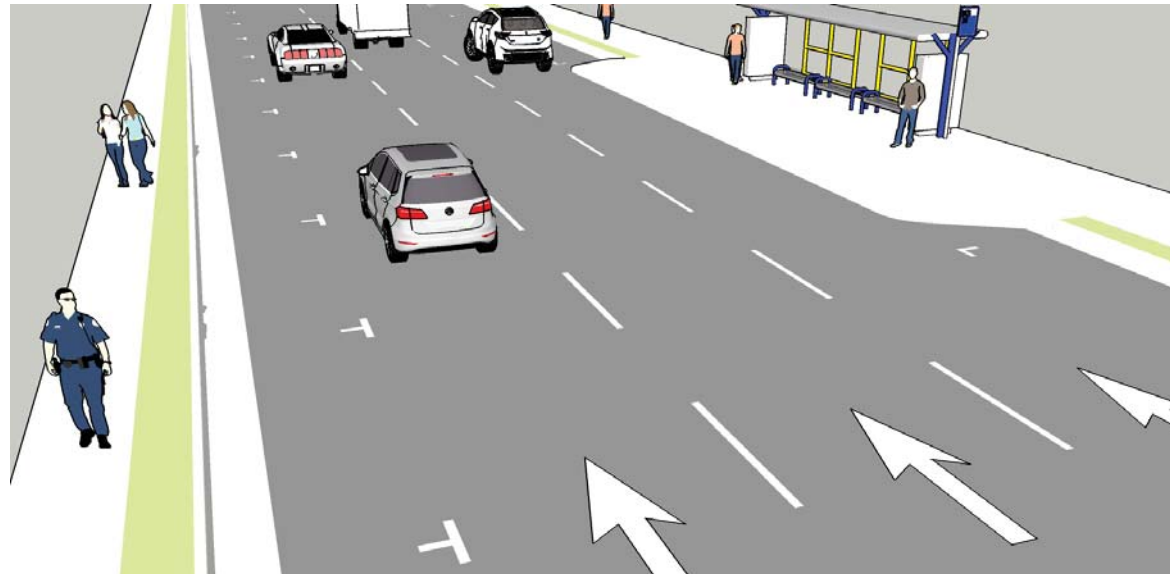
Enlarged Bus Stops

A total of 12 high activity bus stops have been identified for improvements that may include a longer stop area to provide additional room for buses and waiting passengers, bus bulb-outs, enhanced sidewalks, and lighting. The screening process used to identify these stops focused on stops with the highest number of boardings, and evaluated these locations to determine if lengthening is necessary based upon national standards for transit stop design.

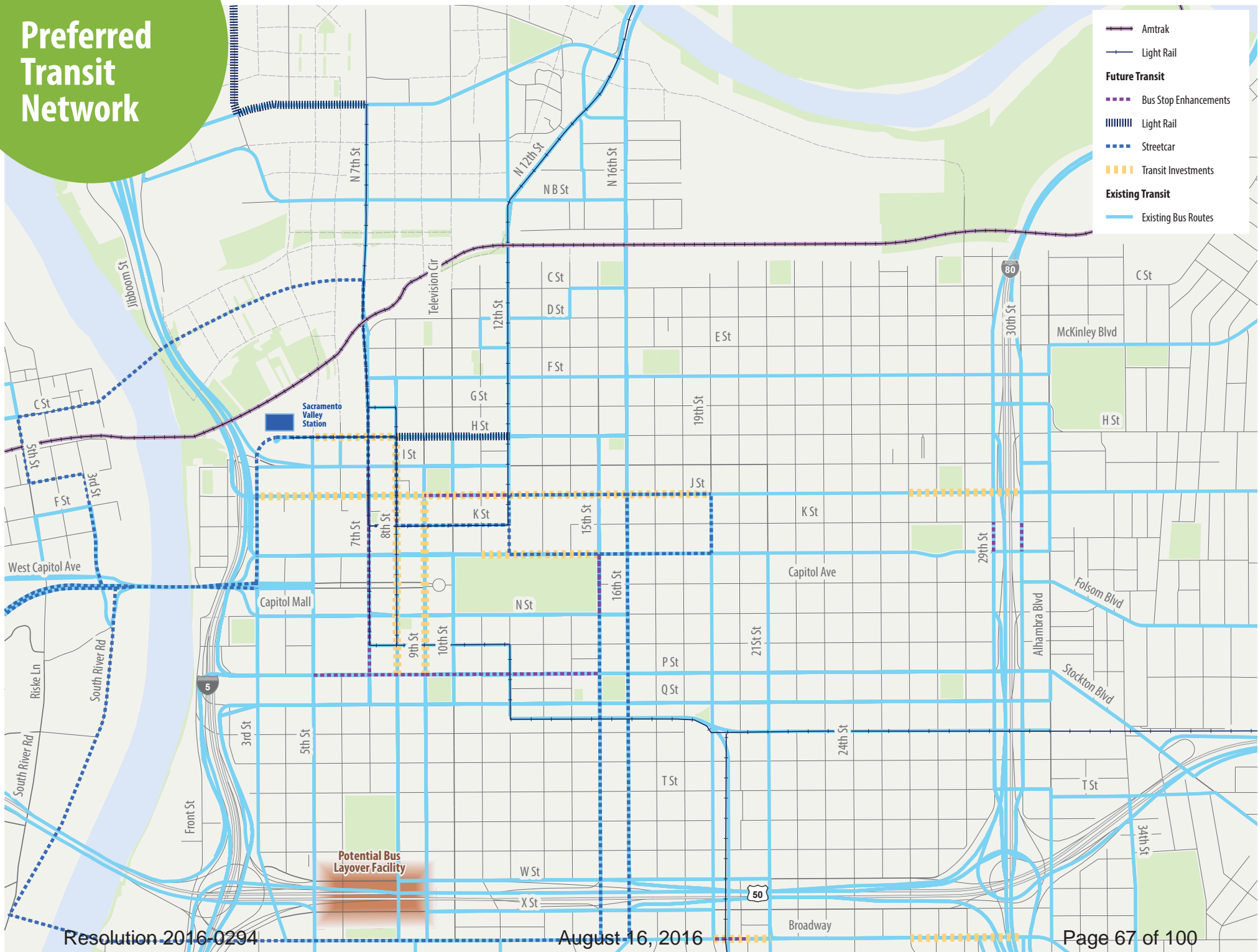
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Bus Stop Enhancement



Preferred Transit Network





ALLEY ACTIVATION

Alley Activation



The Central City's existing system of east-west alleys presents numerous opportunities for the Grid. Indeed, this area already benefits from the extensive system of alleys that are part of the urban fabric of Sacramento, and provide the Grid with a unique advantage that many places do not have.

The Central City's existing system of east-west alleys presents numerous opportunities for the Grid. Indeed, this area already benefits from the extensive system of alleys that are part of the urban fabric of Sacramento, and provide the Grid with a unique advantage that many places do not have. As the Grid continues to grow, densify, and host more activities, its existing system of alleys will only increase in importance.

Most of the Grid's 38 miles of alleys currently fulfill a utilitarian role. These alleys serve as a home to overhead and underground utilities, trash collection containers and services, and provide access to garages and loading docks. By accommodating the more unsightly aspects of urban life, alleys help to maintain a more aesthetically pleasing street front and experience for pedestrians and bicyclists. In addition to aesthetic benefits, alleys also assist with reducing the number of curb cuts along roadways, which enhances safety for bicyclists and pedestrians.

Although alleys may often host less visually appealing elements, they are receiving increasing attention as the Grid continues to grow. As available space in the Central City declines,

efficient use of what is left becomes more important. Due in part to this phenomenon, developers on the Grid have started building homes and storefronts that are accessed via alleys.

This trend has started a conversation in Sacramento about how to "activate" alleys, and make them a more desirable place to travel or spend time.

TYPES OF ALLEY ACTIVATION

- » **Green Alleys – Incorporate sustainable infrastructure**
- » **Residential Alleys – Support and provide access to adjacent residences**
- » **Shared Alleys – Prioritize movement of bicycles and pedestrians**
- » **Vibrant Commercial/Mixed-Use Alleys – Destination for visitors, employees, and residents that includes business that face the alley**

GREEN ALLEYS

Alleys in Sacramento are typically paved with the same dark-colored asphalt used to pave city streets. However, unlike city streets, alleys handle much lower traffic volumes and have lower amounts of heavy vehicle traffic, and much lower speeds. For these reasons, the opportunity exists to use alternative pavement materials that are more environmentally friendly than conventional pavement.

Chicago, Illinois has been at the forefront of these more environmentally friendly approaches to alley design, and numerous cities throughout the country are taking notice. Sacramento has a unique opportunity to enhance its sustainability by adopting the green model for its miles of alleys.

“Green alleys” make use of multiple technologies to conserve resources and improve the environment. By using of permeable paving material (pavers, permeable asphalt, or permeable concrete) along with a reverse crown, alleys may be used to absorb rainwater. Increased infiltration of rainwater lessens the impact

on the environment by allowing for the natural filtration of water, putting less strain on the city’s sewer system, reducing the risk of flooding, and providing more natural water for the City’s valuable tree canopy.

A second technology, high-albedo concrete paving may be used alongside the permeable paving material to provide a secondary environmental benefit. This lighter colored paving used on the outer portions of the alley supports the weight of heavy vehicles, such as garbage trucks, while decreasing the amount of heat absorbed by the alley. Lowering the amount of heat absorbed by surfaces facing the sun reduces the urban heat island effect and conserves energy.

The usage of recycled materials during the construction of green alleys represents another strategy that could be used in tandem with the technologies above. Recycled concrete may be used to construct the base layer for a new green alley, or used in the high-albedo paving along with recycled aggregate, slag, and/or tire rubber.

Specific strategies for alley activations include:

- Installation of green alley infrastructure – permeable pavers, bioswales, LED lighting, etc.
- Encourage development that fronts onto alley
- Mid-block pedestrian crossings – marked crosswalks, bulb-outs to provide direct connections for pedestrians
- Lighting enhancements – may include pedestrian-scale lighting, in-pavement lighting, overhead lighting, or decorative lighting (e.g., string lights)
- Public art
- Landscaping – street trees, gardens, raised planters, etc.
- Pedestrian/bicycle amenities – benches, trash receptacles, bike racks, etc.
- Decorative paving

Grid 3.0 Plan is complementary of the on-going alley activation movement within the City and supports these efforts.



WAYFINDING

Wayfinding

Project Context

Cities design and implement wayfinding and branding programs to help residents and visitors learn about and navigate to important city destinations and areas, including cultural, recreational, historic, civic, transit, educational, medical, and commercial landmarks.

City Branding programs are a collective of visual elements in the form of logos, city seals, signage, and public art presenting consistent and unifying themes (in well-designed programs) or fragmented and disjointed imagery when done from a piecemeal approach. Wayfinding programs often include the development of directional information to destinations, often accompanied by regional or local maps. Branding programs often

include the development of visual icons, logos, or identities to reflect a specific nature or benefit of a specific district.

District Branding programs often highlight special features or characteristics of defined areas to create a sense of intimacy and differentiate the communities and neighborhoods that make up the city. These neighborhoods can vary by residential vs. commercial, historic vs. new, or ethnic breakouts. Oftentimes, logos or iconic representations of these differences are created and used to promote the individual districts. San Francisco is an example with their multiple districts such as Chinatown, Japan Town, North Beach, and Fisherman's Wharf - each represented by a visual icon that identifies each specific area.

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District Branding Organizational and Management Types

Oftentimes, cities develop specific organizational, management, and funding organizations to promote special districts that may be historic or visually important. New York City has their BID program to oversee 72 Business Improvement Districts across five boroughs, such as the MeatPacking, Garment, and 34th Street Districts. Often a special logo or icon is developed for a district that is then applied to websites, signage, banners, and other materials.

Sacramento's PBID (Property and Business Improvement Districts) program includes 11 different districts. The PBID program was created as a financing mechanism where property owners enter into a special assessment district to improve their commercial districts. Many of these districts already have logos, which are seen on websites, in promotional literature, banners hanging in their districts, or small street signs like those along K Street.

Existing City-Wide Wayfinding Program

The Sacramento Central Business District wayfinding program, originally implemented in 2004, is currently undergoing a major update. This program included three types of signs: pedestrian wayfinding, vehicular wayfinding, and pedestrian map kiosks, all of which have been reviewed and revised to reflect changes in the city, specifically in the area surrounding the new Golden 1 Center. Traffic lane changes and new light rail stations have also been incorporated into the map and sign messages, and the vehicular signage has been expanded into new neighborhoods to capture incoming traffic from the various gateways into downtown.

The numbers give an indication of the breadth of this revision. Of the 89 existing vehicular signs (as of January 2016), 59 are slated to be updated as a result of this program, and a further 37 new sign locations will be added — a 40 percent increase in scope. All but two of the 56 pedestrian signs will be updated, and 14 new pedestrian wayfinding signs will be added. Additionally, all six existing map kiosks will receive new updated map panels.

In addition to wayfinding signage directed at vehicles and pedestrians, the plan also includes a strategy to supplement the wayfinding program with signage directed specifically at those traveling by bicycle. This signage would be installed along key bicycle routes within the Central City, directing bicyclists to key districts and destinations along these routes. This system will limit redundancy with existing and planned vehicular and pedestrian wayfinding signage since these signs are visible to those traveling by bicycle, and the program will therefore be concentrated along routes with lower amounts of motor vehicle traffic. This approach will limit "sign saturation" and result in a higher focus on bicycle signage near gateways to/from the Central City. Implementation of this program will take place in phases, with installation of signage along corridors with future bicycle improvement projects occurring after improvements are constructed.

GRID 3.0

District Branding Pilot Program

Four PBIDs have been selected for a District Branding Pilot Program for Sacramento – Greater Broadway, Midtown, River District, and R Street. This document will discuss considerations and parameters necessary to develop a District Branding & Wayfinding Program in Sacramento. As the city begins to develop this program, it needs to consider whether a unified branding icon will be developed to promote all Districts, or if unique and different District icons/logos will be used to promote individual districts. The City will provide oversight of these efforts, and will collaborate with the individual PBIDs on design of the wayfinding signage.

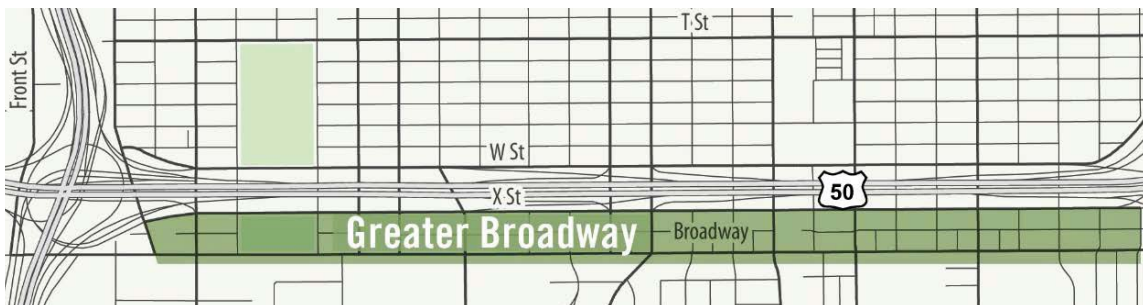


Greater Broadway District

The Greater Broadway District is a 25-block-long linear commercial corridor. It has long been a bustling and eclectic business district. It features a variety of retail and commercial enterprises and is the location of a multitude of ethnic and traditional restaurants. The Tower Theater, located roughly at the center of the corridor, is the iconic focal point of the district. The district connects to one of the largest certified Farmer's Markets in the Sacramento region as well as the site of a popular monthly antique fair. It is an area in transition. Although it is currently an auto-oriented environment, there are plans to convert the mostly 4-lane street section to a 3-lane section with bike lanes and enhanced pedestrian facilities.

Signage Opportunities:

The current expansion of the central city wayfinding program has already located some vehicular signs within the Greater Broadway area. These should eventually display the Broadway district branding. This vehicular wayfinding should be expanded to cover the entire corridor. In the current street configuration, opportunities for pedestrian signage are limited, but a logical starting point would be the light rail stations. Pedestrian map kiosks would provide an overview of the district. Pedestrian wayfinding signs do not seem appropriate, as there are very few destinations within walking distance (these signs do not include commercial establishments, only public amenities). These could be added as appropriate destinations are identified. Overall, identification of the district would probably be best served by large-scale repeated elements such as street banners. To be effective, these must cover the entire district with a high density of placements. The design should be distinctive and easily readable. Another placemaking element would be gateway signage at either end of the corridor ("Welcome to Greater Broadway"). Finally, sites of local or historic interest could be featured in interpretive kiosks or sign units — one example might be the Tower Theater.



VEHICULAR WAYFINDING SIGNS: 12
PEDESTRIAN MAP KIOSKS: 2
INTERPRETIVE KIOSKS: 1
BANNER PLACEMENTS: 10

MIDTOWN

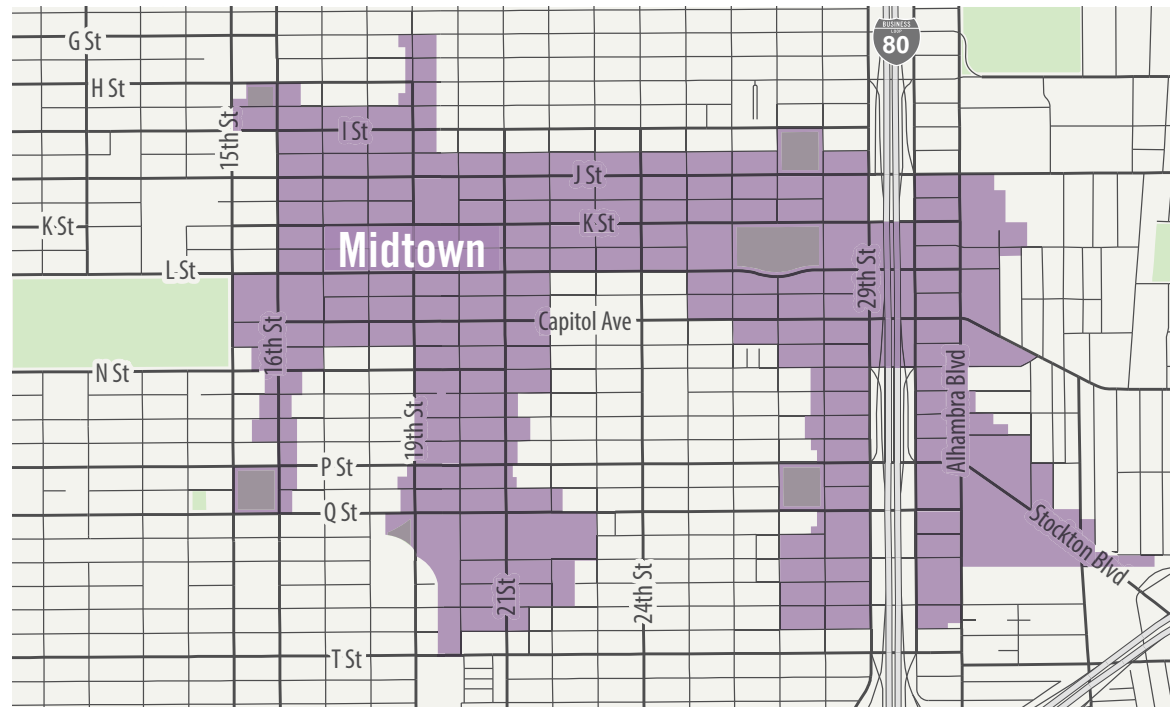
Midtown District

Midtown is a historical district and neighborhood just east of Downtown Sacramento. The community is diverse in terms of race and income, reflecting a mixed-use neighborhood with housing, commercial, historic, and entertainment uses. As the center of Sacramento's art, music, and cultural scene, it's the hip area to live in the Sacramento region, with some of the best dining, clubs, and boutiques, plus a number of small theaters and music venues. Most of the streets are residential in character, with tree-lined streets and old Victorians. The streets that house most of the commercial uses are J, K, and L Streets, as well as 15th/16th and 19th/21st streets.

Note that the PBID boundaries are much more precisely defined than the commonly understood extent of the neighborhood. There is also some ambiguity where the district borders downtown — specifically, the central city wayfinding program covers both districts, and it has signed the 15th and 16th Street corridors as Downtown, not Midtown. So this would need to be resolved in order to present a coherent concept to the public.

Signage Opportunities:

The central city wayfinding project included vehicular and pedestrian signs on 16th, 29th, I, J, K, L, N, and P Streets, and more are planned as part of the current update. These signs should all eventually carry the Midtown branding (as

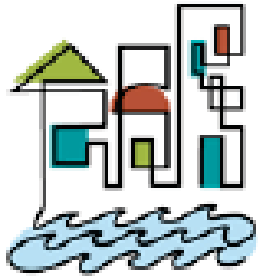


determined by the resolution of the issue noted above). Within the district, there are opportunities for additional pedestrian wayfinding in the vicinity of the defined destinations, which are clustered at the east and west extremities. Pedestrian map kiosks at either end of K Street would provide district orientation — others could be located near Sutter's Fort. There would seem to be too many potential entrance points to make gateway signage practical, but a banner program along the main axis streets would heighten awareness of the district. Due to the area involved, this would require a significant number of banner placements to be effective. The major historical attraction, Sutter's Fort, is probably already well

provided with interpretive signage, but there may be other possible applications: one idea would be an explanation of Victorian architectural styles, illustrated by homes in the neighborhood.

VEHICULAR WAYFINDING SIGNS: 6
PEDESTRIAN WAYFINDING SIGNS: 10
PEDESTRIAN MAP KIOSKS: 4
INTERPRETIVE KIOSKS: 1
BANNER PLACEMENTS: 180

GRID 3.0



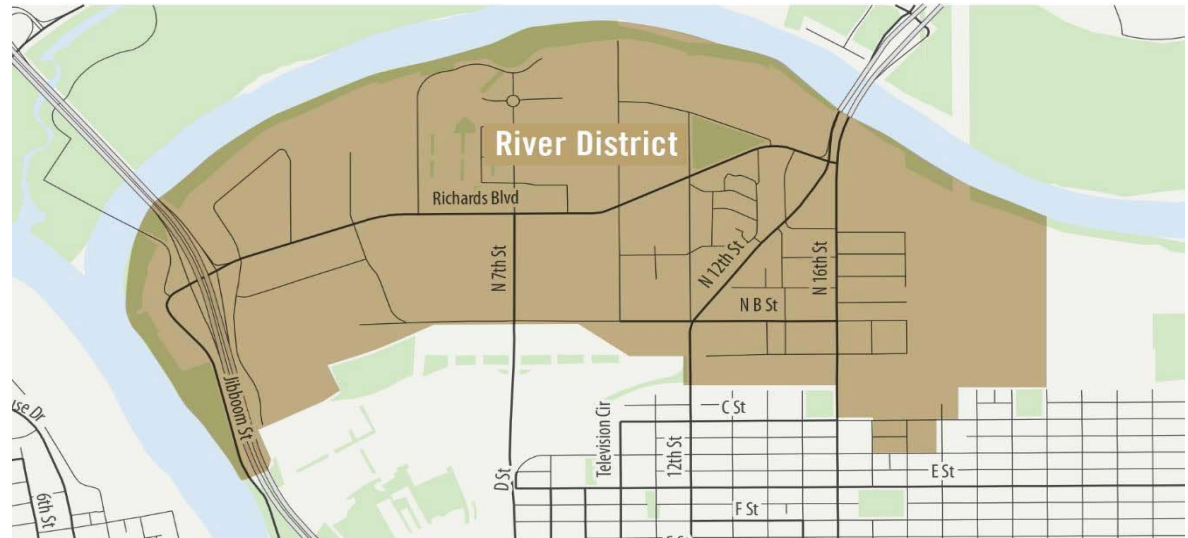
River District

The River District currently supports mostly industrial/commercial uses. The Township 9 project, a major development at the core of the district (northwest corner of Richards/7th), is the catalyst for a planned transition to a mixed-use community with enhanced access to the riverfronts that form the northern and western boundaries.

The recently adopted River District Specific Plan envisions a vibrant, mixed-use community connected to the surrounding neighborhoods by a network of local streets, light rail transit, and bicycle and pedestrian pathways. Parks along the rivers' edges will redefine the access and recreational activities in this district. It is projected that a wide range of employment opportunities and an improved economic environment will result in a transformed River District, leading to increased entertainment and housing options for its residents and visitors.

Signage Opportunities:

Several vehicular wayfinding signs are being added to the district in the current update. These should eventually carry the River District



branding. As additional parcels are developed, more signs would be added. The number given below is a rough approximation based on the build-out shown in the Specific Plan. Pedestrian wayfinding sign placements will be determined by the development of pedestrian-oriented local amenities (there are none at present). Currently, we can anticipate a need for connecting residential developments to the waterfront parks and trails. These riverfront parks are also opportunities for interpretive signs, with possible subjects including district history, river ecology and wildlife.

As a completely new community, it might be helpful to provide large-scale gateway signage at key entrances. The altered streetscape creates an opportunity for a district-wide unified program of street furniture, lighting, and unique identity elements such as a specific design of street

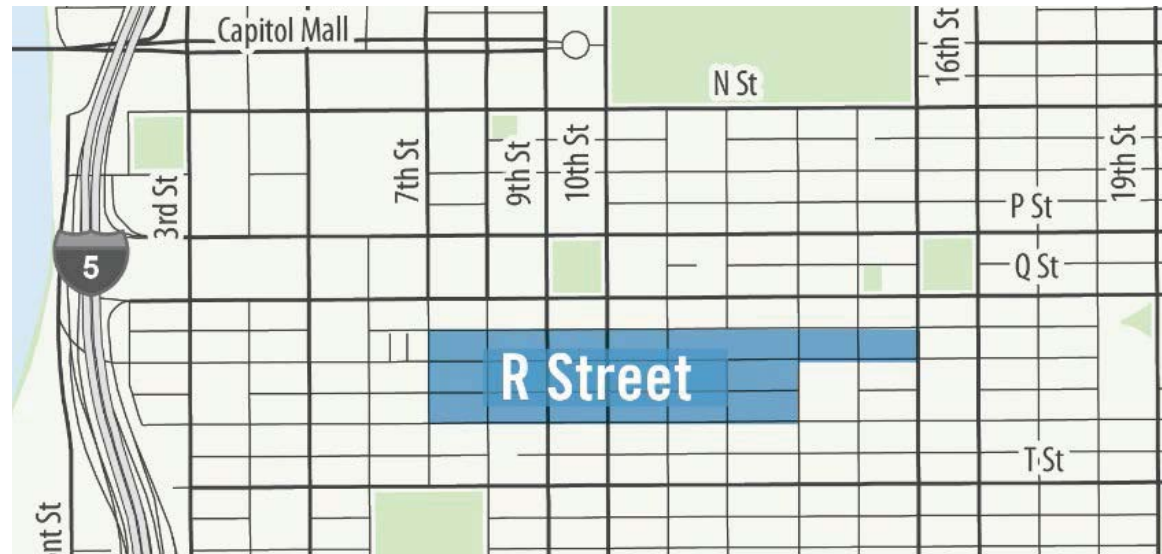
identification signs (perhaps with a distinctive color or typeface). As areas are developed, they could be celebrated with location-specific banner programs.

VEHICULAR WAYFINDING SIGNS:	24
PEDESTRIAN WAYFINDING SIGNS:	12
PEDESTRIAN MAP KIOSKS:	6
INTERPRETIVE KIOSKS:	6
BANNER PLACEMENTS:	30 - 300
(INCREMENTAL VS. FULL IMPLEMENTATION)	
GATEWAY SIGNS:	5
BRANDED STREET SIGNS:	100 - 500
(INCREMENTAL VS. FULL IMPLEMENTATION)	



R STREET

The R Street District is a relatively short, linear commercial district anchored by some key restaurants or restaurant clusters (at 10th Street and 15th Street). R Street formerly had a rail line down the center of the street and features several older warehouse buildings, many of which are being transitioned to commercial or residential uses. The latest project, almost a decade in the making, is the Warehouse Artist Lofts at 1108 R Street. The architecture reflects the historical character of the original Lawrence Warehouse building as well as the industrial aesthetic of the R Street Corridor. This new development helps to fulfill the community's vision of a vibrant mixed-use neighborhood with historic character.



Signage Opportunities:

This district is ideally pedestrian-scaled, and already has a distinctive gateway arch and a banner program. It should be added to the Central City vehicular wayfinding program as a destination, with additional vehicular sign placements to support it along 9th/10th and 15th/16th. New pedestrian wayfinding signs should connect the district to the light rail stations. Pedestrian map kiosks at either end of the corridor would provide overall orientation. Another idea would be to create a unique street identification sign for the district, similar to the "The Kay" signs on K Street. There may be a potential for interpretive signage relating the history of the district, if this has not already been implemented.

VEHICULAR WAYFINDING SIGNS: 6
PEDESTRIAN WAYFINDING SIGNS: 4
PEDESTRIAN MAP KIOSKS: 2
INTERPRETIVE KIOSKS: 2
BANNER PLACEMENTS: 26
BRANDED STREET SIGNS: 18

GRID 3.0

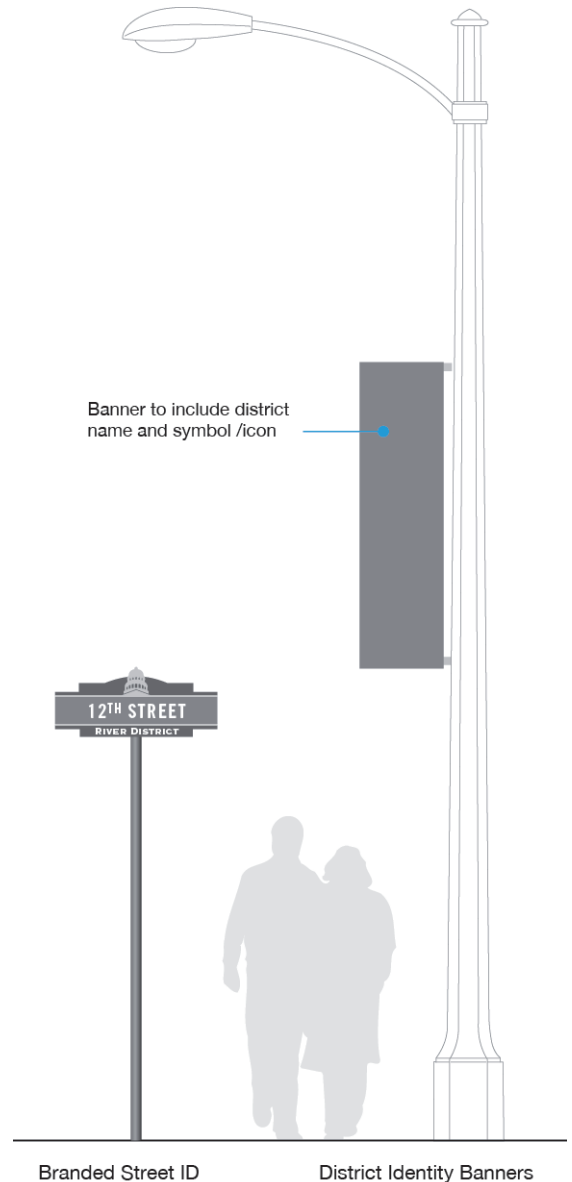
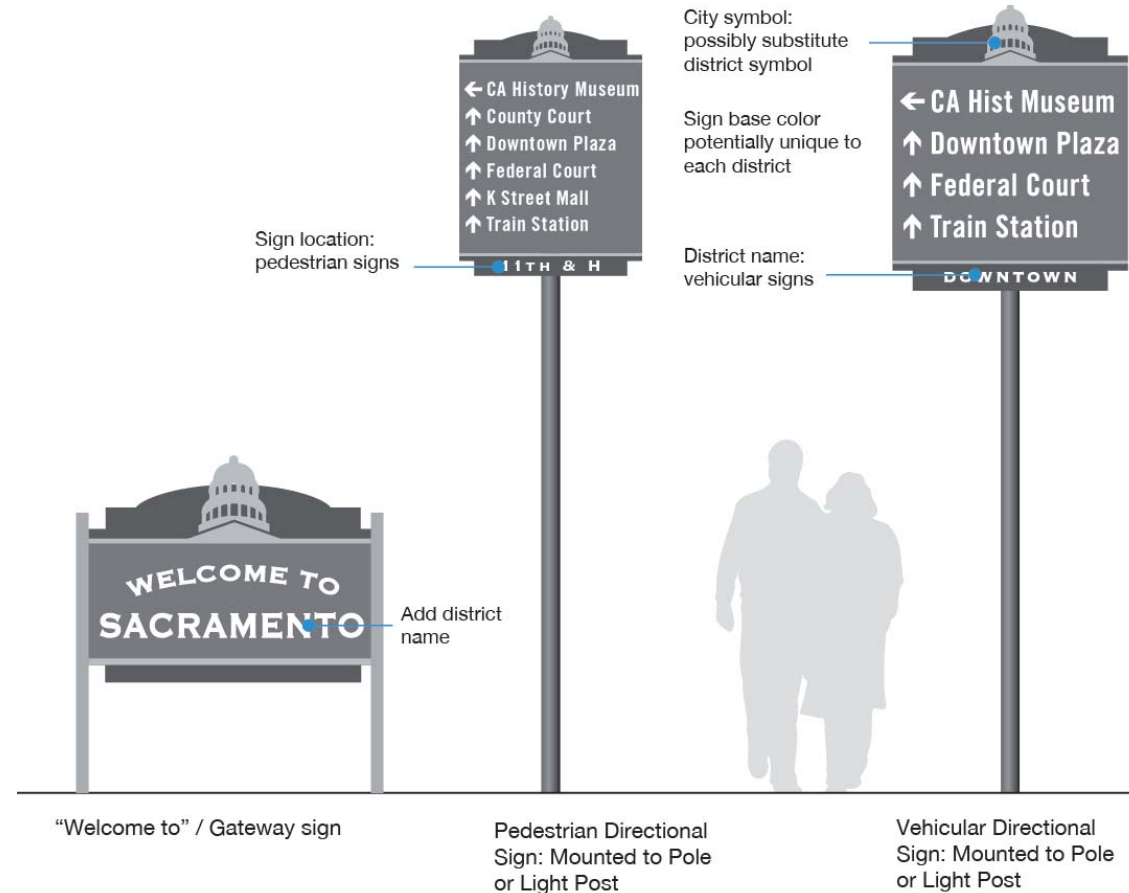
PBID Sign Types and Cost Budgets

The following illustrated sign types show some potential sign units for a District Branding and Wayfinding program for Sacramento. A separate design development phase would need to be undertaken to finalize actual sign types, content, and sign design details. At this point, only four Districts are presented as examples to be followed by other Sacramento Districts. High-level pricing is also included to inform Districts on what a possible District Branding Sign program might cost to implement.

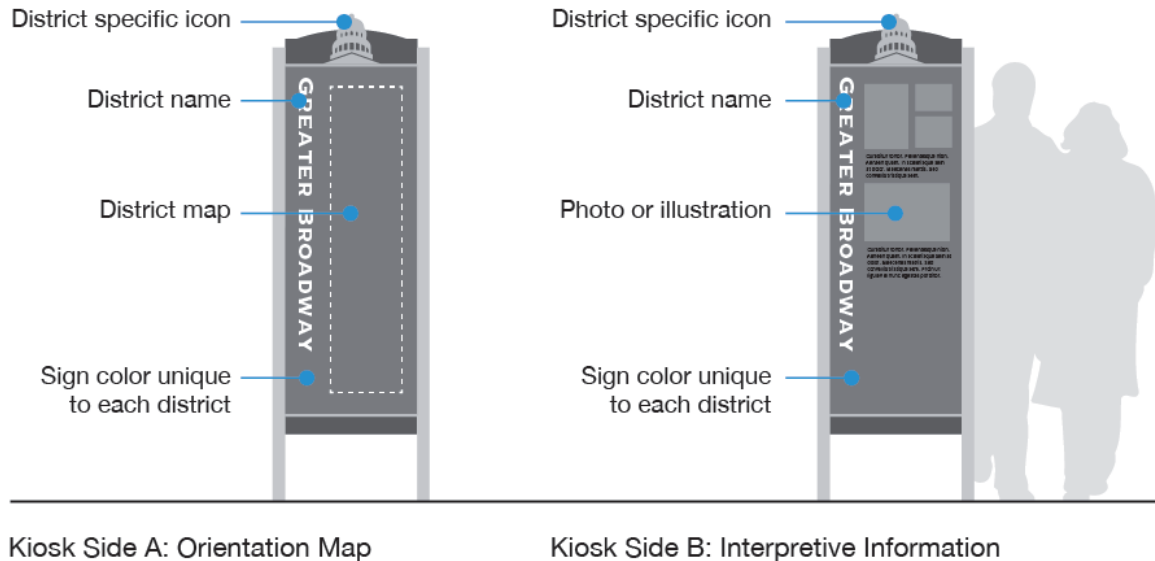
and sign design details. At this point, only four Districts are presented as examples to be followed by other Sacramento Districts. High-level pricing is also included to inform Districts on what a possible District Branding Sign program might cost to implement.

Potential New Sign Types

Existing Central City Wayfinding Program Signs



New Map / Kiosk Sign



Issues in Developing District Branding & Wayfinding Programs

A primary issue to consider is whether Sacramento wants to develop a District Branding program from scratch, or use existing branding icons and build a program around them. Currently, some Districts have their own logos, but the quality and 'look and feel' varies drastically. If a unified branding program is to be developed, then time and effort would have to be put into working with all the Districts in developing a new and unified identity for the branding program.

Similarly, an analysis of the District's nomenclature could be evaluated to determine if the current names appropriately reflect the character of the district. If not, then an 'umbrella nomenclature study' should be undertaken to carefully evaluate District names for thematic consistency, visual manifestation, and holistic consistency.

Currently, the implementation of District Branding on websites, signage, banners, etc. appears to be random, with more of a individual district implementation plan. A more unified design and implementation program would be more desirable, where a set of 'tools' for branding and implementation is developed for use by each district. This tool kit would enable a more consistent and visually cohesive branding program.



SUMMARY

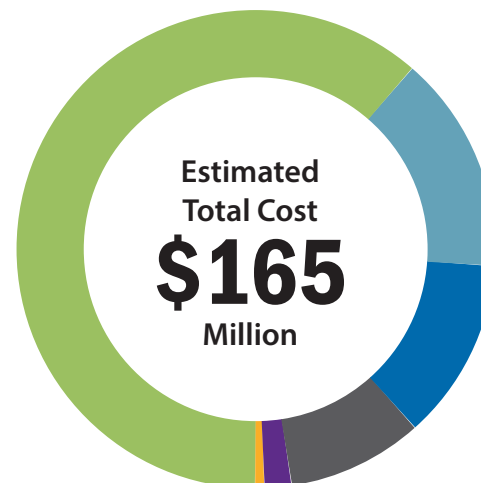
Summary of Preferred Network for the Grid

“ With the expected growth in residential units within the Central City, there will be a higher percentage of short distance trips than today and most of those will be made by walking, biking, and transit. Thus, vehicle trips are projected to increase at a slower rate than the increase in trips by other modes.

The Preferred Network for Grid 3.0 plan responds to this projected travel demand by focusing on investments in pedestrian, bicycle and transit facilities and will result in a decrease in vehicle-miles of travel (VMT) compared to no investment in the Grid. The Preferred Network was designed to avoid removing vehicle lanes from arterial streets that experience excessive levels of delay during peak periods, thus only a small increase in congested (LOS F) conditions is projected. Over 90% of VMT on Grid will occur on arterial and collector streets with a limited amount of traffic on local neighborhood streets.

The Preferred Network will add 80 blocks of two-way streets (68 blocks of two-way conversions and 12 blocks of two-way conversions with contra-flow lanes) and 185 blocks with on-street bike lanes. The number of buses entering the Grid by 2036 is expected to increase by 75 percent and the Preferred Network would add up to 24 blocks with exclusive transit lanes and accommodation for improved bus layover (shown illustratively under the W/X freeway).

The estimated cost of implementing the Grid 3.0 plan is approximately \$165 million.



\$100 Million for Pedestrian Improvements

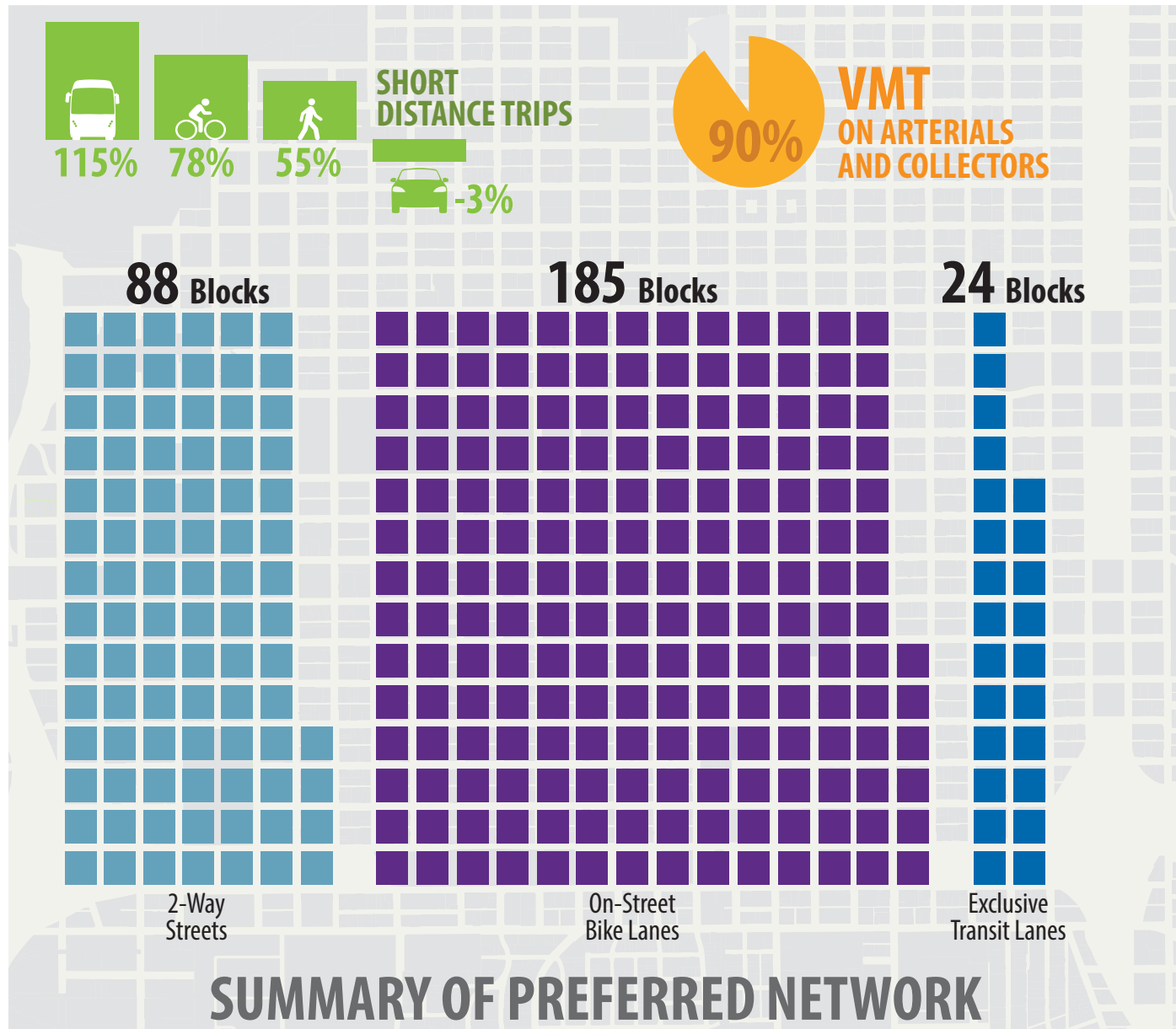
\$24 Million for Roadway Improvements

\$20 Million for Bicycle Facility Improvements

\$15 Million for New Street Lighting

\$3 Million for Transit Improvements

\$3 Million for Wayfinding





FUNDING

60% Additional Funding Needed

32% Funding from Potential Future Sources

8% Funding from Existing Sources



Funding

Estimated capital improvement project (CIP) costs associated with Grid 3.0 are approximately \$165 million, of which about \$19.5 million could be assigned through 2020. Funding for these capital projects will rely on multiple Federal, State, and local sources. These sources include a variety of funds upon which the City has historically relied, new state sources, and, perhaps, new and/or planned state/local sources that would need to be created in the future. This funding overview provides a summary of existing and potential future sources of funding and identifies the scale of additional funding that would be needed to implement the full capital improvement program (CIP) for this project. The compendium to this study contains the detailed calculations supporting the overview presented herein.

This funding analysis reveals that the City can reasonably expect that about eight percent of Grid 3.0 projects can be funded from existing sources. A planning-level estimate indicates that an additional 32 percent of the needed funding could be provided from existing sources, although this estimate is speculative and subject to change as more information becomes available in the future. The remaining 60 percent (or more) of funding would need to come from other sources, most likely local in nature.

Federal/State Funding Sources

In recent years, primary funding sources for transportation-related capital improvements most closely aligned with Grid 3.0 improvements have included Major Street Construction Tax (MSCT), Measure A sales tax, federal and state grants administered through SACOG or directly from federal or state agencies, and earmarks or other one-time funds.

Historical Funding Context

Most federal and state funding programs are administered by SACOG. As summarized in Table 1, between 2000 and 2014, the City obtained an average of approximately \$6.0 million of state and federal funds through SACOG, including Congestion Mitigation & Air Quality (CMAQ), Surface Transportation Funding (STP), State Transportation Improvement Program (STIP), and, more recently, \$1.7 million in Active Transportation Plan (ATP) funds. A review of projects funded during this time frame by these and other federal sources tracked by SACOG revealed that 28 percent of federal and state funds obtained by the City were spent on projects located within the Central City.

This funding analysis extends the Central City capture rate through the remainder of Grid 3.0 implementation time frame (2035). Further, this funding analysis presumes that Grid 3.0 will capture 25 percent of monies spent in the Central City. This capture rate accounts for the existence of Railyards projects, River District projects, and other Downtown projects (such as subsequent phases of the Riverfront Connection) that would also be viable candidates for these competitive funding sources.

Outside of SACOG, between FY 2011/12 and FY 2015/16 the City has received an average of \$5.4 million in gas tax revenues, but these funds are used for street maintenance/rehabilitation and traffic. Also, more recently, the City received \$1.7 million in ATP funds toward a single project obtained directly from the State. The City has also historically received Federal Transit Program (FTP), as well as Highway Safety Improvement Program (HSIP) funding; however, these revenues are excluded from this funding analysis because eligible FTP projects (e.g. streetcar, intermodal facilities, etc.) are not included in the Grid 3.0 CIP, and HSIP projects focus on solving existing safety problems based on accident history.

Table 1

Annual Transportation Capital Funding Sources Citywide (Select Sources)
Downtown Transportation Study, City of Sacramento

Item/Description	Programs Included	Historical City Funding (Annual Average)	Projection Approach(es)	Projected City Funding for Capital Improvements (Annual Avg)
EXISTING FUNDING SOURCES				
Federal/State Funds (SACOG)	Congestion Mitigation & Air Quality (CMAQ), Surface Transp. Funding (STP), Active Transp. Program (ATP) -- Regional Share	\$6,019,164	Historical Funding Levels, City Projections	\$6,019,164
Federal/State Funding Sources (City/Other)	Gas Tax, ATP-- State Share	\$7,141,802	City Projections. Gas Tax excluded.	\$1,695,552
Subtotal All Federal/State Funding		\$13,160,966		\$7,714,716
Local Funding Sources	Measure A Sales Tax, Measure A DIF, Major Street Construction Tax (MSCT), Downtown DIF (DDIF)	\$3,609,771	City Projections (DDIF not projected)	\$4,820,226
TOTAL EXISTING FUNDING SOURCES		\$16,770,738		\$12,534,942
OTHER POTENTIAL FUTURE FUNDING SOURCES (SPECULATIVE)				
Funding Sources with Quantified Forecasts	State Transp. Improvement Program (STIP), Planned City Transp. Dev. Impact Fee (TDIF), Adjusted Downtown DIF (DDIF), Planned Measure B Sales Tax, Potential VLF City Surcharge	\$3,997,857 [1]	City Projections	\$12,805,277
Funding Sources Without Quantified Forecasts	Earmarks/One-Time Funds (via SACOG/ City), Cap & Trade (AHSC Program), State Governor's Transp. Bill	\$4,466,042	Not Estimated [4]	\$0

[1] Historical funding includes STIP only.

[2] Historical funding includes Earmarks/One-Time Funds only.

Sources: City of Sacramento, SACOG, Sacramento Transportation Authority, Sacramento County, California Department of Finance, California Department of Motor Vehicles.

Federal and State Funding Outlook

In December of 2015, the Fixing American's Surface Transportation (FAST) Act replaced the Moving Ahead for Progress (MAP-21) Act as the authorization for federal highway and public transportation programs. The FAST Act authorizes funding for FY 2016-2020, during which time period California is expected to receive an annual average of \$3.9 billion in Federal Highway Administration (FHWA) funding. Because the FAST Act remains very similar to MAP-21, the funding projection in this analysis broadly relies on historical funding levels for federal sources (CMAQ and STP [also referred to as RSTP]).

Gas Tax

Changes to the gas tax structure and fluctuating gas prices have greatly reduced the share of gas tax revenues for local jurisdictions, including Sacramento. As stated previously, the City has utilized gas tax revenues for street maintenance/rehabilitation and traffic, (as well as ongoing operations and maintenance), although even these funds have been reduced. Through 2021, the City projects that no gas tax revenues will be available for capital projects. This funding analysis includes Gas Tax as an Existing Funding Source but presumes that no funding will be available for capital improvements through 2035.

Earmarks and Other One-Time Funds

Importantly, in 2008, the federal government stopped providing earmark funding and in 2011 Congress put a ban on legislative earmarks, which in the past had been an important source of funding for transportation projects in the City.

The federal government instead has initiated competitive national discretionary programs (e.g., TIGER grants) that are highly competitive. The potential for future earmarks or other competitive discretionary funds is classified as a Potential Future Source but is not quantified because, according to City staff, TIGER grants have historically been associated with large regional projects (e.g. the Intermodal Station) and are national competitive; although the program is expected to continue as long as it's funded by the federal government, most typical Grid 3.0 projects are not expected to meet the criteria to qualify for these funds.

STIP

Transportation funding at the state level is changing on multiple fronts. In the past, STIP revenues (administered through SACOG) constituted a major source of state funding for capital improvements in the City. However, in 2015, the State stopped funding new local projects from regional programming in the five-year STIP. Further, the State is currently in the process of removing local projects currently programmed in the STIP due to reductions in gas tax revenues. The State does not foresee resuming local projects in the STIP for at least five years (if and when funding is restored). The funding projection in this analysis classifies STIP as a Potential Future Source and presumes that STIP funding could eventually resume at historic levels. The analysis assigns STIP as a Potential Future Funding Source anticipated to resume in 10 years (or 2025) to account for a five-year delay associated with insufficient gas tax revenues and a subsequent five-year delay to allow for funding projects previously programmed in the most recent STIP.

Active Transportation Program (ATP)

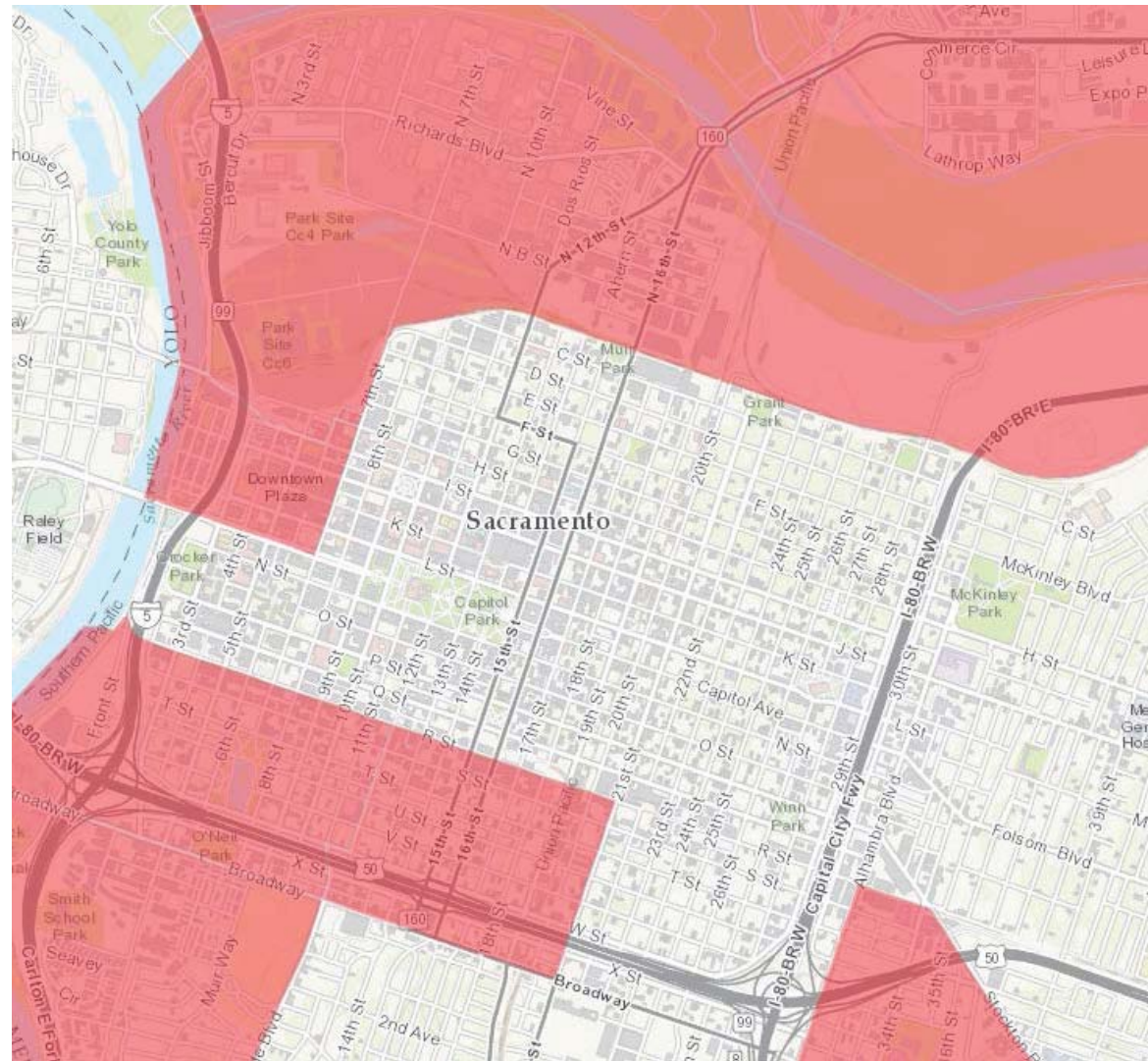
The ATP is often understood as a consolidation of former Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (STRS) programs. The ATP was created in 2013 to encourage more active modes of transportation (including biking and walking), increase safety of non-motorized users, help achieve greenhouse gas reduction goals, and enhance public health. ATP funds are distributed into two major sub-categories: a Regional Share (administered by SACOG) and a State Share (administered by State agencies). To date, the ATP has only undergone two funding cycles (2014 and 2015), and funding has proven to be highly competitive for both the Region and the City.

This funding analysis classifies ATP (both Regional and State shares) as Existing Funding Sources and extends the City's historic levels of ATP funding. The analysis further assumes that 25 percent of funding will occur in the Central City and that half of that funding will be associated with Grid 3.0 projects. It is important to note that the State Share emphasizes disadvantaged communities. The Grid 3.0 project area includes portions of multiple disadvantaged communities (based on CalEnviroScreen scores) along its edges. Transportation projects that meet ATP criteria and fall within an identified disadvantaged community would likely receive a high ranking in the evaluation process for the State Share. If the City can identify Grid 3.0 projects within disadvantaged communities that align strongly with ATP criteria, a higher level of future funding could be obtained.

Cap & Trade

The Cap & Trade program is a key element of California's climate plan to return to 1990 levels of greenhouse gas emissions by 2020. Starting in 2013, this program placed a statewide cap on the major sources of emissions; the cap is structured to decline 2-3 percent annually through 2020. Proceeds raised through auctions of emissions allowances are then used to fund activities that reduce emissions. As of December of 2015, \$2.6 billion had been appropriated to a variety of agencies responsible for administering programs aimed at reducing greenhouse gas emissions and delivering major economic, environmental, and public health benefits in California, including disadvantaged communities.

Cap & Trade funds are spread among several programs aimed at reducing emissions in different ways. Three Cap & Trade programs provide funding for transportation-related improvements: the Transit and Intercity Rail Capital Program (TIRCP), Low Carbon Transit Operations Program (LCTOP), and Affordable Housing & Sustainable Communities (AHSC) Program. These programs encourage use of alternative transportation modes (rail, bus, bicycle, and/or pedestrian), although TIRCP and LCTOP funding priorities do not align well with the CIP for Grid 3.0. The AHSC broadly supports infill and compact development by funding land use, housing, transportation, and land preservation projects designed to promote multimodal travel options, decrease vehicle miles traveled, and reduce land conversions, all of which reduce GHG emissions. About one-third of AHSC funds awarded to date have been for



Disadvantaged Communities (CalEnviroScreen 2.0)

GRID 3.0

transportation projects, although nearly all of these transportation projects have been associated with an affordable housing project.

In FY 2014/15, AHSC funded a total of \$122 million, of which the Sacramento Region obtained \$6.7 million (or 6 percent) for one project with affordable housing in West Sacramento. However, statewide funding is expected to increase dramatically, commensurate with proceeds from the annual auction of emissions; for example, in FY 2015/16 the AHSC is anticipated to provide \$400 million in funding.

Cap & Trade funding could provide significant opportunities for the Grid 3.0 CIP. This funding analysis classifies Cap & Trade as a Potential Future Funding Source because its newness and ongoing evolution makes it difficult to project future funding levels for planning purposes. The ability to access Cap & Trade funds will depend on a number of factors, namely alignment with the specific criteria of the AHSC and possible changes to the program as it matures. At this time, the AHSC funding criteria for areas served by light rail, including the Central City, requires that any transportation improvements be combined with and serve new or rehabilitated income-restricted affordable housing projects. While the City continues to incorporate programs for such housing, it remains challenging to develop throughout the region. The best near term opportunities are to coordinate planned transportation improvements with some proposed

affordable housing projects within the Grid 3.0 project area, including:

- Mixed-Income Project planned by CADA at 18th and S Street. 40 percent of this project's residential units would be affordable.
- Potential reconstruction of the Alder Grove and Marina Vista housing projects on Broadway

This funding analysis classifies Cap & Trade Funding as a Potential Future Source, and does not forecast future AHSC funding for the City or Grid 3.0 because the challenging eligibility requirements makes it difficult to estimate the level of funding that could be successfully obtained.

Proposed Governor's Transportation Plan

At the time this study was produced, California's Governor Brown had developed a transportation funding plan that would produce \$36 billion over the first ten years of implementation. Funding would be used for local city and county streets and road repair (\$11.3 billion); transit and rail (\$4.3 billion); State and local partnership grants (\$2.5 billion) for local transportation projects; and traffic congestion (\$148 million). At the time this funding analysis was prepared, there was no additional information regarding the status of this proposed funding plan, nor how funding within each category would be allocated. Therefore, a forecast of funding for the City, Central City or Grid 3.0 Project Area was not prepared for this funding analysis.

Local Funding

Historical Funding Context

The City has utilized multiple local sources of transportation improvement funding that align with the types of improvements identified in Grid 3.0. As shown in Table 2, these sources have provided about \$3.6 million annually to the City related to transportation in recent years; going forward, this amount is expected to increase to \$4.8 million annually citywide. As shown in Table 2, Grid 3.0 projects could capture in the range of \$195,000 annually from these sources. Considering that some of these sources may not be immediately available, this funding analysis projects total funding of about \$260,000 through 2020, and \$3.0 million through 2035 for Grid 3.0 improvements. Specific local sources comprising this estimate are described below.

Table 2

Summary of Phasing for Grid 3.0 Capital Improvements Downtown Transportation Study, City of Sacramento

Item/Description	Funding Programs	TOTAL GRID 3.0 FUNDING					
		Annual Grid 3.0 Capture	2017-2020			2017-2035	
			Estimated First Yr ^[2]	Amount	%	Amount	%
ESTIMATED CIP COSTS		N/A		\$19,500,000	100% ^[1]	\$170,926,200	100%
EXISTING FUNDING SOURCES							
Federal/State Funding Sources							
Federal/State (SACOG)	CMAQ, STP, ATP-- Regional Share	\$421,341	2018	\$842,683		\$6,741,464	
Federal/State (City)	ATP-- State Share	\$211,944	2018	\$423,888		\$3,391,105	
Subtotal Federal/State Funding		\$633,286		\$1,266,571	6%	\$10,132,568	6%
Local Funding Sources							
Local Funding Sources Quantified	Measure A Sales Tax, Measure A DIF, MSCT	\$195,386	2018-2020	\$258,830		\$2,994,229	
Local Funding Sources Not Quantified	DDIF	\$0	N/A	\$0		\$0	
Subtotal Local Funding Sources		\$195,386		\$258,830	1%	\$2,994,229	2%
TOTAL EXISTING FUNDING SOURCES		\$828,671		\$1,525,401	8%	\$13,126,797	8%
FUNDING GAP (FOR PLANNING PURPOSES)				-\$17,974,599	-92%	-\$157,799,403	-92%
OTHER POTENTIAL FUTURE FUNDING SOURCES (SPECULATIVE)							
Funding Sources Quantified	STIP, Planned TDIF, Adjusted DDIF, Planned Measure B Sales Tax, VLF City Surcharge Concept	\$3,423,984	2018-2021	\$3,510,491		\$54,849,811	
Funding Sources Not Quantified	Earmarks/One-Time Funds, Cap & Trade AHSC, State Governor's Transp. Bill	\$0	N/A	\$0		\$0	
TOTAL POTENTIAL FUTURE FUNDING SOURCES		\$3,423,984		\$3,510,491	18%	\$54,849,811	32%
REMAINING FUNDING GAP (SPECULATIVE)				-\$14,464,109	-74%	-\$102,949,592	-60%

[1] Derived by allocating a proportionate share of \$65,044,200 in projects prioritized during the first ten years.

[2] Some sources are not expected to be immediately available.

Sources: Grid 3.0 Improvement Phasing 03.02.16 provided by Fehr & Peers, City staff February-April 2016, SACOG, Sacramento Transportation Authority, Sacramento County, California Department of Finance, California Department of Motor Vehicles.

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Measure A ½-Cent Sales Tax

Discretionary capital revenues from this countywide sales tax (2009-2039) are restricted to two program areas: traffic control and safety improvements, and safety, streetscaping, pedestrian, and bike facilities. Future funding for capital improvements in the City relies upon the City's revenue projections through FY 2021, which assume typical growth in sales taxes. Review by City staff of Measure A funding since 2009 revealed that about 6 percent of revenues have been spent within the Central City.

In consultation with City staff, this funding analysis projects that 10 percent of future Measure A sales tax funds will be spent in the Central City because projects there are expected to align relatively strongly with Measure A criteria. This funding analysis further assumes that Grid 3.0 projects will capture 25 percent of funds spent within the Central City. This capture rate accounts for the existence of Railyards projects, River District projects, and other Downtown projects that would also be viable candidates for these funding sources. Further, availability of these funds is assumed to begin in 2020, to reflect a presumption that Measure A sales tax funds have already been committed to specific projects in the near term.

Measure A Development Impact Fee (Measure A DIF)

Revenues from the portion of this countywide fee program (2009-2039) that will be made available through grants have not yet been distributed. Measure A's development impact fee is called the

Sacramento County Transportation Mitigation Fee Program (SCTMFP) and is imposed on new development countywide. Measure A calls for a Smart Growth Incentive Program, to be funded with 14% of fee revenues over time. This program, not yet enacted, is planned as a competitive grant program among local public agencies to facilitate land use planning and development/redevelopment projects that promote pedestrian, bicycle, and transit travel and a reduced reliance on personal automobiles. At least \$5 million will be expended exclusively for environmental mitigation associated with construction of the 1-5/SR99/SR50 connector road. STA staff indicated an initial release of fee revenues beginning in 2018. STA will develop a specific set of guidelines specifying eligibility and criteria for each program by that time.

Measure A fees are classified as an Existing Local Funding source because the fee is already in effect and being collected. This funding analysis considered historic development patterns and General Plan growth projections for the City as a whole to develop a mid-point set of development projections through 2035. New Economics applied 14 percent of the SCTMFP fee rate to the adjusted growth projection to derive a citywide annual average fee revenue estimate congruent with Grid 3.0 projects. New Economics then applied the same capture rates assumed for Central City and Grid 3.0 for Measure A sales tax revenues (10 percent and 25 percent) to derive an estimated revenue forecast for Grid 3.0 projects.

Major Street Construction Tax (MSCT)

This excise tax is used for State/Federal grant matches and, to a lesser extent, gap funding for the completion of transportation improvements that would otherwise be only partially completed. Future funding for capital improvements in the City relies upon the City's annual revenue projections through FY 2021.

Because the majority of MSCT funds are used for federal/state grant match, this analysis applies the same capture assumption that is utilized for federal/state funding (28 percent). Of these funds, the Grid 3.0 capture rate is also the same as the rate used for federal/state funding (25 percent).

Downtown Development Impact Fee (DDIF)

This existing City development impact fee for the Downtown area has been in place since the mid-1990's; over time, rates have been adjusted and new sub-area fees have been created to reflect changing development plans for the Railyards and River District. Because the current CIP for this fee program does not align with the Grid 3.0 CIP, this funding analysis does not project any revenues from this program as an Existing Funding Source. Instead, funding from this source for Grid 3.0 improvements is discussed in the subsequent section of this analysis.

Local Funding Outlook

While multiple local funding sources are in place to help fund transportation improvements, availability of funds are expected to change, modifications to some existing sources are being considered, and new sources are being explored.

Revised DDIF

The City approved the DDIF in 1994; the original fee program area included Downtown, the Richards Boulevard area (now known as the River District), and Downtown Railyards. In FY 2015/16, the fee rate for the Downtown sub-area was nearly \$1,000 per residential unit, \$0.67-\$2.07 per non-residential building square foot, and nearly \$500 per hotel room.

This funding analysis classified the Revised DDIF as a Potential Future Funding Source because the fee would need to be amended to fund the improvements identified in Grid 3.0. The City has begun to undertake a specific plan effort for the Downtown area; this effort will be accompanied by a Finance Plan to address infrastructure and public facility needs identified in the Specific Plan. This funding analysis applies the current DDIF rate (which includes only transportation projects), with the presumption that the list of transportation improvements will change but the overall level of transportation funding will remain largely the same. It is too speculative at this time to determine what the ultimate nexus and fee rate could be. The resulting revenue projection also relies upon on a residential and commercial development forecast for Downtown (net of the Railyards and River District) that reflects a mid-point of historical growth rates and General Plan growth estimates. This planning-level forecast should be refined in the future based on full consideration of Grid 3.0 transportation project needs, a review of new development patterns, and updated fee rate calculations.

Planned Transportation Development Impact Fee (TDIF)

The City is completing a nexus study that would allow for the adoption of a new citywide transportation development impact fee (TDIF). If adopted, this fee is envisioned to support funding for transportation improvements citywide consistent with the General Plan and MTP/SCS. The current MTP/SCS identified a need for at least \$100 million in transportation projects for Downtown Sacramento, and funded Grid 3.0 to specifically define the needed improvements. If enacted, the TDIF would support Grid 3.0's CIP, although specific projects and/or funding amounts are still being explored. Outreach and policy discussion about the TDIF have not yet begun; so it is difficult to determine if this will be a funding option.

For basis of discussion only, this funding analysis identifies the TDIF as a potential future funding source and includes approximately \$25 million in Grid 3.0 improvements. Further, if enacted, it will take a few years to generate enough revenue to fund larger projects, this funding analysis assigns the \$25 million to the 2020-2035 time frame.

Planned Measure B ½ Cent Sales Tax Measure

The Sacramento Transportation Authority (STA), which administers the existing Measure A half-cent transportation sales tax program, has analyzed and forwarded for consideration an ordinance for an additional ½ cent sales tax to fund transportation and transit maintenance, operations, and improvements countywide. This measure would also require a two-thirds voter approval and is being proposed as a ballot measure for November of 2016.

At the time this funding analysis was prepared, the STA Board had tentatively adopted the Draft Expenditure Plan (spanning 2017-2047), which could generate \$3.6 billion in funding. Assuming that this Expenditure Plan is finalized, approved by local jurisdictions, and approved by voters, approximately sixty percent of these funds (\$2.2 billion) would be spent on "Local Roadway and Transit Capital, Operations, and Maintenance"; eligible improvements consist of "Fix it First" projects (rehabilitation to roads/bridges and modification of existing arterial streets to complete streets), new complete streets, intelligent transportation system modifications, improvements serving non-motorized travel, and transit capital improvements. The specific capital improvements identified for the City's "Local Roadway & Transit Capital, Operations & Maintenance" allocation include road "Fix It First" projects, the American River LRT/Auto/Bike Bridge auto/bike lane component, Sacramento Intermodal Transfer Facility, Bike Master Plan Implementation, and Downtown transit services alignment. Measure B expenditures would align well with Grid 3.0 projects, although this funding analysis does not quantify a specific projection of funding for the Grid 3.0, as Measure B remains under consideration.

The Draft Expenditure Plan (April, 2016) identifies \$683.5 million for the City in the "Local Roadway and Transit Capital, Operations, and Maintenance" funding category. Because approximately 75 percent of these funds would be restricted to rehabilitating existing streets, this funding analysis only applies 25 percent of the City's allocation in this category for capital improvements. Spread over the 30-year time frame, this funding could

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produce an average of \$5.7 million annually for the City. This funding analysis further applies a capture rate of 15 percent for the Central City, and, within that portion, a capture rate of 50 percent for the Grid 3.0 CIP.

Potential Vehicle License Fee Surcharge

City staff have also been studying Senate Bill 1183, approved in 2014, which allows a city, county, or regional park district to impose and collect a special tax in the form of a motor vehicle registration surcharge of up to \$5. At this time, there is no public campaign to pursue this as a voter initiative. Under the program, funds associated with this surcharge would need to be spent on bicycle infrastructure, including existing and new trails and bikeways, other bicycle facilities, and associated maintenance activities. To create this funding source for the City, the special tax would have to be approved by a two-thirds vote of City residents and could only be collected through the end of 2024 (absent an extension by the State legislature to extend it further).

The fee would be collected by the Department of Motor Vehicles, which would retain a portion of the fee to fund collection and distribution to the City. Of the net revenues, the City could also keep 5 percent for its own administrative purposes. Assuming that the DMV and City each retain 5 percent for administrative duties, the net remaining amount would be \$4.51 for eligible activities. The estimated amount of annual revenues that could be available for bicycle infrastructure and maintenance activities, net of administrative costs, would be approximately \$1.8 million. This funding analysis presumes that approximately 10 percent of citywide revenues

would be expended within the Central City, and that 50 percent of these Central City funds would be expended on Grid 3.0 projects annually through 2024.

Grid 3.0 Capital Funding Projection

This analysis culminates in a planning-level projection of capital improvement funding for Grid 3.0 projects through 2020 and through 2035. The projection generally forecasts an annual funding amount for the City, applies a capture

rate for the Central City, and then applies a second capture rate against the Central City for Grid 3.0 improvements (as opposed to other Central City improvements).

Table 2 summarizes the annual amount captured by Grid 3.0 and assigns timing of availability for these funds to forecast total funding through 2020 and 2035. The following findings explain and characterize the funding projection:

Capital Funding Projection Findings

» **There is an estimated CIP of approximately \$171 million in identified Grid 3.0 projects through 2035.**

New Economics derived this amount based on an initial estimate of \$65 million in projects prioritized for the first ten years of Grid 3.0 implementation. New Economics spread this initial cost over ten years and calculated three years worth of cost (2017-2020) to derive a 2020 cost estimate.

» **Through 2020, the City can reasonably expect to have about \$1.3 million in state/federal funds and \$260,000 in local funds toward Project improvements, for a total of \$1.5 million, or 8 percent of total costs.**

The federal/state estimate is based on historic levels of federal and state funds, historic funding levels in the Central City, and a planning-level capture estimate for the Grid 3.0 Project Area. The local estimate includes Measure A fees and MSCT revenues, but excludes Measure A sales tax (assuming that near-term funds are encumbered), and DDIF revenues (initially assuming that the existing CIP does not coincide with the Grid 3.0 CIP).

<p>» A comparison of CIP costs existing funding sources suggests a funding gap of approximately \$17.9 million between 2017 and 2020. There could be a potential for the City to obtain additional state and local funds in the range of \$3.5 million or more, but these sources may well be difficult to obtain.</p>	<p>Additional potential sources include the planned TDIF, a revised DDIF, planned Measure B Sales Tax Measure, and a potential voter-approved vehicle license registration surcharge. Additional sources not quantified in the 2017-2020 analysis could include earmarks or other discretionary funding (e.g. TIGER grants), new funding made available through the State Governor's Transportation Bill, select Cap & Trade funds, and/or STIP funds.</p>
<p>» There is an estimated CIP of approximately \$171 million in identified Grid 3.0 projects through 2035.</p>	<p>This amount was provided by Fehr & Peers and includes a variety of two-way conversions (with and without contra flow lanes), center turn lane conversions for bicycle lanes, three lane to two lane conversions for bicycles or transit, new roadways, bicycle lane retrofits, Broadway complete streets, and other pedestrian, transit, and bicycle lane projects.</p>
<p>» Through 2035, the City can reasonably expect to have about \$10.1 million federal and state funds and \$2.9 million in local funds toward Grid 3.0 Project improvements, for a total of \$13.1 million, or 8 percent of total costs.</p>	<p>The federal/state estimate is based on historic levels of federal and state funds utilized in the Central City, and a planning-level capture estimate for Grid 3.0 Project Area. The local estimate includes Measure A sales taxes, Measure A fees, and MSCT revenues, but excludes DDIF revenues (initially assuming that the existing CIP does not coincide with the Grid 3.0 CIP). This projection also presumes that the most current set of federal and state funding programs remains largely in place through 2035; future changes in federal and state funding would affect this projection.</p>
<p>» A comparison of CIP costs and existing funding sources suggests a total funding gap of approximately \$157.8 million between 2017 and 2035. There is a potential for the City to obtain additional state and local funds in the range of \$54.8 million or more, which would reduce the gap to approximately \$102.9 million.</p>	<p>Potential future sources require State or local action, including STIP funds, the planned TDIF, a revised DDIF, planned Measure B Sales Tax, and a voter-approved vehicle license fee surcharge concept. Other potential future sources not quantified in this analysis could include future earmarks or other one-time funds (potentially in the form of TIGER or other grant programs), revisions to select Cap & Trade programs to make them more accessible outside the major urban areas, and the State Governor's Transportation Bill.</p>
<p>» Because the levels of future federal and state funding for capital improvements remain uncertain and increasingly competitive, new and/or updated local sources may represent the most palatable sources of funding for Grid 3.0 projects.</p>	<p>Recent reductions in funding at the federal and state levels (including earmarks, STIP, and Gas Tax revenues) are placing additional pressure on local jurisdictions to find or develop other sources of funds for capital improvements as well as maintenance and operations of existing and future transportation facilities. Therefore, local sources, such as Measure B, an updated Downtown Impact Fee, and/or Citywide TDIF, provide the strongest likelihood of locally controlled funding that could be utilized for Grid 3.0 projects.</p>

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Sacramento Stakeholders

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Blue Diamond Growers
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CalPERS
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Capitol Area R Street Association (CARSA)
Capitol Corridor
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The River District
Twin Rivers Housing Community
Upper Land Park Neighborhood Association
WALK Sacramento
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