**GREATER DOWNTOWN STOCKTON** 

## ACTIVE TRANSPORTATION PLAN

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NOVEMBER 2020



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All photos credit City of Stockton unless otherwise noted



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Altamont Corridor Express / San Joaquin Regional Rail Commission (ACE / SJRRC)

Asian Pacific Self Development and Residential Association (APSARA)

Caltrans – District 10

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**Catholic Charities Diocese of Stockton** 

Central Valley Asian-American Chamber of Commerce

Community Center for the Blind and Visually Impaired

Disability Resources Agency for Independent Living (DRAIL)

**Downtown Stockton Alliance** 

**Greater Stockton Chamber of Commerce** 

Greyhound

Public Health Services of San Joaquin County

**Reinvent South Stockton** 

San Joaquin Bike Coalition

San Joaquin Council of Governments

San Joaquin County Public Health Services

San Joaquin Partnership

San Joaquin Regional Transportation District

San Joaquin Valley Air Pollution Control District

St. Mary's Dining Room

Stockton Collegiate International Elementary School

**Stockton Miracle Mile** 

Stockton Ports / Banner Island Ballpark

**Ten Space Development** 

Vietnamese Voluntary Foundation, Inc.

Visit Stockton

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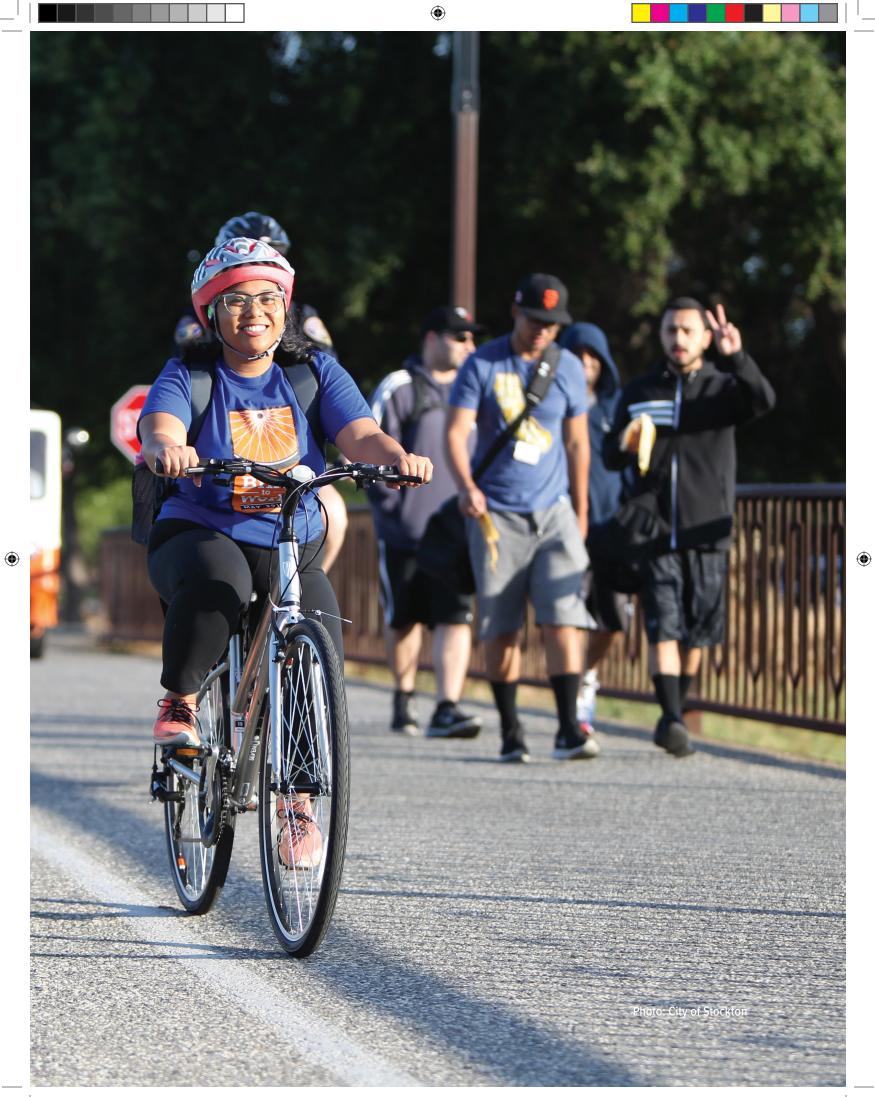
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## CHAPTER 1 Introduction

## What is Active Transportation?

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Active transportation describes human-powered modes of travel, such as walking, rolling in wheelchairs, biking, and riding scooters and skateboards. Active transportation is a critical part of our transportation system – it improves personal health, reduces carbon emissions, and provides affordable, efficient travel. It is also important because nearly all trips begin or end with a form of active transportation, whether a person walks to their parked car after shopping, or bikes to the train station as part of their commute.



People walking across a street in Downtown Stockton.

City of Stockton

## What is the Greater Downtown Stockton Active Transportation Plan?

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The Greater Downtown Stockton Active Transportation Plan is focused on an area of about 4.25 square miles centered on Stockton's central business district. In addition to the businesses and civic institutions of Downtown, the study area includes residential neighborhoods, industrial areas, schools, and major destinations such as the Stockton Arena and Ballpark, Weber Point Events Center, Bob Hope Theater, and CSU Stanislaus State's Stockton campus. Key education, healthcare, and shopping destinations are located immediately outside the study area as well.

The plan will create an actionable vision for a comprehensive active transportation network that:

- Advances previous planning efforts
- Provides a safer and friendlier environment for people walking, rolling, using mobility assistance, biking, and accessing transit
- Carefully balances all travel needs while moving more people in the existing roadway space
- Enhances public health and livability
- Improves air quality
- Assists with revitalization of Greater Downtown Stockton

The Plan recommends a slate of short- and long-term projects, programs, and policies; presents cost estimates and funding strategies to implement these recommendations; and provides detailed project concepts suitable for pursuing grants for design and construction.

#### Greater Downtown Active Transportation Plan



#### Greater Downtown Stockton Active Transportation Plan Study Area

The study area is bounded by Harding Way on the north, Wilson Way on the east, Dr. Martin Luther King, Junior Boulevard on the south, and Pershing Avenue on the west.

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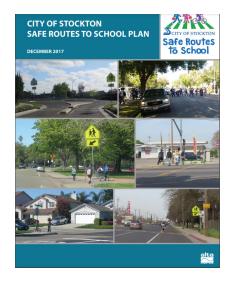
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## Past Plans

Past planning efforts in Stockton have laid the groundwork for an active transportation network in the Greater Downtown area, and many projects are in progress.

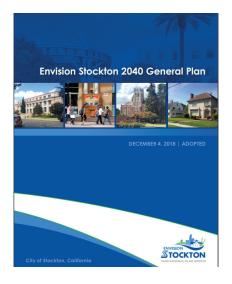
- Stockton's 2017 Bicycle Master Plan evaluates Stockton's existing bicycle network, sets a vision and goals for the future bicycle network, and provides a road map for project prioritization and implementation. The plan proposes key "Backbone Network" bikeway projects, supportive programs, and educational campaigns.
- The 2017 Stockton Safe Routes to School Plan proposes and prioritizes safety improvement projects such as traffic calming, crossing improvements, and curb ramps near schools. The plan identifies projects near three schools in the Greater Downtown study area: Hazelton Elementary School, AG Spanos Elementary School, and Pittman Elementary School.

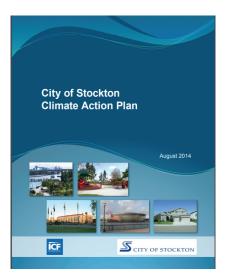




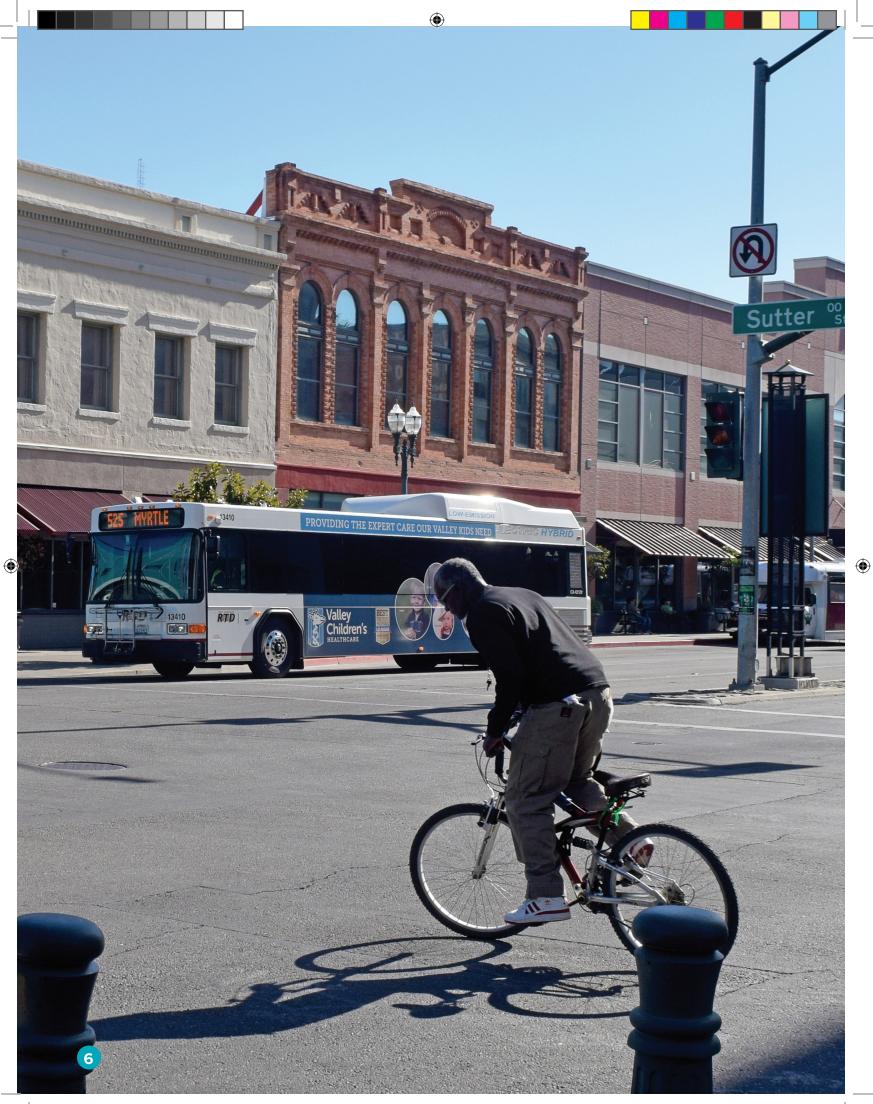
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- The 2016 Envision Stockton 2040
  General Plan update includes a chapter on Transportation and Circulation. It identifies places that can be a focus for active transportation projects: future transit corridors, barriers and gaps in the bicycle network, locations of collisions involving pedestrians, and infill development areas. The General Plan also updates the Level of Service (LOS) standards for motor vehicle traffic in the Downtown area to better support people walking, biking, and taking transit.
- The 2014 Climate Action Plan sets a goal for Stockton to reduce greenhouse gas emissions by 10% from 2005 levels. Initiatives to help meet that goal include transit system improvements, reducing barriers to walking and biking, creating a Safe Routes to School program, and travel demand management (TDM) programs for large employers to help their employees find commute options other than driving alone.





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### CHAPTER 2

## Active Transportation In Greater Downtown Today

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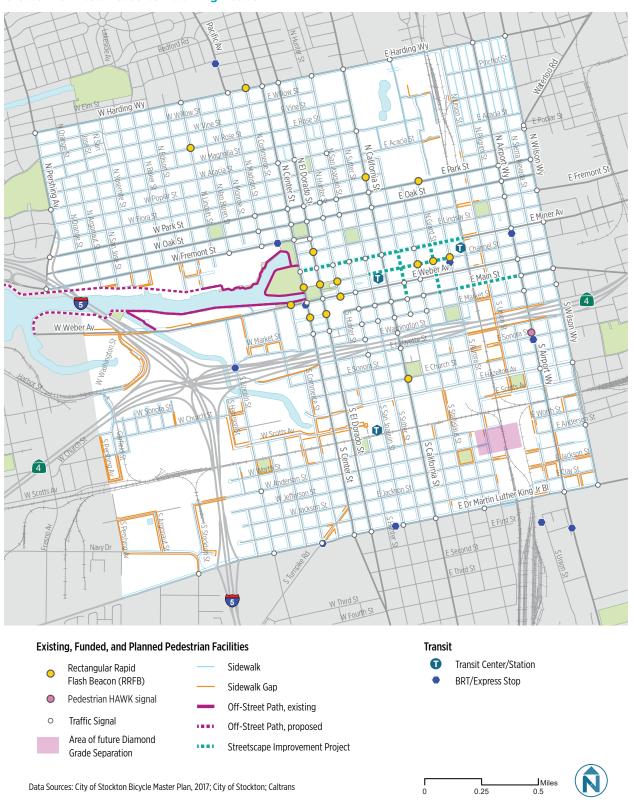
## **Existing Networks**

#### Walking

Greater Downtown Stockton provides the foundation for a high-quality, interconnected pedestrian network. Streets generally follow a grid pattern that offers multiple route options, and most streets have sidewalks. However, the condition of pedestrian facilities varies depending on the neighborhood. The northern part of the study area is generally a better walking environment—block lengths are consistent and traffic signals are closely spaced. Sidewalks are present almost everywhere, but there is room for improvement to the quality and condition of some sidewalks, and curb ramps are missing at many corners. The Union Pacific Railroad and the Stockton channel are the major barriers to street connectivity in this area.

The southern area, South of Market Street, is a more challenging walking environment. The street network is interrupted by I-5 and State Route 4, the Port of Stockton, two major rail lines, and adjacent industrial areas. Gaps in the sidewalk are more common, particularly in industrial areas and near rail lines. There are few traffic signals south of SR-4, resulting in long distances between enhanced pedestrian crossings, and no pedestrian signals, which can make crossing the street an intimidating and difficult experience for people walking.

The map on the next page shows the walking network in the Greater Downtown study area, including sidewalks, places where sidewalks are missing, off-street paths, signals, and previously planned projects to improve the walking environment. The Intersection Toolkit on pages 42-47 describes the types of pedestrian signals and beacons (RRFBs and HAWKs) shown on the map.



#### **Greater Downtown Stockton Walking Network**

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#### **Bikeway Classifications**

The Bicycle Master Plan (2017) proposes a range of bike facilities that are defined in the California Department of Transportation (Caltrans) Highway Design Manual (Chapter 1000: Bikeway Planning and Design) and California Assembly Bill 1193. There are four distinct bikeway classifications that offer various levels of separation from traffic.

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#### **Class I: Bike Path**

Bike paths provide a completely separate right-of-way designated for the exclusive use of people riding bicycles and walking.



#### **Class II: Bike Lane (Buffered or Painted)**

Bike lanes provide designated street space for people riding bicycles, typically adjacent to the outer vehicle travel lane. Bike lanes include special lane markings, pavement legends, and signs. Class II bike lanes may include a painted buffer next to a travel lane or parking lane for horizontal separation.



#### **Class III: Bike Route**

Bike routes provide enhanced mixed-traffic (bicycles and automobiles) conditions. A bike boulevard is a type of bike route that is suitable for all ages and abilities because they are on low-volume, low-speed streets, and often include traffic calming elements such as diverters.



Greater Downtown Stockton ATP.indd 9

#### **Class IV: Separated Bikeway**

Separated bikeways are adjacent to and physically separated from motor vehicle traffic. Types of separation may include grade separation, on-street parking, flexible posts, or other physical barriers such as curbs, planters, and delineators. Separated bikeways may be one-way or two-way.

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#### **City of Stockton**

#### Biking

Greater Downtown Stockton has the potential for a bikeway network that serves people of all ages and biking abilities, from experienced adult riders to children on their way to school: the majority of Downtown streets are in a grid pattern that offer multiple routes to access destinations; many streets have low traffic volumes, which helps create a more comfortable experience for riding a bike; the weather and topography allow for biking year-round; and the City has an adopted Bicycle Master Plan to guide implementation of the bicycle network.

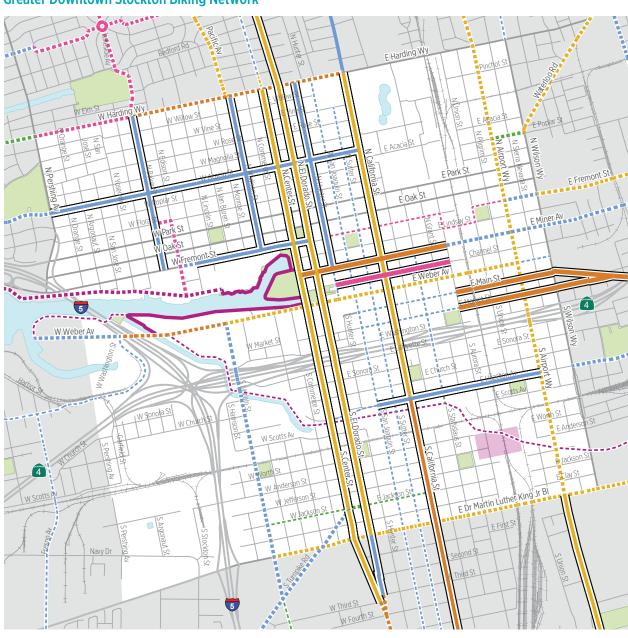
Existing designated bikeways are limited to the off-street, shared-use path that follows the Stockton Channel, and bicycle lanes on North California Street, which begin at Oak Street and continue north. Several projects are currently underway in the Greater Downtown area.

- The Miner Avenue Complete Streets project includes bicycle lanes, wider sidewalks, and crossing improvements.
- Bike lanes on Baker Street and Hunter Street are in construction.
- Bike lanes on Acacia Street, Fremont Street, and Madison Street are in design.
- Class IV separated and Class II buffered bike lanes on California Street are in design.

The map on the facing page shows existing and funded bike facilities, and future bike facilities identified in the 2017 Bike Master Plan. The Bike Master Plan proposes a "backbone network" of projects that will provide low-stress connections throughout Stockton. Additional bike projects from the Bike Master Plan are shown with thinner dashed lines.

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Greater Downtown Active Transportation Plan



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#### **Greater Downtown Stockton Biking Network**



#### **Proposed Bike Facilities**

Backbone Network Other Class I: Off-Street Path •• 10 Class IV: Separated Bikeway Class II: Buffered Bike Lanes 10 Class II: Bike Lanes 1.0 10

	 Class I: Off-Street Path
••••	 Class IV: Separated Bikeway
	 Class II: Buffered Bike Lanes
	 Class II: Bike Lanes
••••	 Class III: Bicycle Boulevard

..... ----- Class III: Bike Route

Data Sources: City of Stockton Bicycle Master Plan, 2017; City of Stockton; Caltrans





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#### Transit

Downtown Stockton is a hub for public transportation, the site of the Downtown Transit Center and two train stations, both served by Amtrak and one served by ACE commuter rail. While the primary purpose of a public transportation system is to provide bus or train lines that serve the destinations people need to reach, "first mile/last mile" connections help people reach the bus stop or train station from their homes and workplaces. Whether or not transit is a viable travel option depends not just on how far a person lives from a bus stop, but also on the conditions they encounter on the way there. A walk of a quarter mile may be convenient and pleasant or, in the absence of sidewalks and safe street crossings, nearly impossible. Improving access to transit is an important goal of the Greater Downtown Active Transportation Plan.

In addition to numerous local bus routes, three Bus Rapid Transit (BRT) Express routes have a terminus in Downtown, and a fourth runs along the south edge of the study area on Dr. Martin Luther King Jr Boulevard (see map next page). A fifth BRT line is under design.

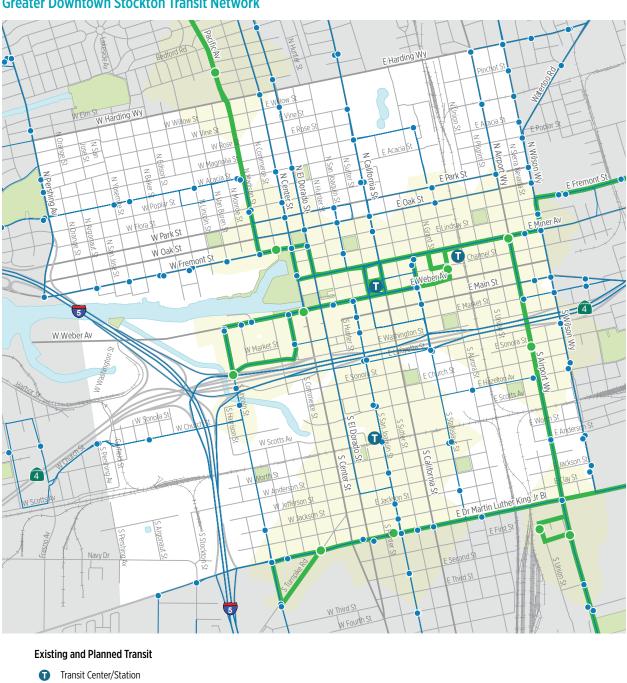


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People board a San Joaquin RTD bus at the Downtown Transit Center.

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Greater Downtown Active Transportation Plan



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#### **Greater Downtown Stockton Transit Network**

- BRT Express Route/Stop
- Bus Route/Stop

Area within 1/3 mile walk of a BRT station or 1/2 mile walk of Amtrak/ACE

Data Sources: San Joaquin Valley Regional Transit District; City of Stockton; Caltrans





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## Needs

The needs analysis evaluates how well the existing walking and biking networks serve the community. It is broken into two elements – relative demand and quality of supply. The demand analysis looks at where people are most likely to walk and bike, given good conditions to do so. The quality of the existing network is assessed by looking at barriers and gaps – the conditions on the ground that discourage people from walking and biking. The results help pinpoint locations where improvements will provide the biggest benefit.

#### Demand

The demand analysis highlights the places in Downtown that attract the most people, including employment, retail, education, entertainment, and recreation destinations.

Factors that influence demand for active transportation include:

- Population and employment density: People walk and bike to and from the places where they live and work.
- Equity and propensity: Households without a car, households with low incomes, renters, people of color, people with disabilities, older adults, and low-income workers may be more likely to walk, bike, or take transit.

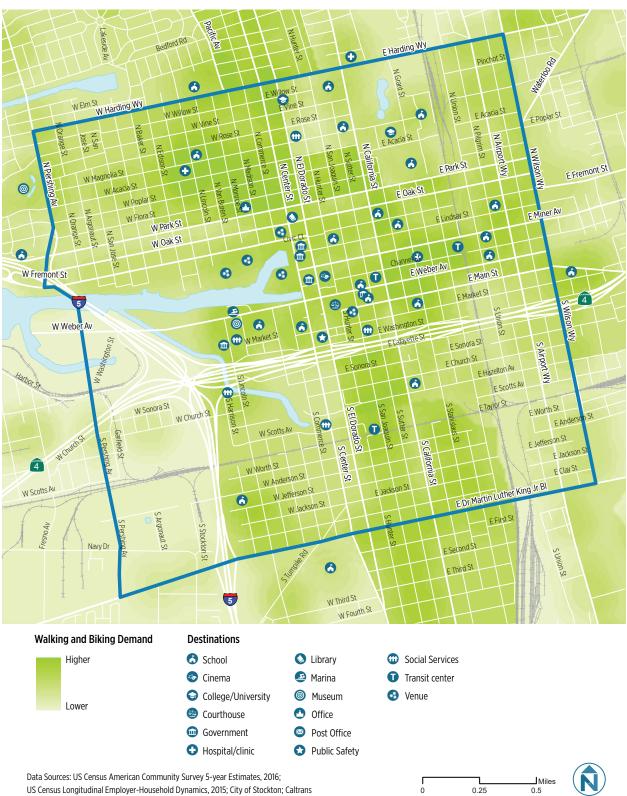
 Access to transit: A transit trip usually involves a walk or bike ride to and from the bus stop. Areas within walking distance of a high-capacity transit stop (rail and Bus Rapid Transit Express) are expected to have high demand.

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Access to destinations: Communities
where it is easy to walk or bike to
schools, parks, health care, social
services, and entertainment venues
experience positive public health outcomes and reduced parking demand.
The analysis includes both destinations
within the study area and just outside
the study area, since people pass
through the study area to reach them.

The map on the facing page shows a demand rating for every part of the study area, based on all of the above factors combined. More darkly shaded areas have a higher level of demand for walking and biking.

Greater Downtown Active Transportation Plan



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Walking and Biking Demand in Greater Downtown Stockton

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#### Supply

Several major natural and humanconstructed barriers present challenges to active transportation in Greater Downtown. Highways, rail lines, and bodies of water interrupt the street grid and limit route options. Other barriers are more difficult to see, but can be equally discouraging to people who walk, bike, or roll from place to place. For the purposes of this plan, a barrier is any condition that decreases the comfort of people walking and biking.

Streets with high traffic volumes, high traffic speeds, more than two lanes, or long distances between crossings are examples of barriers in Downtown Stockton because they are difficult for people to cross. Additionally, certain streets and intersections have a history of multiple collisions involving people walking or biking, indicating that conditions may need improvement. It's important to note that bicyclist- and pedestrian-involved crash rates are also a reflection of the number of people who walk and bike in a location. Stockton overall has a high rate of total fatal and injury collisions compared to other large cities in California-only Los Angeles has more of these collisions per capita.<sup>1</sup> The relative rate of collisions involving people walking and biking is not as high, but that may be due to a reluctance to walk and bike on the part of Stockton residents.

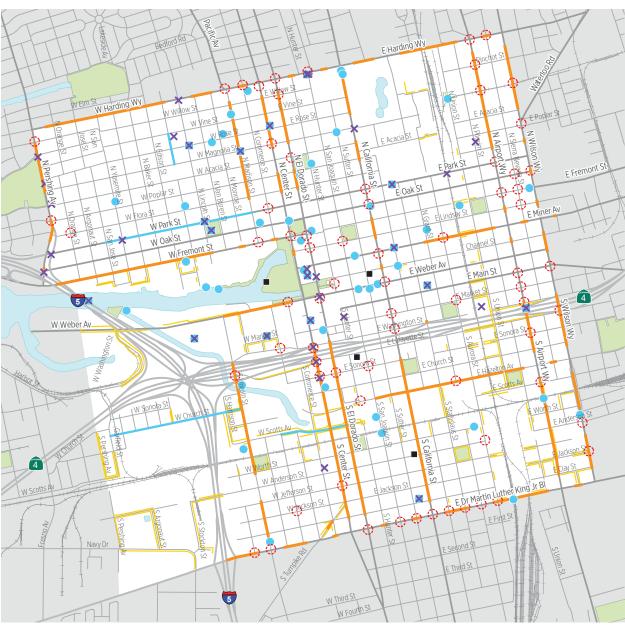
The barriers map shows:

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- Places where it may be challenging to cross the street due to road width, traffic conditions, and lack of controlled crossings.
- Corridors and intersections with three or more bicycle or pedestrian crashes, or where someone walking or biking has been killed or severely injured in the past ten years.
- Places that the community identified as barriers during the outreach process (for more information see Chapter 3 and Appendix A).
- Places where sidewalks are missing. The sidewalk and curb ramp network through the Greater Downtown area is deficient and difficult to navigate for people of diverse physical abilities.
   Poorly maintained sidewalks, tall curbs, and lack of curb ramps present barriers to travel.

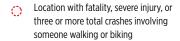
<sup>1 &</sup>lt;u>https://www.ots.ca.gov/media-and-research/</u> <u>crash-rankings-results/?wpv-wpcf-year=2017&wpv-wpcf-</u> <u>city\_county=Stockton&wpv\_filter\_submit=Submit</u>

#### Greater Downtown Active Transportation Plan



#### Barriers to Walking and Biking in Greater Downtown Stockton





- Challenging to cross street segment
- Sidewalk gap

- Public and Stakeholder Input
- × Barrier to crossing the street
- Barrier along the street
- Lack of amenities (such as bike parking)

Data Source: UC Berkeley SafeTREC Transportation Injury Mapping System, Caltrans, City of Stockton



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Public input and data analysis tell a story of several key corridors and intersections that present significant challenges to walking and biking. Center, El Dorado, California, Airport, Harding, and Weber are all major streets that are very difficult to cross, have a high incidence of collisions, and were the focus of many public comments. Public input also helped identify areas that the available data did not capture, such as locations where a sidewalk is present but is in very poor condition.

Numerous at-grade railroad crossings in Greater Downtown Stockton also present dangerous crossings and barriers to travel. These crossings were not evaluated comprehensively as part of this plan, but strategies proposed in Chapter 4 describe an opportunity to evaluate and improve these rail crossings.







Wide, busy streets with long distances between traffic signals can be very challenging to cross.

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Many sidewalks in Greater Downtown lack curb ramps (top). Rail lines in the study area typically cross streets at-grade (bottom).

#### **On-Street Parking**

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Parking is allowed on most streets throughout the Greater Downtown study area, but the City of Stockton does not have a comprehensive inventory of on-street parking supply and usage. For this reason, the impact of capital and land development projects on on-street parking supply cannot be analyzed. A thorough understanding of on-street parking utilization, loading activity, and pickup/dropoff activity can inform project implementation throughout Downtown Stockton, not just for biking and walking projects, but for any project that may have impacts on curb space or usage.



On-street parking is available on most streets in Greater Downtown.

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### **CHAPTER 3**

## What We Heard

The Greater Downtown Active Transportation Plan used multiple methods to gather community input on what it is like to bike and walk in Greater Downtown today and what types of projects and programs people would like to see.

- A Stakeholder Representative Group composed of business and other community members was convened at key points of the project to give input on the analysis of existing conditions and proposed projects.
- In the summer of 2018, the project team facilitated a series of three small group discussions with representatives from seven community-based organizations who work with traditionally under-represented communities in Stockton. The groups discussed the connection between social equity and active transportation, ways the community can be involved in the Greater Downtown Active Transportation plan, and how the project team can partner with community-based organizations throughout the process. Community organizations who participated were:

- -The Chinese Cultural Society
- -St. Mary's Dining Room
- -El Concilio

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- -Asian Pacific Self Development and Residential Association
- -The Mexican Heritage Center
- -The Vietnamese Voluntary Foundation
- -Little Manila Rising
- Two pop-up workshops and a virtual workshop were held in the fall of 2018.
   Pop-up workshops took place at the Downtown Stockton Asian Farmers Market and the Stockton Open Air Mall Flea Market. Workshops included a survey asking what improvements people would like to see, and a map that asked where it is difficult to walk and bike in Greater Downtown Stockton.
- In August of 2020, another virtual workshop presented an overview of the final plan and gave opportunity for the public to comment.

**City of Stockton** 

in three important ways:

Infrastructure projects).

Findings



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types of improvements they would like to see. This helped the project team develop specific recommendations and design concepts for projects and programs. The most popular types of improvements were:

The community weighed in on what

Outreach helped shape the Greater Down-

town Stockton Active Transportation Plan

The community and stakeholders

identified locations where walking or

biking are difficult or uncomfortable,

and suggested solutions. The project

team used this information to identify

potential new projects (see Chapter 5,

–Walking: Rectangular Rapid Flash Beacons and wider sidewalks

The Stakeholder Representative Group.

- -Biking: Secure bike parking and bike lanes (striped, buffered, and separated/protected bike lanes were equally popular)
- Stakeholders and community organizations identified area-wide challenges such as ADA accessibility, school pickup and dropoff, poor sidewalk conditions, lack of bike parking, poor or nonexistent pedestrian lighting, and lack of north-south bike connections,. This direction shaped the Plan's recommendations for policies, practices, and programs (See Chapter 4, Policies, Practices and Programs).

Detailed summaries of each public outreach and stakeholder event can be found in Appendix A.

Source:: AIM Consulting

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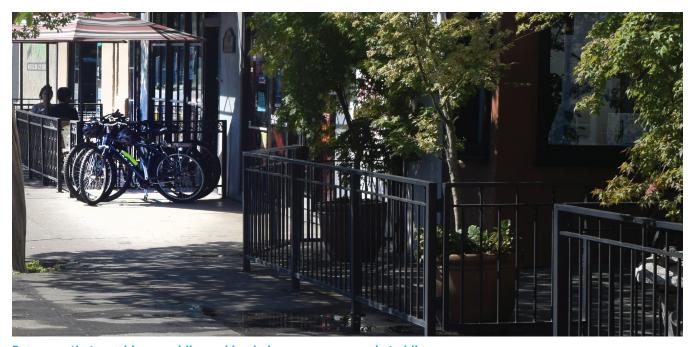


#### CHAPTER 4

# Policies, Practices, and Programs

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Transforming Greater Downtown Stockton into a supportive, comfortable and safe place for all people walking, biking, and rolling involves more than improving the physical infrastructure. City policies, practices, and programs can create an environment where people feel safe and comfortable from the moment they leave their homes until they arrive at their destination. Programs can lay the groundwork to enable physical infrastructure changes and encourage or incentivize people to choose active transportation.



Programs that provide more bike parking help encourage people to bike.



## Recommendations

Building a comfortable, welcoming biking and walking network is not just about building bike lanes and improved crossings. There are many additional strategies that empower people to choose multimodal active transportation for their daily trips. Some supportive strategies have already been proposed or partially implemented, either by the City of Stockton, or regional agencies such as San Joaquin RTD. The tables in this chapter provide descriptions of existing or previously proposed strategies for continuation or modification, and an overview of new strategies and planning projects recommended for implementation. These strategies may require city staff coordination with partner agencies and organizations to maximize effectiveness, especially those that have not yet been implemented locally, but all will help the City of Stockton create a Greater Downtown environment that fully supports people walking, bicycling, and using wheelchairs and other mobility devices.

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Strategy	Description/Benefits	Existing Policy and State of Implementation	Modifications or Implementation Strategy
Transit			
Bikes on Bus/ Train	Provide bike racks on buses and trains to make car-free trips easier and increase the reach of bicycle trips. Training videos and marketing/ outreach to promote use.	<ul> <li>Short Range Transit Plan aims to develop bike parking at all BRT sta- tions, and at select bus stops</li> <li><u>Racks present</u> on all existing and new buses</li> <li>Training video on website for <u>bikes</u> on bus</li> </ul>	Market and promote bike and transit integration across the city through a variety of media and communication channels, such as social me- dia and workplace outreach.
Transit Stop Amenities and Real-Time Information	<ul> <li>Increases comfort, convenience, and usefulness of transit. May include:</li> <li>Real-time arrival information</li> <li>Electronic displays at high ridership stops</li> <li>Text alerts or bus locator/real-time feed to mobile devices</li> <li>Posted maps and schedules</li> <li>Garbage cans and other stop ameni- ties, such as shelters, seating, and lighting</li> </ul>	Express BRT stations have posted schedules, ticketing machines, high quality shelters, seating, and bike racks.	Prioritize stops for additional amenities and upgrades such as real-time information, including high ridership non-BRT stops.
Transit Stop Area Curb Enforcement	Parked motor vehicles can block access to the curb at bus stops and BRT stations, making it difficult or impos- sible for buses to pull up to the curb. This makes boarding and alighting difficult or impossible for people using wheelchairs and mobility assistance, and can increase conflicts between travel modes at bus stop areas because buses cannot completely pull completely out of the travel lane.	Some red curb markings delineate areas where parking is prohibited. Compliance with and enforcement of no parking regulation is lax.	Develop standards for in-lane stops and increase enforce- ment of red zones.
<b>Biking and Wa</b>	lking		
School-based Bike/Walk Programs	<ul> <li>Safe Routes to School is an effort to improve biking and walking conditions in areas near schools, and encourage and educate people to use and explore the biking and walking options available in their school community.</li> <li>Elements may include</li> <li>Annual Walk to School and/or Bike to School days</li> <li>Bicycle safety physical education curriculum or special events</li> <li>School Safety Patrol and school pickup/dropoff procedural changes</li> </ul>	<ul> <li>Several policy measures to support</li> <li>Safe Routes to School programs are</li> <li>described in Stockton's 2014 Climate</li> <li>Action Plan.</li> <li>2017 SRTS Plan identified Priority</li> <li>Safety Projects, and Measure K funding</li> <li>was secured. Types of funded improvements in the Greater Downtown area</li> <li>include:</li> <li>Medians and curb extensions to</li> <li>improve crossings</li> <li>New Rectangular Rapid Flash Beacon</li> <li>crossings</li> <li>Striped bike lanes and road diet</li> <li>restriping</li> </ul>	Continue implementing program and project recom- mendations from 2017 SRTS plan, and identify funding to support and expand policies from the Climate Action Plan

### Existing Supportive Multimodal Strategies

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### Proposed Supportive Multimodal Strategies

Strategy	Description and Benefits	Existing Policy and State of Implementation	Implementation Strategy
Transportation [	Demand Management (TDM)		
Conduct Greater Downtown Commute Mode Survey	Better understand travel patterns for commute trips Downtown to inform targeted policy and program enhancements that encourage mode shift. Complementary to other Down- town TDM programs/policies.	No survey conducted at this time.	Work with <u>Dibs</u> , the San Joaquin Council of Government's Transportation Demand Management program, to pilot a Greater Downtown Commute Mode Survey.
Travel Smart outreach program	Targeted marketing programs can influence travel behavior by educating residents about existing travel options and helping connect with resources for trip planning. Higher effort programs may include: • Transit/bike/walk marketing outreach, mailed and in-person • Map and travel training Lower effort programs may include: • Open streets and other community events • Mailed marketing info	2014 Climate Action Plan proposes actions to create public education and information campaign including promotion of trip planning, transit usage, ride-sharing, and biking and walking.	Work with Dibs to create targeted outreach program for Stockton residents. Consider beginning by targeting new residents who recently moved to Stockton.
TDM strategies for events at Stockton venues	Encourage programs to reduce on-site parking demand and promote ride- sharing, transit, and bicycle travel to sporting events, concerts, and other large events.	2014 Climate Action Plan proposes actions to encourage event opera- tors to offer incentives for shared rides, transit passes, and bicycle valet parking.	Work with city's Parking and Events Man- ager and Dibs to implement event-based TDM strategies at Stockton venues.
<b>Biking and Walk</b>	ing		
Bike Parking	<ul> <li>A citywide bike parking program may include:</li> <li>Request a Bike Rack program for businesses and property owners</li> <li>On-street bike corrals</li> <li>Bike parking at transit stops/stations</li> <li>Bike parking requirements for new developments (see Zoning/ Development Code)</li> </ul>	Bicycle Master Plan recommended a citywide bicycle parking program	<ul> <li>Implement bike parking program recommendation from Bicycle Master Plan:</li> <li>Establish siting and design requirements for short-term and long-term parking</li> <li>Construct bike parking in City- and Parking Authority-owned parking structures and lots</li> <li>Partner with businesses to cover partial or full cost of bike parking installation</li> </ul>
Bike/Scooter Share	Offers flexible mobility solutions that may reduce the appeal of driving and make some types of trips quicker and easier. May consist of free-floating and/or dock-based systems.	No bike or scooter share currently operates in Stockton	Implement recommendations from 2020 San Joaquin RTD bike share study. Develop state-of-the-practice permit and operations requirments for private bike or scooter share companies.



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#### Greater Downtown Active Transportation Plan

Strategy	Description and Benefits	Existing Policy and State of Implementation	Implementation Strategy
Interim installa- tion of key Class IV separated bikeways to sup- port post-COVID recovery	Install key bikeway projects using quick-build methods and materials to quickly enable active transportation access across the study area.	The 2017 Bicycle Master Plan included a one-day "Living Preview" of pro- tected on-street bicycle infrastructure. A two-way protected bike lane was installed on Center Street between Fremont Street and Channel Street using tape, traffic cones, and straw bales.	Install low-cost treatments and plan quick installations by engaging with San Joaquin Bicycle Coalition and other volunteers who installed Living Preview projects.
Slow Streets program	<ul> <li>Work closely with under-served communities and businesses in Stockton to create a Slow Streets program during and after COVID restrictions to:</li> <li>Create increased space and access within the street for walking, biking, and rolling while maintaining safe physical distancing and maintaining local motor vehicle access</li> <li>Create simple permit program for businesses to extend customer seating and access space into adjacent streets, potentially including full street/block opening to nonmotorized use</li> </ul>		<ul> <li>Begin targeted outreach program to communities of concern and business community.</li> <li>Identify streets and blocks for potential implementation based on:</li> <li>Bike boulevards proposed in the Bicycle Master Plan</li> <li>Neighborhood business streets with lower traffic volumes</li> <li>Potential for repurposing existing onstreet parking lanes</li> </ul>
Infrastructure			
Access Manage- ment	Consolidate driveways and design streets and site access to minimize conflicts between all modes. Can make biking and walking safer and more appealing by limiting the number of locations that cars may cross sidewalks and bike lanes, and by slowing the speed of turning vehicles.		Study access and circulation issues in proposed developments, and explore options to consolidate access in existing parcels.
Wayfinding	<ul> <li>A wayfinding system clearly defines pedestrian, bicycle, and vehicular networks and guides travelers to destinations of interest or connecting networks.</li> <li>May be used for vehicle parking and for biking/walking network</li> <li>May include both signage and mark- ings on the street and sidewalks</li> </ul>	2017 <u>Downtown Manage- ment District Plan</u> recommended improving wayfinding First phase of wayfinding signage will be installed late 2020, with additional signage installed as fund- ing is identified. Signs are oriented to support people walking out of parking structures (or lots).	Design and implement consistent wayfinding strategies across Greater Downtown area that apply to all travel modes.

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#### City of Stockton

Strategy	Description and Benefits	Existing Policy and State of Implementation	Implementation Strategy
Annual Sidewalk Infill Program	Create a dedicated annual fund of \$100,000 for systematic installation of sidewalks to fill gaps in the existing walking network.		Target locations for sidewalk construction based on a subset of the criteria used for Greater Downtown ATP project screening, such as: • Equity • Safety • Connectivity • Transit • Population and Employment
Programs, Polici	es, and Code		
Vision Zero	Vision Zero is a set of policies and programs aimed at eliminating deaths and serious injuries from traffic crashes. Identifies high crash corridors and intersections, and designs and builds solutions to make roadways safer.	No Vision Zero policy/ program. A Systemic Safety Analy- sis project is currently underway.	Review citywide collision trends and study need for and benefits of Vision Zero as City policy.
Complete Streets Policy	A policy that directs street design and operation to enable safe access for people of all ages and abilities traveling by all modes. Ensures that every transportation project makes the street network better, safer, and more inclusive for people traveling by walking, rolling, biking, riding transit, or driving. Can be context-sensitive rather than broadly proscriptive, meaning that not all projects or streets must accom- modate all modes.	No existing Complete Streets policy.	Review city street standards, project de- velopment procedures and departmental coordination, and study need for and expected benefits of Complete Streets.
Zoning and Development Code	<ul> <li>In many cities, zoning and development codes contain elements that can help create walkable, bikeable communities, such as:</li> <li>Bike parking requirements</li> <li>Eliminate minimum parking requirements</li> <li>Pedestrian design standards</li> <li>Transit access standards</li> <li>TDM program requirements for developments over certain size</li> </ul>	City of Stockton code still requires <u>minimum quanti-</u> <u>ties</u> of parking, but does allow for <u>reductions</u> . <u>Development Code</u> does require bicycle parking, but could be strengthened.	<ul> <li>Evaluate code changes applicable to city of Stockton as part of General Plan updates, and as part of parking, transit, and TDM plans/studies. Changes may include:</li> <li>Lighting requirements for bicycle parking</li> <li>Bike parking requirements for multi- family housing</li> <li>Additional bike capacity requirements</li> <li>Creating motor vehicle parking maximums</li> </ul>



#### **Future Planning Projects**

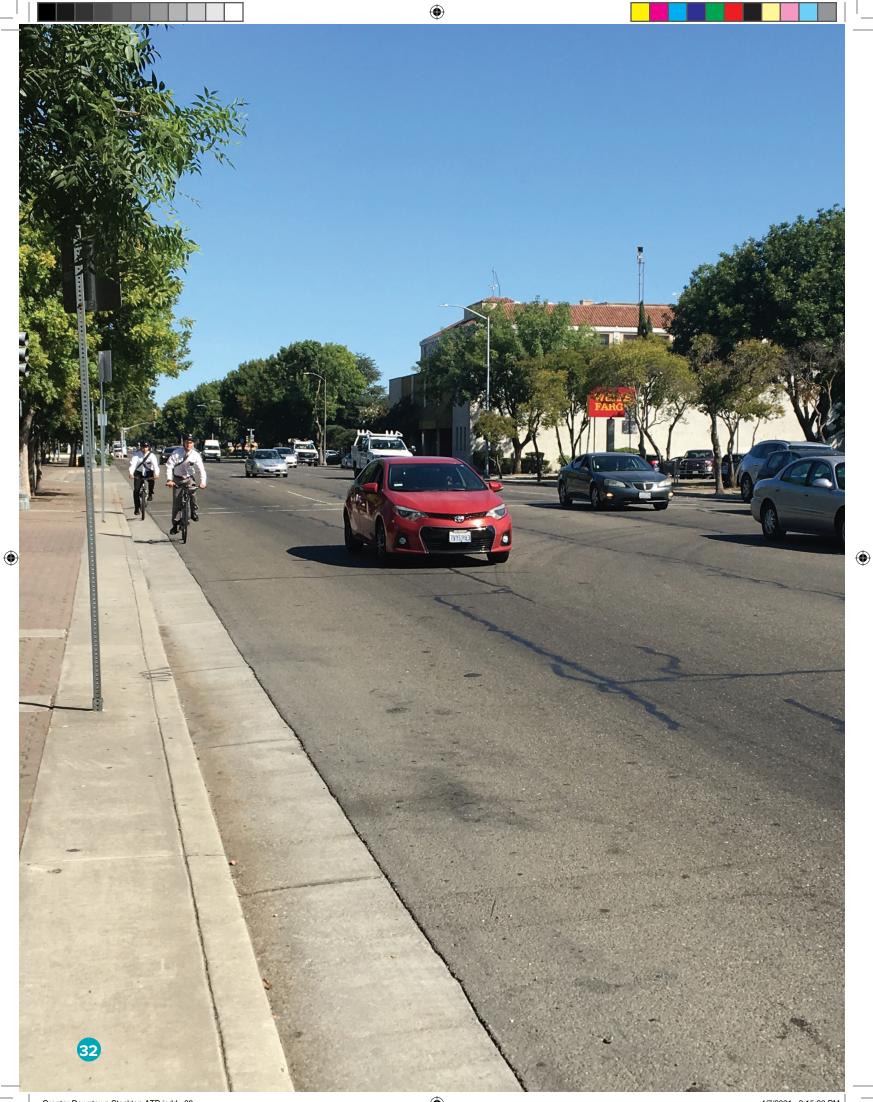
The table below describes three strategies whose scope would likely be much greater than most of the strategies described above, and which could feasibly become standalone planning projects. They address important gaps in data and understanding of the Greater Downtown active transportation network.

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Project	Description
Greater Downtown Railroad Cross- ing Improvements	There are numerous at-grade railroad crossings through the Greater Downtown area, with differing crossing and safety accommodations.
	Carry out a systemic evaluation of all at-grade pedestrian and bicycle crossings:
	<ul> <li>Assess needed upgrades such as paved crossings, gates, warning signage, and lighting</li> </ul>
	<ul> <li>Pursue a funding source for ongoing improvements - 2.5% of Measure K regional transportation funding program is allocated for railroad crossing safety projects.</li> </ul>
Curbside Management Study	The collective impact of previously planned capital and land development projects on on-street parking supply is not comprehensively understood. A thorough understand- ing of on-street parking utilization, loading activity, and pickup/dropoff activity can inform project implementation throughout Downtown Stockton.
	Conduct a curbside management study that would:
	Analyze curb lane utilization and turnover
	<ul> <li>Create recommendations to satisfy parking demands based on existing on- and off- street availability, combined with parking management and pricing strategies</li> </ul>
	• Develop curbside management policy and zoning ordinance changes to enable the city to proactively plan and manage the curb zone both spatially and temporally
ADA Transition Plan	The sidewalk and curb ramp network in the Greater Downtown area includes locations that are difficult to navigate for people of diverse physical abilities. Poorly maintained sidewalks, tall curbs, and lack of curb ramps present barriers to travel. Conduct a comprehensive Americans with Disabilities Act (ADA) assessment and action plan to:
	• Identify sidewalk deficiencies, missing or sub-standard curb ramps, and right-of-way constraints that limit sidewalk and crossing improvements throughout Greater Downtown
	Create an evaluation framework to prioritize improvements
	Pursue a funding source for ongoing improvements

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# CHAPTER 5 Infrastructure Projects

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## **Opportunities**

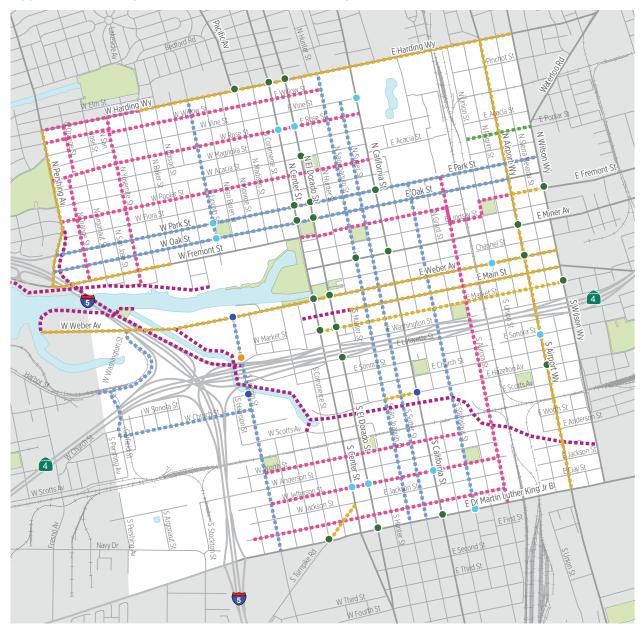
The initial project list for Greater Downtown active transportation infrastructure improvements came from prior planning efforts, outreach to stakeholders and the public, and analysis. Bike facility opportunities came from the Bicycle Master Plan. Projects from the Plan that are already in progress were removed from consideration, and suggestions from stakeholders and the public were added to the list.

Crossing improvement opportunities were identified at intersections and mid-block locations along streets that are difficult to cross comfortably (see barriers map on page 17), particularly in areas with high demand. Suggestions from the public were also incorporated. To select specific crossing locations, the existing crossing infrastructure (such as crosswalks, signals, and curb extensions) and the potential to improve the experience for people walking by painting or re-painting crosswalks, shortening the crossing distance with elements like curb bulb-outs or center medians, or adding a signal were taken into consideration. See pages 42 through 47 for definitions and examples of these elements.

The map on the next page shows all the bike facility and intersection improvement opportunities.

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#### **Opportunities for Bicycle and Pedestrian Infrastructure Improvements**

#### **Proposed Bike Facilities**

#### Class I: Off-Street Path

- Class IV: Separated Bikeway
- Class II: Buffered Bike Lanes
- Class II: Bike Lanes
- Class III: Bicycle Boulevard Class III: Bike Route

#### **Proposed Crossing Improvement Locations** by Existing Traffic Control

- Signalized intersection
- Unsignalized intersection three or four-way stop

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- Unsignalized intersection two-way stop
- Mid-block location

Data Sources: City of Stockton Bicycle Master Plan, 2017; City of Stockton; Caltrans



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# **Evaluation Process**

Opportunities to create a better active transportation network in Greater Downtown Stockton are numerous, but funding and other resources are limited. By evaluating and prioritizing project opportunities, the Greater Downtown Active Transportation Plan can help city staff and decision-makers focus on implementing the projects that will provide the greatest benefit. The evaluation criteria for determining these high impact projects reflect what matters most to community members, City of Stockton staff, and elected officials, as well as the goals of the 2017 Bicycle Master Plan and the Envision Stockton 2040 General Plan Update.

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	Criteria	Key Question	Scoring
1	Equity	Does the project serve areas where disadvantaged populations live and work?	Up to four points based on the density of people of color, people with low incomes, and low-income jobs in close proximity to the project.
2	Safety	Does the project improve safety in an area with a high number of collisions involving people walking and biking?	Up to four points based on the number of collisions that have occurred at the project location in the past five years.
3	Connectivity	How many destinations does the project connect?	Up to four points based on how many destinations are in close proximity to the project.
4	Transit	Does the project serve high capacity (BRT and rail) transit?	Four points if the project connects to a BRT or rail station; Zero points if it does not.
5	Population and employment	How many residents and jobs does the project serve?	Up to four points based on the density of jobs and residents in close proximity to the project.
6	Level of traffic stress	Does the project create a comfortable, low-stress walking or biking environ-	Bikeway projects receive four points if the facility type and roadway conditions lead to a low level of traffic stress. <sup>2</sup>
		ment?	Crossing projects receive up to four points based on the existing level of difficulty to cross the street, (determined by number of lanes, vehicle volumes, and speed).
7	Economic devel- opment	Does the project support economic development?	Four points if the project is located in or along a focused development area as identified in the General Plan Infill scenario; Two points if the project connects to the develop- ment area; Zero points if neither.
8	Project readiness	Was the project identified as a high priority in a previous planning effort?	Four points if the project was prioritized in the Bike Master Plan or other previous planning effort.

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<sup>2</sup> Analysis based on Peter G. Furth Level of Traffic Stress Criteria. <u>http://www.northeastern.edu/peter.furth/criteria-for-level-of-traffic-stress/</u>

**City of Stockton** 

## Recommendations

The Greater Downtown ATP's project recommendations are divided into near-term and long-term projects. Before finalizing the lists, high scoring projects with similar elements that were in close proximity to each other were combined. For example, the bikeway projects on Main Street, Market Street, and Weber Avenue were combined into one project, along with crossing improvements along those corridors. Bundling projects together helps the City of Stockton find funding and makes the construction process more efficient and less disruptive to nearby residents and merchants. The bundled projects that scored the highest are included in the near-term recommendations and are described in more detail in the next section. Projects that scored lower, are within a block of a currently funded project, or will be more complex to implement are included in the long-term recommendations.

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#### Table of Near-Term Projects

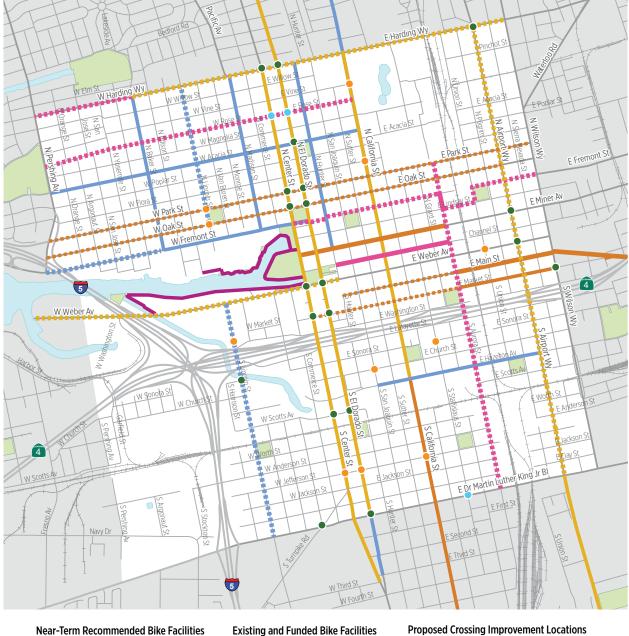
Corridor	Bike Facilities	Crossing Improvements
Dr Martin Luther King Jr Blvd	None	• Stanislaus St (HAWK signal)
		• El Dorado St
		• Turnpike Rd
Center St and El Dorado St	Class IV separated bike lanes and Class II	Rose St (HAWK signal)
	buffered bike lanes are planned on Center St	• Oak St
	and El Dorado St between Cleveland St and	• Park St
	3rd St, and received grant funding from the	Market St
	Caltrans Active Transportation Program (ATP)	Harding Way
	Cycle 4	Jefferson St
Wabar Ava/Main St/Markat St	Class II buffered bike lanes (Main St and	
Weber Ave/Main St/Market St Complete Streets	Market St ) and Class IV separated bike lanes	Wilson Way and Market St
complete streets	(Weber Ave)	Center St and Market St
		El Dorado St and Market St
		Lincoln St and Weber Ave
Airport Way	Class IV separated bikeway from Harding Way	Miner Ave
	to MLK Blvd	Weber Ave
		• Harding Way (in coordination with Harding Way project, see below)
East-West Connections:	Corridor study to assess options:	Lincoln St (see Lincoln St project below)
Fremont St/Park St/Oak St	Class II buffered bike lanes on Park St and	Center St
	Oak St	• El Dorado St
	• Class III bike boulevard on Fremont St from El Dorado St to Airport Way	
	<ul> <li>Class II bike lanes on Fremont St from Pershing St to Baker St</li> </ul>	
Aurora St and Rose St Bike Boulevards	Class III bike boulevards	At major intersections
Lincoln St	Class II bike lanes from Harding Way to	• Sonora St
	Fremont St and from Weber Ave to MLK Blvd	• Park St
		• Oak St
		• Washington St (RRFB at BRT Station)
Harding Way	Class III bike boulevard from Pershing St to	Center St
	Baker St	• El Dorado St
	Class IV separated bikeway from Baker St to Wilson Way	• Airport Way
Greater Downtown RRFB	None	Lincoln St and Oak St
installation		Lincoln St and Park St
		Lincoln St and Washington St
		Stanislaus St and Sonora St
		San Joaquin St and Church St
		Jefferson St and Center St
		Jefferson St and El Dorado St
		Jefferson St and California St
		Union St and Weber Ave
		California St and Vine St
		<ul> <li>California St and Flora St</li> </ul>

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#### **Near-Term Infrastructure Projects**



Data Sources: City of Stockton Bicycle Master Plan, 2017; City of Stockton; Caltrans

- Class I: Off-Street Path
- Class IV: Separated Bikeway Class II: Buffered Bike Lanes Class II: Bike Lanes Class III: Bicycle Boulevard

#### **Existing and Funded Bike Facilities**

- Class I: Off-Street Path
- Class IV: Separated Bikeway
- Class II: Buffered Bike Lanes
- Class II: Bike Lanes
  - Class III: Bicycle Boulevard

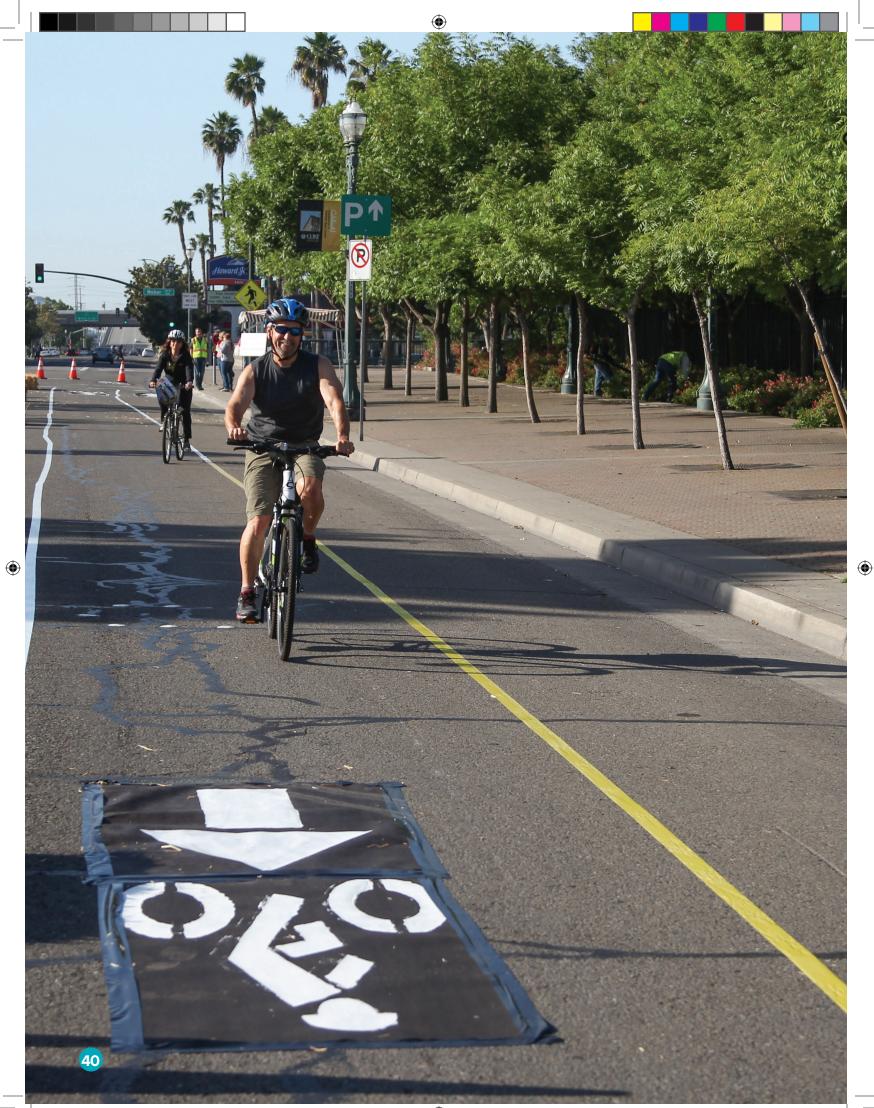
- Curb extensions and high-visibility crosswalks
- RRFB ۲
- Pedestrian signal



#### Table of Long-Term Projects

Corridor	Bike Facilities
San Joaquin St	Class II bike lanes from Harding Way to MLK Blvd
Hazelton Ave	Class IV separated bikeway from California St to San Joaquin St
Sutter St	Class II bike lanes from Vine St to MLK Blvd
Poplar St	Class III bike boulevard from Pershing St to California St. Includes traffic calming and/or diversion to maintain low speeds and volumes.
Stanislaus St	Class II bike lanes from Park St to MLK Blvd
Mormon Slough Shared-Use Path	Class I path along the Mormon Slough heading SE from Weber Ave
Clay St	Class III bike boulevard from Harrison St to Aurora St. Includes traffic calming and/or diversion to maintain low speeds and volumes.
Worth St	Class III bike boulevard from Lincoln St to Stanislaus St. Includes traf- fic calming and/or diversion to maintain low speeds and volumes.
I-5 Bridge	Bike and pedestrian bridge adjacent to I-5 over McLeod Lake (assumed that implementation would be combined with any future work on the I-5 bridge)
Jefferson St	Class III bike boulevard from Lincoln St to Aurora St. Includes traffic calming and/or diversion to maintain low speeds and volumes.
Miner's Levee Shared-Use Path extension	Class I shared-use path
Willow St	Class III bike boulevard from Pershing St to San Joaquin St. Includes traffic calming and/or diversion to maintain low speeds and volumes.
Pershing St	Class IV separated bikeway from Fremont St to Harding Way
Church St	Class II bike lane from Lincoln St to Garfield St
Washington St/Garfield St	Class II bike lane on Washington St and Class III bike boulevard on Garfield St from Weber Ave to Church St
Yosemite St/Orange St Bike Boulevards	Class III bike boulevard from Harding Way to Miner's Levee Path. Includes traffic calming and/or diversion to maintain low speeds and volumes.
Turnpike Rd	Class IV separated bikeway from Jackson St to south of study area

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### CHAPTER 6

# **Near-Term Projects**

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This chapter provides more information about near-term recommended projects in Greater Downtown Stockton. Some programs and projects are system-wide, meaning they recommend a similar approach throughout the study area, such as the Rectangular Rapid Flash Beacon installation. Other projects recommend specific improvement along a corridor. Corridor projects consist of a combination of pedestrian improvements and bike facilities. Bike facilities include Class II Bike lanes, Class IV Separated Bike Lanes, and Class III Bike Boulevards, (for descriptions of each type of bike facility, see page 9). Improvements that can be made at intersections for people walking and biking are described in the Intersection Toolkit on pages 42-47. Proposed projects will require further assessment in the Project Design/Environmental phase, and designs may evolve from what is shown in this plan.

# **Intersection Toolkit**

#### High Visibility Crosswalks and Bike Crossings

High visibility crosswalks clearly indicate the pedestrian crossing zone and make it more visible to people driving. The city's standard highvisibility crosswalk design is the Triple Four (shown below). On bikeways, green striped crossings let people driving know that they should watch out for people biking as well.

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The City of Stockton uses Triple Four high-visibility crosswalks.



Green bike crossing markings parallel the crosswalk where a bikeway crosses a busy street. Source: Nelson\Nygaard



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#### **Curb Extensions**

Curb extensions or "bulb-outs" extend the sidewalk into the parking lane at a marked crossing location. They shorten the distance across the street and make it easier for people driving to see people waiting to cross. There are curb extensions on many corners in Downtown Stockton.

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Curb extensions increase the visibility of people waiting to cross on many corners in Downtown Stockton.

#### Median Refuge Islands

Refuge islands create designated space in the roadway median so that people walking may cross the street in two stages. They are usually applied on streets with high speeds, higher traffic volumes and/or three or more travel lanes.

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#### **City of Stockton**

#### **Bike Boxes**

A bike box is a bike-only area that extends across a traffic lane at a signalized intersection. Bike boxes give people biking a safe and visible place to wait at a red light and make turning left easier.

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A bike box increases visibility of bicyclists and positions them at the head of the queue. Source: NACTO

A left-turn queue box provides a designated space for people biking to make a left turn in two stages, by pulling out of traffic and waiting until it is safe to cross all motor vehicle lanes. They can be used at signalized and unsignalized intersections.



A left-turn queue box provides space for bicyclists to wait until the light turns green. Source: Nelson\Nygaard

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#### Signals and Beacons

Rectangular Rapid Flashing Beacons (RRFBs) and high intensity activated crosswalks (HAWKs, also called pedestrian hybrid beacons) are types of traffic signals that are activated by pushing a button. They alert people driving to the presence of people crossing or waiting to cross at a crosswalk. They are typically installed at midblock crossings or at the intersection of a minor road with a major one in places where there is a lot of bike or pedestrian traffic.

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**RRFBs flash when activated to alert drivers that someone is crossing.** Source: Nelson\Nygaard



A HAWK signal gives drivers a red light after being activated by someone walking. Source: Nelson\Nygaard

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#### City of Stockton

#### **Traffic Diverters**

Traffic diverters prevent automobiles from continuing straight through an intersection. They are used at intersections on Class III Bike Boulevards to keep traffic volumes low.



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Traffic diverter prevents motor vehicles from using the bike boulevard as a through street.

Source: Nelson\Nygaard

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#### **Protected Intersections**

Protected intersections are a design solution for intersections where two separated bikeways meet. They use concrete islands and pavement markings to keep different modes physically separate and eliminate conflicts. In a protected intersection, corner islands extend protection of the bike lane into the intersection, create a bicycle queuing area in front of the crosswalk, and create a waiting area for cars that are turning right. Pedestrian islands shorten the crossing distance for people walking or using mobility devices, and high-visibility crosswalks and bike crossing markings clearly delineate the path of travel for people walking and biking.

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A protected intersection in Chicago, IL. Source: CDOT

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# **Near-Term Project Profiles**

This section describes the recommended near-term infrastructure projects in more detail and provides illustrative designs. Cost estimates for near-term projects can be found in Appendix B.

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#### **Area-Wide Projects**

#### Greater Downtown RRFB Installation

Flashing beacons at marked crossings will help alert drivers to the presence of people waiting to cross. The Greater Downtown ATP identified locations for high-visibility crosswalks and RRFB installation based on public input, proximity to destinations, the distance between existing signals, planned and proposed bikeway locations, and Federal Highway Administration guidance.

- Lincoln St and Oak St
- Lincoln St and Park St
- Lincoln St and Washington St (BRT Station)
- Stanislaus St and Sonora St
- San Joaquin St and Church St
- Jefferson St and Center St
- Jefferson St and El Dorado St
- Jefferson St and California St
- Union St and Weber Ave
- California St and Vine St
- California St and Flora St



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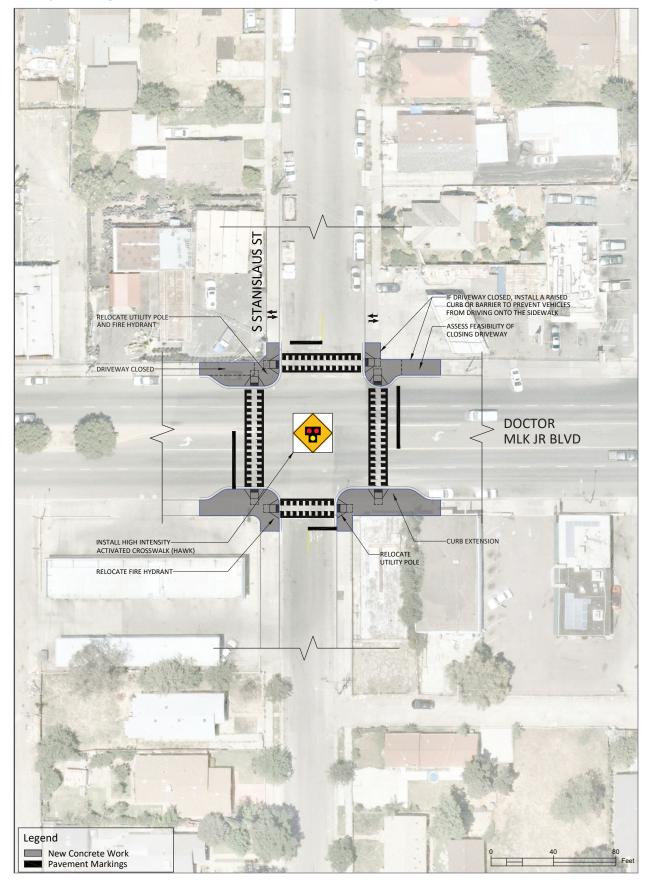
#### **Corridor Projects**

#### Dr. Martin Luther King Jr. Boulevard

Dr. Martin Luther King Jr. Boulevard is a high priority for pedestrian improvements. There are many destinations located on MLK Blvd, including Edison High School and numerous businesses. It is a major east-west route for motor vehicle traffic, and also provides one of the only ways for people walking to get across I-5 and the railroad. Crossing MLK Blvd can be uncomfortable because it has four to five lanes and high traffic volumes.

The Bike Master Plan identifies MLK Blvd as a separated bikeway on the Backbone bikeway network, however the Greater Downtown Active Transportation Plan does not propose pursuing that option due to the traffic volumes and high demand for on-street parking. Instead, the ATP proposes crossing improvements at several locations in the near term, and that the City explore alternate parallel routes and bike improvements at key locations in the long term. Crossing improvement locations are:

- Stanislaus Street: Pedestrian hybrid beacon, curb extensions, high visibility crosswalks
- El Dorado Street: Curb extensions and high visibility crosswalks
- Turnpike Road: Curb extensions, pedestrian refuge island, and high visibility crosswalks



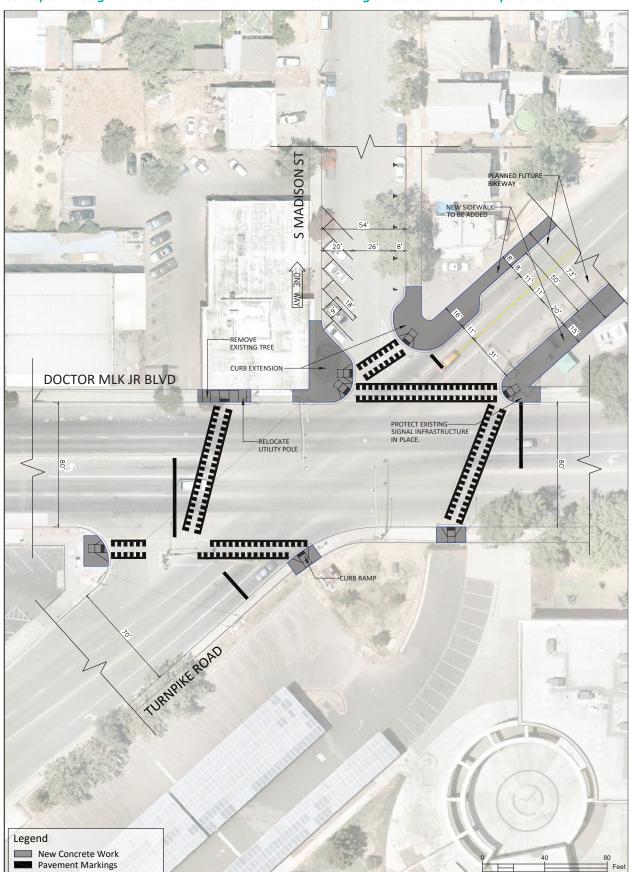
#### Conceptual Design for the Intersection of Dr. Martin Luther King Jr Boulevard and Stanislaus Street

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Conceptual Design for the Intersection of Dr. Martin Luther King Jr Boulevard and Turnpike Road

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#### City of Stockton

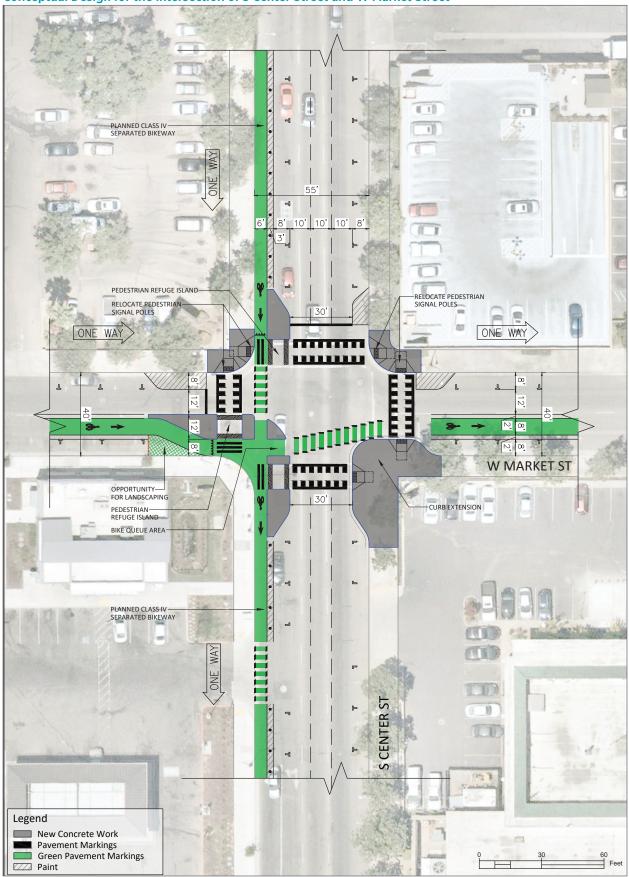
#### Center Street and El Dorado Street

Center Street and El Dorado Street are a pair of major multi-lane one-way streets that run through the heart of Downtown Stockton. They can be difficult for people walking to cross, especially outside of central Downtown where traffic signals are spaced farther apart. The City of Stockton is planning to build Class IV separated bike lanes on Center and El Dorado. The Greater Downtown Active Transportation Plan recommends adding bike and pedestrian crossing improvements at the following intersections:

- Rose Street: HAWK, high-visibility crosswalks, curb extensions
- Oak Street: high-visibility crosswalks and curb extensions at existing signal
- Park Street: high-visibility crosswalks and curb extensions at existing signal
- Market Street: high-visibility crosswalks, curb extensions, and bike crossing markings at existing signal
- Harding Way: high-visibility crosswalks and curb extensions at existing signal
- Jefferson Street: RRFB, high-visibility crosswalks, and curb extensions

Greater Downtown Stockton ATP.indd 52





#### Conceptual Design for the Intersection of S Center Street and W Market Street

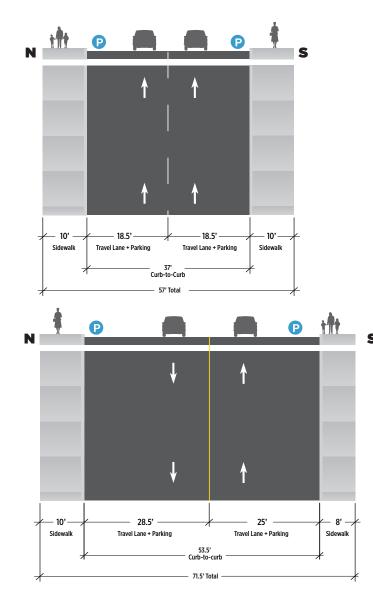
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#### Main Street/Market Street/Weber Avenue Complete Streets

Weber Avenue and the Main Street/Market Street couplet connect people to many businesses, social services, and government services in Downtown Stockton. The City of Stockton has plans in the works for bike lanes on Main Street that extend from the east into the Greater Downtown study area to Aurora Street. At Wilson Way, Main becomes one-way westbound and is paired with Market Street, which is one-way eastbound. The Greater Downtown Active Transportation Plan recommends extending the bike lanes on Main and Market west and installing Class IV separated bike lanes on Weber from Center Street to the west, connecting to Weber Institute of Applied Sciences and Technology, Stockton High School, the Children's Museum, and other destinations. Further study may be needed to determine exactly where the bikeway would transition from Main/Market Streets to Weber Avenue. The project includes crossing improvements at major intersections for people walking and biking.

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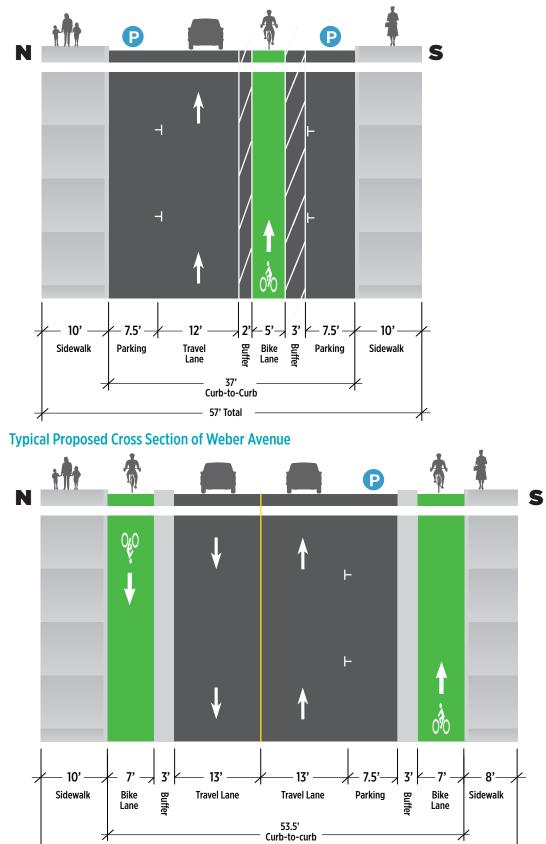


Typical existing cross sections of Market Street (top) and Weber Avenue (bottom). The cross section of Main Street mirrors Market Street and is one-way in the opposite direction.



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Typical Proposed Cross Section of Market Street

Greater Downtown Active Transportation Plan

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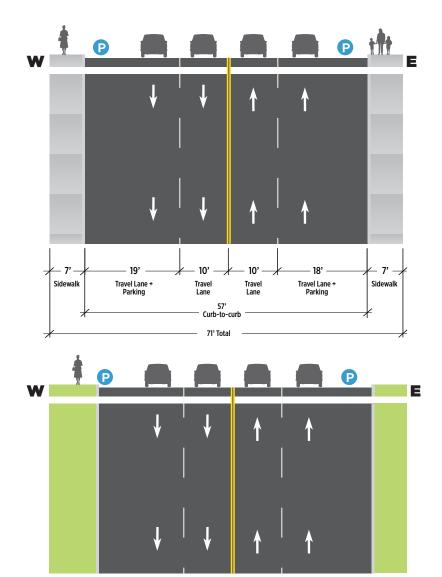
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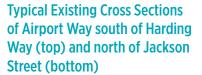
71.5' Total

#### Airport Way

Class IV separated bike lanes on Airport Way will provide a continuous connection from northeast Stockton, through the Greater Downtown area, and into southeast Stockton on a major arterial. Stockton's 2017 Bike Master Plan identifies West Lane/Airport Way as part of the Backbone bikeway network and proposes repurposing parking lanes or travel lanes to create Class IV separated bike lanes between Eight Mile Road and Performance Drive. A Complete Streets Study would fully assess the tradeoffs between parking and bike lanes. In addition to bike facilities, the study should look at sidewalk improvements, particularly filling gaps in the sidewalk between Anderson St and Clay St. A protected intersection should be considered where Airport Way and Harding Way meet.

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~10'

Additional ROW 17'

Travel Lane + Parking 10'

Travel Lane

> 55' Curb-to-c 72' Total

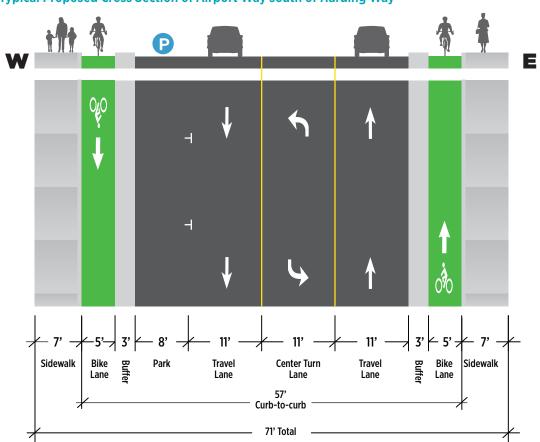
10'

Travel Lane ۲

18'

Travel Lane + Parking 7

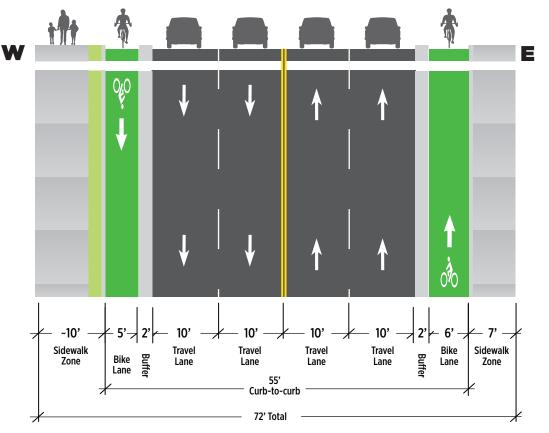
Additior ROW



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#### Typical Proposed Cross Section of Airport Way south of Harding Way

#### Typical Proposed Cross Section of Airport Way north of Jackson Street





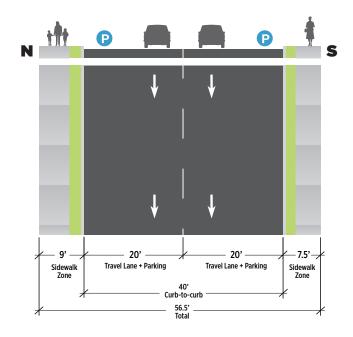
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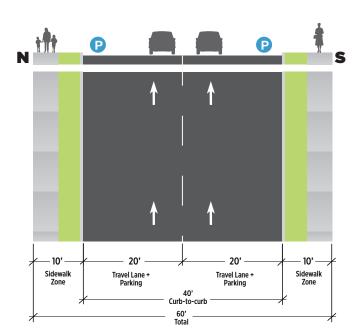
#### East-West Bike Connections: Fremont Street/Park Street/Oak Street

The City of Stockton has a project in progress to add bike lanes to Fremont Street between Baker and El Dorado. The Greater Downtown ATP recommends extending bike facilities on either Fremont or the Park/Oak couplet to give people biking access to businesses, neighborhoods, Pittman Elementary School, and other community destinations to the east and west. A corridor study would assess the following options: a "road diet" (lane reduction or rechannelization) to enable Class II bike lanes on Park/Oak, Class II or higher bike lanes on Fremont between Pershing and Baker, and a Class III Bike Boulevard on Fremont between El Dorado and Aurora St.

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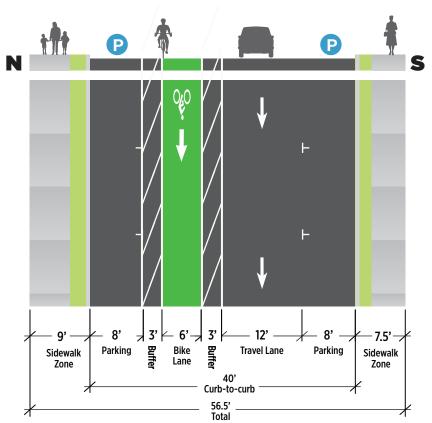


#### Typical Existing Cross Sections of Park Street (top) and Oak Street (bottom)



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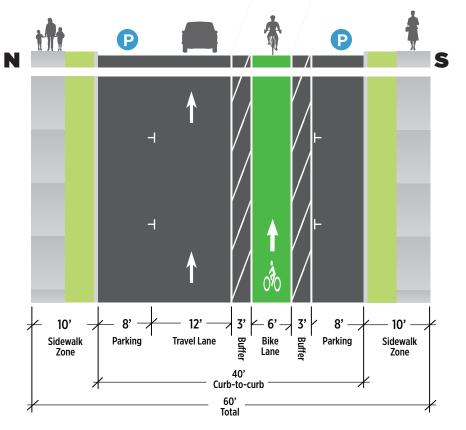
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#### Typical Proposed Cross Section of Park Street

**Typical Proposed Cross Section of Oak Street** 



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#### Bike Boulevards: Aurora Street and Rose Street

A bike boulevard is a type of Class III bike facility that creates a comfortable environment for families and friends to ride side-by-side on neighborhood streets. They are usually implemented on streets that already have low traffic volumes and speeds. Shared lane markings are one element of a bike boulevard, but other treatments are usually needed to help keep motor vehicle volumes and speeds low and help people biking get across busy streets. Crossing improvements create better conditions for people walking as well. Potential treatments for Aurora Street and Rose Street include:

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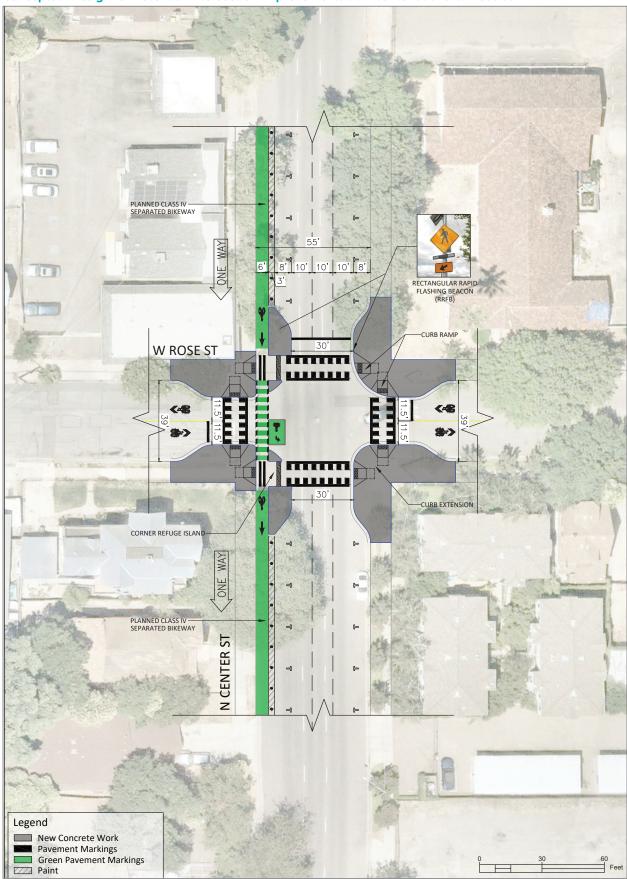
- Actuated signals or beacons
- Traffic diverters
- High visibility crossings
- Curb extensions
- Median refuges



An example of a traffic diverter that also acts as a median refuge island at a major street crossing on a bike boulevard. Source: Nelson/Nygaard

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Conceptual Design for Potential Intersection Improvements at N Center St and W Rose St

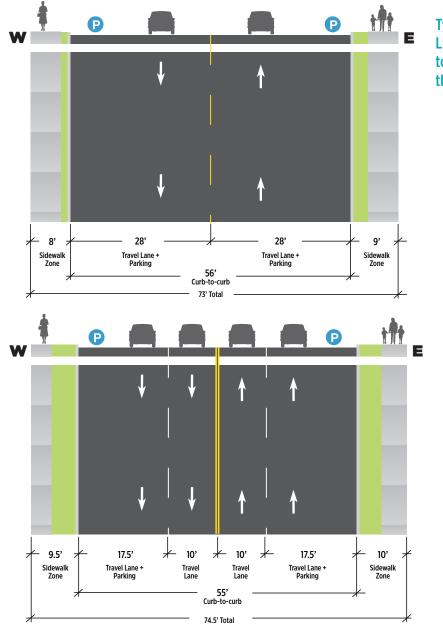
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#### Lincoln Street

The Greater Downtown Stockton ATP recommends bike lanes on Lincoln Street throughout the study area. Although Lincoln Street is not continuous, it serves destinations on both the north and south sides of McLeod Lake such as Dameron Hospital, the Banner Island Ball Park, the Children's Museum, the Department of Motor Vehicles, and St. Mary's Dining Room. North of the channel, Lincoln St is a wide two-lane street with parking. Bike lanes can easily fit without an impact on the existing lanes. From Highway 4 to the south Lincoln Street has four travel lanes. Traffic volumes are low, and the Greater Downtown Stockton ATP recommends repurposing one travel lane per direction to create buffered bike lanes. Crossing improvements for people walking and biking are recommended at the intersections of Lincoln St with Park St, Oak St, and Sonora St.

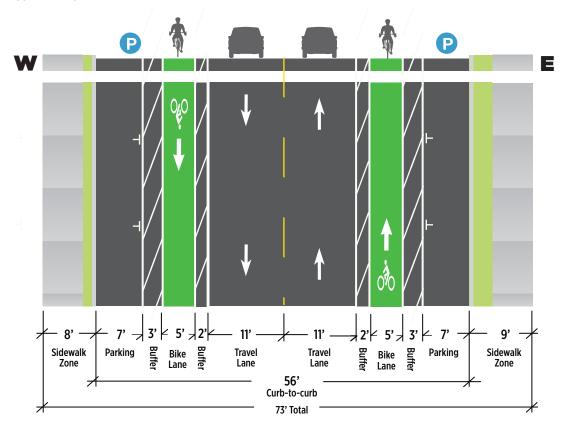
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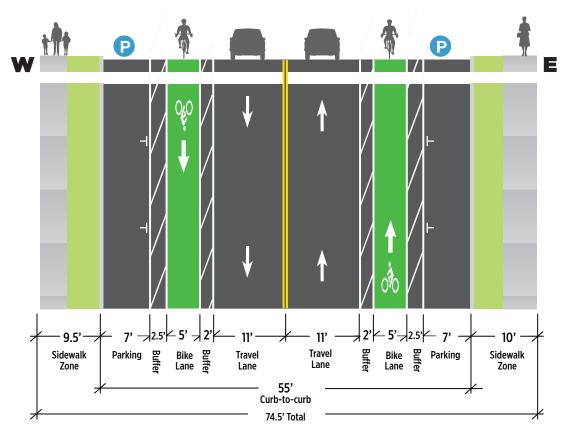
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#### Typical Proposed Cross Section of Lincoln Street north of Stockton Channel

#### Typical Proposed Cross Section of Lincoln Street south of Stockton Channel





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#### Harding Way

Harding Way is an important east-west route to and through Greater Downtown, home to retail, employment, and schools. The Greater Downtown ATP proposes a Complete Streets Corridor Study for Harding between Pershing Avenue and Wilson Way, expanding upon the study extents from the Bike Master Plan. Multiple types of bike facilities and alternate routes may be needed to create a complete street that works for everyone. The study should also consider improvements to sidewalks and crossinga at major intersections, including a potential protected intersection at Harding Way and Airport Way.

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Harding Way has high traffic volumes east of Madison, which means Class IV separated bike lanes are the preferred low-stress facility for this segment. To make space for separated bike lanes, the parking lane could be used or Harding Way could be reduced from four lanes to three (one lane per direction and a center turn lane), also known as a "road diet." Streets that see fewer than 20,000 vehicles daily are the best candidates for road diets.<sup>3</sup> Traffic volumes on Harding Way are higher than that in places, so further study is needed to determine whether a road diet would work. Similarly, analysis of on-street parking use and off-street parking availability would help determine whether the parking lanes could be replaced with a separated bikeway.

West of Edison Street, the neighborhood is residential and Harding Way is two lanes with parking on one side. Traffic volumes are lower, but remain too high for a comfortable bike boulevard. Routing bicyclists one block south to Willow Street may be a better option.

<sup>3</sup> Federal Highway Administration (2014). Road Diet Informational Guide. Available at https://safety. fhwa.dot.gov/road\_diets/guidance/info\_guide/





Harding Way is a large, busy street with several schools and other destinations.

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Greater Downtown Active Transportation Plan



# CHAPTER 7 Next Steps

During the months when the Downtown Stockton Active Transportation Plan was finalized, the global COVID-19 pandemic drastically altered the way people get around. Shelter in Place and Stay-at-Home orders caused traffic volumes and bus ridership to drop drastically. Walking and biking are valuable transportation alternatives in this new normal, both for essential trips and for the physical and mental health benefits they offer.

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Even as restrictions are lifted and residents begin to return to their places of employment and normal activities, transportation may look very different for the foreseeable future. Stockton residents who have other options may not feel comfortable taking transit. People who can work from home may continue to do so permanently. However, there are also many in Stockton who must travel to work, and must do so by walking, biking or riding transit. The rapid implementation of this plan will support these essential movements.

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#### **City of Stockton**



#### **Near-Term Actions**

Creating safe, comfortable places for active transportation can play a part in Stockton's recovery and reopening following the public health crisis. In the first few months of the crisis, lower traffic volumes led to an increase in speeding on local streets across the nation. As more people return to work, Stockton may see higher volumes of automobile traffic. Higher traffic speeds and volumes increase the risks for people who walk, bike, and roll. Active transportation projects will provide alternatives for people who do not wish to take transit or drive alone--or who have no other transportation options other than walking, biking or riding transit—and will help to keep streets safe even as traffic conditions change. These projects also have a positive impact on commerce and the economy, as they bring grant funding for planning and construction, and increase access to businesses.

Next steps for Stockton include:

- Seek grant funding for high priority projects
- Install quick build and demonstration projects to test design concepts
- Conduct complete streets corridor studies
- Advance design and construction of planned projects in Greater
   Downtown



Several of the near-term projects included in this plan have been submitted for grant funding from the Caltrans Active Transportation Program, Highway Safety Improvement Program, Measure K, and other sources.

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- Main St/Market St complete streets
- Dr. Martin Luther King Jr. Blvd crossing improvements
- Downtown RRFB installation
- Greater Downtown bike boulevards: Aurora St and Rose St
- Lincoln St bikeway
- Downtown east-west connections: Fremont/Park/Oak

#### **Long-Term Actions**

Long-term recommendations in the Greater Downtown Stockton Active Transportation Plan include projects and programs that will be more complex or expensive to implement. Many will require further study. Some long-term projects, specifically bikeways, are recommended for the long term because they are in close proximity to other planned facilities. After planned and near-term priority projects are implemented, the City of Stockton may wish to conduct public outreach and observe biking, walking, and rolling activity to better assess the need for additional network connections.



