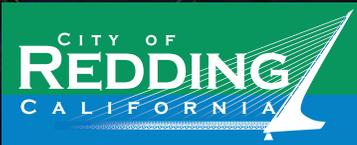




CITY OF REDDING

ACTIVE TRANSPORTATION PLAN



April 2018

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How to use this plan

This plan was designed for use by local, regional, and state agencies, as well as practitioners and the general public. The table below offers a quick reference for some of the topics that may be of most interest to readers:

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EXECUTIVE SUMMARY

Walking and bicycling, jointly referred to as “active transportation,” are key components of the City of Redding transportation system. Active transportation not only supports the health, vitality, and prosperity of the community, but directly supports quality of life for residents. The purpose of this plan is to lay the foundation for the establishment of a safe, efficient, comfortable, and connected active transportation network (i.e., pedestrian and bicycle networks/facilities) that is not only used, but intrinsic to the lifestyle of Redding residents and visitors. This plan is an update to the *Bikeway Action Plan 2010-2015* (City of Redding, 2010) and builds on local planning efforts to create safe and vibrant active transportation environments, as documented in the *City of Redding Pedestrian Safety Assessment* (City of Redding, 2010), the *City of Redding Complete Streets Policy* (City of Redding, 2012), the *Downtown Redding Community Based Transportation Plan* (City of Redding, 2016), the *Draft Downtown Redding Specific Plan Update* (City of Redding, 2017), and the *Draft City of Redding Parks, Trails, and Open Space Master Plan* (City of Redding, 2017).

This plan has established the following active transportation vision and goals:

Vision

The City of Redding is a community where people of all ages and abilities can walk and bike conveniently, safely, and enjoyably, incorporating walking and bicycling into their daily lives. The City of Redding is also a destination for visitors seeking to enjoy our outdoor amenities on foot or by bike.



Goal 1: Develop a highly connected and comfortable active transportation network.



Goal 2: Increase the number of walking and bicycling trips.



Goal 3: Increase safety and mobility for pedestrians and bicyclists.



Goal 4: Promote an active transportation culture that benefits the community.

This plan includes the following chapters:

Chapter 1: Introduction

Chapter 2: Existing Conditions

Chapter 3: Existing Networks

Chapter 4: Public Outreach

Chapter 5: Goals and Actions

Chapter 6: Planned Networks

Chapter 7: Implementation

This plan is a living document and will be updated every 4-7 years. To promote greater connectivity within and to/from the City of Redding, this plan was developed in conjunction with the *GoShasta Regional Active Transportation Plan* (Shasta Regional Transportation Agency [SRTA], 2018), which presents the active transportation networks of other cities and communities in the greater Shasta Region, as well as a vision of a Regional Trunk Line System. Together, both plans support a healthier, more livable, and economically competitive region.

Chapter 1: Introduction

The City of Redding is well known for the Sacramento River Trail. This nationally-recognized, multi-use facility is a major recreational opportunity that has become the backbone of the active transportation network. Over the last 30 years, the trail has been extended to over 20 miles in length, creating a viable commuter corridor that connects neighborhoods, schools, parks, bikeways, open spaces, and major commercial areas. The community has been outspoken in their desire to see this trail, or similar facilities, extended into additional neighborhoods, the downtown, and commercial areas. Any improvements that result from this plan should follow the lead of the Sacramento River Trail Project in contributing to the aesthetic and cultural value of the community.

In recent years, the City of Redding has successfully developed a number of new facilities in the road network, as well as off-road (the latter, locally known as “multi-use trails,” connect to new parks and subdivisions). The city has partnered with agencies, like the California Department of Transportation (Caltrans), the Bureau of Land Management (BLM), and Shasta County, to build facilities that extend beyond

city limits. As trails have developed, the focus has shifted from a primarily recreational use to a broader, more comprehensive view of their importance to the transportation system. In fact, the *Draft City of Redding Parks, Trails, and Open Space Master Plan* (City of Redding, 2017b) identifies the multi-use trails as integral and vital components of our community infrastructure. Additionally, the city recognizes the economic value of our active transportation network, as tourism has focused on the outdoor amenities of our area. The extensive mountain biking, road biking, running, kayaking, fishing, bird watching, and general enjoyment of the outdoors is all accessed through our active transportation network. Ensuring access to lodging and neighborhoods is critical to the continued success of these vital attractors of tourism.

As part of this plan, the city will pursue additional transformational projects that will not only showcase the beauty of the area, but provide necessary connections. These connections across and/or along rivers, creeks, railroads, canals, and highways will benefit existing residents, while attracting others.



Chapter 2: Existing Conditions

This chapter discusses existing conditions and trends for walking and bicycling. Although people walk and/or bike for a number of reasons, generally, walking and bicycling trips typically consist of commute, utilitarian, or recreational trips. Additionally, walking and bicycling becomes an attractive and feasible choice for transportation when origins and destinations are closely located and facilities are both safe and interesting.

Land Use

The City of Redding has an estimated 91,000 residents and covers 60 square miles, making it the most populous and largest city in Shasta County. Additionally, it is the county seat and regional hub of Northern California.

Originally, the town was a mere seven block by seven block area of present-day Downtown Redding. As noted



in the *2000-2020 City of Redding General Plan* (City of Redding, 2000), the city grew following a pattern of low-density development that was mostly discontinuous in nature, due in part to topography, flood-prone lands, and physical barriers.

Today, Redding has evolved from a small mining town into a regional hub. Opportunities for continued improvement include:

1. **Connectivity:** The Sacramento River, a valuable city asset, presents challenges and opportunities for development. The Sacramento River Trail includes four iconic pedestrian/bicycle bridges across the Sacramento River, which increase connectivity while providing cultural artistic elements. The trail also incorporates many under crossings of obstructions, such as highways, the railroad, and major roads. These connections are fully separated from vehicular traffic and add to the overall connectivity of the community in a way that is comfortable for people of all ages and abilities. The success of the Sacramento River Trail will continue to be used as a guide for future investments in walking and biking infrastructure. Connectivity from neighborhoods to downtown also is needed.
2. **Density:** Downtown Redding currently is undergoing redevelopment. Recent projects include the White Building (corner of Pine and Butte Streets) and the Gateway Building (corner of Shasta and Market Streets). Future projects are planned, including a \$37 million 4-story mixed-use project that is slated to commence construction in 2018. These types of projects will bring investment to the urban core in the form of new shopping and (high-density) housing opportunities. Additionally, the Redding Cultural District recently received California Cultural District designation by the California Arts Council.

The topography offers many opportunities as well. The city is bounded by foothills on the west and the north, but is relatively flat on the south and the east. The foothills provide recreational trails in the open space areas between subdivisions. The east side of the city has less open space for trails, but has a well-

connected road network with ample right-of-way. The creek corridors have long been identified as excellent opportunities for recreational trails, but are recognized for their value to the transportation system as well.

Transportation

Travel Patterns

The U.S. Census Bureau American Community Survey (ACS) provides data on the mode by which people travel to/from work (or commute). It should be noted that the ACS does not account for non-commute trips, including utilitarian or recreational trips, or multi-modal trips (e.g., walking to a bus stop or walking after driving to a destination).

As shown in Figure 2.1, commute patterns in the city were relatively consistent for 2010 and 2015. Of the modes (e.g., driving, walking, bicycling, public transit), the most popular is driving (79 and 81 percent).

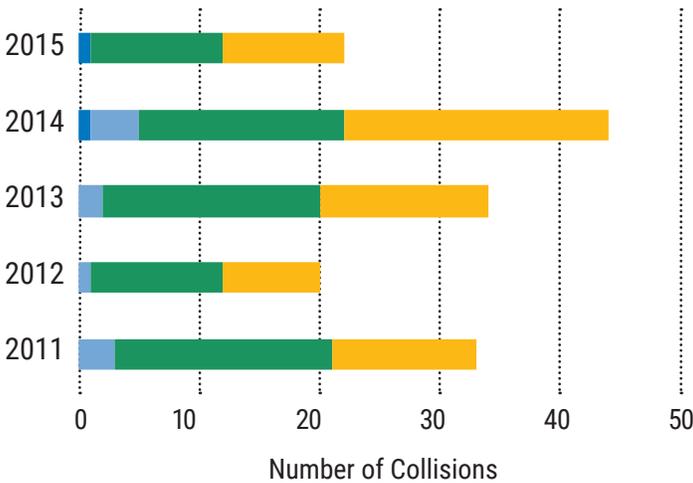
Vulnerable Road Users

If in a collision, pedestrians and bicyclists are at greater risk of being seriously injured than drivers. As such, pedestrians and bicyclists are considered vulnerable road users.

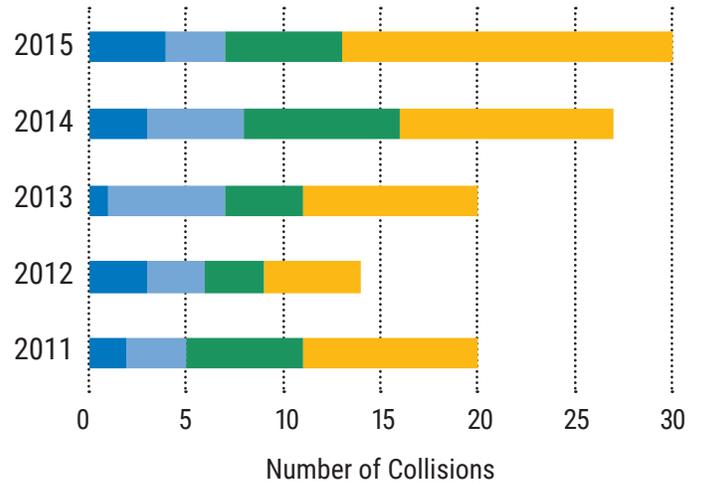
Commute Mode	Commute Mode Split Percentage		
	2010	2015	% Change
 Drove alone	79.1%	81.4%	2.3%
 Carpooled	10.7%	8.2%	-2.4%
 Public transportation	0.9%	1.0%	0.1%
 Bicycle	0.8%	1.1%	0.3%
 Walked	2.2%	2.0%	-0.2%
 Taxicab, motorcycle, or other means	1.6%	1.1%	-0.4%
 Worked at home	4.8%	5.1%	0.4%

Figure 2.1. Commute Modes in the City of Redding (2010 and 2015)

Bicycle Collisions



Pedestrian Collisions



■ Fatality ■ Severe Injury ■ Other Visible Injury ■ Complaint of Pain Injury

Figure 2.2. Pedestrian and Bicycle Collisions in the City of Redding (2011-2015)

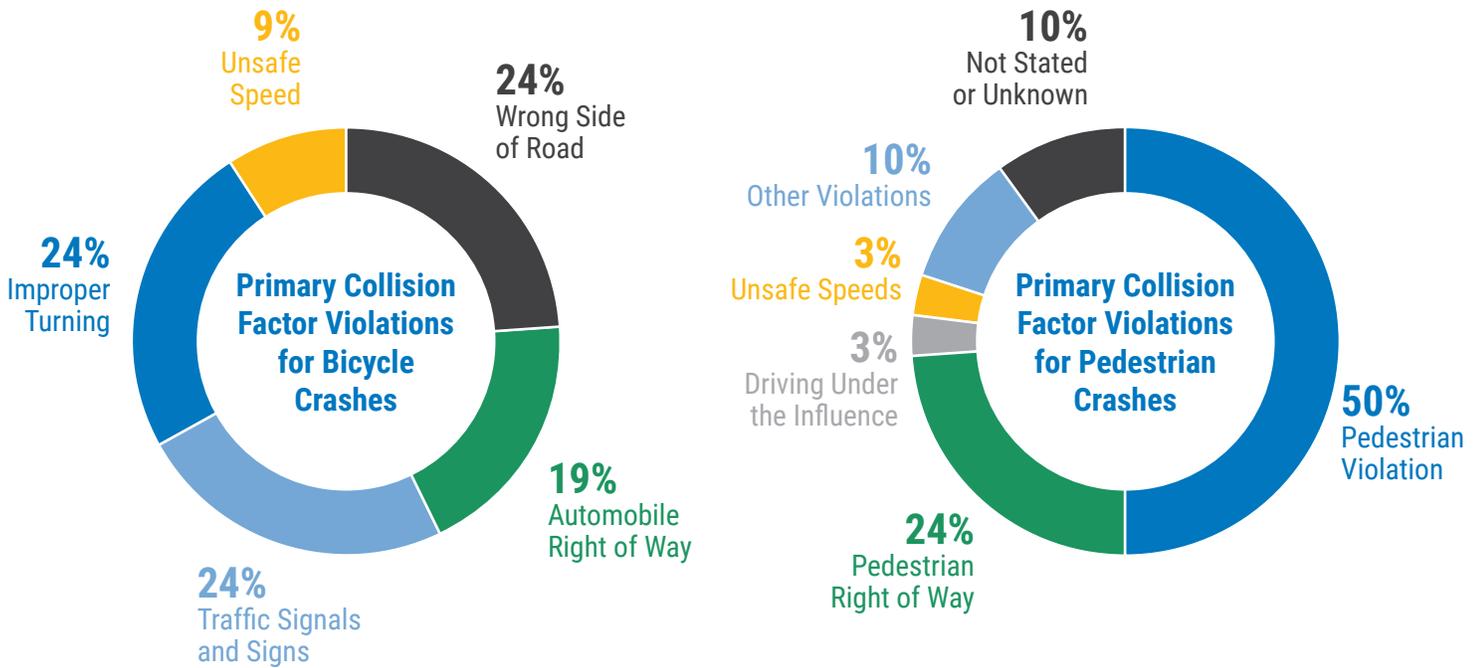


Figure 2.3. Primary Collision Factors for Bicycle and Pedestrian Collisions in the City of Redding (2011-2015)

As shown in Figure 2.2, from 2011 to 2015, a total of 153 bicycle crashes and 111 pedestrian crashes were reported in the city. These crashes were concentrated in Downtown Redding, around Mt. Shasta Mall, and along the Cypress Avenue, Victor Avenue, Hartnell Avenue, Lake Boulevard, and Market Street corridors.

As shown in Figure 2.3, for these pedestrian crashes, primary collision factors (PCFs) included “pedestrian violation” (50 percent), which is when an officer determines that a pedestrian did not appropriately

follow the rules of the road, and “pedestrian right-of-way” (24 percent), which is where a motorist violates the pedestrians’ right-of-way. For the bicycle crashes, PCFs included “wrong side of road,” “improper turning,” and “traffic signals and signs” (24 percent each).

For additional information on collisions, see Appendix A (Existing Conditions).

Public Transit

The Redding Area Bus Authority (RABA) is the public transit provider in Shasta County. Most RABA riders are highly transit dependent and commute by public transit. The RABA Intermodal Transit Center, also known as the RABA Downtown Transit Center, is located in Downtown Redding and is the main transit hub in Shasta County, serving as a point of connection to RABA and other interregional transportation services (e.g., Amtrak Rail, Capitol Corridor Bus, Greyhound, Sage Stage, Susanville Indian Rancheria, and Trinity Transit). Opportunities exist to better enhance “last mile connections” from the RABA Intermodal Transit Center via walking and bicycling, as well as through zoning and density.



Chapter 3: Existing Networks

This chapter presents the existing pedestrian and bicycle networks, including current practices and programs.

Existing Bicycle Network

The existing bicycle network, shown in Figure 3.1, is comprised of the following bicycle facilities: shared use paths, bike lanes, and bike routes.

The relatively comprehensive coverage of the existing bicycle network is a result of the *Bikeway Action Plan 2010-2015*, from which the city developed and implemented several bicycle facilities, including those described under “Recent and Funded Projects” in Appendix A (Existing Conditions).

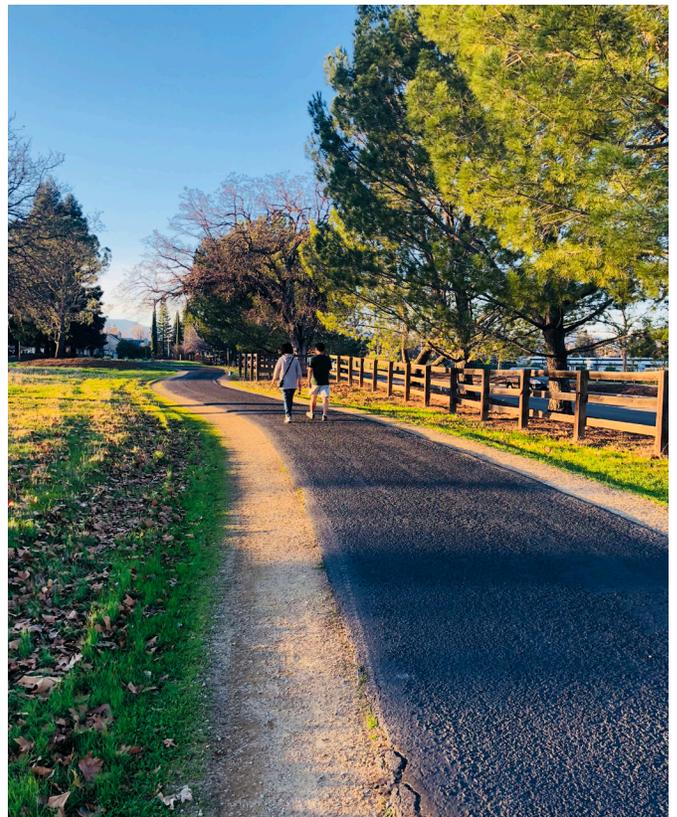
Bicycle support facilities and amenities include bicycle parking, bicycle shops, and repair stations (e.g., a place to put air in low tires or fix a flat tire). As shown in Figure 3.1, there are 66 locations with bicycle racks, many of which are concentrated in Downtown Redding and/or near shopping or commercial centers. Additionally, there are five bicycle shops and one repair station.



Existing Pedestrian Network

The existing pedestrian network, shown in Figure 3.2, is comprised of the following pedestrian facilities: shared use paths and sidewalks. Additionally, pedestrian facilities could include trails, curb ramps, crosswalks, crossing aids (e.g., pedestrian crosswalk indicators), traffic control devices aimed at facilitating pedestrian crossings (e.g., pedestrian crossing signs/beacons), grade separated crossings, and other strategies to encourage and improve conditions for walking.

The sidewalk network is well connected in Downtown Redding, adjacent to and within many of the retail centers, and within most of the residential neighborhoods.



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Existing Bikeway Network



Bikeway Type

- Shared Use Path
- Buffered Bike Lane
- Bike Lane
- Bike Route

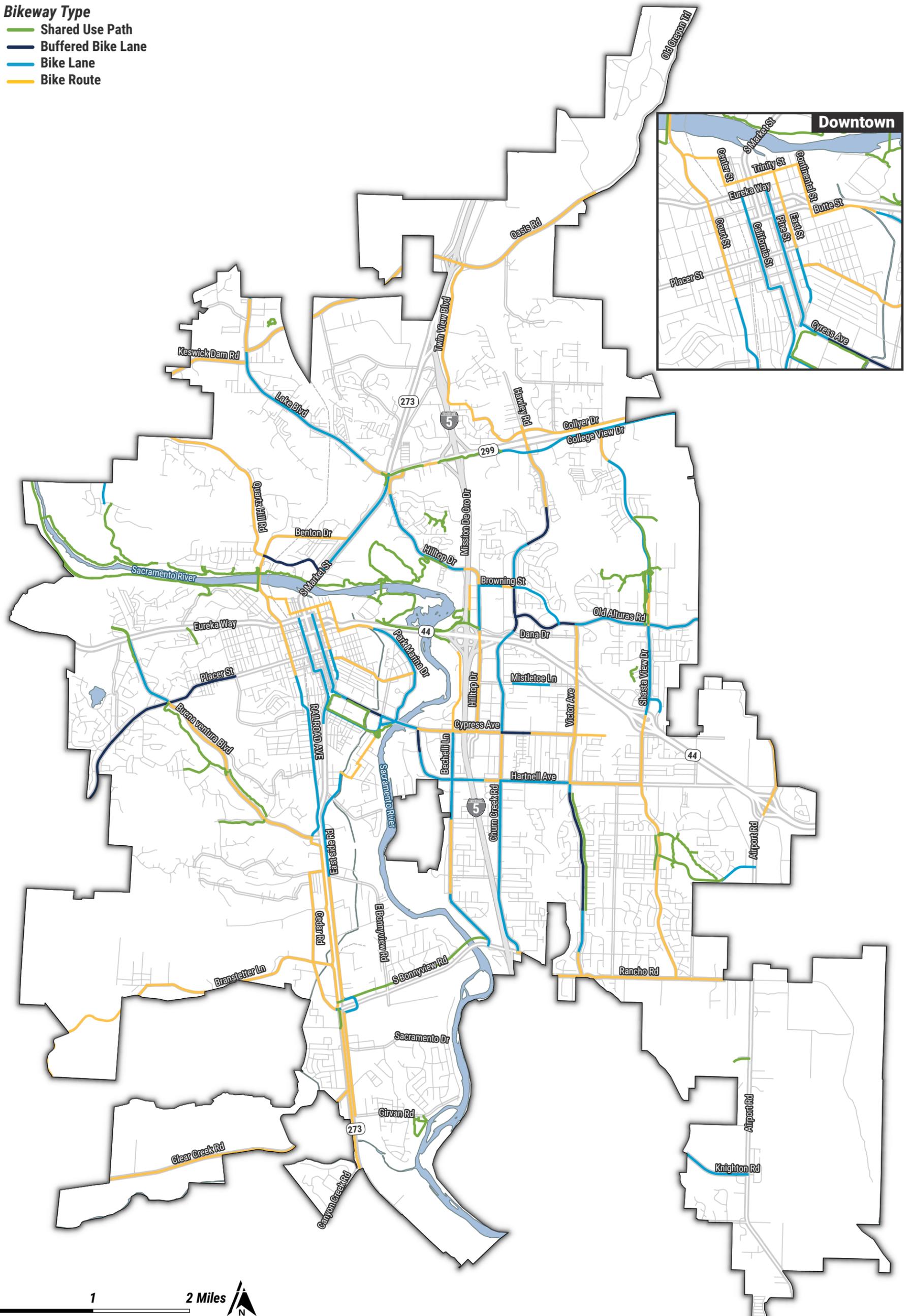


Figure 3.1. Existing Bicycle Network

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Existing Pedestrian Network



Pedestrian Facility Types

- Shared Use Path
- Sidewalk

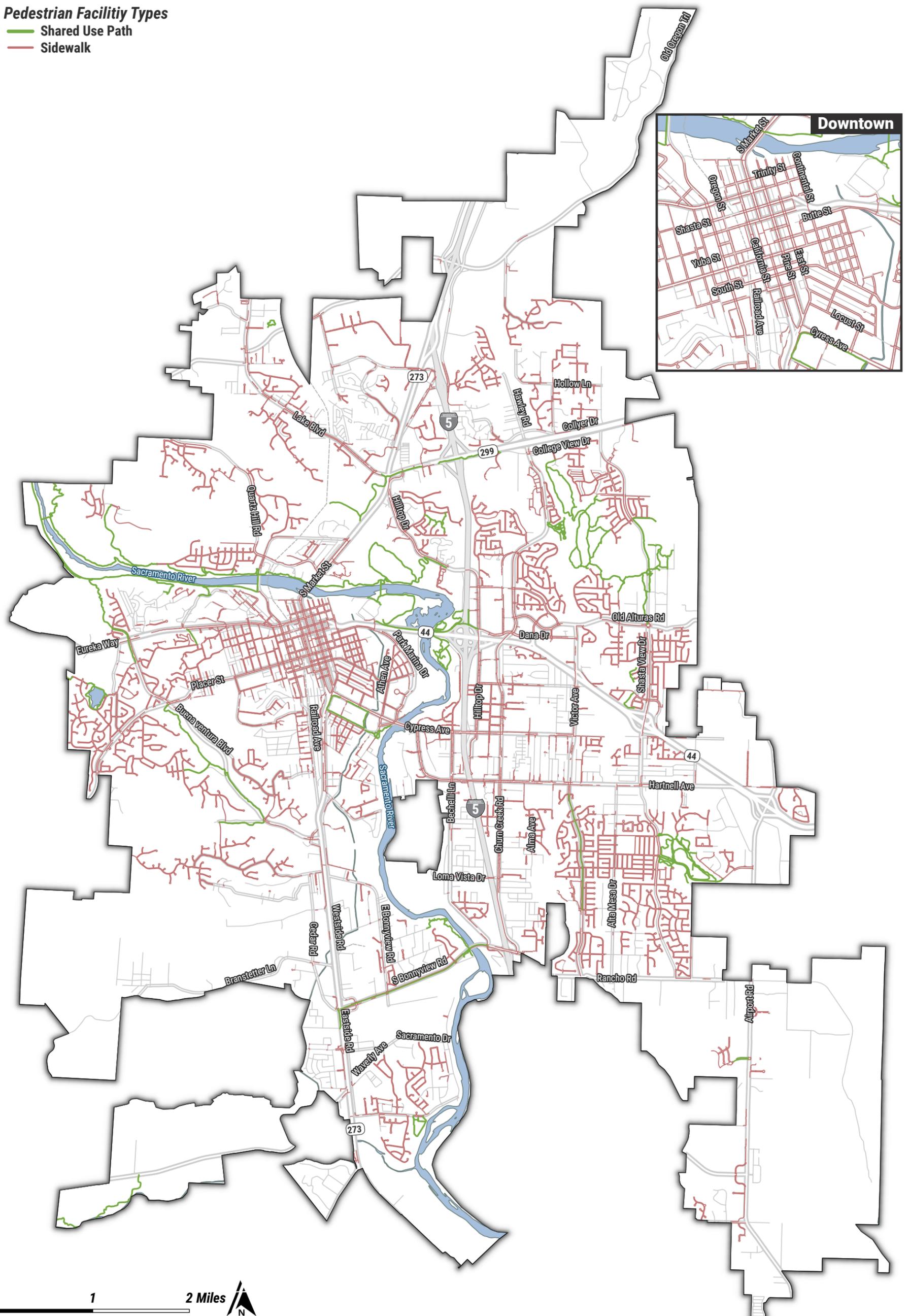


Figure 3.2. Existing Pedestrian Network

Maintenance

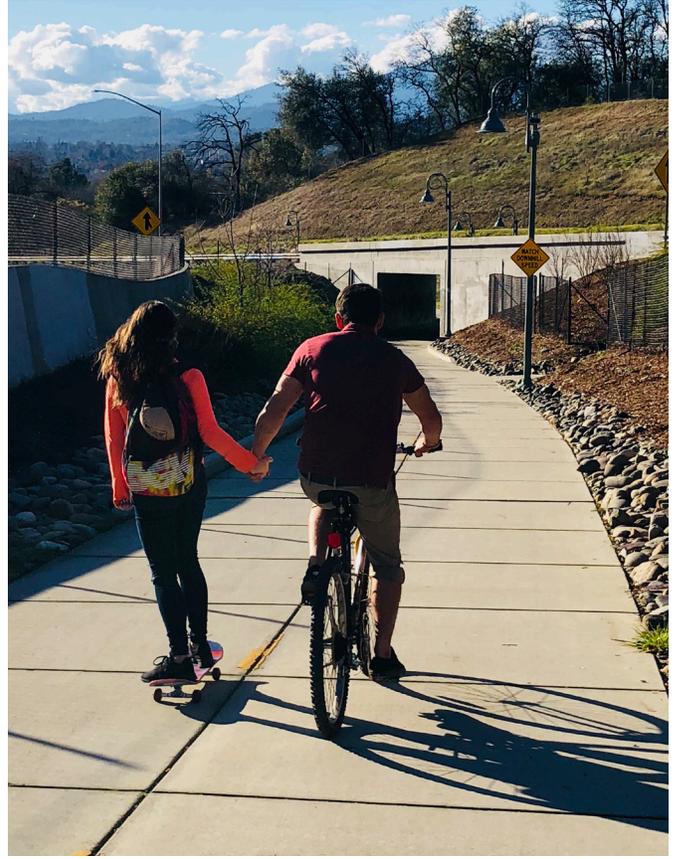
Maintenance of the networks is needed to ensure that pedestrians and bicyclists have safe and comfortable facilities. Maintenance of sidewalks, bicycle facilities, signs, pavement markings, and other roadway features is the responsibility of the Public Works Department Streets Division. The Parks Division of the Community Services Department is responsible for the maintenance of the shared use paths. Both are funded through the General Fund.

For additional information on maintenance, see Appendix A (Existing Conditions).

Support Programs

Support programs promote the utilization and expansion of walking and biking networks. Existing programs are described below.

- *Healthy Shasta* is a partnership of over 20 organizations focused on increasing healthy and active living. One of Healthy Shasta's goals is to increase walking and bicycling among students and adults by working with partners to create environments that are safe, easy, and convenient, while providing education, encouragement, and support. Healthy Shasta provides print and online walking and bicycling maps, is focused on expanding and linking people to walking groups, assists worksites in encouraging employees to walk and bicycle, and teaches bicycle safety skills.
- *Safe Routes to School (SRTS)* is run by the Shasta County Health and Human Services Agency. It serves multiple school districts to improve safety and encourage more students to walk and bicycle to school. Sample activities include implementing pedestrian and bicycle safety curriculums in local schools, providing training and resources to schools hosting walking school buses, Walk to School Day events, and Bike to School Day events, and training crossing guards.
- *Shasta Living Streets* is a local nonprofit organization dedicated to advancing the development of better bikeways and trails, walkable cities, and vibrant public places in Shasta County. They provide bicycle valet parking at the local farmer's market each Saturday. Additionally, they help to organize events, such as



Family Bicycling Day.

- *The Shasta Wheelmen* is a local bicycling club that was founded in 1970. They offer regular group rides, an annual Century, and advocacy on behalf of the local bicycling community.
- *Shasta Bike Month and Challenge*, coordinated by a variety of local organizations (including the City of Redding), takes place each May. The challenge includes worksite and school teams that encourage people to try bicycling more often. Bike Month activities include the "Ride with a Transportation Official" bike ride, the "Spring Spin" social event, outdoor 'bike-in' movies, and other activities to create enthusiasm and support for bicycling while fostering a bike culture.
- *The City of Redding Active Transportation Advisory Group*, composed of bicycle advocates, pedestrian advocates, funding partners, schools, businesses, social service agencies, and other members of the public, meets quarterly to discuss active transportation in the community.

Chapter 4: Public Outreach

This chapter provides a summary of the two-phase public outreach process. It should be noted that both the *City of Redding Active Transportation Plan* and the *GoShasta Regional Active Transportation Plan* utilized the same public outreach process, but what is summarized here applies to the City of Redding and its plan. The project team consisted of City of Redding, SRTA, and Caltrans staff, as well as the consultant team (Toole Design Group, Kittelson Associates, Inc., and the Local Government Commission).

For more information, see Appendix B (Public Outreach).

Phase I Public Outreach

A variety of outreach and engagement strategies were used to gather input from residents on existing conditions, opportunities, and challenges related to walking and bicycling.

Pre-charrette Outreach

Leading up to the opening outreach campaign, the consultant team worked with the City of Redding to engage stakeholders, conduct online and off-line outreach, and ultimately engage hundreds of people in the planning process.

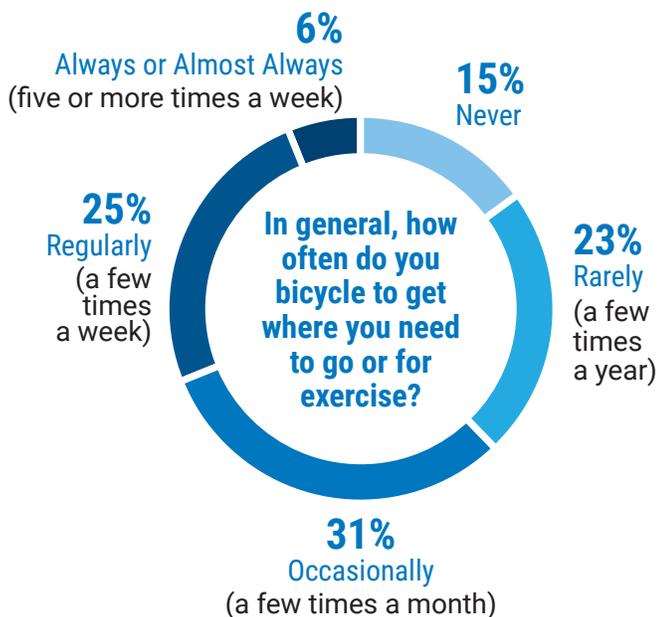


Figure 4.1. Sample online survey results

Project Website and Online Tools

The goshasta.org website was launched in January 2017 to provide a virtual project interface for both the *City of Redding Active Transportation Plan* and the *GoShasta Regional Active Transportation Plan*. An online survey and WikiMap (i.e., online map that allows viewers to add comments) provided a web-based venue for public participation, effectively expanding ways for the public to get involved in the project without the need to travel to a workshop. The website was promoted through social media, event flyers, print media, and targeted outreach to stakeholders.

Stakeholder Meetings

On February 6, 2017, the consultant team met with the City of Redding Active Transportation Advisory Group to provide a project overview, including presentation of the level of traffic stress (LTS) methodology, discuss priorities, and solicit comments on the draft. On the same day, the consultant team also met with City of Redding stakeholders, which included representatives from the Parks, Planning, Communications, Public Works, Fire, and Police Departments, as well as the Shasta Union School District and Turtle Bay. Stakeholders identified several challenges and opportunities related to walking and biking in Redding.

Walk Audits and Bicycle Assessments

Walk audits and bicycle assessments were conducted the week of February 6, 2017. The audits and assessments focused on evaluating and discussing the safety and quality of the pedestrian and bicycle environments, as well as how facilities could be improved to support walking and bicycling.



Figure 4.2. Downtown Redding Walk Audit

Public Workshop

During the same week as the audits, a public workshop was held at Redding City Hall to discuss the plan. Following introductions, the workshops opened with a 20-minute presentation on active transportation. Visual examples were provided of complete streets, traffic calming techniques, good sidewalk design, high visibility and protected pedestrian crossings, and different types of bicycle facilities. After the presentation, participants were invited to visit a series of stations to provide input on active transportation needs and priorities. In addition, a visioning exercise was conducted, which is discussed in the “Active Transportation Vision” section. For a summary of all comments received, see Appendix B (Public Outreach).



Figure 4.4. Public Workshop

Phase II Public Outreach

For the second phase of public outreach, on-line and in-person outreach was used to provide opportunity for the public to comment on the proposed active transportation network.

On-line Wikimap

A total of 443 comments (320 bicycling and 123 walking comments) were received on the regional Wikimap (which included opportunities to comment on projects and issues specific to the City of Redding).

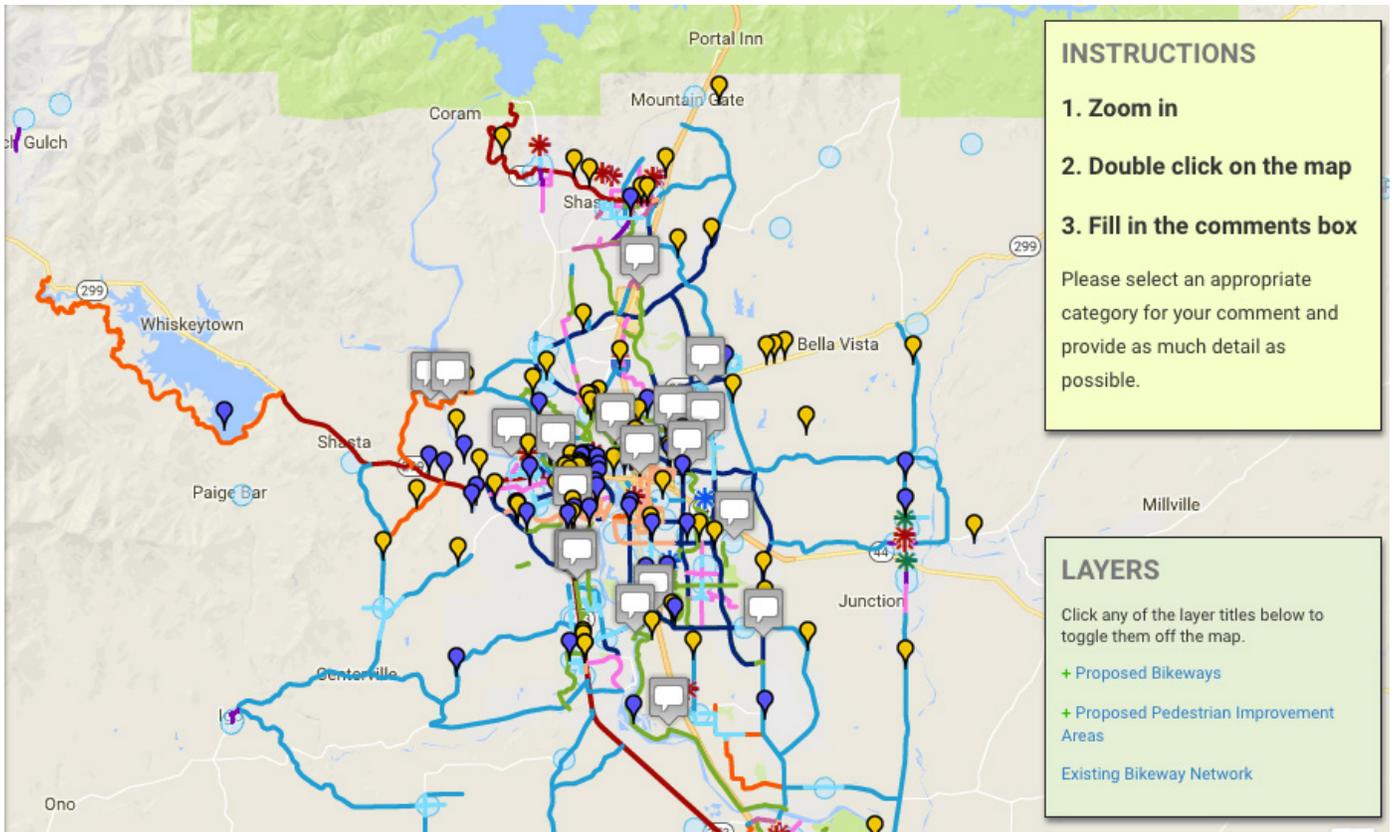


Figure 4.5. Regional Wikimap

In-person Events

In October 2017, the project team hosted two outreach events. Information booths were setup at the farmer's market at Redding City Hall on Saturday, October 21st from 7:30 a.m. to 12:00 p.m., and at the Sundial Bridge at Turtle Bay Museum on Sunday, October 22nd from 9:00 a.m. – 12:00 p.m.

The event at the farmer's market was promoted in conjunction with the bicycle valet, helmet give-away, and "freedom from training wheels" event organized by Shasta Living Streets. Approximately 100 people visited the information booths. In contrast to an evening workshop format, the booth at the farmer's market was effective at engaging a broader demographic of community members: stakeholders at every stage of life, with various ability levels, including those experiencing homelessness, were involved in the conversations.

The event at the Sundial Bridge at Turtle Bay Museum captured morning walkers, joggers, and cyclists of all ages. Approximately 75 people stopped by the information booths to review the proposed active transportation network and submit comments.



Figure 4.6. In-person interviews on October 21-22, 2017

Chapter 5: Goals and Actions

The vision, goals, actions, and indicators of success developed for this plan are the result of stakeholder input, an analysis of existing conditions and needs, and an assessment of plans and policies.

Vision

The City of Redding is a community where people of all ages and abilities can walk and bike conveniently, safely, and enjoyably, incorporating walking and bicycling into their daily lives. The City of Redding is also a destination for visitors seeking to enjoy our outdoor amenities on foot or by bike.



Goal 1: Develop a highly connected and comfortable active transportation network.

Provide a highly connected and comfortable active transportation network that gets people from their homes to places they want to go.

» Actions:

1. Incorporate plans from the City of Redding General Plan, the Downtown Redding Specific Plan, the City of Redding Parks, Trails, and Open Space Master Plan, and other documents into the development of the active transportation network. Develop future land use, transportation, and construction plans, policies, and standards to further advance the active transportation network (e.g., preserve right-of-way to incorporate bicycle and pedestrian facilities).
2. Identify key destinations within the city (i.e., high-density population and employment areas), as well as neighborhoods that have limited bicycle and pedestrian access to these key destinations due to barriers (e.g., topography, water bodies, and freeways).
3. Focus on connecting visitor-supporting origins and destinations, such as commercial/civic institutions, outdoor amenities, and lodging, in order to encourage longer stays and frequent visits.
4. Implement comfortable bicycle and pedestrian facilities, consisting of a mix of facility types, on

key corridors to key destinations. Assess the active transportation network, to identify improvements for seamless connections.

5. Coordinate with city departments to develop amenities for the active transportation network (e.g., trees, canopies, seating, wayfinding, murals, etc.), as well as ongoing maintenance.
6. Coordinate with other agencies to develop the active transportation network, where appropriate. Within the city, coordinate with Caltrans regarding improvements within or along their facilities and SRTA regarding the implementation of the Regional Trunk Line System. Outside the city, coordinate with other cities or the county to delineate project boundaries.
7. Continue pursuing grant funding and other funding to leverage local resources. Also, continue using maintenance practices to reallocate space within the road network.
8. Update the plan every 4-7 years to reflect community interests and needs.



Indicators of Success:

- New or improved bicycle and pedestrian facilities (e.g., shared use paths (miles), separated bike lanes (miles), buffered bike lanes (miles), bicycle lanes (miles), sidewalks (miles), unsignalized pedestrian crossings, signalized pedestrian crossings, and green paint in conflict areas).
- Recognition as a Bicycle Friendly Community Gold or Silver status.



Goal 2: Increase the number of walking and bicycling trips.

Increase the number of daily walking and bicycling trips within and through the city.

» Actions:

1. Maximize multi-modal connections (e.g., biking, walking, and transit) at transit centers and bus stops. Partner with RABA to consider short- and long-term bicycle parking needs at transit centers and key destinations, as well as comfortable facilities and/or amenities at bus stops.
2. Partner with developers to provide end-of-trip facilities (e.g., showers and bicycle lockers) in accordance with the *California Green Building Standards Code*. Consider additional development standards for Downtown Redding. Also, partner with existing businesses to provide end-of-trip facilities and other pedestrian and bicycle amenities, clarifying the process needed to implement such facilities and amenities.
3. Partner with local jurisdictions and other agencies, including RABA, to achieve multi-jurisdictional goals of increasing transit and non-motorized travel.
4. Support regional goals of reducing greenhouse gas emissions by developing the active transportation network.



Indicators of Success:

- An increase in walking and bicycling trips.
- Per capita reduction in regional greenhouse gas emissions



Goal 3: Increase safety and mobility for pedestrians and bicyclists.

Coordinate street improvements with education efforts to increase the safety and mobility of non-motorized users.

» Actions:

1. Educate bicyclists and pedestrians about safe behaviors (e.g., bicycling and crossing streets). Enforce laws.
2. Educate motorists about safe driving. Enforce laws.
3. Monitor and reduce bicycle and pedestrian crashes, injuries, and fatalities on roadways. Consider the development of a tool that allows non-motorized users to report unsafe (i.e., near miss) locations.
4. Coordinate planned roadway improvement projects, such as repaving and overlays, with the design, development, and improvement of the active transportation network.
5. Assess intersections and pedestrian crossings for implementation of enhanced safety measures (e.g., protected signal phasing for left turns, pedestrian crossing signs/beacons, crossing islands, and curb bulbs). Assess roadways for implementation of enhanced safety measures (e.g., traffic calming measures/programs, road diets, revised design standards, and signals set for lower speeds throughout Downtown Redding).
6. Coordinate with various city departments and other agencies regarding annual street improvement projects (e.g., Americans with Disabilities



Act improvements, Community Development Block Grant improvements, and RABA transit passenger boarding improvements), focusing on improvements that would benefit the active transportation network.

7. Identify micro-projects (e.g., pedestrian-scale lighting and shade) to enhance bicycle and pedestrian safety and comfort in key areas.

Indicators of Success:

- Implementation of street improvement projects and safety measures.
- A reduction in crashes, injuries, and fatalities.



Goal 4: Promote an active transportation culture that benefits the community.

Promote and advance active transportation within the community.

Actions:

1. Improve the quality of the active transportation environment with attractive, interesting, and interactive features, such as public art and street furniture. Partner with businesses and local organizations to activate outdoor public spaces, creating a sense of place.
2. Partner with businesses to implement parklets, which could include seating, greenery, and/or bike racks within the street right-of-way. Parklets would allow businesses to directly invest in active transportation and receive a financial return (i.e., increased business). Requires the development of a City of Redding Parklet Policy.
3. Partner with businesses, groups, and agencies to promote active transportation. Publicize Bicycle Friendly Businesses, active transportation activities and events, and bike-friendly accommodations (e.g., bike valet at events, bike racks on transit buses, and bike racks in front of businesses). Consider additional city-sponsored activities and events (e.g., bike rides and open street events).
4. Equitably distribute active transportation benefits (e.g., provide disadvantaged communities with direct, meaningful, and assured benefits).
5. Support community-wide public health through enhanced physical activity opportunities. Physical activity reduces obesity, diabetes, and heart disease.
6. Provide an annual “State of Walking and Bicycling” update, which could include a summary of projects completed, events, testimonials, trends, and other data.



Indicators of Success:

- Number of activities, events, programs, and features that promote active transportation.

Chapter 6: Planned Networks

This chapter presents the planned pedestrian and bicycle networks. Also included is the process used to develop the planned networks and support programs.

Developing the Planned Networks

Methodology

The planned pedestrian and bicycle networks were developed through an iterative process, as described in Appendix D (Network Development, Prioritization Methodology, and Planned Project Lists). In addition to the data analyses, the networks were reviewed to ensure connectivity to key existing and planned destinations (e.g., schools, colleges, shopping centers, employment centers, commercial/civic uses, trails, parks, and transit). Further, the feasibility of implementing different facilities was assessed.

These considerations are described below.

General Plan and Zoning

The city planning process was consulted to ensure consistency with the General Plan and local zoning. The General Plan calls out four regional commercial areas or “quadrants” that are intended to provide shopping and employment opportunities in each area of the city. The four quadrants include Downtown/West Redding, East Redding (Dana Drive), South Redding (S. Bonnyview Road), and North Redding (Oasis Road). Each quadrant has existing or planned shopping centers, schools, high-density residential, and other local uses, allowing residents to receive services in their quadrant without having to travel across town. A focus of the planned active transportation network was to ensure neighborhood connectivity to services within each quadrant.

Downtown/West Redding – This area is governed by the *Downtown Redding Specific Plan Update*, with land use and zoning specifically designed to create pedestrian priority areas. The Specific Plan identifies wide sidewalks and includes additional pedestrian and bicycle amenities to enhance the area. These amenities

are intended to complement building uses and promote walking and biking in downtown. In addition, the Specific Plan will allow many additional residential units to be located within this zone, enhancing the vitality of downtown. The downtown will also incorporate a bicycle loop that will connect the Diestelhorst Bridge to the Sundial Bridge through downtown. This loop is planned to be a fully-separated, on-street facility.

East Redding (Dana Drive) – This area, which is located around the Mt. Shasta Mall, is surrounded by ample housing in close proximity to the numerous services of this major regional hub. There are a few key pedestrian and bike crossings that have been identified for enhancement. As this area redevelops, additional pedestrian amenities will be added.

South Redding (S. Bonnyview Road) – As this area develops, innovative new infrastructure is planned to be incorporated, including new roundabouts and a divergent diamond interchange which includes a shared use path. These improvements will extend the existing shared use path across the interchange and connect services on Bechelli Lane and Churn Creek Road. A large vacant parcel on S. Bonnyview Road is zoned for mixed-use, which allows for the future development of a mixed-use village that would tie many of the southern neighborhoods together into a new walkable, bikeable hub.

North Redding/Oasis Road – This area is governed by the *Oasis Road Specific Plan*, which calls for a new regional commercial area that includes walking and bicycling improvements. The Specific Plan also requires dense residential housing that would become the hub for the northern neighborhoods.

Mixed-use Trails

The city has an extensive amount of off-road multi-use trails, as well as on-road bicycle and pedestrian facilities, all of which utilize a combination of open space, parks, and the road network. A major focus of the planned active transportation network was to ensure coordination with the *Draft City of Redding Parks, Trails, and Open Space Master Plan*, to determine which of the proposed off-street multi-use trails should

be incorporated into the planned active transportation network, as they provide recreational opportunities but serve the larger transportation system as well.

Complete Streets

The Transportation Element of the General Plan identifies goals and policies for Complete Streets. As stated in the General Plan, street right-of-way is required to be reallocated to accommodate all users. Additionally, the off-street network needs to be incorporated to reach this goal. The city has three main road types: Arterials, Collectors, and Local Streets. The adopted City of Redding Construction Standards incorporate the City of Redding Complete Streets policies listed under Goals T1, T2, T3, and T4 of the General Plan. Newly constructed roads incorporate these standards, goals, and policies to accommodate all users. However, existing roads likely will require modifications to accommodate all users (e.g., active transportation users), resulting in corridors that could utilize a variety of facilities (e.g., in-street bicycle facilities, sidewalks, or shared use paths). As walking and bicycling become more prevalent, and with the

development of the planned active transportation network, City of Redding Street Standards for development may require revisions in the next General Plan update.

Arterials

Arterials provide access to activity centers, freeways, and other arterials and collectors. For old arterials, widths can vary, but typically are 84 feet. For new arterials, the minimum width is 96 feet. These widths can comfortably accommodate two to three vehicle lanes and provide space for the development of pedestrian and bicycle facilities. The city has successfully incorporated road diets, roundabouts, and other solutions to accommodate existing traffic without adding lanes. This has provided opportunities to add buffered bike lanes, shared use paths, or wider sidewalks (the wider sidewalks act as mixed-use paths alongside buffered bike lanes). These solutions have become examples for the planned active transportation network, where creative solutions may be needed to address minimal widths or other challenges, such as freeway or bridge crossings.



Collectors

Collectors provide access between residential areas and neighborhood commercial areas. Collectors have smaller widths than arterials, and are critical for pedestrians and bicyclists to access services. If a collector provides direct access to schools, parks, or other active transportation attractors, in addition to a sidewalk, a shared use path may be added.

Local Streets

Local Streets provide access to residential areas and are designed for low speeds. Typically, separate bicycle facilities are not found on Local Streets, as bicycles are accommodated in street. In cases where a Local Street is intended for the planned bicycle network, bicycle boulevards are designated to enhance through bike traffic. On Local Streets, pedestrians typically are accommodated on sidewalks, as required for newer subdivisions. In some cases, Local Streets may incorporate a shared use path or wide sidewalk if a school or park type facility is within the subdivision and additional facilities are desired.

ADA Curb Ramps

As detailed in the Americans with Disabilities Act (ADA) Transition Plan for City Streets (City of Redding, 2015), the city has an established process for the identification and prioritization of ADA curb ramps. Prioritization focuses on locations where ADA curb ramps would have the most immediate and significant impact on the mobility of persons with disabilities, assessing location desirability, resident complaints, and the location of ADA paratransit users. Location desirability is calculated based on a number of current known conditions, including the following: land use; connecting sidewalk; crosswalk type and alignment; curb type; ramp condition; detectable markings; mid-block crossing refuges; and traffic control.

The planned pedestrian network considers sidewalk, shared use path, and intersection improvements to enhance pedestrian connectivity and safety. Additionally, the city will follow the methodology described above to implement ADA curb ramps.

Access to Transit

The city will work with RABA and the community to determine where bicycle and pedestrian facilities or amenities (e.g., sidewalks, benches, and shelters) are needed. Current funding sources, such as the Transportation Development Act Local Transportation Fund and the State Transit Assistance fund, could be used and should prioritize locations where connections are lacking.

Safe Routes to School

An important focus of a complete active transportation network is developing safe, comfortable ways for students to walk and bike to school. Safe routes to school projects will be coordinated with local school districts to ensure guidance on optimal routes is provided to families and that specific infrastructure issues within the walk shed of a school are identified and addressed.

Potential improvements include:

- Providing a safe walking environment between students' homes and schools by installing sidewalks or otherwise providing a delineated space for walking
- Ensuring intersections are enhanced with high-visibility crossings and other treatments, such as pedestrian crossing signs/beacons
- Managing vehicle speeds using roadway design and enforcement

Regional Trunk Line System

As described in the *GoShasta Regional Active Transportation Plan*, SRTA envisions a system of "Trunk Lines" or high-quality facilities that provide a trail or trail-like (in terms of level of comfort) experience for walking or bicycling between communities and activity centers throughout the Shasta Region. The planned active transportation network considered appropriate corridors to implement the Regional Trunk Line System, to meet both local and regional needs.

Bicycle Facility Types

The planned bicycle network includes the following facility types:

Shared Use Paths

Figure 6.1 illustrates a shared use path that is located in an independent right-of-way. Figure 6.2 illustrates a shared use path that is adjacent to a roadway (i.e., sidepath). Both of these facility types currently exist

in Redding. New paths will depend on available right-of-way and funding, as they tend to be relatively more expensive to implement than other active transportation infrastructure.

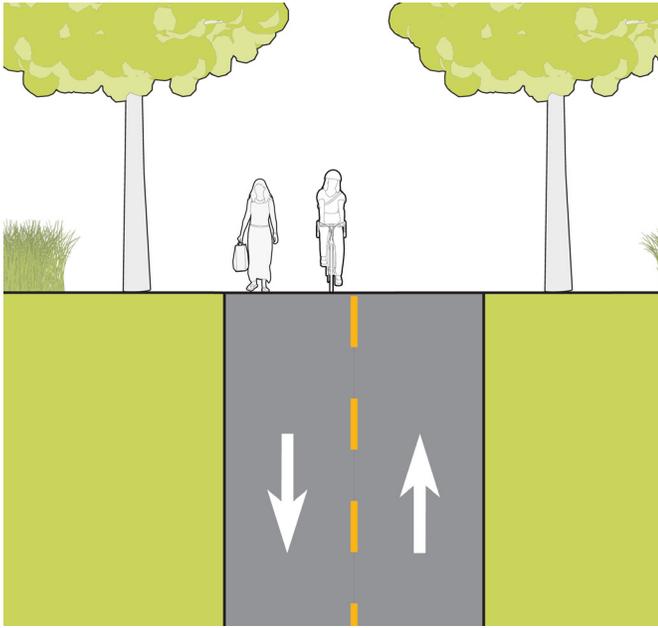


Figure 6.1. Example of a Class I Shared-Use Path in an independent right-of-way

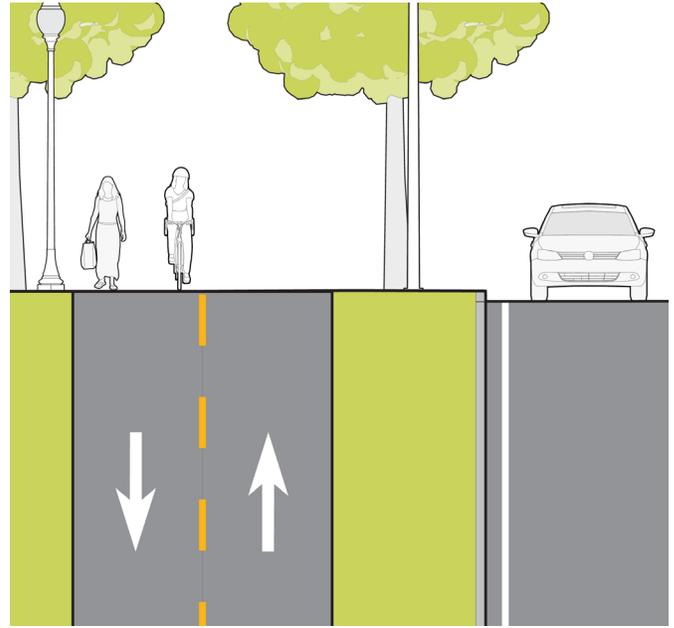
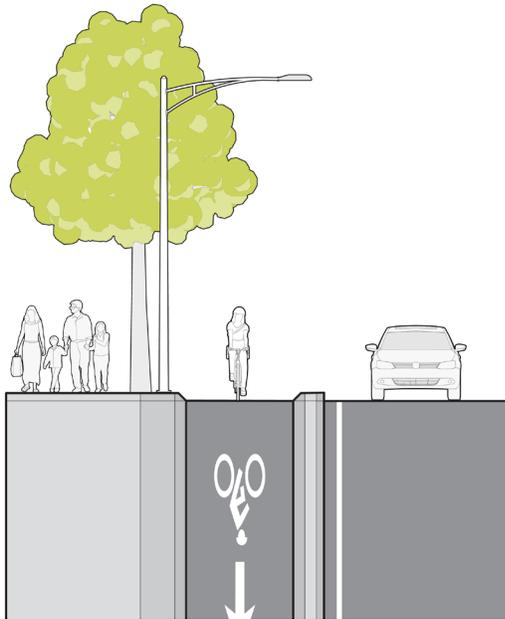


Figure 6.2. Example of a Class I Shared-Use Path (Sidepath)

Separated Bike Lanes

Separated bike lanes provide physical separation from vehicular traffic using elements such as on-street parking, flex posts, curb medians, or planter strips. These types of facilities are particularly appropriate on roadways with higher volumes of vehicular traffic or

vehicle speeds. Figure 6.3 shows various designs for separated bike lane treatments. Separated bike lanes are planned on many corridors, including California Street, Division Street, Center Street, Trinity Street, and Continental Street.



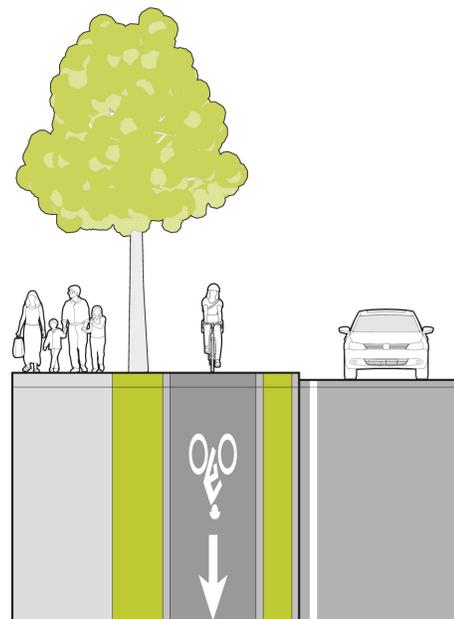
Street-level with curb median



Partially raised with mountable curb



Partially raised with curb median



Sidewalk-level

Figure 6.3. Class IV Separated Bike Lane Treatments

Bike Lanes

Bike lanes are the most common bicycle facility in Redding. They provide an exclusive space for bicyclists in the roadway but may not be comfortable for all riders, particularly on roads with higher vehicle speeds and volumes. Bicycle lanes may be the only feasible

option for accommodating bicyclists where there are right-of-way constraints. Where possible, wider (greater than 5 feet) bicycle lanes or additional buffers between bicyclists and motor vehicles should be provided to improve comfort.

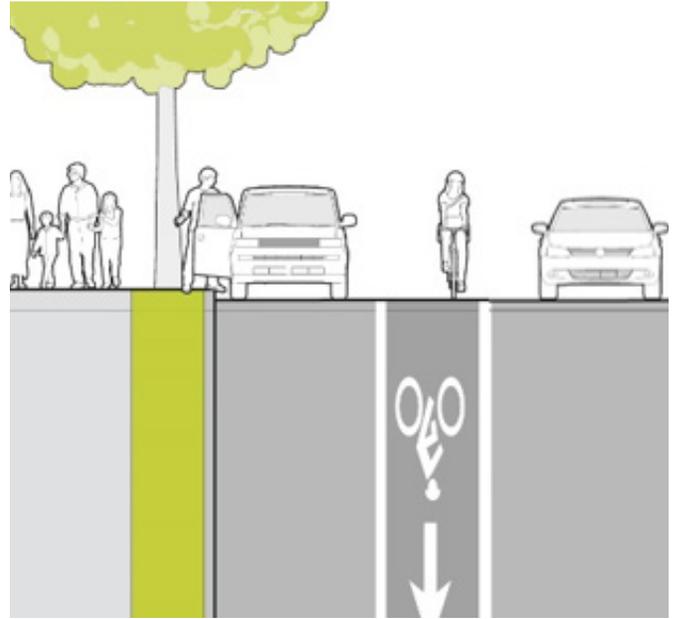
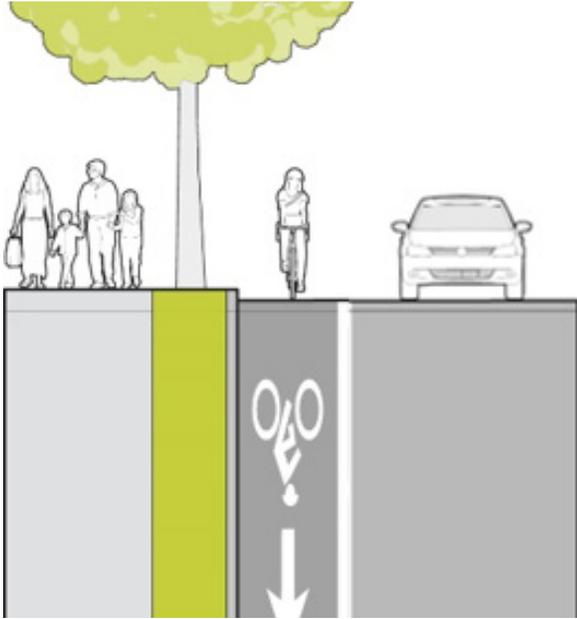


Figure 6.4. Class II Bike lanes with and without adjacent on-street vehicle parking

Buffered Bike Lanes

Buffered bike lanes provide additional lateral space between bicyclists and vehicles. While buffers are typically used between bike lanes and vehicle travel lanes to increase bicyclists' comfort (as shown in

Figure 6.5), they can also be provided between bike lanes and parking lanes in locations with high parking turnover to discourage bicyclists from riding too close to parked vehicles.

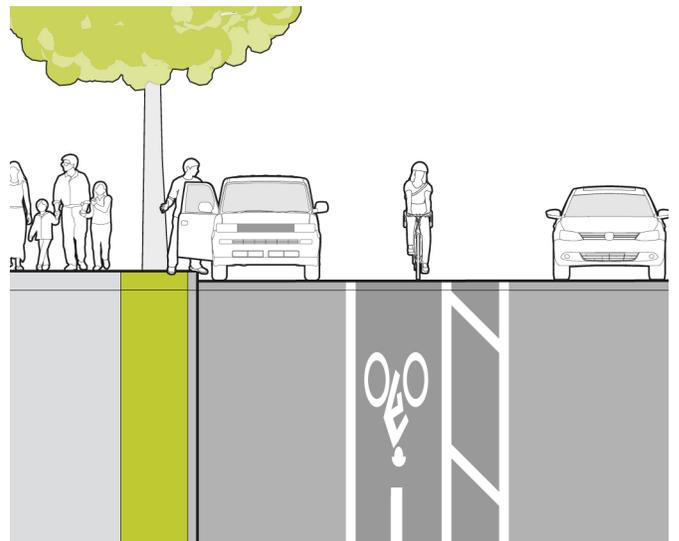
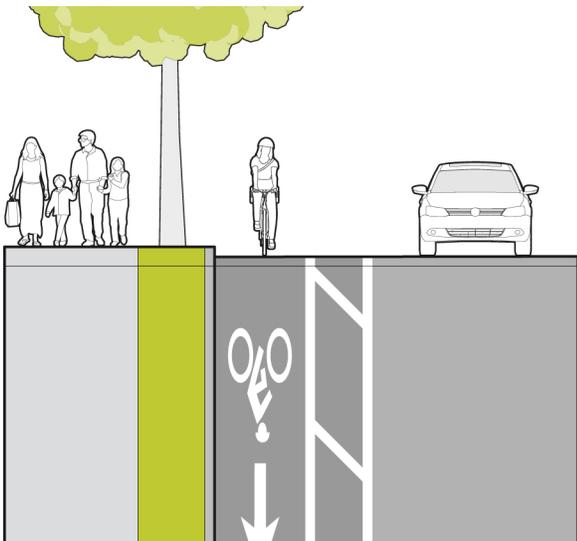


Figure 6.5. Class II buffered bike lanes with and without adjacent on-street vehicle parking

Bicycle Routes

Bicycle routes are indicated by signage and are most appropriate for experienced cyclists or along roads with low vehicle volumes and speeds. Bicycle routes may be used where it is not possible to install an exclusive bicycle lane, such as where there are topographical or right-of-way constraints. Roadways designated as bike routes should include appropriate signage, adequate sight lines, and paved shoulders where feasible and context appropriate. These features can help minimize conflicts and create a more predictable shared roadway environment.

Bicycle Boulevards

Bicycle boulevards provide connections between destinations by using low-speed, low-stress routes through neighborhoods. Bicycle boulevards may be enhanced with traffic calming to maintain a low-speed environment, safe crossings at key arterial intersections, and sometimes traffic diversion to minimize vehicular traffic while permitting bicycle traffic. Figures 6.6 to 6.8 show various traffic calming, diversion, and operational treatments that can be applied to optimize bicycle boulevards for bicyclists of all ages and abilities.

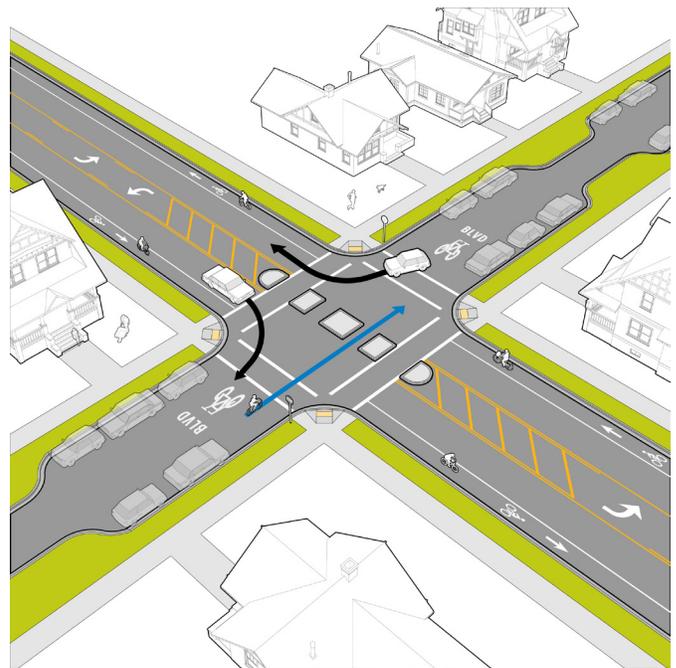


Figure 6.6. Bicycle Boulevard with median at an arterial crossing and chokers for traffic calming

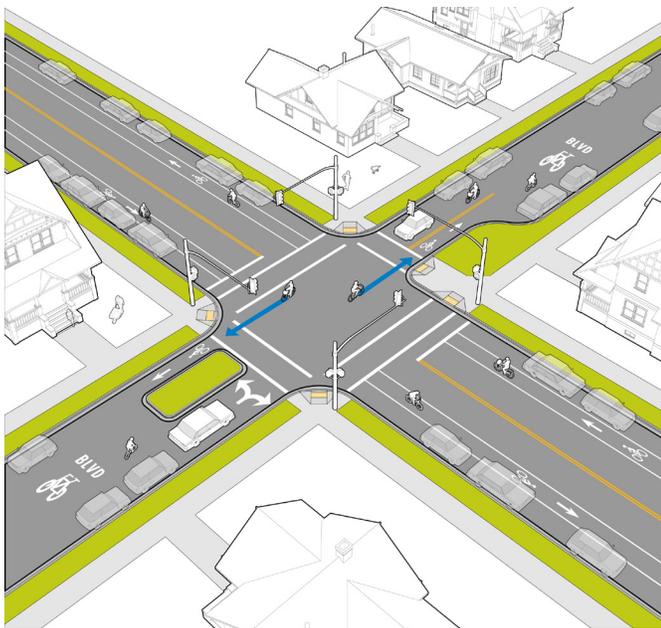


Figure 6.7. Bicycle boulevard with vehicle access control

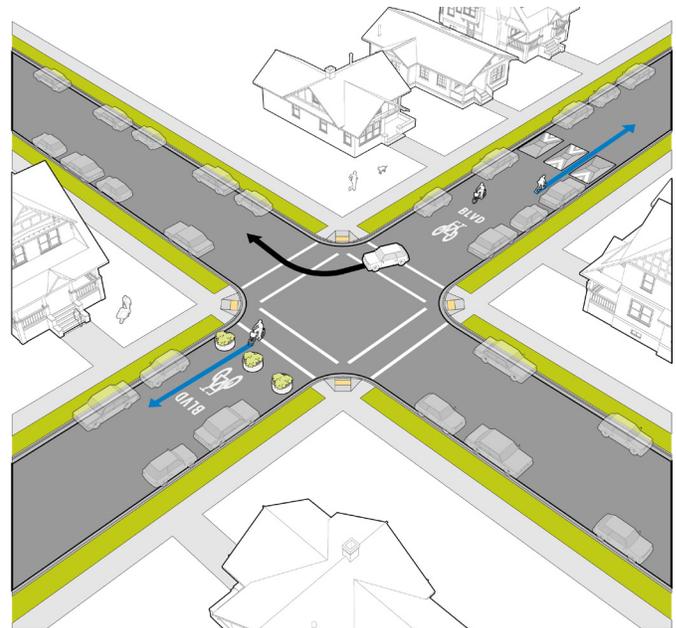


Figure 6.8. Bicycle Boulevard with vehicle diversion and speed humps or speed table for traffic calming

Pedestrian Facility Types

The planned pedestrian facilities include the following: sidewalks, shared use paths, and intersection improvements.

Intersection improvements may include:

- Constructing a crossing (e.g., across a creek) where one is currently lacking
- Constructing curb extensions and/or raised crossings to slow vehicle turning speeds and reduce pedestrian exposure
- Shortening cycle lengths and coordinating signal timing along corridors to reduce pedestrian delay
- Installing high-visibility crosswalks (see Figure 6.9)
- Installing other enhancements, such as pedestrian median islands, pedestrian crossing signs/beacons, and lighting, at higher-volume crossings or where high vehicle speeds and/or volumes are present at midblock or unsignalized crossings (Figure 6.10)



Figure 6.9. High-visibility crosswalks

Planned Bicycle Network

The planned bicycle network is shown in Figure 6.11 and summarized in Table 6.1. The mileage numbers in Table 6.1 include bikeway upgrades (e.g., upgrading existing bike lanes to planned buffered bike lanes). The resultant build-out bicycle network (existing and planned bikeways) is shown in figure 6.12.

Bikeway Mileage

Bikeway Type	Miles
Shared Use Path	54.3
Bike Lane	37.1
Bike Route	1.7
Separated Bike Lane	2.0
Bike Boulevard	17.1
Buffered Bike Lane	53.2
Total	165.5

Table 6.1: Summary of Planned Bikeway Mileage

NOTE: This total includes 0.8 miles of shared use path, 3.3 miles of bike lanes and 1.3 miles of buffered bike lanes on Caltrans roadways.



Figure 6.10. Crosswalk enhancements for an unsignalized crossing

Bikeway Design

Bikeway design practices have evolved at a rapid rate over the past decade and will continue to do so. The city will make every effort to implement current best practices as presented in the design guidance documents listed below and stay apprised of new innovations and guidance.

Planned Pedestrian Network

The planned pedestrian network is shown in Figure 6.13.

ACTIVE TRANSPORTATION PLAN

Planned Bikeway Network



- | | |
|---------------------|-----------------------------------|
| Bikeway Type | Bikeway Type |
| Shared Use Path | Subject to Caltrans Proces |
| Separated Bike Lane | Shared Use Path |
| Buffered Bike Lane | Buffered Bike Lane |
| Bike Boulevard | Bike Lane |
| Bike Lane | |
| Bike Route | |

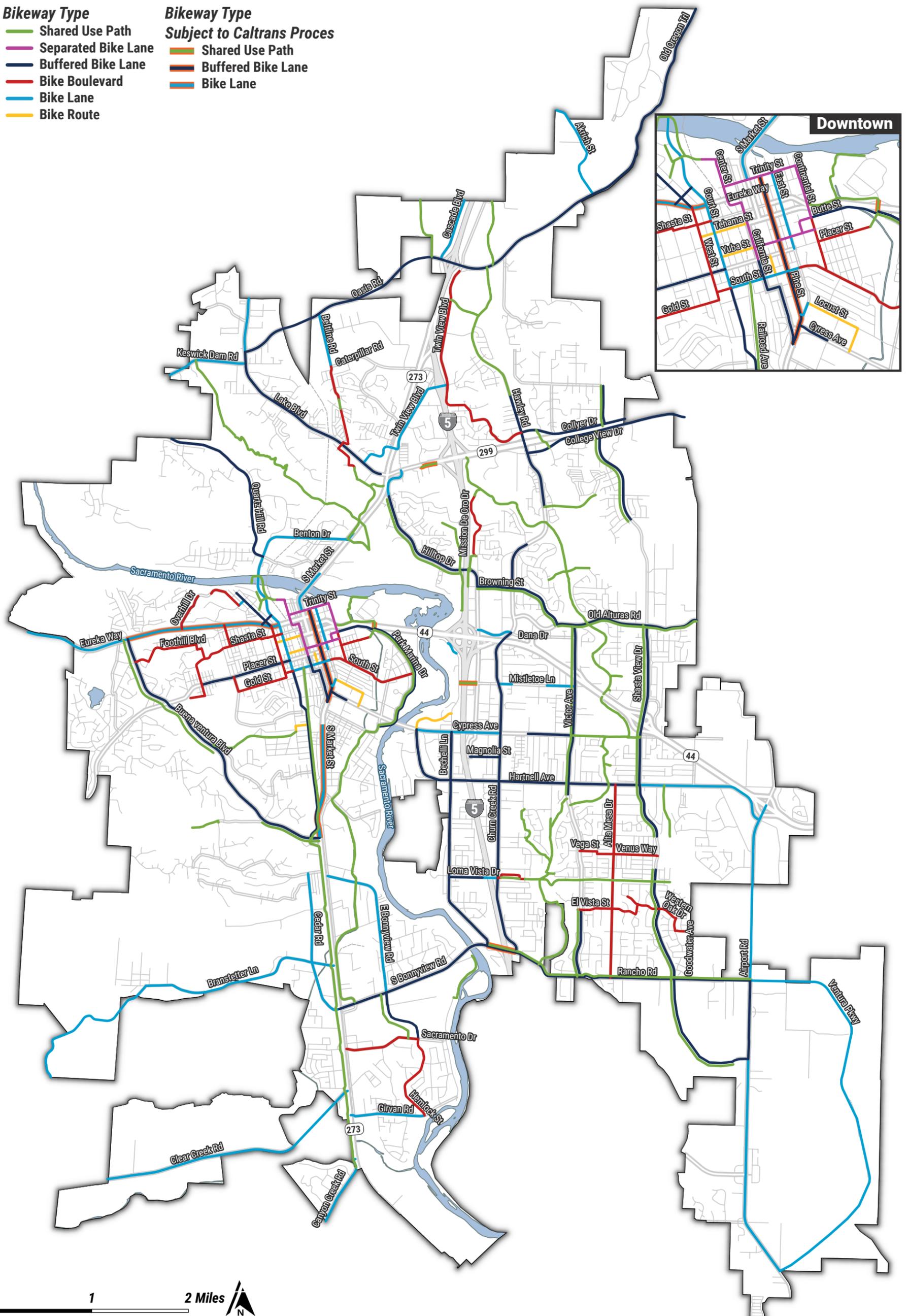


Figure 6.11. Planned bicycle network

ACTIVE TRANSPORTATION PLAN

Build-Out Bikeway Network



Bikeway Type

- Shared Use Path
- Separated Bike Lane
- Buffered Bike Lane
- Bike Boulevard
- Bike Lane
- Bike Route

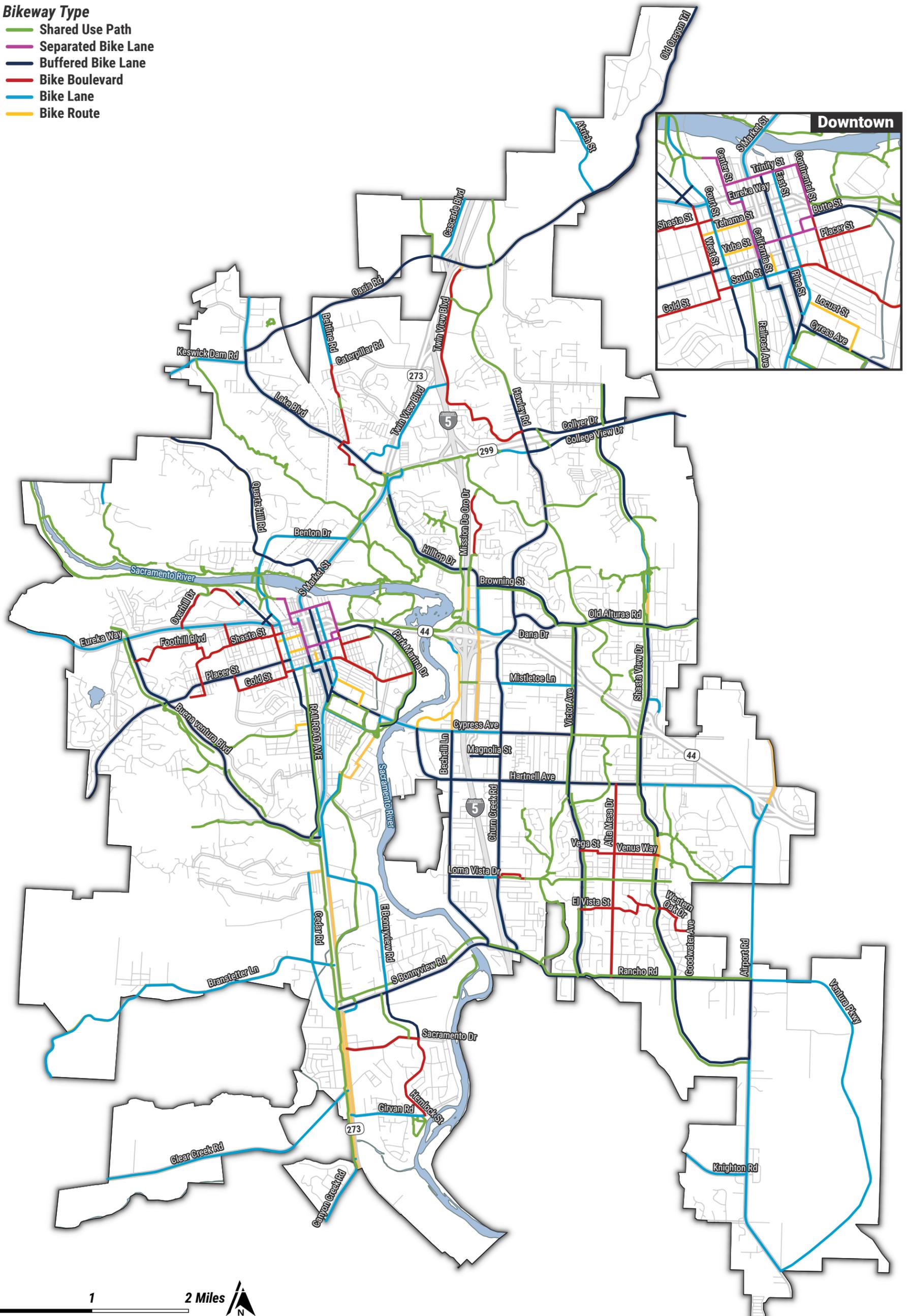


Figure 6.12. Build-out bicycle network

ACTIVE TRANSPORTATION PLAN

Planned Pedestrian Improvements



Pedestrian Improvement Types

- Shared Use Path
- Sidewalk
- Intersection Improvement
- Intersection improvement (Subject to Caltrans Process)

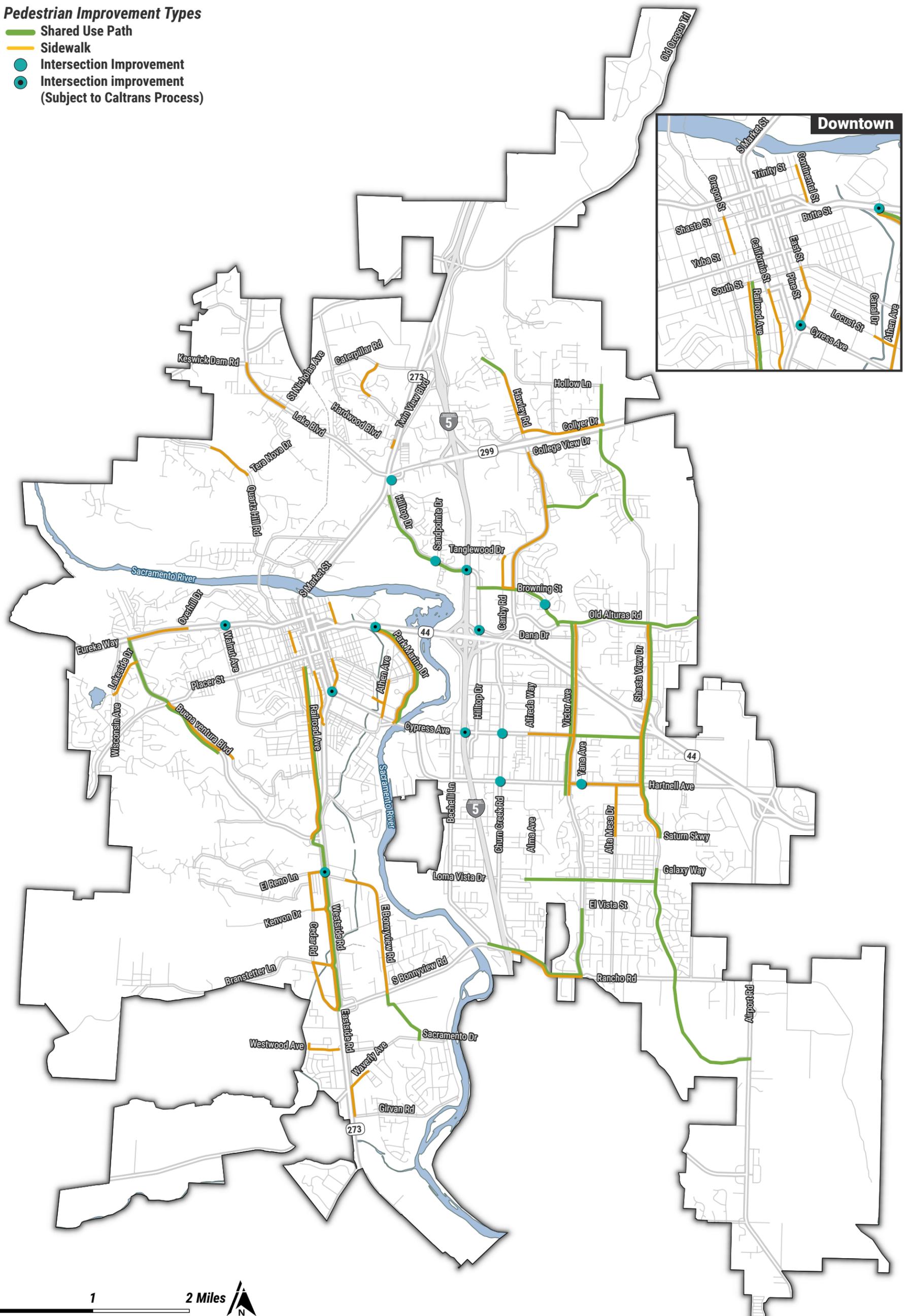


Figure 6.13. Planned pedestrian network

Planned Support Programs

Building a connected and safe active transportation network is key to encouraging people to walk, bike, and ride transit in the City of Redding. Equally important are programs to teach people how to use the system and ones that focus on making the system safe and accessible for all ages and abilities. A variety of program areas that could be explored and implemented by the city are listed below. Additional background information on these programs and initiatives, including examples from other jurisdictions, can be found in Appendix C (Programmatic Support Background).

Education Recommendations

Developing and implementing a variety of safety education programs can improve safety for all roadway users by spreading information about the proper use of the roadway and which behaviors to avoid. Currently, there are a number of programs and groups that educate residents about walking and biking, including Healthy Shasta, Shasta Living Streets, and Safe Routes to School (SRTS).

Safety Messaging and Bicycle Ambassadors

Some community members are trained as League Cycling Instructors through the League of American Bicyclists. The instructors' curriculum is focused on educating the community on bicycling "street skills." Several instructors teach the "Women of Wheels" class through the City of Redding Recreation Department. Working with these instructors and existing programs (Healthy Shasta, SRTS, etc.), the City of Redding could promote a safety messaging campaign which instructors can use in future trainings. In addition, the City, in cooperation with SRTA or other partners, could expand the number and types of educators by creating an independent bicycle ambassador program.

Bicycle Theft Prevention Initiative Recommendations

Concerns about bike theft may prevent people from biking. Providing an adequate supply of well-designed and secure bike parking at popular destinations may encourage more people to make trips by bike. Secure parking, when combined with education on proper

locking methods, bicycle registration programs, and other strategies can reduce theft and increase user's confidence in the security of their bike.

Bike Racks

The City of Redding will continue to work with Healthy Shasta to purchase, install, and identify new locations for bike parking. The city could consider expanding on these efforts by developing a formal and sustainable bike parking program, which would improve coordination between public requests, property owners and businesses, city departments, and other agencies. A bicycle parking crowdsourcing app could be used to identify where the city could focus its bicycle parking investments and/or incentivize businesses to do so.

Education of Proper Locking

The city could work with local organizations to implement a sticker campaign aimed at increasing proper bike locking awareness. The campaign could include stickers that can adhere to public bike racks, showing the proper way to securely lock a bike. In addition, the campaign logo could be embedded into print and online publications, such as the Bike Redding map, Visit Redding trail map, and websites supporting trail use and active transportation.



Bicycle Registration Program

The Redding Police Department could connect with Project 529, a national non-profit that merges jurisdiction's bicycle registration databases and provides functionality for searching for stolen bikes. The city could help promote Project 529 by working with local bike shops and providing outreach materials about how to register your bike and the benefits of doing so.

Anti-Bike Theft Signage

The city could review the current patterns of bike thefts to better understand if there are any hot spots. If so, the city could collaborate with nearby or adjacent property owners to choose a location for a sign that informs people about the risks in the area, and how they can protect their bike through proper locking techniques and bike registration.

Bike Bait Program

The city could work closely with communities and businesses to determine whether bait bike programs are a feasible and/or appropriate policing strategy to reduce bicycle theft. There are however, potential shortcomings and adverse impacts to community members, especially at-risk youth, that may result from bait bike programs.

Encouragement Recommendations

Bike Friendly Business Award

The city will look for opportunities to support the Bicycle Friendly Business program in conjunction with Shasta Living Streets, Healthy Shasta and the Redding Chamber of Commerce. The city could offer resources and an easy-to-follow toolkit for becoming a Bicycle Friendly Business. In addition, the city could work with businesses to determine if there are any barriers that prevent or discourage employers from providing incentives.

End-of-Trip Facilities

The city could develop resources that organizations and businesses can use to help them select appropriate end-of-trip facilities (e.g., bike parking types) and guide them through the city's development process (e.g., permitting and design requirements).



The city could do initial outreach when launching the resources, to increase awareness of why end-of-trip facilities are important and answer questions on how to properly provide amenities.

Open Street Events

The city will continue to support open street events and possibly increase the number of times per year open street events occur. Hosting these events can support local businesses, provide a fun venue for municipalities to collect input from residents regarding transportation needs and concerns, can be a relatively inexpensive way to promote safe physical activity. These types of events can also provide a venue to set up temporary active transportation facilities or activities (cycle tracks, bike trains, walking school buses) to showcase recent projects or educate residents on future city efforts.

Wayfinding

Wayfinding signage helps people navigate the active transportation network with confidence and raises awareness of active transportation modes. While a wayfinding standard is listed as a long-term consideration in the Downtown Redding Specific Plan, implementing a wayfinding system citywide would

be a relatively low-cost and effective encouragement strategy. Implementing a wayfinding program for existing walking and biking routes can be a short-term action; this can grow as the network expands.

Enforcement Recommendations

Enforcement programs can increase awareness of road safety among all users, improve behavior, and reduce traffic safety problems. The City of Redding Police Department, in close cooperation with Development Services and Public Works, could develop an overarching data-driven enforcement strategy focused on improving pedestrian and bicyclist safety. This strategy could target behaviors that are shown to contribute most to serious and fatal crashes, identify areas in the city where increased enforcement is needed, and emphasize educating roadway users and rewarding good behavior.

Focusing enforcement efforts on behaviors that contribute to fatal and injury-causing crashes, rather than less serious infractions, is an effective strategy for improving safety with limited resources. Typically, these behaviors include drivers failing to yield the

right-of-way to bicyclists and pedestrians, excessive speeding, and traffic control compliance. National data also shows that impairment is a significant contributor to serious and fatal crashes, and that distracted driving is a growing problem. An analysis of crash data could help determine which behaviors most contribute to serious and fatal crashes in Redding. Enforcement of California's recently strengthened distracted driving law (AB 1785) could be a priority for Redding police.

Evaluation of Programs

While there are many strategies to promote active transportation, the City of Redding will need to decide which strategies to pursue at which time. Evaluating programs and projects using data can help with these decisions. Project evaluations could:

- Inform decision makers and the public on whether the projects, programs, and policies are successful
- Illustrate areas that can be improved
- Demonstrate how funds are being used
- Celebrate successes to garner public support

Data Collection and Counts

The city will continue to work with Healthy Shasta to conduct bicycle and pedestrian counts.

Additionally, the city could participate in a regional bike count program in coordination with SRTA. The National Bicycle and Pedestrian Documentation Project, which organizes a nationwide bicycle and pedestrian count twice a year, provides a readily available framework for conducting short-duration manual counts. Short-duration counts can be conducted by volunteers and can include detailed information about the number and gender of bicyclists and pedestrians, their travel direction, whether they are riding on the street or sidewalk, and weather. Long-duration counts allow short-duration counts to be extrapolated to get a more accurate picture of bicycle and pedestrian volumes throughout the year. Long-duration counts are collected using permanent or temporary automated counters. The city could seek funding from SRTA to purchase automated counters to collect more robust volume data that would help measure its goal to increase the number of people walking and biking.



Photo by NJ Bicycle and Pedestrian Resource Center

Chapter 7: Implementation

This plan provides a vision of the planned pedestrian and bicycle networks. This chapter provides a method of implementation, whereby projects that reasonably could be implemented within the next 5 years are identified.

Generally, projects range in terms of their complexity and ease of implementation. In some cases, projects can be implemented through retrofitting existing streets with minimal design effort and impacts to other travel modes. In other cases, projects may be more capital-intensive, require additional analysis, design and neighborhood involvement, and depend on grant funding.

Coordination

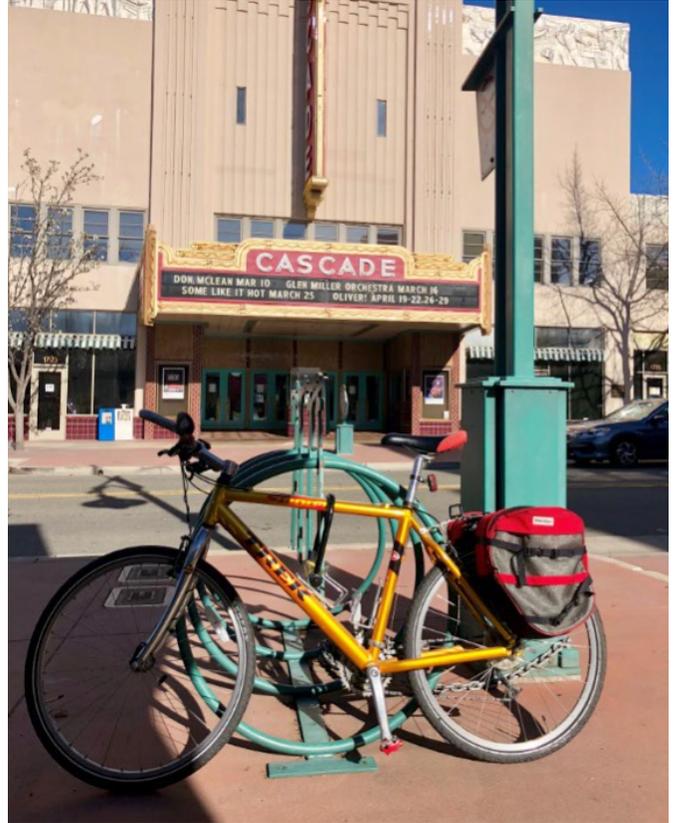
Portions of the planned pedestrian and bicycle networks are located in areas that overlap with other jurisdictional agencies (e.g., Caltrans, Union Pacific Railroad, California Public Utilities Commission, Anderson-Cottonwood Irrigation District (ACID), Bureau of Land Management, Bureau of Reclamation, City of Anderson, City of Shasta Lake, and Shasta County), and will require coordination for implementation. Such projects will be developed through partnerships, in accordance with the necessary requirements.

Priority Projects

While all parts of the planned pedestrian and bicycle networks are important, some portions are more likely to provide a higher return on investment because of the destinations or high number of users served, ease of implementation, and/or ability to garner funding. Such projects are considered priority projects.

A number of factors were considered in the prioritization process, as described in Appendix D.

Tables 7.1 and 7.2 summarize priority pedestrian and bicycle projects, respectively. The order in which projects are listed does not indicate the order in which they will be implemented. In some instances, projects could be merged.



Priority Pedestrian Projects

Project ID	Street Name	From Street	To Street	Project Description
53	RAILROAD AVE	SOUTH ST	BUENAVENTURA BLVD	Sidewalk
12	RAILROAD AVE (EAST SIDE)	SOUTH ST	BUENAVENTURA BLVD	Shared use path
54	SHASTA VIEW DR	SATURN SKWY	GOODWATER AVE	Sidewalk
41	VICTOR AVE (WEST SIDE)	BRAMBLE PL	OLD ALTURAS RD	Shared use path
34	SHASTA VIEW DR (EAST SIDE)	SATURN SKWY	GOODWATER AVE	Shared use path
55	VICTOR AVE	BRAMBLE PL	OLD ALTURAS RD	Sidewalk
42	OLD ALTURAS RD (NORTH SIDE)	BROWNING ST	VICTOR AVE	Shared use path
52	PARK MARINA DR (EAST SIDE)	SUNDIAL BRIDGE DR	E. CYPRESS AVE	Shared use path
22	PARK MARINA DR	SUNDIAL BRIDGE DR	E. CYPRESS AVE	Sidewalk

* Details of how each project scored under the individual criteria can be found in Appendix D.

Table 7.1: Priority Pedestrian Projects

Priority Bicycle Projects

Project ID	Street Name	From Street	To Street	Project Description
128	SHASTA ST; WILLIS ST; PLEASANT ST; SOUTH ST	SOUTH ST/SAN FRANCISCO ST	SHASTA ST/COURT ST	Bike Boulevard
133	SHASTA VIEW DR	SATURN SKWY	GOODWATER AVE	Buffered Bike Lane
143	SOUTH ST	EAST ST	PARK MARINA DR	Bike Boulevard
149	TRINITY ST	CENTER ST	CONTINENTAL ST	Separated Bike Lane
154	VICTOR AVE	BRAMBLE PL	OLD ARTURAS RD	Shared-Use Path
155	VICTOR AVE	BRAMBLE PL	OLD ALTURAS RD	Buffered Bike Lane
114	PARK MARINA DR	SUNDIAL BRIDGE DR	E CYPRESS AVE	Shared-Use Path
115	PARK MARINA DR	SUNDIAL BRIDGE DR	PARKVIEW AVE	Buffered Bike Lane
121	RAILROAD AVE	BUENAVENTURA BLVD	SOUTH ST	Shared-Use Path
111	OFF-STREET (TURTLE BAY TO DOWNTOWN TRAIL)	TURTLE BAY	CONTINENTAL ST	Shared-Use Path
134	OFF-STREET (SHASTA VIEW DR)	SATURN SKWY	GOODWATER AVE	Shared-Use Path
47	CONTINENTAL ST	BUTTE ST	TRINITY ST	Separated Bike Lane
28	BUTTE ST	CONTINENTAL ST	SUNDIAL BRIDGE DR	Buffered Bike Lane
68	HAWLEY RD; CHURN CREEK RD	HAWLEY RD/COLLYER DR	CHURN CREEK RD/PALACIO DR	Buffered Bike Lane
45	COLLYER DR	POISON OAK LN	HAWLEY RD	Buffered Bike Lane

* Details of how each project scored under the individual criteria can be found in Appendix D.

Table 7.2: Priority Bicycle Projects

Funding

An important catalyst for the development of this plan was positioning the city to better receive funding, specifically, funding from the California Transportation Commission Active Transportation Program (ATP). In 2018, the ATP will allocate approximately \$440 million towards active transportation projects statewide. As the ATP is highly competitive, identifying priority projects both in an active transportation plan and a regional transportation plan scores well under the ATP criteria, increasing our likelihood of successfully receiving funding. Such funding will be particularly important for projects that are difficult to fund and implement from traditional sources and routine accommodation.

A variety of other funding sources, including locally-apportioned proceeds from the Transportation Development Act (TDA), existing street maintenance and roadway construction funds provided through the General Fund, local businesses, organizations and foundations, and other grant programs will also be utilized to implement the planned pedestrian and bicycle networks and support programs. More detail on these funding sources is provided below.

Federal Funding Opportunities

Several federal funding sources are available for pedestrian and bicycle-only projects, or for the inclusion of these facilities in other projects. Current funding is primarily available through the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) via the Fixing America's Surface Transportation (FAST) Act, which was signed in 2015 and supports funding until 2020.

The FHWA maintains a data table to assist communities in understanding which Federal funding programs could be used for bicycle and pedestrian projects. Specific program requirements must be met and eligibility must be determined on a case-by-case basis. For example, transit funds must be used to provide access to transit, and Congestion Mitigation and Air Quality Improvement (CMAQ) funds must benefit air quality in eligible areas. More detailed information can be found in the link below.

Resources

- FHWA's Bicycle and Pedestrian Program webpage. https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/

Transportation Investment Generating Economic Recovery (TIGER) Grant

TIGER grants fund a broad array of road, rail, transit, and bicycle and pedestrian projects. The program focuses on capital projects that generate economic development and improve access to reliable, safe, and affordable transportation, especially for disadvantaged communities. The grant funds projects that have gone through preliminary design stages, and prioritizes projects with broad stakeholder support. Applicants are required to demonstrate that project benefits outweigh the costs. Projects in urban areas must request at least \$10 million (with a 20% match).

Resources

- Tiger Discretionary Grants. www.transportation.gov/tiger

Federal Transit Administration (FTA) Grants

The FAST Act's five years of predictable formula funding includes funding for new grant programs for buses and bus facilities, innovative transportation coordination, workforce training, and public transportation research activities.

Resources

- FTA's Grant Programs. https://www.transit.dot.gov/grants/13093_3549.html
- FTA's Bicycles & Transit. <https://www.transit.dot.gov/regulations-and-guidance/environmental-programs/livable-sustainable-communities/bicycles-transit>

Transit Oriented Development (TOD) Planning Pilot Grants (5309)

This program provides funding for:

- Advanced planning efforts that support TOD associated with new fixed- guideway and core capacity improvement projects
- Projects that facilitate multimodal connectivity and accessibility
- Projects that increase access to transit hubs for pedestrian and bicycle traffic

Resources

- FTA's Pilot Program for TOD Planning. <https://www.transit.dot.gov/TODPilot>

Bus and Bus Facilities Program (Ladders of Opportunity Initiative) (5309)

Funds from this program may be used to modernize and expand transit access specifically for the purpose of connecting disadvantaged and low-income individuals, veterans, seniors, youths, and others with local workforce training, employment centers, health care, and other vital services.

Resources

- Bus and Bus Facilities Program (Ladders of Opportunity Initiative). <https://www.transit.dot.gov/funding/grants/applying/5309-bus-and-bus-facilities-program-ladders-opportunity-initiative>

Enhanced Mobility of Seniors and Individuals with Disabilities Program

This program is intended to enhance mobility for seniors and persons with disabilities by providing funds for programs to serve transit-dependent populations beyond traditional public transportation services and Americans with Disabilities Act (ADA) complementary paratransit services. (This program consolidates New Freedom eligible projects.) Bicycle and pedestrian improvements that provide access to an eligible public transportation facility and meet the needs of the elderly and individuals with disabilities are eligible for funding.

Resources

- Enhanced Mobility of Seniors & Individuals with Disabilities. <https://www.transit.dot.gov/funding/grants/enhanced-mobility-seniors-individuals-disabilities-section-5310>

State Funding Opportunities

California Transportation Commission ATP

In 2013, Governor Brown signed legislation creating the ATP. This program consolidated the Federal Transportation Alternatives Program (TAP), California's Bicycle Transportation Account (BTA), and Federal and California Safe Routes to School (SRTS) programs. The ATP is administered by Caltrans Division of Local Assistance, Office of Active Transportation and Special Programs. A portion of the funds are administered by MPOs in the state which issue their own call for projects typically at the same time as the state call. In 2017, SB 1 augmented the ATP by \$100 million per year. Caltrans has typically issued a call for projects every year and the 2018 call for projects is expected to occur in March.

Resources

- Active Transportation Program (ATP). <http://www.dot.ca.gov/hq/LocalPrograms/atp/>

System Safety Analysis Report Program (SSARP)

The SSARP program was established by Caltrans in 2016, and is designed to assist local agencies in performing collision analysis and the identification of safety issues on roadway networks for all modes. The program focuses on systemic safety analysis for motor vehicles with an emphasis on pedestrian and bicycle collisions. This analysis should result in a list of systemic, low-cost countermeasures that can be used to prepare designs to be used in applications for future HSIP funding cycles.

Resources

- Systematic Safety Analysis Report Program (SSARP). <http://dot.ca.gov/hq/LocalPrograms/HSIP/SSARP.htm>

Highway Safety Improvement Program (HSIP)

HSIP funds are available for safety projects aimed at reducing traffic fatalities and serious injuries. Bike lanes, roadway shoulders, crosswalks, intersection improvements, underpasses and signs are examples of eligible projects. Projects in high-crash locations are most likely to receive funding. This program is funded through the Federal Highway Administration and is administered by Caltrans; all projects must result in the complete construction of safety improvements.

Resources

- Highway Safety Improvement Program (HSIP). <http://dot.ca.gov/hq/LocalPrograms/hsip.html>

California Office of Traffic Safety (OTS)

The California Office of Traffic Safety (OTS) has grants available to reduce motor vehicle fatalities and injuries in specific areas of pedestrian and bicycle safety, roadway safety, community based organizations, police traffic services, alcohol and drugs, occupant protection, emergency medical services and traffic records.

Resources

- California Office of Traffic Safety – Grants. <http://www.ots.ca.gov/Grants/>

Regional Funding Opportunities

Regional Active Transportation Program

A portion of the statewide ATP is administered by SRTA for projects within its jurisdiction. Program goals include increasing the proportion of trips accomplished by biking and walking, increasing safety and mobility for non-motorized users, advancing efforts to implement SB 375, enhancing public health, ensuring disadvantaged communities fully share in benefits of the program, and providing a broad spectrum of projects to benefit many types of active transportation users.

Resources

- Active Transportation Program (ATP). <https://www.srta.ca.gov/226/Active-Transportation-Program-ATP>

Transportation Development Act (TDA)

The TDA provides two major sources of funding for public transportation: the Local Transportation Fund (LTF) and the State Transit Assistance fund (STA). The TDA funds a wide variety of transportation programs, including planning and program activities, pedestrian and bicycle facilities, community transit services, public transportation, and bus and rail projects. Two percent of money in the fund is made available to counties and cities for facilities provided for the exclusive use of pedestrians and bicycles, or for local street and road purposes in those areas where the money may be expended for such purposes, in the development of a balanced transportation system. Of this amount, five percent may be expended to supplement moneys from other sources to fund bicycle safety education programs. In Shasta County, approximately half of FY2014-15 funds were distributed to cities and the county for maintenance of local streets and roads.

Resources

- Transportation Development Act Guidebook. http://www.dot.ca.gov/hq/MassTrans/Docs-Pdfs/STIP/TDA_4-17-2013.pdf
- Transportation Development Act (Shasta Regional Transportation Agency). <https://www.srta.ca.gov/215/Transportation-Development-Act-TDA-Funds>

Potential local funding sources include:

- TDA Article 3;
- Developer Impact Fees and Transportation Impact Fees;
- Local Bond Measures;
- Business Improvement Districts (BIDs); and
- Local Improvement Districts (LIDs)

Measuring Success

It is important to track progress and evaluate efforts to build-out the networks, while supporting the use of the networks through education, encouragement, engineering and enforcement initiatives. Indicators of Success are shown in the infographic below (as well as in Chapter 5) to measure success. These indicators will be tracked on an annual basis using available data.

