

SHASTA REGIONAL ACTIVE TRANSPORTATION NETWORK

Funded with a Caltrans Sustainable Transportation Planning Grant.



SHASTA REGIONAL ACTIVE TRANSPORTATION NETWORK

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1. INTRODUCTION & HISTORY

The Shasta Regional Active Transportation Network (SRATN) project was led by the Shasta Regional Transportation Agency (SRTA) to aid local jurisdictions in Shasta County with project designs and the development of grant applications to build high quality walking and biking facilities. The SRATN (also known as Shasta Trunk Lines Regional Active Transportation Network for All) project's preliminary designs and public engagement were funded through a Caltrans-funded Sustainable Transportation Planning grant. Grant writing was funded with regional funds.

SRTA has long been working to advance a community driven regional vision for a connected, low-stress, intuitive active transportation network that is safe and comfortable for people of all ages and abilities. The benefits of this are many, from providing new and/or more attractive travel options to increasing access to opportunity and daily needs. SRTA provides technical assistance and works with partners to develop grant-competitive projects so local agencies may secure funding to implement those projects.

GRANT APPLICATION ASSISTANCE HISTORY

SRTA led the GoShasta Regional Active Transportation Plan in 2018 (updated in 2019), which defines the policies, programs, and projects for a safer and more connected active transportation network in Shasta County. Since then, SRTA has been working to aid local jurisdictions in public engagement, conceptual design, and grant preparation to get projects built. To date, two such rounds of assistance have been conducted (including this effort):

Sustainable Shasta | 2017-2021

This was the first round of grant application assistance, in which SRTA assisted with project development and grant applications for Active Transportation Program (ATP) Cycles 4 and 5. The following applications were submitted:

Project	Applicant	Funding Program
North Redding Active Transportation Trunk Line (NRATTTL)	Shasta County RTPA	ATP Cycle 5
Cottonwood Active Transportation Trunk Line (CATTLE)	Shasta County	ATP Cycle 5
Cottonwood Lasso Loop	Shasta County	ATP Cycle 5
West Cottonwood School Connector	Shasta County	ATP Cycle 5
Victor Avenue & Cypress Avenue Active Transportation (VCAT) Project	City of Redding	ATP Cycle 5
Turtle Bay to Downtown Gap Completion Project	City of Redding	ATP Cycle 5
California Street Bikeway Project	City of Redding	ATP Cycle 5
Ashby-to-Downtown	City of Shasta Lake	ATP Cycle 5
Ashby Road Safe Routes to School Pedestrian Improvements	City of Shasta Lake	ATP Cycle 4

Shasta Regional Active Transportation Network | 2020-2023

In the second round of grant application assistance, SRTA was able to expand the program to consider other funding sources. Assistance was provided for the Caltrans Cycle 6 Active Transportation (ATP) and Clean California call for grant applications. The following applications were submitted:

Project	Applicant	Funding Program
Butte Street Boogie	City of Redding	ATP Cycle 6
Victor Improvement Project	City of Redding	ATP Cycle 6
Hilltop Improvement Project	City of Redding	ATP Cycle 6
Park Marina Drive Rapid Implementation Project	City of Redding	ATP Cycle 6
Calaboose Creek	City of Redding	Clean California

In addition to the noted applications, project development and a field visit was conducted with the Pit River Tribe for the Pit River Tribe/Burney Munik'Chun Walking + Biking Network. SRTA also initiated engagement with both the elementary school and the junior/senior high school in Burney. Based on discussions with the Tribe, Shasta County, and Caltrans, it was determined to delay submittal of this application until a future ATP cycle when more robust design and funding strategies can be explored including coordination with Caltrans on improvements to SR 299/Main Street. Project development continues on this project, so all associated materials in this report are subject to change based on new needs identified or additional community input.

The project team also considered updating the North Redding Active Transportation Trunk Line (NRATTL) grant application from Cycle 5 for re-submittal. After conversations with the City of Redding and Caltrans, the update was put on hold to be reconsidered in a future cycle.

APPLICABLE GRANT PROGRAM DESCRIPTIONS

As noted, the SRATN project included grant application assistance for two state calls for grant applications. The programs can be described as follows:

Active Transportation Program

Since 2013, the state of California has released call for ATP grant applications every other year. Created by Senate Bill 99 and Assembly Bill 101, the program aims to achieve the following goals, as defined on the state's ATP website:

- / Increase the proportion of trips accomplished by biking and walking.
- / Increase the safety and mobility of non-motorized users.
- / Advance the active transportation efforts of regional agencies to achieve greenhouse gas reduction.
- / Enhance public health, including reduction of childhood obesity through the use of programs including, but not limited to, projects eligible for Safe Routes to School Program funding.
- / Ensure that disadvantaged communities fully share in the benefits of the program.
- / Provide a broad spectrum of projects to benefit many types of active transportation users.

Eligible applicants include most government agencies, tribal governments, schools, nonprofits, and others.

Eligible project types include:

- / **Infrastructure projects:** capital projects like building paths, bikeways, and walkways.
- / **Non-Infrastructure (NI) projects:** active transportation related education, encourage, and enforcement activities.
- / **Combination Projects:** projects that combine infrastructure and non-infrastructure projects.
- / **Plans:** community wide active transportation plans in disadvantaged communities.

Clean California

In 2021, the state of California announced the first call for applications for the Clean California Local Grant Program. The program is intended to provide funds to clean and beautify public spaces in underserved communities. The goals of the program are, as stated on the states Clean California website:

- / Reduce the amount of waste and debris within public rights-of-way, pathways, parks, transit centers, and other public spaces.
- / Enhance, rehabilitate, restore, or install measures to beautify and improve public spaces and mitigate the urban heat island effect.
- / Enhance public health, cultural connection, and community placemaking by improving public spaces for walking and recreation.
- / Advance equity for underserved communities.

Eligible applicants include local and regional public agencies, transit agencies, and tribal governments. Nonprofit organizations can partners with eligible applicants as sub-applicants.

Eligible project types include:

- / **Infrastructure projects:** capital projects aimed at community litter abatement and beautification.
- / **Non-infrastructure projects:** community litter abatement events and/or educational programs.

2. PROJECT KICK OFF

The first step in the SRATN process was to identify eligible projects that local jurisdictions wanted to move forward. To be eligible for funding, all projects must, at least at a conceptual level, be included in an adopted plan. GoShasta serves as the guide for future regional active transportation projects in Shasta County. The City of Redding developed a plan as part of the GoShasta planning process, and the city's projects are included in both plans. These plans served as the baseline for project identification.

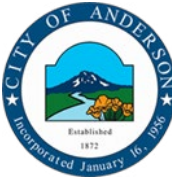
SRTA held a kick-off meeting with local partners on December 9, 2021. The meeting focused on best

practices in active transportation planning, design, and engagement strategies which could set up partners to win grants. The meeting also served as a kickstarter for ideas for potential projects which could be pursued as part of the SRATN.

In addition to the kick-off workshop, SRTA reached out to each potential partner for identification of potential projects. Two partners responded: the City of Redding and the Pit River Tribe (in conjunction with Shasta County). These conversations resulted in the projects described in this report.

Kick-Off Meeting Summary

Invitees & Potential Project Partners



Designing Impactful Active Transportation Projects

Impactful Projects...

- ✓ Close gaps & connect destinations
- ✓ Address real & perceived safety needs
- ✓ Design for people of all ages and abilities
- ✓ Make it visible through wayfinding & awareness

Provide Low-stress Connections to Destinations

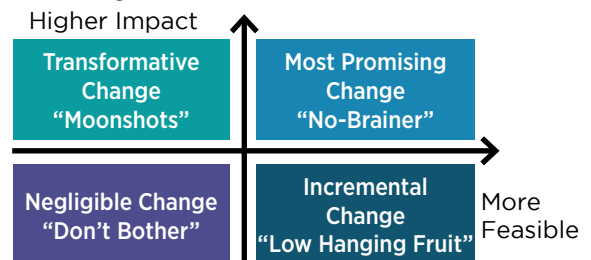
Identify destinations, barriers, & routes through public engagement

Identify low-stress networks & solutions to close gaps and cross barriers

Design context-sensitive facilities & multimodal amenities



Types of Projects

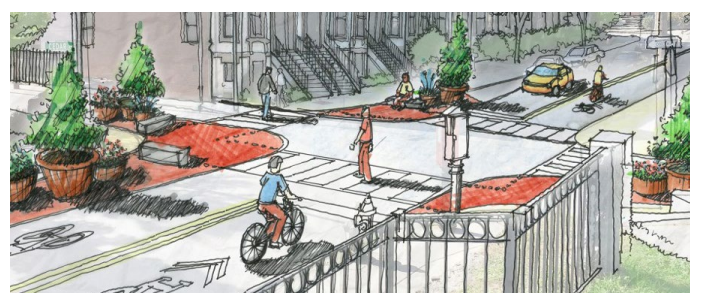


Don't Give Up at the Intersection

Intersections are frequent points of conflict

Separation between modes increases safety and comfort

Special care to be taken at major street crossings





The key to a successful application is a cohesive story explaining the need and how the project addresses it

Sundial Bridge
Credit: Toole Design

Competitive Projects + Grant Applications

Connecting Gaps

Gap Types



Physical Gaps



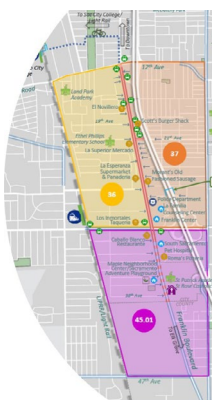
Barriers



Desire Lines

Strategies for Success

- Connect people to destinations
- Follow desire lines
- Provide access to key services
- Provide for local trips
- Bridge barriers and close gaps



Addressing Safety

The Known & Unknown



Crash History



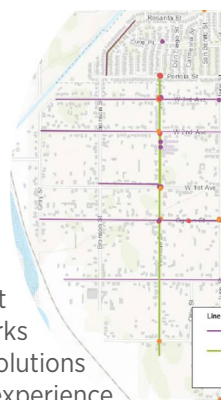
Identified Barriers



Proven Solutions

Strategies for Success

- Plan for the most vulnerable users
- Use data-informed project development
- Prioritize projects on high-injury networks
- Implement proven & research-backed solutions
- Weave in community concerns & lived experience



Engaging the Community

Strategies for Success

- Advance community-driven projects
- Be open to changing projects to reflect community desires
- Build on previous public engagement efforts
- Partner with community groups
- Use demonstration projects to introduce ideas and build support

Community-driven projects can help uplift people and address historic underinvestment



Partner Feedback

Design Challenges

- Lack of staff time for project development and grant applications
- Geometric and design challenges, including limited right-of-way
- Outdated and rigid design standards
- Utilities, railroads, and other elements impact cost and time
- Maintenance costs

Public Engagement Challenges

- Lack of trust from the community
- Gathering productive or meaningful input
- Lack of engagement and attendance at meetings
- Poor representation & difficulty engaging hard-to-reach members

Opportunities for Demonstration Projects

The word cloud below was generated by participants.

Bike ped signal cycle
Urban greening
Bulb outs
Speed humps
Public art
Speed reduction with bulb outs, etc

Routes that allow for useful rides
Incorporating color, art, and FUN!
Protected intersection
Bike
Lanes - paint
Bicycle

Ways to reduce crosswalk distances
Infrastructure
Protected
Protected bike lanes
Flexiposts
Left turn closures
Bike corrals

3. COMMUNITY ENGAGEMENT

Engagement and consensus building are critical elements to successful, implementable projects. SRTA and all of its partners recognize this, and undertook a number of engagement efforts throughout (and prior to) the SRATN process which guided the concept design for each project. For each meeting, graphic, easy-to-understand materials were produced. To encourage engagement, efforts were location based as opposed to project based, meaning all projects in Redding were covered in each Redding engagement event, and separate engagement events were conducted in Burney. The engagement activities are summarized throughout this chapter, with a full summary in **Appendix A**.

ENGAGEMENT IN REDDING

Four events were held in Redding which covered all projects in the city. The meetings can be summarized as follows:

Redding Active Transportation Network Expansion Community Meeting 1

Held On: May 4, 2022 | Attendees: 19

On Wednesday, May 4th from 5:30-7:00 p.m., SRTA, in partnership with the City of Redding, Caltrans, and the Shasta County Health and Human Services Agency held a Virtual Community Meeting on Zoom. The meeting purpose was to introduce potential project areas and gather broad feedback on the walking and biking conditions, needs, and opportunities in Redding. Community members generally noted the following:

- / Lack of infrastructure makes walking and biking uncomfortable
- / A need for traffic calming
- / A need for crossing improvements at major intersections or on major roads

Additionally, community members noted many locations in Redding where they felt the active transportation environment could be improved.

Note: Additional engagement was conducted for Park Marina Drive and Calaboos Creek prior to the SRATN project. Those engagement processes are documented elsewhere, and high-level summaries can be found in Chapters 7 and 8.



MIRO Map of Community Comments (bottom)

Meeting Attendees (top)



Manzanita School Pop Up

Held On: May 18, 2022 | All Students and Parents Invited

A pop-up engagement activity was held at Manzanita Elementary School on May 18th as part of the school's open house with City of Redding (City) and Shasta Regional Transportation Agency (SRTA) staff engaging students and parents in a discussion of the Butte Street Boogie and other Redding Active Transportation Network Projects for input on the project recommendations. As part of that pop-up event, students and parents shared the following feedback that was integrated into the design plans for the City's project recommendations:

- / Needing to slow traffic in the morning during school drop-off hours
- / Desire to address the red curb areas and driveway access at the site
- / Desire for improved crosswalks

Photos from Manzanita School Pop Up



Redding Active Transportation Network Expansion Community Meeting 2

Held On: June 1, 2022 | Attendees: 15

On Wednesday, June 1st, 2022 from 5:00pm-7:00pm, the City and SRTA held an in-person community meeting at the Community Room at the City of Redding City Hall. Members of the public were invited to review overviews of the four projects that were being considered for ATP grant applications and provide comments. All of the attendees of the meeting were supportive of the four projects.

General comments were received regarding:

- / Speeding
- / Lack of crossing opportunities along major corridors
- / Lack of infrastructure for walking and biking
- / Feeling unsafe walking or biking in the project areas.

Feedback also included requests for:

- / Native street trees for any plantings
- / Amenities like benches and bathrooms along shared-use paths for the project
- / Additional potential pedestrian crossing locations within the Butte Street Boogie project area north of Manzanita Elementary School, at Center Street & Shasta Street, and at Center Street & Yuba Street.

Photos from Community Meeting 2



Redding Active Transportation Stakeholder Meeting

Held On: June 7, 2022 | Attendees: 7

The City of Redding also conducted an outdoor stakeholder meeting with seven key active transportation advisors and stakeholders for the City in early June. This stakeholder group provided input on the project recommendations, including:

- / New retail should be adding more bike parking.
- / City hall needs more and better bike parking.
- / Park Marina is severely needed – it is dangerous, with one stakeholder almost hit the other day.
- / People avoid Victor now due to the lack of facilities.
- / Side paths on Hilltop are dangerous due to root lift and are currently very skinny.
- / The new path proposed for the Butte Street Boogie network will have to consider camping that occurs in the area.



Photo from Stakeholder Meeting

ONLINE SURVEY

A digital survey was distributed in May 2022 that invited comments about all of the projects. Responses were received for three projects as summarized below:

- / **Butte Street Boogie | 12 responses:** Respondents noted a desire for better walking and biking infrastructure, traffic calming, crossing improvements, bike parking, and connections to destinations.
- / **NRATTL | 8 responses:** Respondents noted a desire for safety improvements, accessible infrastructure, traffic calming, lighting, sidewalks, bike lanes, and some location-specific comments.
- / **Burney / Pit River | 39 responses:** Respondents noted a need for sidewalks and bike lanes, traffic calming, lighting, improvements for people with disabilities, connections across SR 299, and connections to schools. Many comments related to feeling unsafe due to lack of infrastructure.

ENGAGEMENT IN BURNEY

While engagement in Burney is ongoing, three events have been held thus far:

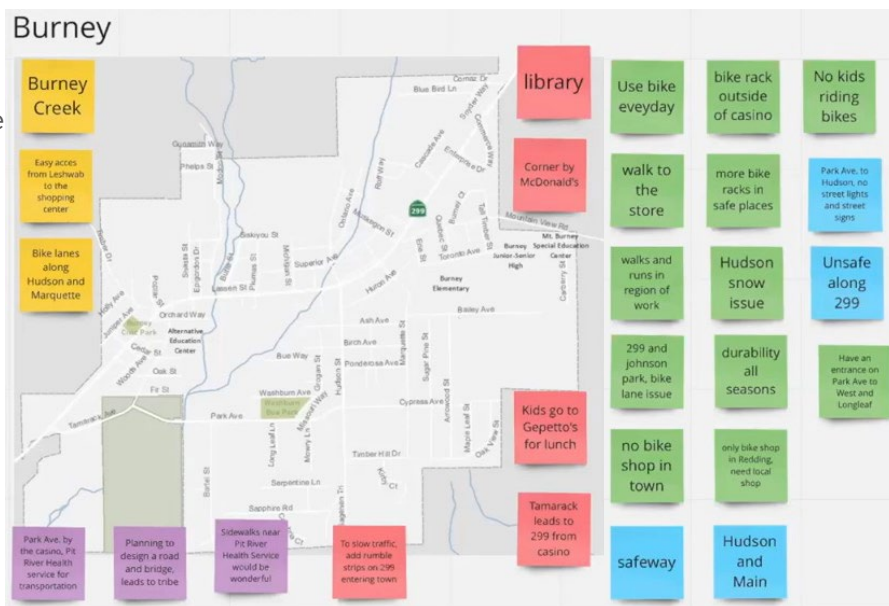
Burney / Pit River Tribe Walk & Bike Network Community Meeting 1

Held On: May 5, 2022 | Attendees: 10

On Thursday, May 5th from 5:30-7:00 p.m., SRTA, in partnership with the Pit River Tribe, Shasta County, and Caltrans held a Virtual Community Meeting on Zoom. The meeting purpose was to introduce potential project areas and gather broad feedback on the walking and biking conditions, needs, and opportunities in Burney. Community members generally noted the following:

- / Lack of infrastructure makes walking and biking uncomfortable & support for new infrastructure
- / A need for traffic calming
- / Needing a bike shop and bike parking
- / Need to plan for snowy weather and maintenance
- / A need for crossing improvements at major roads, especially State Route (SR) 299

Additionally, community members noted locations in Burney where they felt the active transportation environment could be improved.



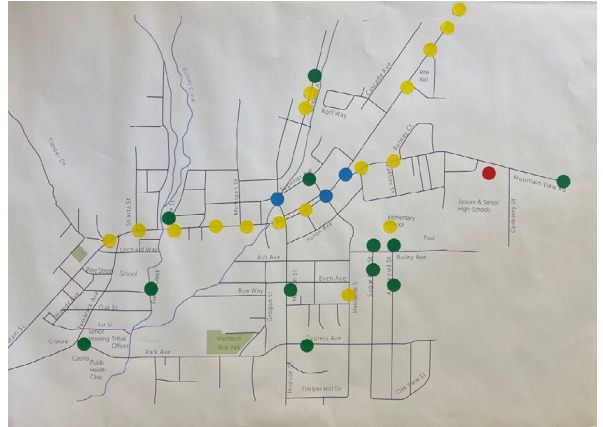
MIRO Map of Community Comments (right)

Burney / Pit River Tribe Youth Engagement

Held In: April 2022 | Responses: 314 (students & faculty)

The Pit River Tribe, Shasta County, Caltrans, and Shasta Regional Transportation Agency collaborated to implement a survey which was given in person at local schools. The survey engaged students and faculty to provide their input on their travel experience to school and how transportation could be made better. The survey found:

- / Approximately one-third of students travel to school on foot, bike, scooter, or skateboard
- / Most students and faculty walk, bike, scooter, or skateboard for recreation/transportation purposes other than travel to school, or stated they would like to if they could.
- / Key issues in active transportation noted include poor or missing sidewalks / bike lanes, unsafe crossings, lack of lighting, speeding vehicles, inattentive drivers and a need for bike racks.
- / There were many statements about people being hit or killed while walking or biking.
- / Students also mapped places where they would like to see improvements.



4. BUTTE STREET BOOGIE

The Butte Street Boogie is a low-stress, interconnected, active transportation network connecting the Magnolia and Manzanita neighborhoods of Redding to recently constructed active transportation projects in the Lakeview neighborhood and Downtown Redding. The project was named after the indirect route developed by people who regularly walk and bike through the neighborhood to avoid hills and travel along the existing low speed and volume streets.

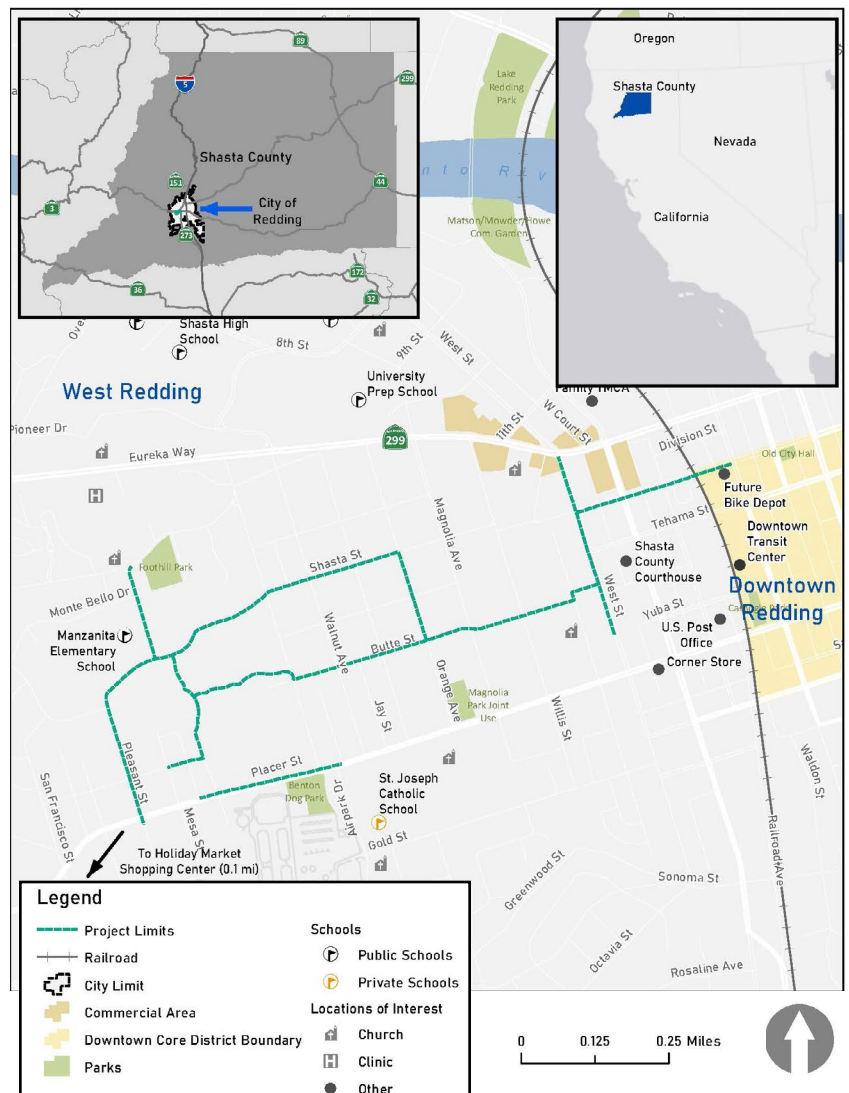
PROJECT BACKGROUND & SCOPE

The project formalizes a popular biking route through a combination of low-stress facilities including separated bikeways, shared-use paths (SUPs), and bicycle boulevards on low-speed and low-volume residential streets. Significant traffic calming and intersection improvements create a route that is safe and comfortable for people of all ages and abilities, and an alternative to high-stress arterials like Placer Street and SR 299. As shown in **Figure 1**, the proposed route is intentionally indirect and allows bicyclists to “boogie” around hills on less steep streets. The project closes 0.6 miles of sidewalk gaps and installs 27 marked crossings, 74 curb ramps, and lighting improvements to improve connectivity for people who walk and people with mobility impairments. These enhancements, combined with crossing improvements at Manzanita Elementary School, will make it safer for students to walk, bike, or roll more often.

The project connects communities to destinations through arterial crossing improvements and dedicated bicycle facilities. The project will implement a road diet and 0.25 miles of Class IV separated bike lanes on Shasta Street, connecting people to the planned and funded California Street two-way separated bike lane, Shasta Bike Depot, and Downtown E-Bikeshare program. The project enhances pedestrian and cyclist comfort across SR 299, connecting to the ATP-funded West Street improvements (recently built), Shasta High School, and the Sacramento River Trail. It also closes sidewalk gaps and connects to recently built buffered bike lanes on Placer Street, connecting disadvantaged community (DAC) residents to the Holiday Market shopping center, St. Joseph Catholic School, and Benton Dog Park.

The project’s 0.5-mile SUP creates additional low-stress connections through an existing open space. It includes a direct connection to Manzanita Elementary School and a route for people walking/biking to continue west on Placer Street, and doubles as a recreational opportunity in an underutilized open space.

Figure 1 | Butte Street Boogie Alignment & Destinations



EXISTING CONDITIONS

An analysis of the existing conditions was conducted to better understand who might use the project, how they travel, and what their needs might be. Below is a summary of the findings. Further details can be found in the [Butte Street Boogie Existing Conditions Technical Memorandum](#).

Who Lives Here & How Do They Travel?

The following conclusions describe the demographic makeup of the area around the project:

- / **Population:** approximately 7,740
- / **Median age:** between 25 and 35; approximately one-third of people are either under 18 or over 65
- / **Median Income:** \$33,316 (less than 80% of statewide median household income of \$60,188)
- / **Travel Patterns:** approximately 7.5% of people walk, bike or ride transit to work; 85% drive

Based on these findings, the entire area qualifies as a DAC under per ATP guidelines.

What is it Like to Walk, Bike, Ride Transit, & Drive?

Walking & Biking

There are no existing low-stress bicycle facilities that connect Downtown Redding to the Manzanita and Magnolia neighborhoods, although there are existing and planned facilities nearby. The sidewalks are disconnected or missing, even on higher speed roads.

Transit

Redding Area Bus Authority (RABA) Route 2W operates on Placer Street. The RABA Downtown Transit Center, on Yuba Street, is a key depot that serves rail (Amtrak) and RABA bus routes.

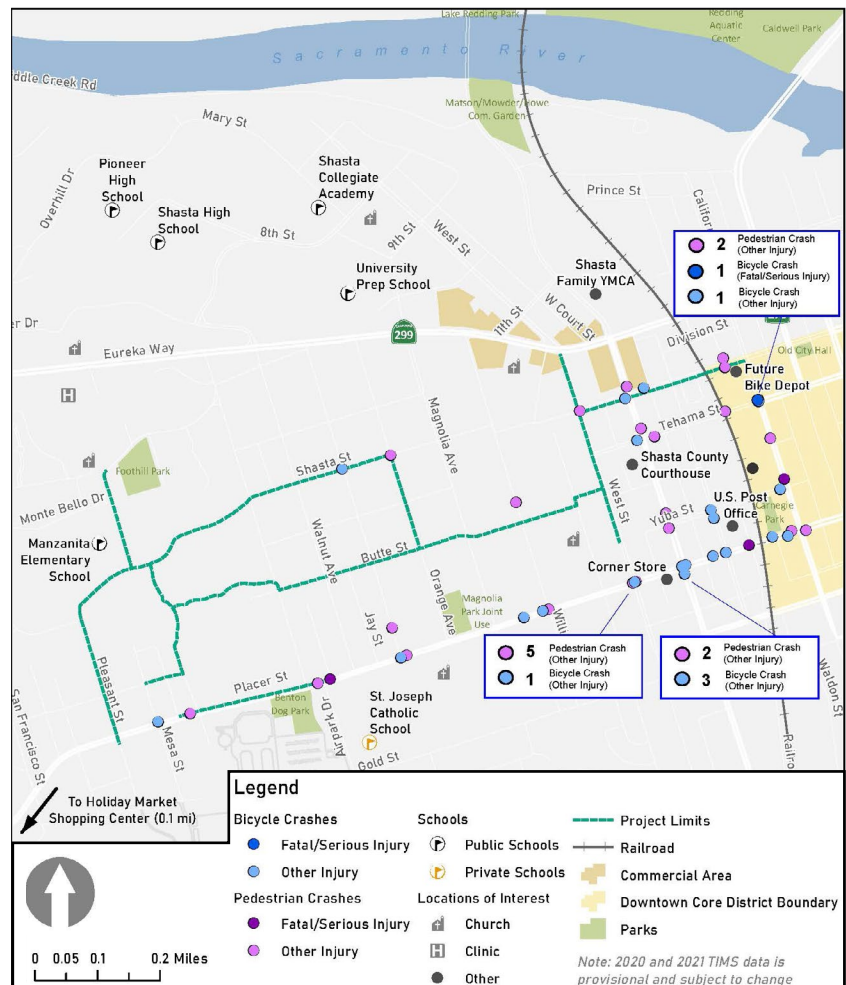
Driving

Most streets along the Butte Street Boogie network are signed 25 miles per hour (mph) or less, with the exception of Placer Street (35 mph) and West Street (35-55 mph, with speed limit increasing west of Downtown). The higher speed streets also have higher volumes and present barriers for people walking and biking. Community members noted concerns about speeding vehicles within the Magnolia and Manzanita neighborhoods, especially near Manzanita School.

Safety Findings (TIMS, 2010-2021)

- / **Ped/Bike Crashes:** >50
- / **Severity:** 3 people killed while walking, 1 severely injured while biking
- / **Concentrations of Crashes:** Downtown Redding and along Placer Street
- / **Common Types:** intersection, rail crossing
- / **Common Causes:** Vehicles fail to yield to pedestrians in crosswalk, crossing outside of crosswalk, wrong way bicycling

Figure 2 | Butte Street Boogie Crash History



PROJECT DEVELOPMENT

The Butte Street Boogie alignment was developed to formalize a biking route that many people in Redding are already utilizing for biking. Throughout the engagement process, it was determined that other improvements were needed to address walking needs and access, as well as traffic calming around Manzanita Elementary School. A full description of the project development process can be found in the **Butte Street Boogie Alignment Technical Memorandum**. It can be broken into the following phases:

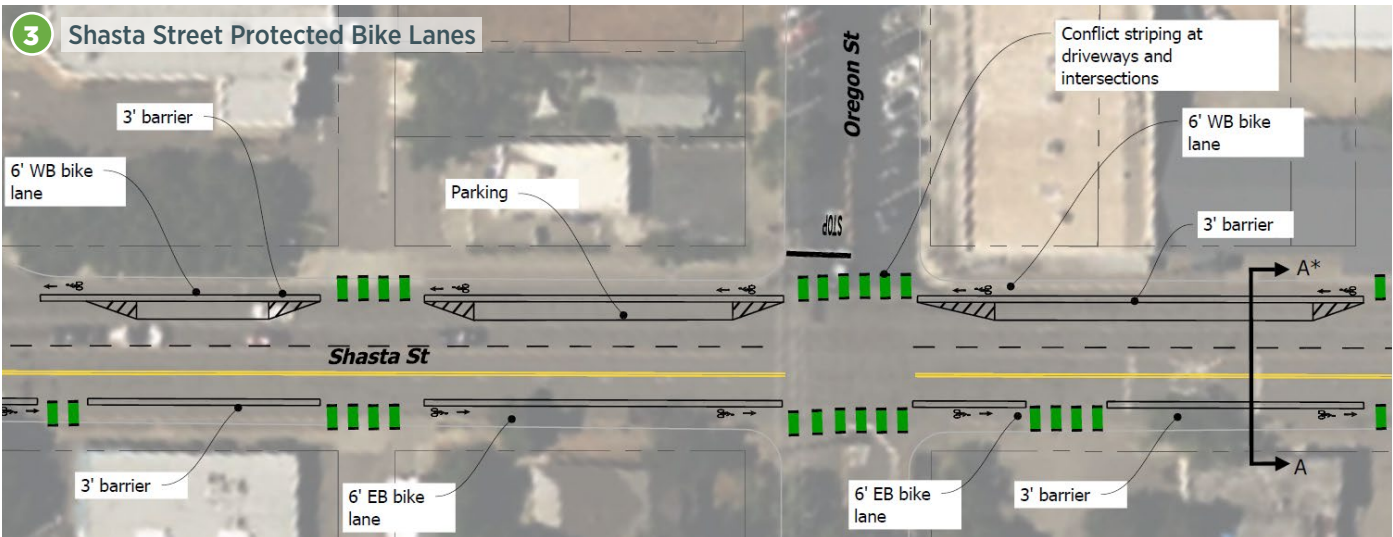
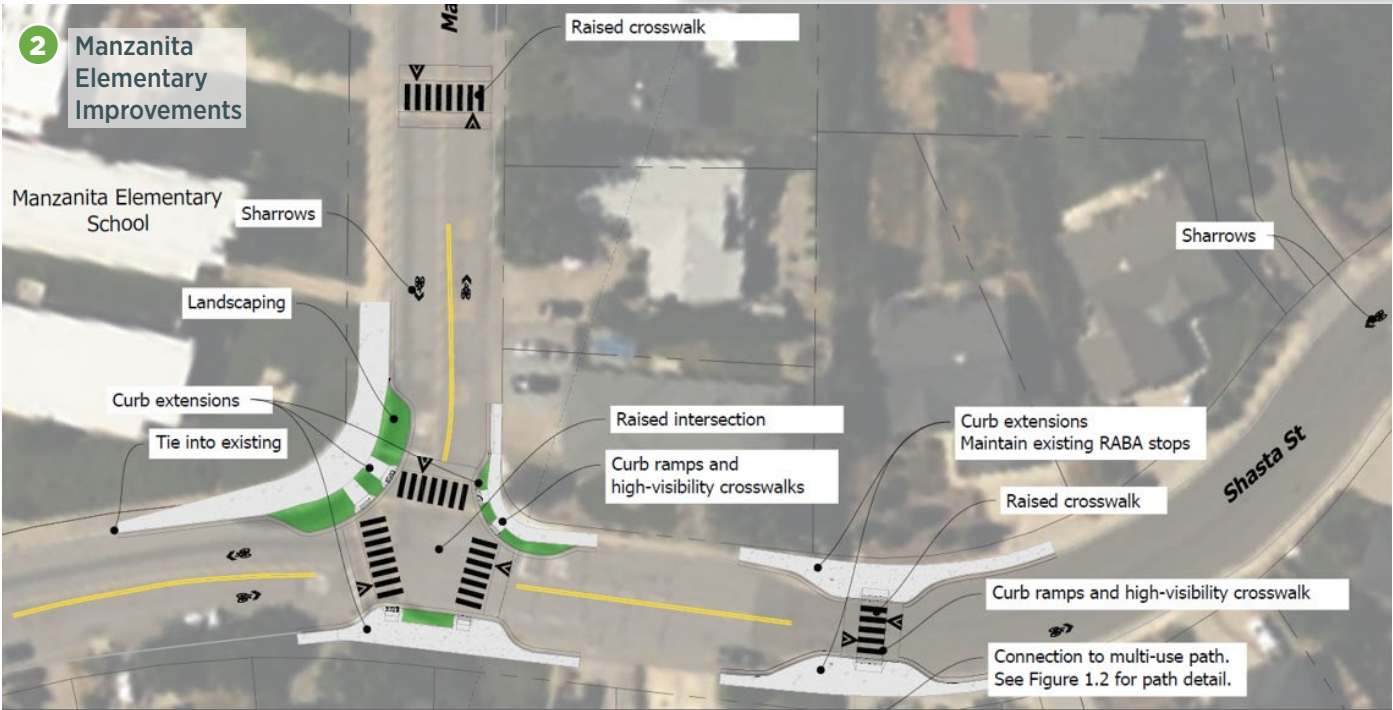
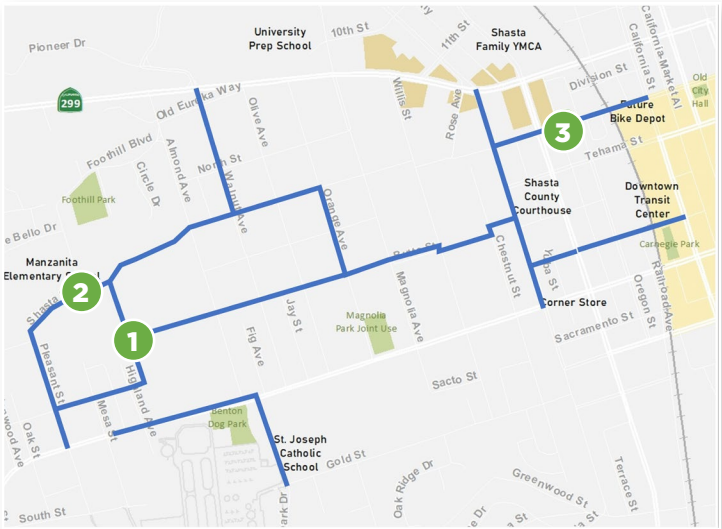
- 1. Desktop Analysis:** Every street in the neighborhood was considered for elements including route directness, traffic volumes, elevation, connectivity to destinations, potential for traffic calming, and gaps in existing infrastructure.
- 2. Field Visit & Stakeholder Discussions:** Staff from SRTA, the City of Redding, and the Consultant team conducted a field visit/bike ride along the potential alignment streets. This ride was informed by summaries of comments staff had received through community engagement, personal experience identifying the most comfortable east/west routes for biking, and comments received from the Principal at Manzanita School at a stop along the ride.
- 3. Community Engagement:** As described in **3. Community Engagement**, several community engagement events were held. In general, community members were very supportive of the project and the traffic calming elements. In this phase, the project was changed or refined based on the community engagement as follows:
 - Final selection and confirmation of alignment on Butte Street, which has a gentler grade than similar east-west routes.
 - Widening shared-use paths (SUP) to 12 feet wherever possible (from 10 feet).
 - Additional crossing locations were explored and added where possible – specifically near Manzanita Elementary School where crossings were added at the connection to the open space SUP network and north of the raised intersection.
 - The Walk audit with school stakeholders helped inform recommendations and routing for the bike network and crossing enhancements.
- 4. Final Design Refinements based on Feasibility and Stakeholder Coordination:** The final design was developed to reflect the comments heard during the community engagement phase. In this phase, the major design change included the removal of the path along Yuba Street due to right of way and security issues around the County Courthouse.

FINAL PROJECT CONCEPT

Typical images from the final conceptual design can be found in **Figure 3** and are included in full in **Appendix B**. Generally, the project alignment and features can be described as follows:

- / Class IV separated bike lanes on Shasta Street between West Street and California Street
- / Traffic calming and bike boulevard treatments along:
 - West Street between 11th Street and Yuba Street
 - Butte Street between Almond Avenue and West Street
 - Orange Avenue between Shasta Street and Butte Street
 - Shasta Street between Magnolia Avenue and Pleasant Street
 - Pleasant Street between Placer Street and Shasta Street
 - Manzanita Hills Avenue between Foothill Boulevard and Shasta Street
- / A Class I SUP through the open space connecting to Shasta Street (north), Butte Street (east), and Yuba Street (west)
- / Filling sidewalk gaps along:
 - Butte Street between Almond Avenue and West Street (in various areas)
 - Placer Street between Mesa Street and Airpark Drive
- / Sidewalk and crossing improvements throughout the project area

Figure 3 | Butte Street Boogie Typical Concepts



5. VICTOR IMPROVEMENT PROJECT

The Victor Improvement Project is a network of low-stress bikeway facilities connecting the Mistletoe neighborhoods to nearby neighborhoods, businesses, services, and amenities as shown in **Figure 4**.

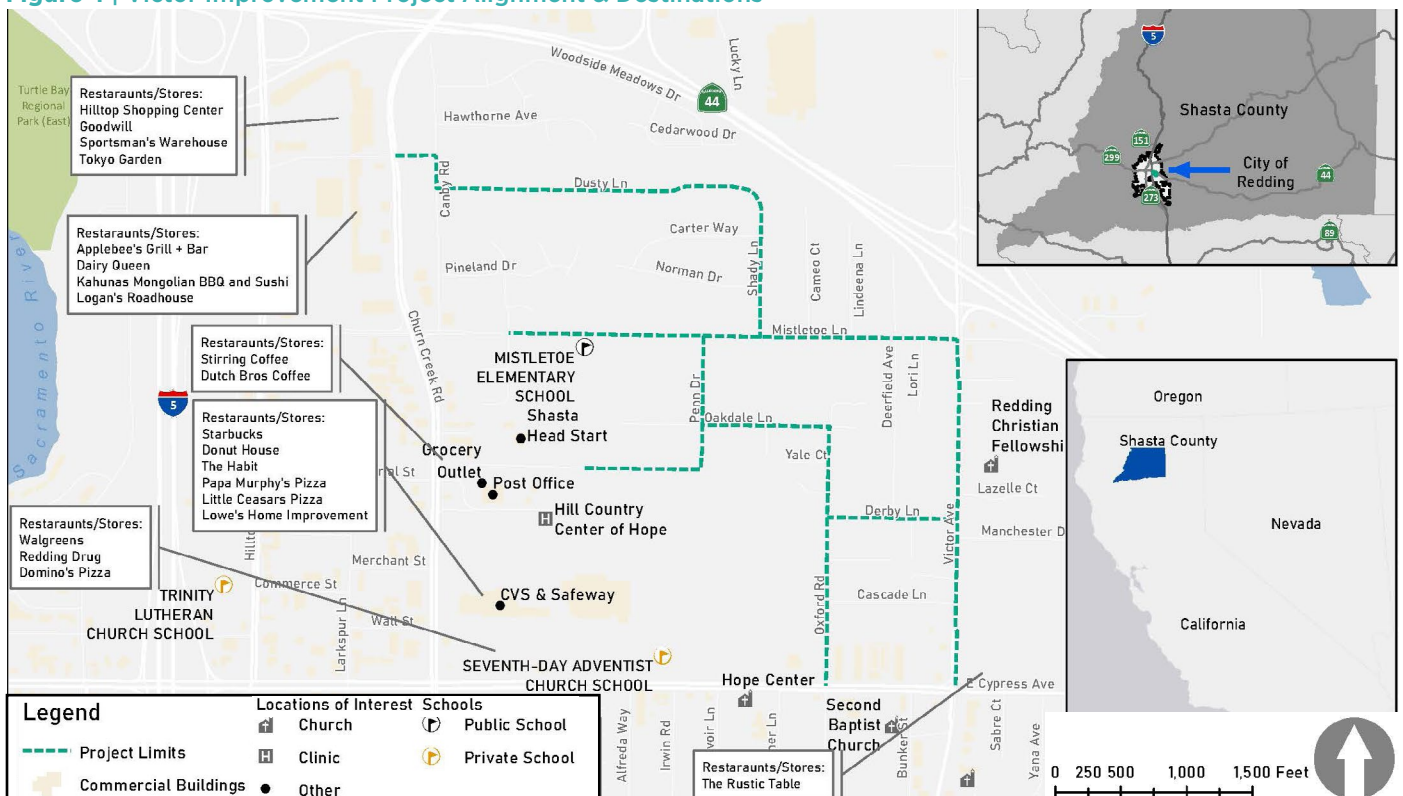
PROJECT BACKGROUND & SCOPE

The Mistletoe Community has long expressed a desire for traffic calming and improved walking and biking facilities on and connecting to Victor Avenue. The Victor Avenue Corridor Study included recommendations for a shared-use path, crossing improvements, and bike lanes on Victor Avenue and the proposed project moves these recommendations forward.

Other portions of the community have been (or are in the process of being) retrofitted to include facilities for active transportation users, such as Hartnell Avenue, Cypress Avenue, and Victor Avenue south of Cypress Avenue. This section of Victor Avenue and Mistletoe Lane have become missing gaps for active transportation users in the community. This results in residents being disconnected from safe facilities to walk, bike, or roll to essential destinations, including grocery stores, the post office, and employment opportunities. Project connectivity will allow residents within the Mistletoe community and those who live south of Cypress Avenue, near soon-to-be constructed improvements, to travel north along Victor Avenue through the low-stress bike network proposed throughout the Mistletoe community to reach services along Churn Creek Road.

The main feature of the project is a 0.86-mile SUP along the west side of Victor Avenue and the south side of Mistletoe Lane extending planned improvements funded through an ATP Cycle 5 grant on Cypress Avenue and Victor Avenue south to Hartnell Avenue. Bike lanes are also included on Victor Avenue for those who prefer biking in the street. Traffic calming and crossing improvements near Mistletoe Elementary School will make it safer for students to walk, bike, or roll to and from school. The project also includes 1.5 miles of low-stress bicycle boulevard and traffic calming treatments on Derby Lane, Oxford Road, Oakdale Lane, Penn Drive, Dusty Lane, and Canby Road. These improvements are intended to provide alternate routes to people who are not comfortable biking on higher speed and volume roads like Victor Avenue. Finally, an approximately 600-foot SUP is proposed through the existing open space south of Oakdale Lane connecting the project to another proposed SUP which is planned to be developed as part of an affordable housing development. This SUP would connect the neighborhood to the grocery stores and other retail opportunities in the southwest portion of the neighborhood.

Figure 4 | Victor Improvement Project Alignment & Destinations



EXISTING CONDITIONS

An analysis of the existing conditions was conducted to better understand who might use the project, how they travel, and what their needs might be. Below is a summary of the findings. Further details can be found in the [Victor Improvement Project Existing Conditions Technical Memorandum](#).

Who Lives Here & How Do They Travel?

The following conclusions describe the demographic makeup of the area around the project:

- / **Population:** approximately 9,234
- / **Median age:** between 25 and 35; approximately one-third of people are either under 18 or over 65
- / **Median Income:** \$57,041 (less than 80% of statewide median household income of \$60,188)
- / **Travel Patterns:** approximately 4.8% of people walk, bike or ride transit to work; 82% drive

Based on these findings, the entire area qualifies as a DAC under per ATP guidelines.

What is it Like to Walk, Bike, Ride Transit, & Drive?

Walking & Biking

There are no existing walking or biking facilities in most of the study area. Current level of traffic stress is high for people biking.

Transit

RABA Route 6S operates on Victor Avenue, and most bus stops do not have sidewalk access or comfortable places to wait for the bus. RABA also operates three routes on roads that are nearby the project network on Hilltop Road (Routes 11 and 14) and Churn Creek Road (Route 4). These routes provide connections to destinations like Mt. Shasta Mall and Downtown Redding.

Driving

Victor Avenue has speed limit signs indicating both 35 and 40 mph, although observed speeds are higher. The speed limit on Mistletoe Lane is 35 mph. Both streets see higher volumes of vehicles daily. All neighborhood streets are 25 mph with low traffic volumes.

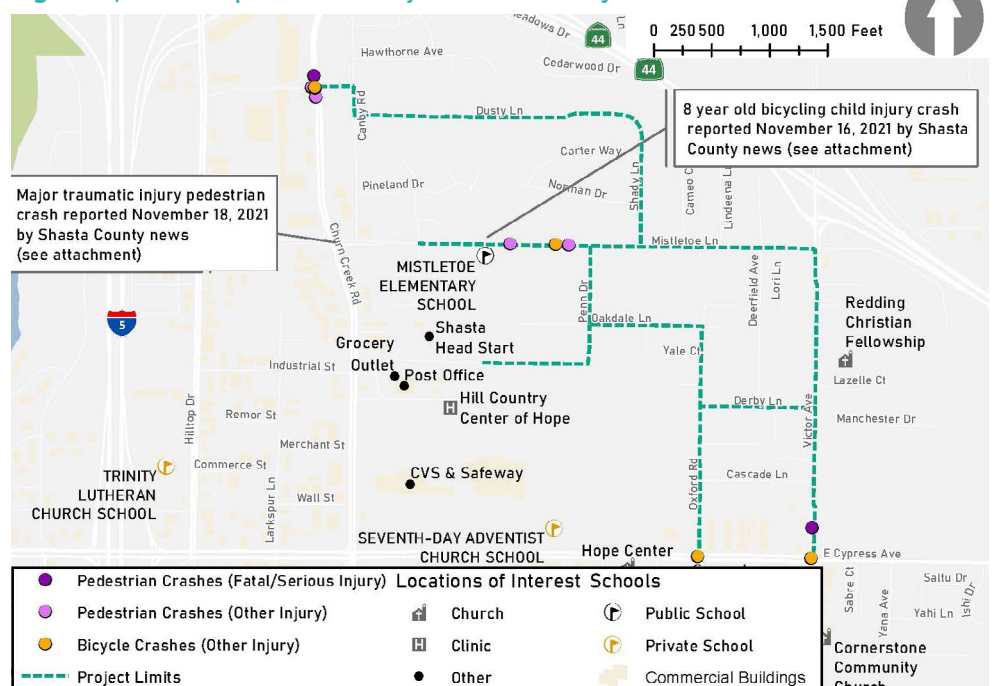


Safety Findings (TIMS, 2010-2021)

- / **Ped/Bike Crashes:** 12
- / **Severity:** 3 people severely injured while walking
- / **Concentrations of Crashes:** Near Mistletoe Elementary

Collision analysis findings support the projects recommendations to slow traffic, improve crossings, install dedicated bike facilities, and design intersections and conflict points, like driveways, to increase visibility of people who walk and bike.

Figure 5 | Victor Improvement Project Crash History



PROJECT DEVELOPMENT

The Victor Improvement Project alignment was developed to formalize a biking route that many people who bike in Redding are already utilizing. Throughout the engagement process, it was determined that other improvements were needed to address walking needs and access, as well as traffic calming in the area. A full description of the project development process can be found in the **Victor Improvement Project Alignment Technical Memorandum**. It can be broken into the following phases:

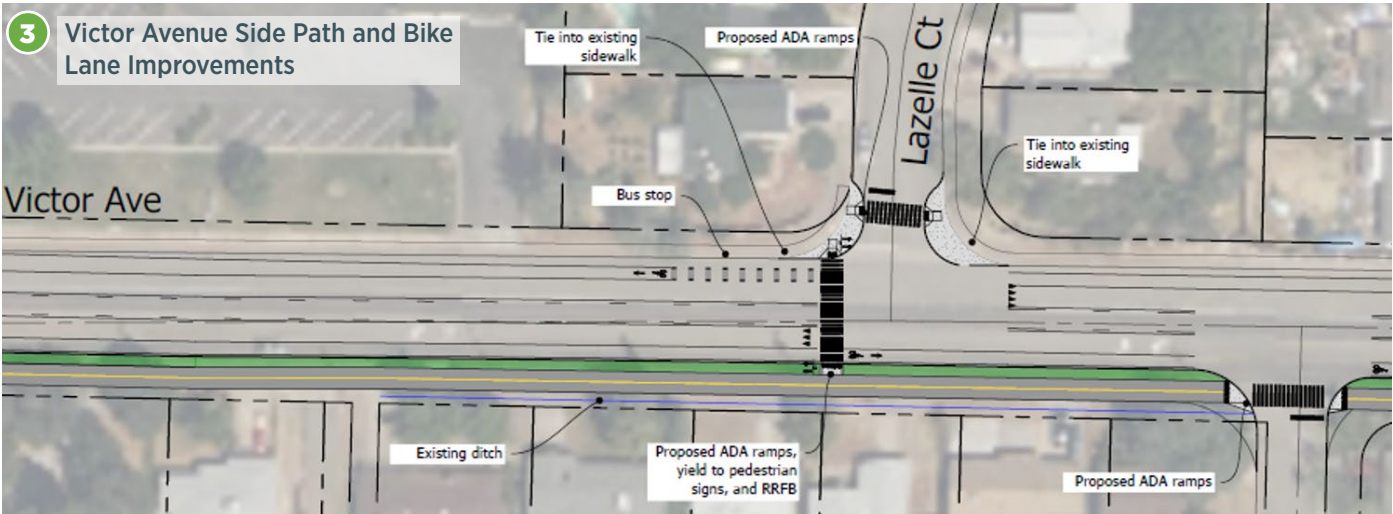
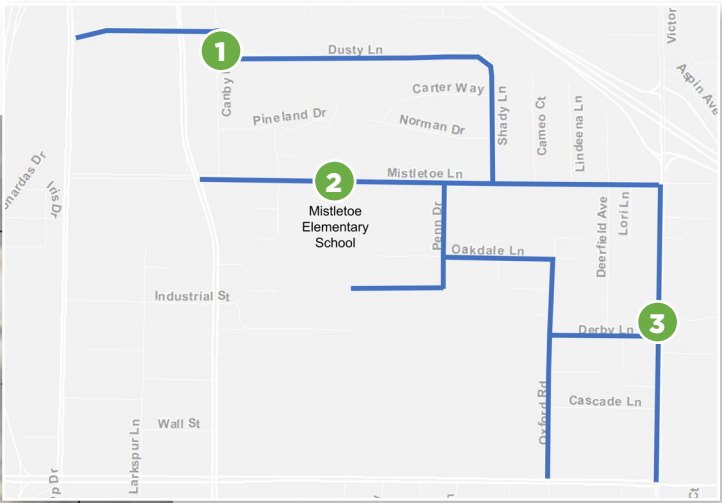
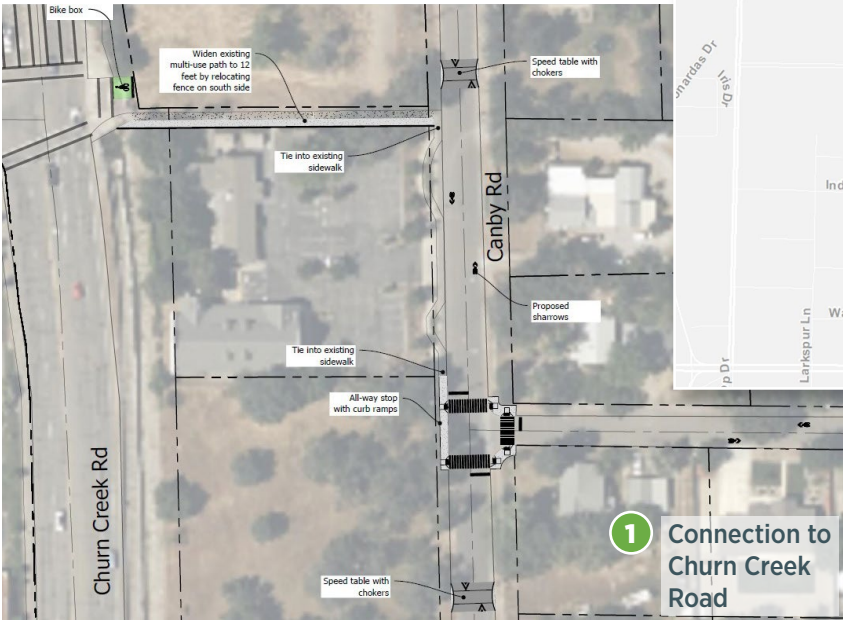
- 1. Desktop Analysis:** The Victor Avenue Corridor Improvement Study was reviewed. It recommended a SUP and bike lanes along Victor Avenue as well as several crossing improvements. The recommendations resulted in a successful application for ATP Cycle 5 funds to implement the study recommendations south of and along Cypress Avenue. The study team also reviewed updated information regarding collision data, community destinations, and other project design plans. This resulted in an initial project alignment along Victor Avenue from Cypress Avenue to Mistletoe Lane and along Mistletoe Lane from Victor Avenue to Mistletoe Elementary School. The segment along Mistletoe Lane was initially envisioned as bike lanes with sidewalk or a bike boulevard treatment.
- 2. Field Visit & Stakeholder Discussions:** Staff from SRTA, the City of Redding, and the Consultant team conducted a field visit along the potential alignment streets. This ride was informed by summaries of comments staff had received through community engagement and personal experience identifying the most comfortable routes for walking and biking. During the field visit, the team recognized that the speeds and volumes along Victor Avenue suggested a potential need for additional network improvements, as even with a separated SUP, some people may not feel comfortable biking or walking along the corridor. Changes included:
 - Low-stress network improvements on neighborhood streets south and north of Mistletoe Avenue, building off an existing road closure at Oxford Road and a new crossing being installed at Oxford Road and Cypress Avenue.
 - A second crossing near Mistletoe Elementary School due to sight distance and visibility.
 - Several SUP connections to new developments or formalizing existing connections.
- 3. Community Engagement:** As described in **3. Community Engagement**, several community engagement events were held. In general, community members were very supportive of the project and the traffic calming elements. The location of crossing improvements was confirmed. While the project initially proposed moving the crossing in front of Mistletoe Elementary School east, community engagement confirmed the existing crossing should be maintained, and a second crossing should be built to the east.
- 4. Final Design Refinements based on Feasibility and Stakeholder Coordination:** The final design was developed to reflect the comments heard during the community engagement phase. In this phase, the major design change included the removal of a suggested bike lane along Presidio Street between Hilltop Drive and Churn Creek Road, as it was discovered the street is privately owned. However, crossing improvements at Churn Creek Road and Presidio Street were maintained to provide walking, biking, and rolling access to the west.

FINAL PROJECT CONCEPT

Typical images from the final conceptual design can be found in **Figure 6** and are included in full in **Appendix C**. Generally, the project alignment and features can be described as follows:

- / Class II bike lanes along Victor Avenue from Cypress Avenue to Mistletoe Lane
- / Class I SUPs and associated crossing as follows:
 - Along Victor Avenue from Cypress Avenue to Mistletoe Lane
 - Along Mistletoe Lane from Cypress Avenue to Penn Drive
 - Through the open space connecting from Penn Drive to the proposed SUP at Del Monte Street
 - Converting the existing sidewalk at Presidio Street between Churn Creek Road and Canby Road into an SUP
- / Traffic calming and bike boulevard treatments along:
 - Oxford Road from Cypress Avenue to Oakdale Lane
 - Derby Lane from Oxford Road to Victor Avenue
 - Oakdale Lane from Penn Drive to Oxford Road
 - Penn Drive from Open Space to Mistletoe Lane
 - Shady Lane from Mistletoe Lane to Dusty Lane
 - Dusty Lane from Shady Lane to Canby Road
 - Canby Road from Dusty Lane to Presidio Street SUP
- / Crossing improvements throughout the project area

Figure 6 | Victor Improvement Project Typical Concepts



6. HILLTOP IMPROVEMENT PROJECT

The Hilltop Improvement Project (Figure 7) includes a road diet from five to three lanes while improving walking and bicycling facilities along Hilltop Drive and formalizing an existing connection to the Sacramento River Trail. The project provides a low-stress connection between the Hilltop neighborhood to the shopping, dining, and employment destinations east of I-5 and along Lake Boulevard / SR 299.

PROJECT BACKGROUND & SCOPE

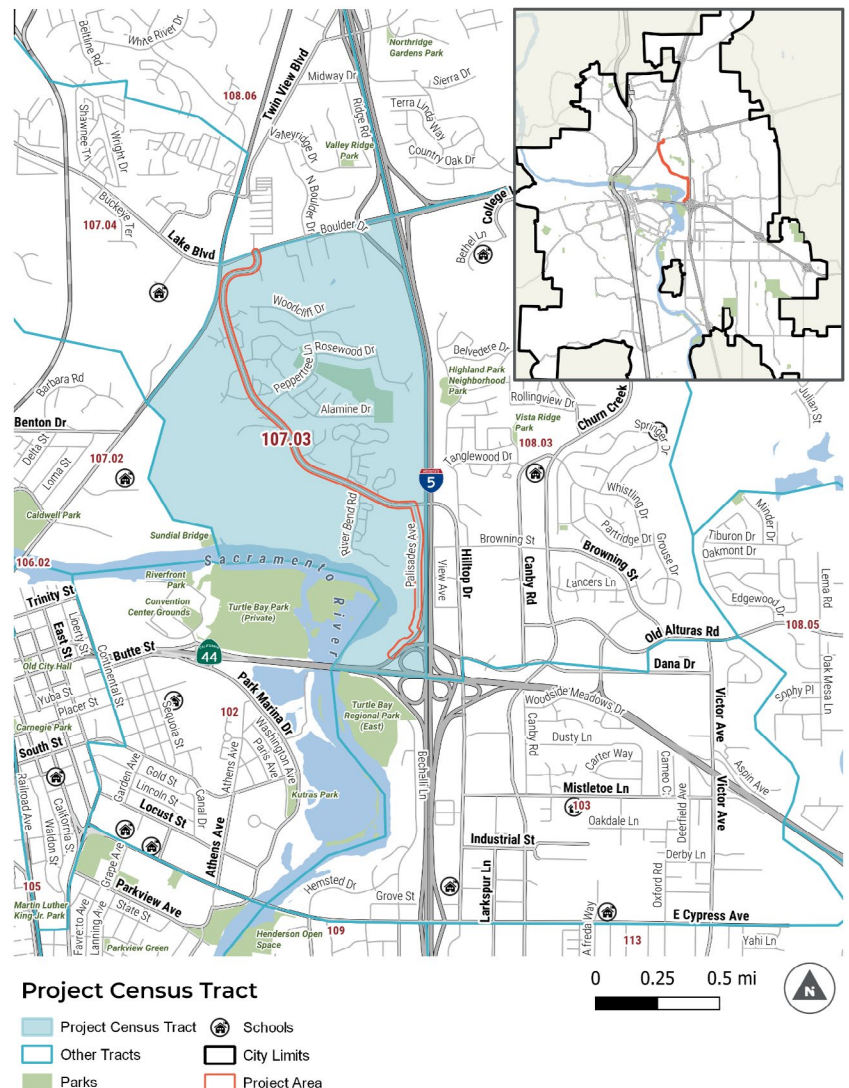
Hilltop Drive is a key multimodal connection in northeast Redding and is the only through-route in a largely residential area. Many multi-family housing units are located on Hilltop Drive, some of which is housing for seniors. Hilltop Drive is currently a five- or three-lane street (depending on the location within the corridor) with consistent Class II bicycle facilities and a narrow path on the west side of the roadway. Given its location in between Interstate 5 and State Route 273/299 (N Market Street/ Lake Boulevard) and its proximity to downtown via the Sundial Bridge, safe walking and bicycling infrastructure is vital to improving non-motorized access to destinations within and outside of the corridor area.

Hilltop Drive is a key connection in an area with few direct connections. It largely travels through a residential area, with commercial destinations to the north via Lake Boulevard / SR 299 and community and recreational destinations in the south via off-street trails. As a result, improvements for people walking and bicycling are important to establishing an interconnected active transportation system.

The Hilltop Drive Road Diet and Active Transportation Improvements project will connect people walking and bicycling to community destinations such as an elementary school, the Arboretum and botanical gardens, and the Sundial Bridge into downtown, and other trails. Connections include:

- / At the north end, where Hilltop connects with Lake Boulevard, there is an existing Class I path on Lake Boulevard (the SR 299 bikeway), as well as the planned Caltrans CAPM + complete Streets Improvements and the North Redding Active Transportation Trunk Line projects.
- / In the central part of the corridor, connections southbound toward the trail along the Sacramento River and downtown can be made from Hilltop via North River and Arboretum Loop trails.
- / Further to the east, where Hilltop approaches I-5, bicycle boulevard treatments are proposed on Palisades Avenue, and a short SUP is proposed to connect with a segment of the Palisades Trail, also paved, to create a Class I path connecting to the SR44 bikeway. The latter improvements will connect to the Dana to Downtown Bikeway. These connections lead both eastbound to the Mt. Shasta Mall and westbound to downtown Redding.

Figure 7 | Hilltop Improvement Project Alignment & Destinations



EXISTING CONDITIONS

An analysis of the existing conditions was conducted to better understand who might use the project, how they travel, and what their needs might be. Below is a summary of the findings. Further details can be found in the [Hilltop Improvement Project Existing Conditions Technical Memorandum](#).

Who Lives Here & How Do They Travel?

The following conclusions describe the demographic makeup of the area around the project:

- / **Population:** approximately 3,600
- / **Median age:** 40 years old; approximately one-third of people are either under 18 or over 65
- / **Median Income:** \$46,169 (less than 80% of statewide median household income of \$60,188)
- / **Travel Patterns:** approximately 3% of people take transit to work and none walk or bike; 98% drive

Based on these findings, the entire area qualifies as a DAC under per ATP guidelines.

What is it Like to Walk, Bike, Ride Transit, & Drive?

Walking & Biking

There are sidewalks and bike lanes along most of Hilltop Drive, although there are gaps in the facilities. Although there is a Class II bike lane, cars often park in the lane and the level of traffic stress for biking is high. There is one marked crosswalk and one new rectangular rapid flashing beacon is being constructed.

Transit

RABA Route 11 operates on Hilltop Drive, providing connections to destinations like Mt. Shasta Mall and Downtown Redding. Along Hilltop Drive, there are ten bus stops serving local residents. There are few amenities located at bus stops. Many bus stops have sidewalk access, with the exception of the bus stop at Palisades Avenue.

Driving

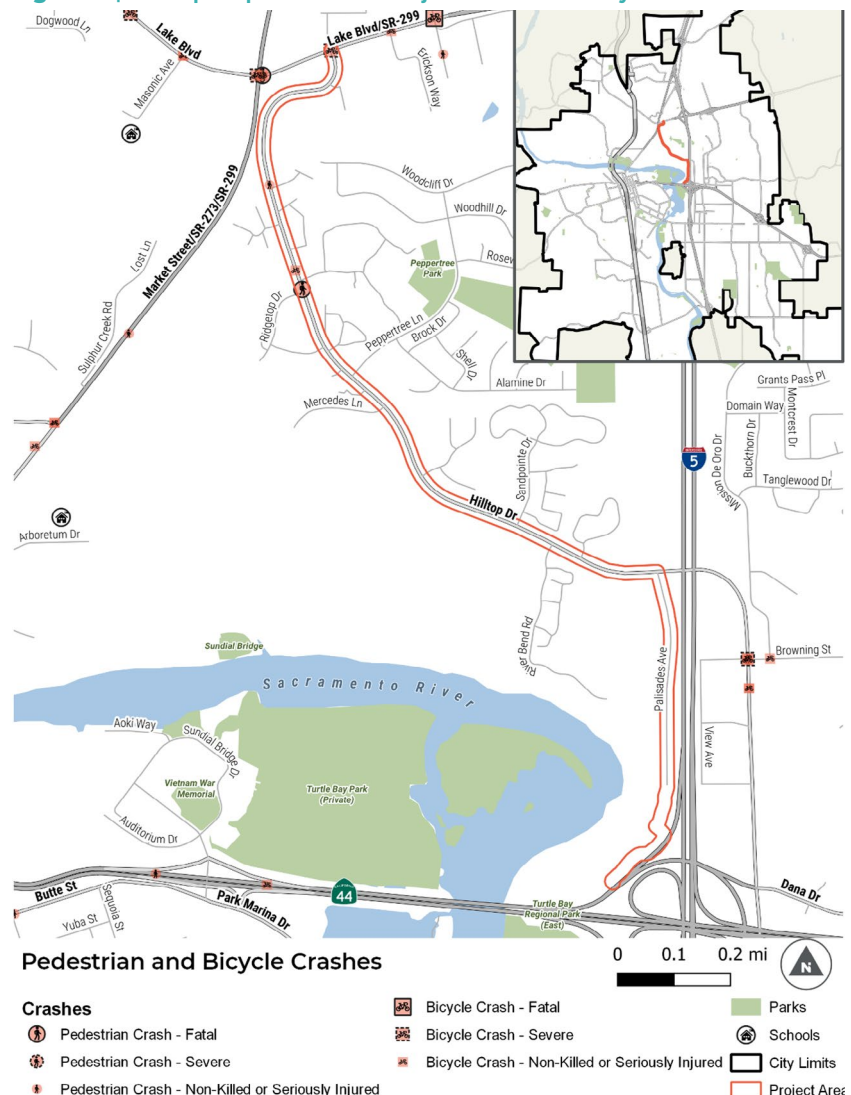
The speed limit on Hilltop Drive is 45 mph and anecdotal evidence from a field visit noted high speeds. All neighborhood streets are 10-25 mph with low traffic volumes.

Safety Findings (TIMS, 2015-2019)

- / **Ped/Bike Crashes:** 4
- / **Severity:** 1 person severely injured while biking

It should be noted that crashes have occurred on major streets that connect to Hilltop Drive. For instance, there have been three crashes at the intersection of Hilltop Drive and Browning Street, located east of the project area. Additionally, Lake Boulevard, where Hilltop Drive terminates to the north, has had eight crashes within one mile of Hilltop Drive.

Figure 8 | Hilltop Improvement Project Crash History



PROJECT DEVELOPMENT

The Hilltop Improvement Project includes a road diet, new Class IV separated bikeways, and other improvements to upgrade an existing bikeway to be safe and comfortable for people of all ages and abilities; a new SUP to connect the neighborhood to destinations; and upgrades to sidewalks and curb ramps. Throughout the engagement process, it was determined that other improvements were needed to address walking needs and access, as well as traffic calming in the area. A full description of the project development process can be found in the [Hilltop Improvement Project Alignment Technical Memorandum](#). It can be broken into the following phases:

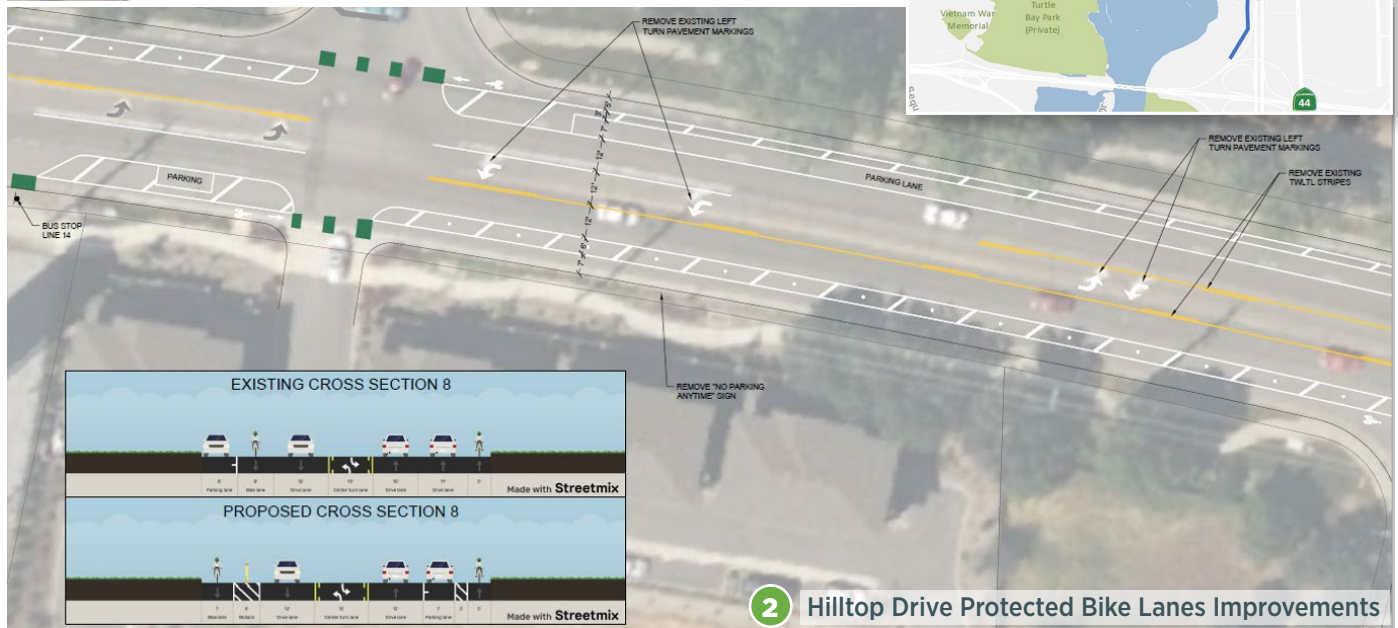
1. **Desktop Analysis:** An initial review of the existing conditions was conducted to understand traffic volumes, elevation, connectivity to destinations, potential for traffic calming, and gaps in existing infrastructure. This resulted in the identification of the corridor for a road diet and the need for sidewalk improvements.
2. **Field Visit & Stakeholder Discussions:** Staff from SRTA, the City of Redding, Caltrans, and the Consultant team conducted a field visit/bike ride along the potential alignment. This ride was informed by summaries of comments staff had received through community engagement, and personal experience biking in the area. At this point, the need for a connection east of I-5 was explored and the team looked for potential options to formalize this connection. It was determined a connection along Hilltop Drive would be difficult to implement due to right of way constraints on the overpass over I-5, and so the connection along Palisades Avenue and through the existing hiking trail to the Sacramento River Trail was considered. Additionally, the need to address sidewalk gaps and ADA deficiencies was identified in this phase.
3. **Community Engagement:** As described in [3. Community Engagement](#), several community engagement events were held. In general, community members were very supportive of the project and the traffic calming elements. No major changes occurred in this phase.
4. **Final Design Refinements based on Feasibility and Stakeholder Coordination:** The final design was developed to reflect previous phases and opportunities and constraints uncovered in the design process. The sidewalk design shifted during the project in terms of which side of Hilltop Drive the new sidewalk segments would be located on, as well as the width of the sidewalks.

FINAL PROJECT CONCEPT

Typical images from the final conceptual design and cross sections can be found in [Figure 9](#) and are included in full in [Appendix C](#). Generally, the project alignment and features can be described as follows:

- / Class IV separated bike lanes along Hilltop Drive from Highway 299 to Palisades Avenue
- / Class I SUP and associated crossing between Palisades Avenue and the Sacramento River Trail
- / Traffic calming and bike boulevard treatments along Palisades Avenue between Hilltop Drive and new SUP
- / Sidewalk and ADA curb ramp improvements throughout the project area
- / Crossing improvements throughout the project area



[illegible]

3 Hilltop Drive Pedestrian Crossing Enhancements

7. PARK MARINA DRIVE RAPID IMPLEMENTATION PROJECT

The Park Marina Drive Rapid Implementation Project (Park Marina Drive project) is intended to narrow and reduce travel lanes on Park Marina Drive from California State Route 44 entrance to Parkview Avenue to provide Class IV separated bike lanes along the corridor (**Figure 10**). The project upgrades existing bicycle facilities to improve comfort, while new pedestrian infrastructure creates safer crossing opportunities for pedestrians and people using mobility devices. A key aspect of the project is the focus on low cost materials that can be implemented quickly, such as bollards and striping, to have a significant impact on the corridor. By constructing the project in this way, it is possible to test a project design, evaluate it, and the modify the design in the future through formal capital projects or additional low cost treatments. The proposed “quick-build” project is a centerpiece of Redding’s effort to re-envision the corridor for active transportation in support of the Riverfront Specific Plan and Redding Active Transportation Plan. The quick-build will transform the automobile-centric corridor to provide a walking and biking environment for all ages and abilities along the scenic riverfront.

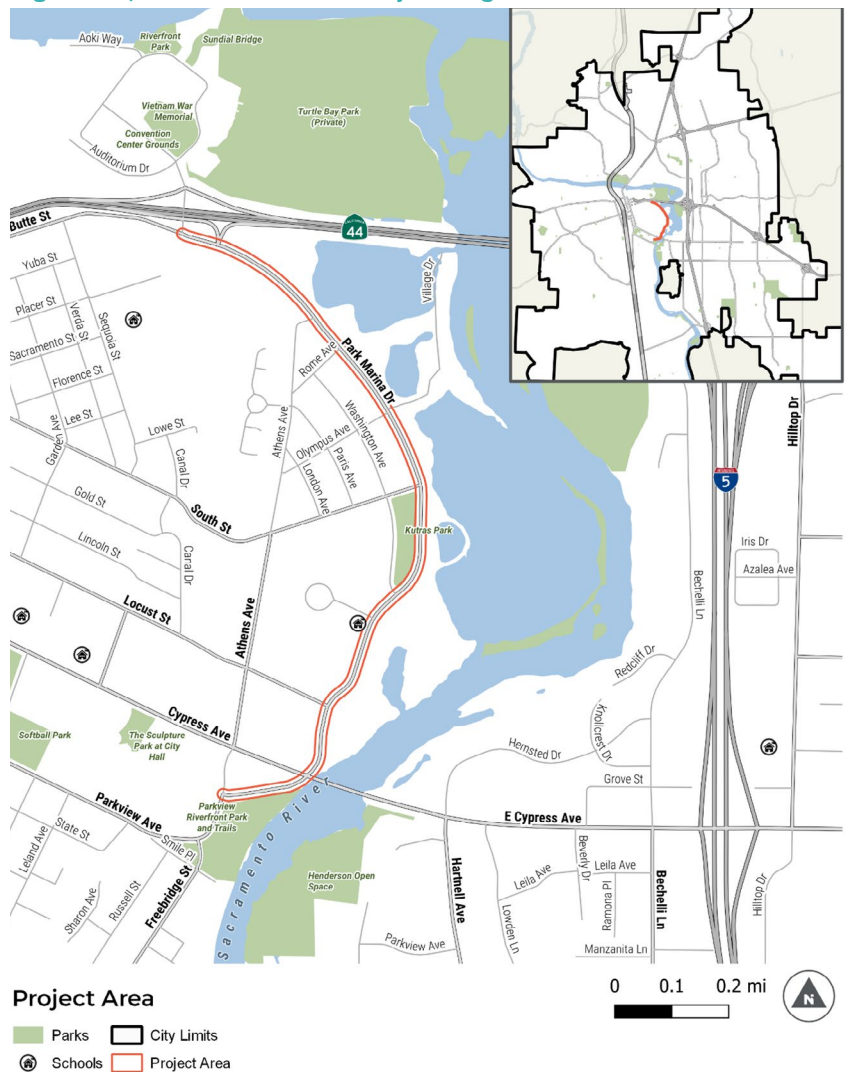
PROJECT BACKGROUND & SCOPE

Park Marina Drive is currently a three-to-five-lane road that is adjacent to downtown Redding and parallel to the Sacramento River. It is a key connector for people walking and bicycling in an area with poor street connectivity. There are currently Class II bicycle lanes along the corridor, as well as significant sidewalk and curb ramp gaps.

Significant planning has been done to define the plan, culminating in the Park Marina Drive Corridor Study, which defined many of the needs for the project. The quick-build project brings the recommendations from this study to life. The project broadens residents’ mobility options along the corridor by reducing their level-of-traffic stress walking and biking. The project connects residents to Redding’s extensive trail network and recreational opportunities within the corridor, such as Kutas Park. The corridor also offers access to retail, broadening mobility options for commuters and shoppers, as well as county and federal offices, such as the Social Security Administration.

On top of this, the project will link people on bikes to the region’s expansive low-stress bicycle network. Two low-stress bicycle routes are planned and funded to connect to this Park Marine Drive project: the Turtle Bay to Downtown Gap Completion project, which will connect Park Marine Drive to the trail network north of SR 44, and the Affordable Housing and Sustainable Communities program grant which will construct a river trail connection from the Turtle Bay Exploration Park to Downtown. Improvements for walking and biking on Park Marina Drive will improve access to existing transit stops on the corridor. Safer crossing opportunities will allow residents to safely access a transit stop on the other side of the street, while low-stress bicycle infrastructure promotes multi-modal trips to destinations near and far.

Figure 10 | Park Marina Drive Project Alignment & Destinations



EXISTING CONDITIONS

An analysis of the existing conditions was conducted to better understand who might use the project, how they travel, and what their needs might be. Below is a summary of the findings. Further details can be found in the [Park Marina Drive Existing Conditions Technical Memorandum](#).

Who Lives Here & How Do They Travel?

The following conclusions describe the demographic makeup of the area around the project:

- / **Population:** approximately 2,458
- / **Median age:** 45 years old; approximately one-third of people are either under 18 or over 65
- / **Median Income:** \$48,452 (less than 80% of statewide median household income of \$60,188)
- / **Travel Patterns:** approximately 7% of people walk or bike and none take transit; 86% drive

Based on these findings, the entire area qualifies as a DAC under per ATP guidelines.

What is it Like to Walk, Bike, Ride Transit, & Drive?

Walking & Biking

There are sidewalks and bike lanes along most of Park Marina Drive, although there are gaps in the facilities. There are no low-stress crossing opportunities for people walking or biking, and most intersections lack marked crosswalks and accessible infrastructure. Although there is a Class II bike lane, level of traffic stress for biking is high.

Transit

RABA Route 2E operates on Park Marina Drive, providing service throughout Downtown Redding. Along Hilltop Drive, there are three bus stops serving local residents. There are few amenities located at bus stops and there are no sidewalk connections to the stop at Olympus Avenue/Village Drive.

Driving

The speed limit on Park Marina Drive is 35 MPH and anecdotal evidence from a field visit noted high speeds. All neighborhood streets are 25 MPH with low traffic volumes.

Safety Findings (TIMS, 2015-2019)

There was one crash involving someone walking and none involving people biking between 2015-2019. The crash occurred at the intersection of Park Marina Drive and Parkview Avenue. Vehicle volumes and speeds likely deter people from walking and biking because existing infrastructure does not make people feel safe. High access to private vehicles and auto oriented land uses may also influence people to drive instead of walk or bike.



PREVIOUS ENGAGEMENT

The City of Redding and Shasta Living Streets conducted significant engagement regarding Park Marina Drive in advance of the SRATN.

Meetings held include:

- / November 18, 2020: Visioning Workshop (1 hour)
- / November 20, 2020: Group 1 Zoom Meeting (20 minutes)
- / November 20, 2020: Group 2 Zoom Meeting (40 minutes)
- / November 20, 2020: Group 3 Zoom Meeting (30 minutes)
- / August 11, 2021: Community Workshop Breakout Meeting 1 (1.5 hours)
- / August 11, 2021: Community Workshop Breakout Meeting 2 (1 hour)

Identified needs include:

- / Need for safety, comfort, and accessibility improvements to Park Marina Drive
- / Desire for traffic calming
- / Desire for multimodal connections to Downtown Redding
- / Importance of safe routes for residents and visitors using the soon-to-launch Downtown E-Bikeshare system
- / Supporting safe, comfortable connections to major catalyst development projects
- / Desire to connect Park Marina Drive to the Downtown low-stress active transportation facilities

PROJECT DEVELOPMENT

The Park Marina Drive project includes a road diet, new Class IV separated bikeways, and other improvements to upgrade an existing bikeway to be safe and comfortable for people of all ages and abilities. A full description of the project development process can be found in the [Park Marina Drive Project Alignment Technical Memorandum](#). It can be broken into the following phases:

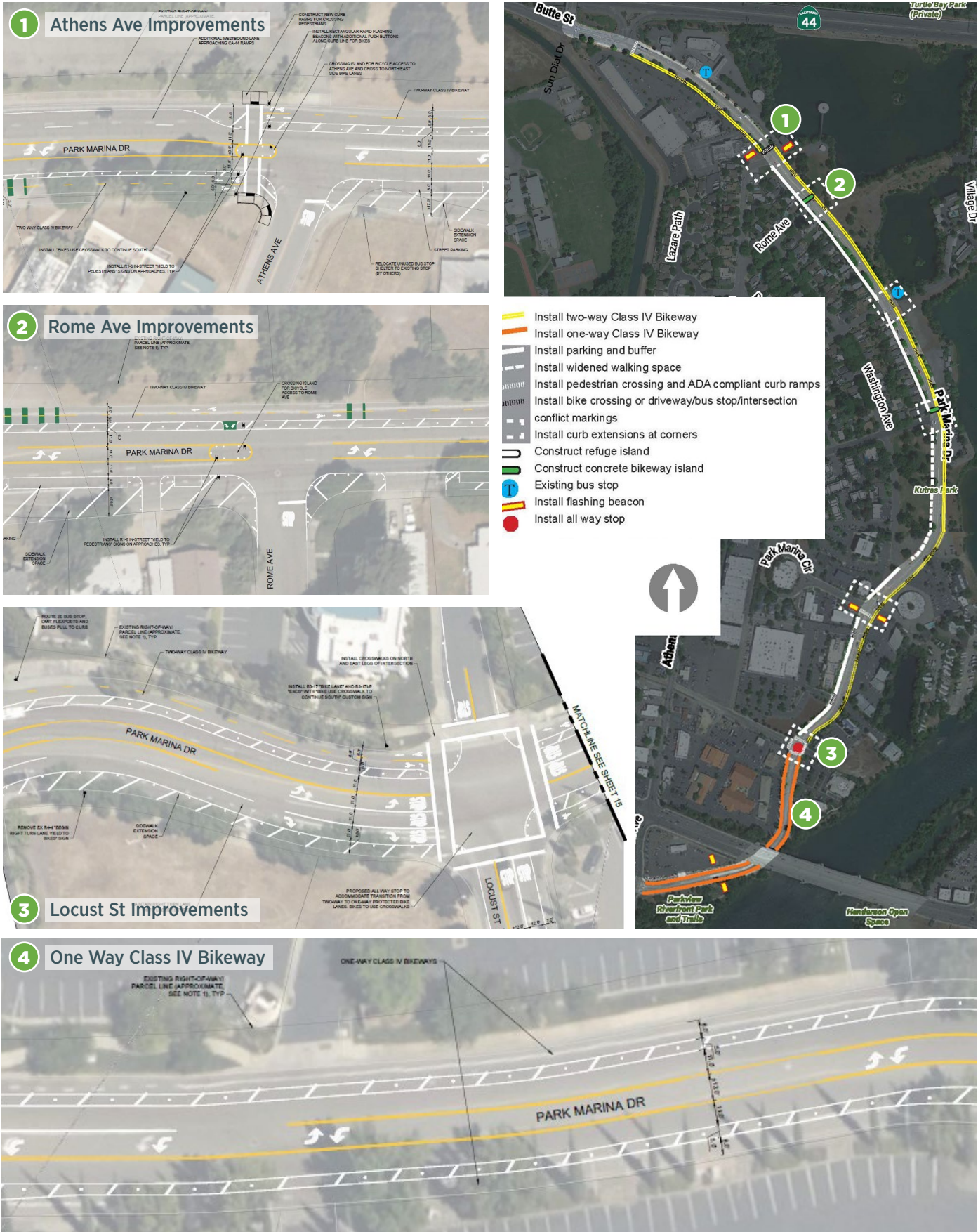
1. **Desktop Analysis:** The Park Marina Drive Corridor study was evaluated to understand recommendations and needs in the area. This resulted in the identification of the corridor for a road diet and the need for sidewalk improvements.
2. **Field Visit & Stakeholder Discussions:** Staff from SRTA, the City of Redding, and the Consultant team conducted a field visit/bike ride along the potential alignment. This ride was informed by summaries of comments staff had received through community engagement, and personal experience biking in the area. At this point, discussion was held regarding the need for new crossings and the most comfortable design for the crossing at SR 44.
3. **SRATN Community Engagement:** As described in [3. Community Engagement](#), additional community engagement indicated continued support for the project. No major changes occurred in this phase.
4. **Final Design Refinements based on Feasibility and Stakeholder Coordination:** The final design was developed to reflect previous phases and opportunities and constraints uncovered in the design process. Project changes throughout the grant application process were minimal. Minor changes included switching the two-way Class IV bikeway from the north side of Park Marina Drive to the south side between the CA-44 on-ramps and Athens Avenue. The change was made to accommodate two westbound lanes (rather than one) that feed the CA-44 on ramps.

FINAL PROJECT CONCEPT

Typical images from the final conceptual design and cross sections can be found in [Figure 11](#) and are included in full in [Appendix D](#). Generally, the project alignment and features can be described as follows:

- / Class IV two-way separated bikeway on the southbound side from the northern limits to Athens Avenue and on the northbound side from Athens Avenue to Locust Street
- / Class IV one-way separated bikeways from Locust Street to Parkview Avenue
- / A widened walking space from South Street to north of Park Marina Circle
- / Rapid flashing beacons at Athens Avenue, Park Marina Circle, and the steps accessing Cypress Avenue
- / Pedestrian crossings with ADA accessible ramps at SR 44, Athens Avenue, Park Marina Circle, and Locust Street
- / Curb extensions for corners at intersections with Athens Avenue, Rome Avenue, Olympus Avenue, South Street, Washington Street, Park Marina Circle, Locust Street, and Parkview Avenue

Figure 11 | Park Marina Drive Project Typical Concepts & Cross Sections

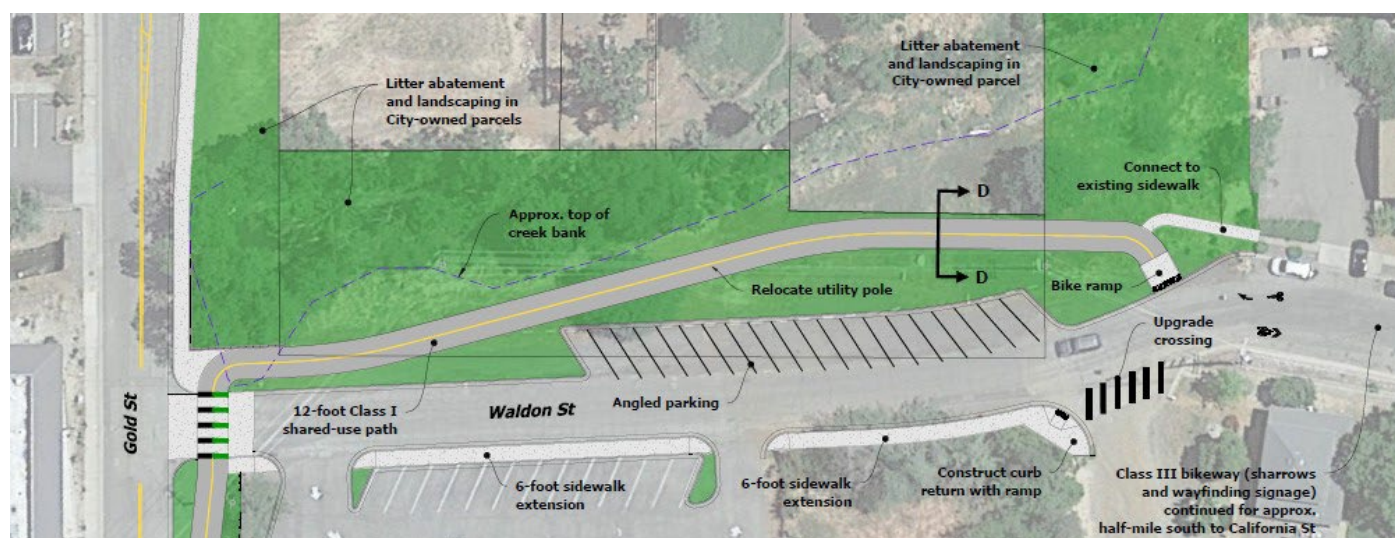
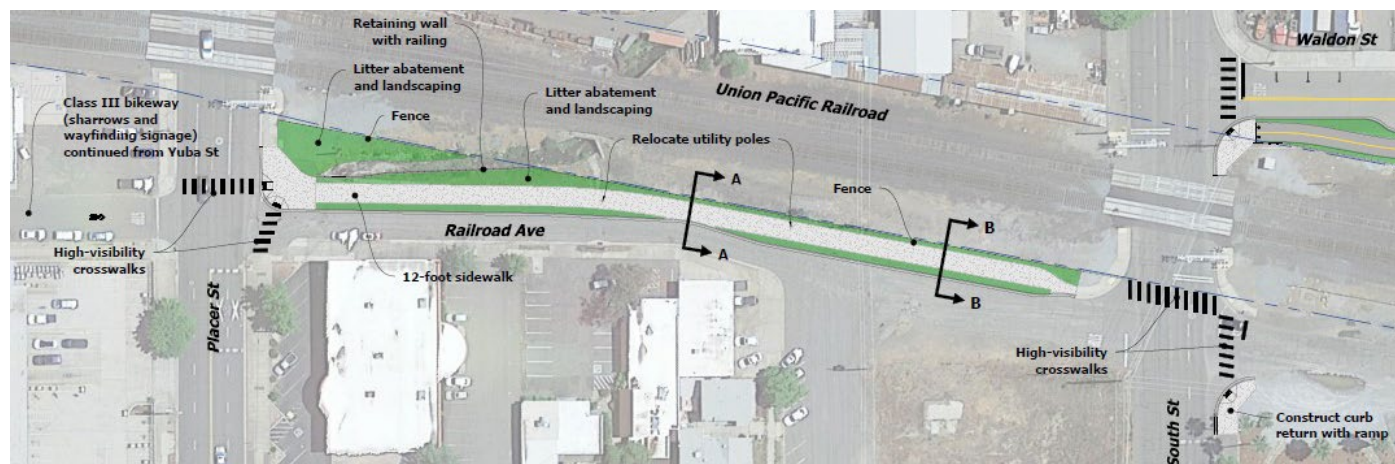
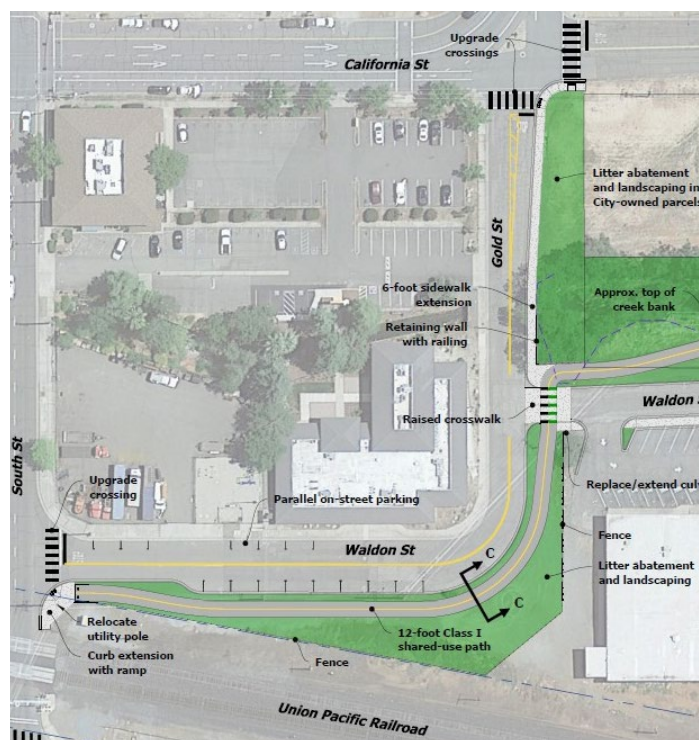


8. CALABOOSE CREEK

SRTA assisted the City of Redding in developing concept design plans for improvements at Calaboose Creek for a Clean California Grant Application. The City led the analysis, engagement, and application development for the project. Because of this, a full project development summary is not included in this report. The project can be summarized as follows, with typical images from the final conceptual design and cross sections found in **Figure 12** and included in full in **Appendix F**:

- / Class I SUP between Placer Street and Lincoln Street
- / Crosswalk improvements along the alignment and a raised crosswalk at Waldon Street and Gold Street
- / Six-foot sidewalks along Waldon Street and Gold Street
- / Class III bikeway marking and signage from Lincoln Street to California Street along Waldon Street
- / Litter abatement, beautification, and landscaping along the project alignment

Figure 12 | Calaboose Creek Typical Concepts
(cont'd on next page)





9. PIT RIVER TRIBE / BURNEY MUNIK'CHUN WALKING + BIKING NETWORK

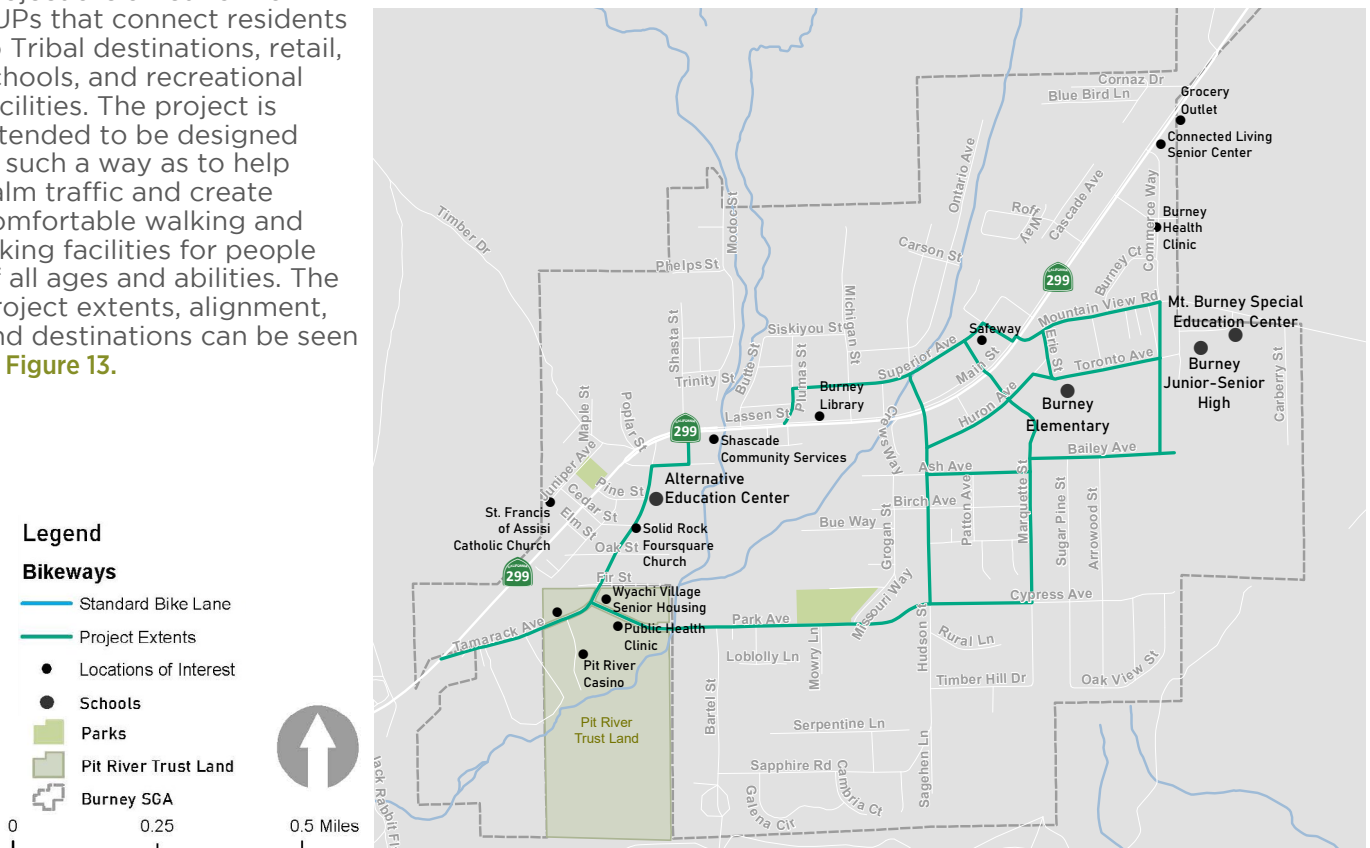
The Pit River Tribe/Burney Munik'Chun Walking + Biking Network is a community-wide project to create a low-stress, interconnected, active transportation network in Burney. The word Munik'Chun means "All My Children" and was chosen by the Pit River Tribe for the project. This is a fitting name, as the project will address locations where children have been involved in crashes and connects homes to tribal facilities, several schools, recreational facilities, and other essential destinations to serve the Tribe children and the broader Burney community. The first phase of the project includes a network of shared-use path (SUP) facilities throughout the community, associated crossing improvements, and traffic calming. Caltrans is currently planning to stripe buffered bike lanes along SR 299/Main Street as part of an upcoming resurfacing project. Discussions with Caltrans are underway to determine the feasibility of including additional active transportation projects along SR 299/Main Street as part of a Phase 2 of the Munik'Chun Walking + Biking Network. As such, the Munk'Chun Walking + Biking Network is still in active development, and subject to change as new needs are identified or community input is received.

PROJECT BACKGROUND & SCOPE

The Pit River Tribe, Shasta County Public Works, and Burney community have expressed a desire for traffic calming and better walking and biking facilities. Part of this desire stems from crashes which resulted in the deaths and serious injuries of people on foot or using mobility devices, including Tribal Elders. Additionally, residents have noted difficulties getting to retail and community destinations on foot. Students are also unable to access the schools and recreational facilities comfortably on foot or bike. There are currently very few sidewalks or multimodal facilities on most of the local streets, and SR 299/Main Street lacks comfortable crossings. In 2012, the Pit River Tribe/Burney Bicycle and Walkway Plan was created, which identified a baseline network for walking and biking improvements. However, the plan is yet to be implemented. The Pit River Tribe/Burney Munik'Chun Walking + Biking Network builds off the 2012 plan while also introducing more recent best practices in active transportation planning and design in a context-sensitive manner.

The main features of the project are a network of SUPs that connect residents to Tribal destinations, retail, schools, and recreational facilities. The project is intended to be designed in such a way as to help calm traffic and create comfortable walking and biking facilities for people of all ages and abilities. The project extents, alignment, and destinations can be seen in **Figure 13**.

Figure 13 | Pit River Tribe/Burney Munik'Chun Walking + Biking Network Project Alignment & Destinations



EXISTING CONDITIONS

An analysis of the existing conditions was conducted to better understand who might use the proposed improvements, how they travel, and what their needs might be. Below is a summary of the findings.

Who Lives Here & How Do They Travel?

The following conclusions describe the demographic makeup of the study area:

- / **Population:** approximately 3,965
- / **Median age:** 35 years old; almost half of people are either under 18 or over 65
- / **Median Income:** \$45,875 (less than 80% of statewide median household income of \$60,188)
- / **Travel Patterns:** approximately 3% of people walk or bike and none take transit; 94% drive

Based on these findings, the entire area qualifies as a DAC per ATP guidelines.

What is it Like to Walk, Bike, Ride Transit, & Drive?

Walking & Biking

There are no existing low-stress bicycle facilities in the study area, although Caltrans is initiating the striping of a Class II buffered bike lane along SR 299/Main Street. Sidewalks are disconnected or missing, even on higher speed roads. There are very few safe and comfortable crossings.

Transit

RABA operates the Burney Express bus connecting Burney to Downtown Redding along SR 299. The bus runs three times a day in the morning, afternoon, and evening. There is no service on weekends and some holidays.

ShastaConnect also provides door to door on-demand transit service for residents the Intermountain Area including Burney, Cassel, Fall River, and McArthur.

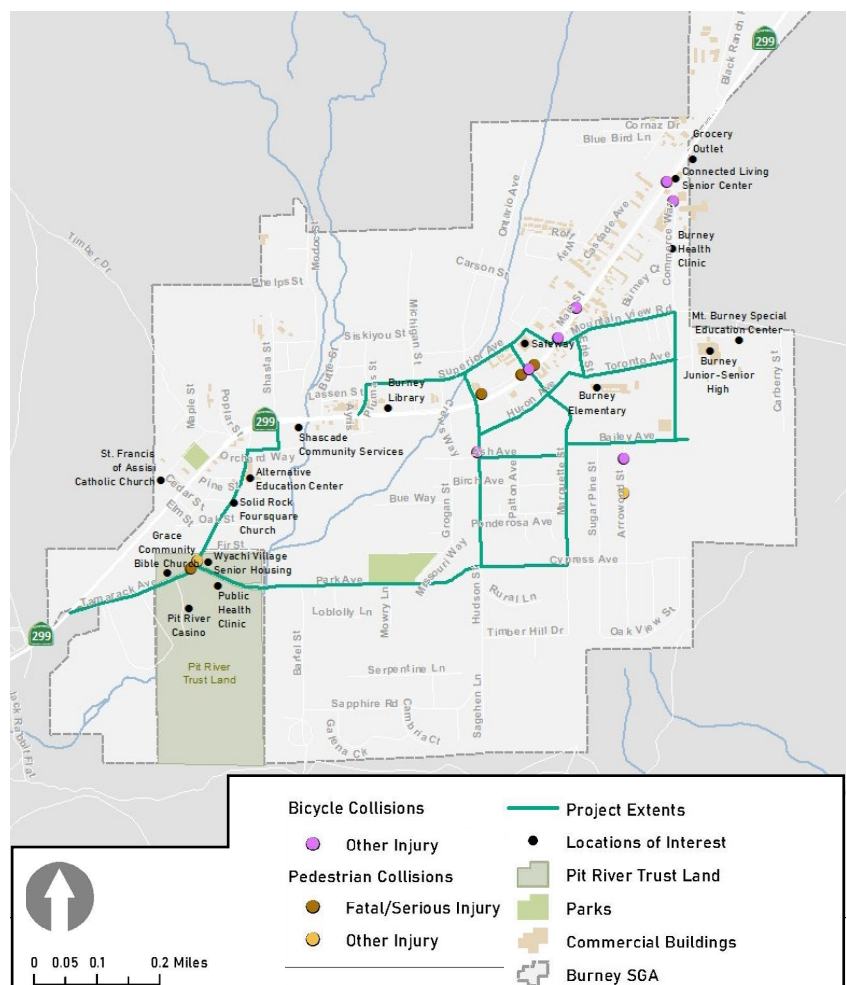
Driving

The speed limit along SR 299/Main Street is 55 MPH outside of Burney and reduces to 30 MPH within the town, and anecdotal evidence from a field visit noted high speeds. All other streets are 25 MPH. Tribal staff and residents noted drivers sometimes cut through local streets to avoid SR 299/Main Street, and stated drivers often exceed the speed limit on these streets.

Safety Findings (TIMS, 2010-2021)

- / **Ped/Bike Crashes:** 13
- / **Severity:** 2 people killed and 2 people seriously injured while walking, none killed or seriously injured while biking
- / **Concentrations of Crashes:** Along SR 299/Main Street and at the intersection of Tamarack Avenue and Park Avenue
- / **Common Causes:** Crossing outside of crosswalk and speed related crashes

Figure 14 | Pit River Tribe/Burney Munik'Chun Walking + Biking Network Project Crash History



PROJECT DEVELOPMENT

The Munik'Chun Walking + Biking Network was developed to formalize the improvements planned in the Pit River Tribe/Burney Bicycling and Walkway Plan. Throughout the engagement process, addressing walking needs for Tribal Elders and students walking or biking to destinations or schools were identified as critical, as well as managing speeds on the community's local streets and enhancing pedestrian crossings. A full description of the project development process can be found in the [Munik'Chun Walking + Biking Network Alignment Technical Memorandum](#). It can be broken into the following phases:

- 1. Desktop Analysis:** Every street in the community was considered for elements including route directness, traffic volumes, elevation, connectivity to destinations, potential for traffic calming, and gaps in existing infrastructure. However, the community's previously developed plan was used as a focus to build on prior community engagement and needs identification.
- 2. Field Visit & Stakeholder Discussions:** Staff from SRTA, the Shasta County Public Works, the Pit River Tribe, and the Consultant team conducted a half-day design charrette and field visit along the potential alignment streets. This charrette and walk audit was informed by summaries of comments staff had received through community engagement, personal experience identifying the most comfortable routes for walking and biking, and comments received during the audit.
- 3. Community Engagement:** As described in [3. Community Engagement](#), several community engagement events were held. In general, community members were very supportive of the project and the traffic calming elements. In this phase, the project was changed or refined based on the community engagement as follows:
 - Final selection and confirmation of the alignments following Tamarack Avenue and Park Avenue including relocation of enhanced pedestrian crossings to better align with planned improvements by the Pit River Tribe and other feedback.
 - Widening shared-use paths (SUP) to 10-12 feet wherever possible (from 8 feet).
 - Additional crossing locations were explored and added where possible – specifically near Burney Elementary and Junior/Senior Schools.
 - Additional detail was developed to ensure the design of the SUPs throughout the community would not interfere with snow removal operations and ensure stormwater drainage was appropriately accounted for given current drainage concerns.
 - The design charrette, walk audit, and school specific outreach helped inform recommendations and routing for the bike network and crossing enhancements.
- 4. Final Design Refinements based on Feasibility and Stakeholder Coordination:** The final design was developed to reflect the comments heard during the community engagement phase. In this phase, the major design change included the removal of the paths outside the County's right of way due to right of way concerns and potential security access concerns regarding the paths connections to the community's schools. The stormwater drainage designs were also updated to reflect comments received from Shasta County Public Works.

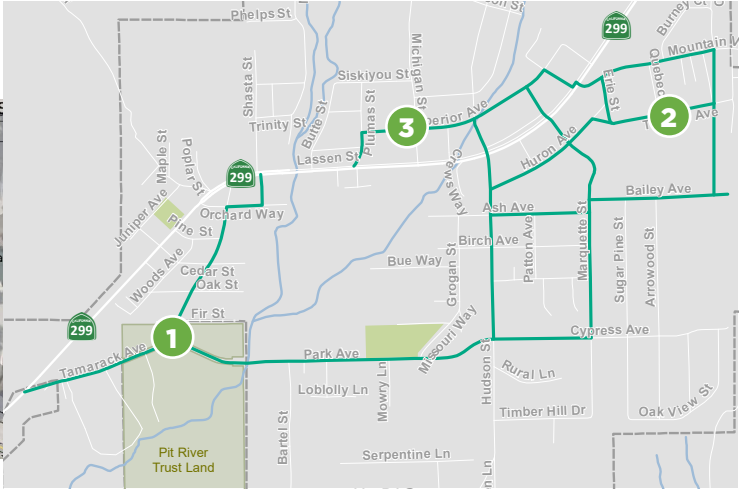
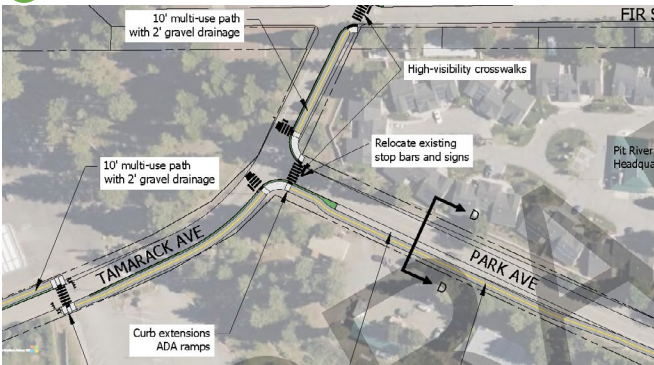
FINAL PROJECT CONCEPT

Typical images from the final draft conceptual design can be found in [Figure 15](#) and are included in full in [Appendix G](#). Generally, the project alignment and features can be described as follows:

- / Class I shared use paths on the following corridors: Tamarack Avenue, Park Avenue/Cypress Avenue, Hudson Street, Ash Street, Marquette Street, Huron Avenue, Mountain View Street, Toronto Avenue, Bailey Avenue, as well as additional short connections between these primary corridors
- / Two Class I SUPs through Burney Elementary and Junior/Senior Schools right of way to connect between Toronto Avenue and Bailey Avenue to facilitate safe routes to both schools for students walking or biking
- / Sidewalk infill and a Class III bikeway network north of SR 299/Main Street along Hudson Street, Superior Avenue, and Plumas Street
- / Curb extensions and intersection tightening with enhanced crosswalk markings and rectangular rapid flashing beacons (where needed) to facilitate pedestrian crossings and calm traffic along all project corridors.

Figure 15 | Munik’Chun Network Typical Concepts

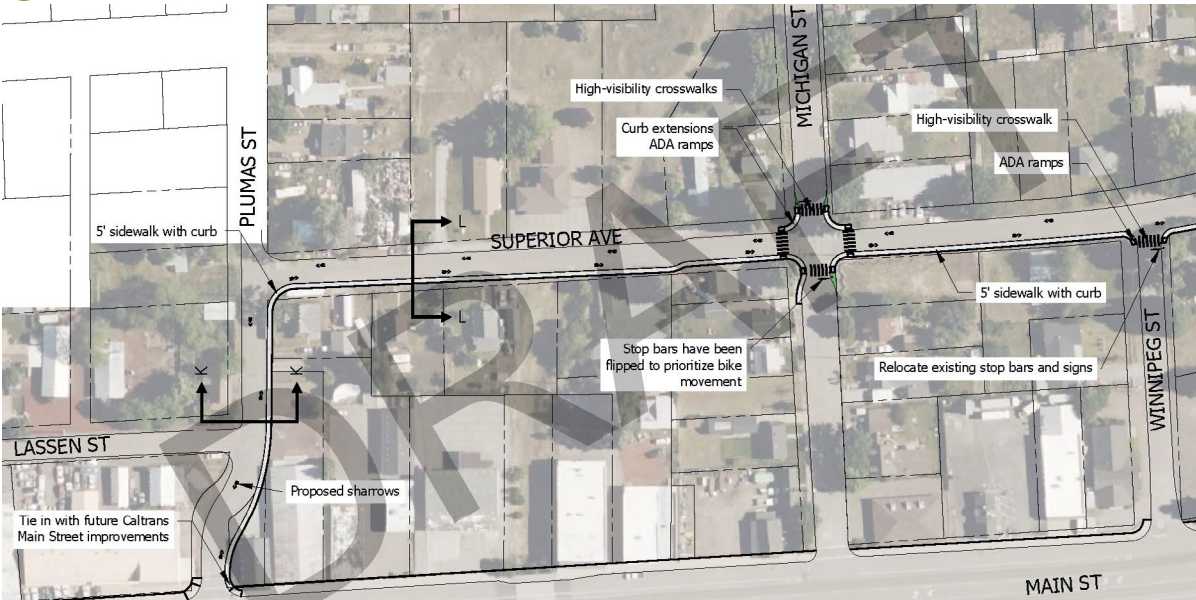
1 Tamarack and Park Avenue SUP Improvements



2 Burney School SUP Improvements



3 North Bike Route and Sidewalk Improvements



10. NEXT STEPS

The next steps for the SRATN project can be summarized as follows:

- / **Continued Project Development:** as noted previously, the Pit River Tribe/Burney Munik'Chun Walking + Biking Network project is ongoing. The Pit River Tribe and partners will continue to refine project design and materials for future grant applications and are expected to expand the project with a Phase 2 to include SR 299/Main Street and connections to other regional facilities..
- / **Awarded Projects | Final Design & Construction:** for projects awarded funding, final design and construction will occur based on the schedules defined in the grant applications. TThese phases may require minor refinements to design elements based on conditions identified in final design. Both the Victor Avenue Improvement and Butte Street Boogie projects were awarded funding for implementation in ATP Cycle 6.
- / **Projects Not Awarded | Reassessment:** for projects not awarded funding, the City of Redding and SRTA will reevaluate the projects to determine whether the projects will be updated and resubmitted or funded through other sources. The Calaboose Creek project is currently seeking funding as part of the Clean California Local Grant Program Cycle 2.
- / **Continued Community Engagement:** for all projects, engagement will be ongoing. For projects awarded funding, engagement opportunities are defined in the grant applications, including education campaigns, engagement during final design to refine features, engagement during construction to keep people informed, and engagement post construction to help people learn how to use the new infrastructure.
- / **New Projects:** several new projects have been identified for potential project development, including the continuation of the Victor Improvements project north of SR 44, evaluating a multimodal bridge over Interstate 5 at Hilltop Avenue, and multimodal enhancements on the South SR 273 corridor.. These projects will be developed for future grant application cycles and will require new engagement efforts. SRTA will continue to coordinate with partners in the region to identify potential future project opportunities.



APPENDIX A

Engagement Documentation

APPENDIX B

Butte Street Boogie Concept Design

APPENDIX C

Victor Improvement Project Concept Design

APPENDIX D

Hilltop Improvement Project Concept Design

APPENDIX E

Park Marina Drive Rapid Implementation Project Concept Design

APPENDIX F

Calaboose Creek Concept Design

APPENDIX G

Pit River Tribe/Burney
Munik'Chun Walking
+ Biking Network
Concept Design

