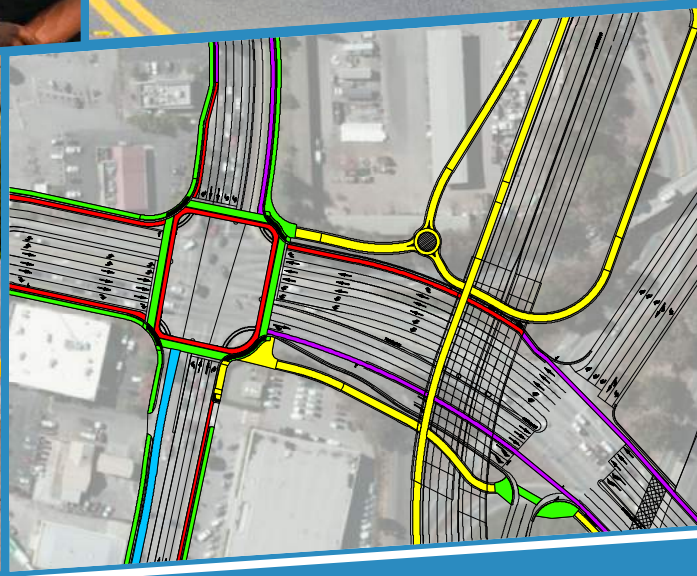
Caltrans District 4 Bike Plan

for the San Francisco Bay Area

Caltrans

alta PLANNING + DESIGN



2018

Director's Message

I am very pleased to present the first-ever Bike Plan for Caltrans District 4, covering the nine-county San Francisco Bay Area. This Plan builds on the 2017 California State Bicycle and Pedestrian Plan, *Toward an Active California*, which identifies policies, strategies, and actions for Caltrans and its partners to take to improve the safety and comfort of pedestrians and bicyclists throughout the State. The much-anticipated District 4 Bike Plan is first and foremost an evaluation of bicycle needs and a listing of proposed improvements. The Plan also serves as a resource to inform selection and scoping of District projects from all funding sources. The project list is a living document that will be updated as additional needs are identified.

State highways are an integral part of the region's transportation system. Safe, comfortable, and convenient bicycle facilities and connections are important elements of a multimodal network that provides travel options, creates opportunities for more active lifestyles, is efficient, and reduces impacts on air quality and land use. This Plan will help guide the District in further developing an integrated bicycle network for the Bay Area.

Considerable time and effort was spent on developing this "snapshot" of bicycling needs, which resulted in a list of improvements for the nine Bay Area counties. This could only be accomplished with input from many local agencies, stakeholders, and the public through an extensive outreach process. I would like to acknowledge and thank all who participated with a special recognition for the important role and contribution of the District 4 Bike Plan Technical Advisory Committee in guiding the development of the Plan.

We look forward to working with our local and regional partners on implementing this Plan.

BIJAN SARTIPI
District 4 Director
March 2018

Caltrans Project Team

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Cover Images — from top left to bottom right:

- Bay Bridge Gateway Park artist rendering courtesy PWP Landscape Architecture
- Focus group meeting with Rich City Rides, photo courtesy MIG, Inc.
- Highway 1 near Stinson Beach, photo by Sergio Ruiz
- Lincoln Hill Path in San Rafael, photo by Caltrans District 4 Photography / John Huseby
- Intersection bicycle box at Greenwood Cove Drive and Tiburon Boulevard (State Route 131), photo by Sergio Ruiz
- US 101 Woodside Road Project in Redwood City, Initial Study bikeway concept

Acknowledgments

Caltrans would like to thank representatives of the following organizations for their participation and contribution to the development of the Caltrans District 4 Bike Plan.

- Alameda County Transportation Commission
- Bay Area Trails Collaborative
- Bike Concord
- Bike East Bay
- California Coastal Commission
- City of Oakland
- City of San Jose
- City/County Association of Governments of San Mateo County
- Contra Costa Transportation Authority
- Cycles of Change
- First Community Housing
- Marin County Bicycle Coalition
- Metropolitan Transportation Commission
- Napa County Bicycle Coalition
- Napa Valley Transportation Authority
- Peninsula Conflict Resolution Center
- Peninsula Working Group
- Rich City Rides
- Safe Routes to School National Partnership
- San Francisco Bay Trail Project
- San Francisco Bicycle Coalition
- San Francisco County Transportation Authority
- San Francisco Municipal Transportation Agency
- Santa Clara Valley Transportation Authority
- Silicon Valley Bicycle Coalition
- Solano Transportation Authority
- Sonoma County Bicycle Coalition
- Sonoma County Transportation Authority
- Transportation Authority of Marin

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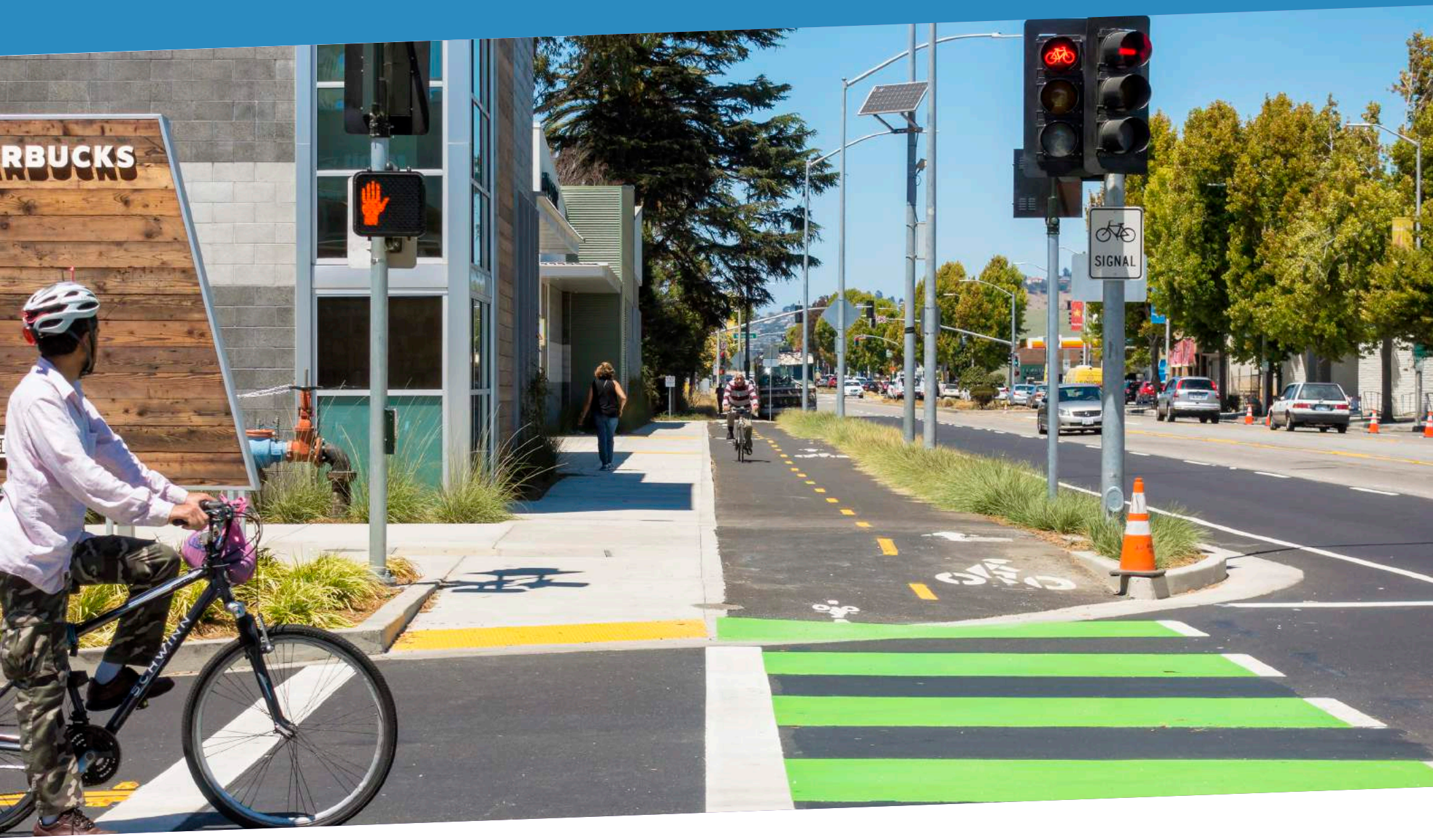


Introduction

Caltrans goals are to provide a safe transportation system for all users, promote health through active transportation, and improve multimodal mobility and accessibility for all people.

Why a Bike Plan for District 4?

While most bicycle travel in the Bay Area takes place on the local streets and trails, bicycling is also permitted on many State highways, including some freeway segments. The State transportation network, often referred to as the State highway system, is a multimodal network of Caltrans-owned and operated State highways, Interstate freeways, bridges, and park and ride lots.

Freeways and other major highways often act as barriers to bicycling. With nearly 1,400 miles of State highways throughout District 4, Caltrans plays an important role in connecting and expanding the regional bicycle network and removing these barriers.

Bicycle facilities that are safe, comfortable and convenient can help:

- **Improve public health** and promote active lifestyles
- **Create connections** to people's destination or transit; and
- **Reduce traffic congestion** and greenhouse gas emissions

Facing page: State Route 123 San Pablo Avenue cycle track in the City of Albany; photo by Sergio Ruiz

Purpose

The Caltrans District 4 Bike Plan (Plan) identifies infrastructure improvements that can enhance bicycle safety and mobility throughout District 4 and remove some of the barriers to bicycling in the region. The Plan was developed in cooperation with local and regional partners to ensure that the improvements on the State highway system complement proposals for local networks.

The Plan considers all potential bicycle trips, but prioritizes utilitarian bicycle travel to work, school, shopping, and other similar purposes, or to connect to transit. State highways that serve as recreational or touring routes for bicyclists are also considered in this Plan to meet the safety needs of all highway users.

The Plan will help inform future investments on the State transportation network by Caltrans and other jurisdictions. Caltrans is required to accommodate the needs of bicyclists in Caltrans projects wherever possible. Many funding programs also require consideration of complete streets improvements as part of a project, such as sidewalks, bike lanes, and crossing improvements.

Caltrans is eligible to compete for Active Transportation Program (ATP) funds for more significant improvements that have the potential to increase biking trips. This Plan will help District 4 identify and prioritize bicycle improvements on the State network that will be competitive for ATP funds.

Vision, Goals & Objectives

California State Bicycle and Pedestrian Plan

The District 4 Bike Plan builds on the California State Bicycle and Pedestrian Plan, known as *Toward an Active California*. The District 4 Bike Plan adopts the overall vision, goals, objectives, and strategies of *Toward an Active California* and represents an important implementing action from the statewide plan. Information on *Toward an Active California* is available at: www.goactiveca.org.

Vision

By 2040, people in California of all ages, abilities, and incomes can safely, conveniently, and comfortably walk and bicycle for their everyday transportation needs.

Goals

Toward an Active California sets a policy framework around four broad goals: safety, mobility, preservation, and social equity.

SAFETY
Reduce the number, rate, and severity of bicycle and pedestrian involved collisions

MOBILITY
Increase walking and bicycling in California

PRESERVATION
Maintain a high quality active transportation system

SOCIAL EQUITY
Invest resources in communities that are most dependent on active transportation and transit

Source: *Toward an Active California*, www.goactive.org

Emphasis Areas for the District 4 Bike Plan

While the District 4 Bike Plan does not set new policies or goals, District 4 plays an active role in implementing policies and strategies identified in *Toward an Active California*. Several strategies are particularly relevant to the Bay Area, based on input received from stakeholders and the public, and are emphasized in this Plan, including:

1. Prioritize safety and comfort in creating complete bicycle networks
2. Design safer and more intuitive highway crossings and interchanges
3. Streamline and communicate the process for local agencies to engage with Caltrans and for Caltrans to engage with local communities
4. Promote innovation through design and testing new bicycle treatments
5. Incorporate social equity into the prioritization process for the District 4 Bike Plan
6. Increase investment in bicycle facilities on state highways
7. Engage with low-income, minority, rural, and tribal communities during planning and project development to address issues affecting those communities

A technical memorandum summarizing the Caltrans vision, goals, objectives and strategies for bicycling, with emphasis areas for District 4, can be found in Appendix B.

Caltrans District 4 staff organized a tour of Class IV separated bikeways in Bay Area cities with staff from local jurisdictions and Caltrans Headquarters Divisions of Design, Traffic Operations, and Transportation Planning. Photo of the protected intersection at 9th Street and Division Street in San Francisco by Sergio Ruiz.

Approach

The District 4 Bike Plan was developed using a thorough, data driven process to identify and prioritize investments to improve bicycling on and across the State owned transportation network.

Process

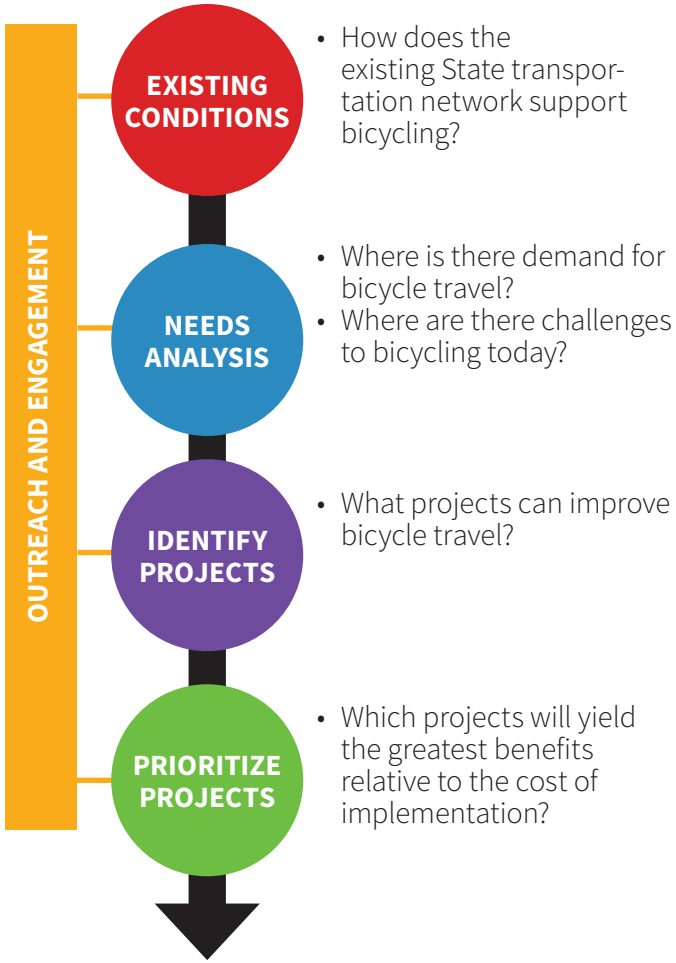
The Plan was developed through three phases — needs analysis, project identification, and project prioritization — all informed by community outreach and engagement, in addition to coordination with a Technical Advisory Committee, composed of representatives from agencies, municipalities, and advocacy groups from all nine Bay Area counties.

The needs analysis identified areas of challenge to bicyclists using or crossing the State transportation network. This needs analysis included identifying existing and potential demand for bicycle travel, safety challenges, and how comfortable people feel bicycling on or across the State network.

Projects to address these needs were gathered from existing city and county bicycle plans, staff input from local and county agencies and advisory committees, and by the project team in response to the needs that were identified in the analysis.

Following project identification, projects were prioritized based on several measures of potential benefit and the relative cost of the improvements. A data-driven approach was used to prioritize needs based on existing challenges and barriers for bicycling, safety data, potential bicycling demand, and equity.

The entire process was informed by public, stakeholder and agency input and a technical advisory committee that met throughout the Plan development.



Facing page: State Route 84 Niles Canyon Stroll n' Roll in Alameda County; photo by Sergio Ruiz

Public Outreach

The District 4 Bike Plan process was guided and informed by input received through a robust and dynamic public engagement program with the goal of collecting input from a broad cross-section of Bay Area residents and constituencies.

A Technical Advisory Committee (TAC), composed of representatives from agencies, municipalities, and advocacy groups from all nine Bay Area counties provided strategic guidance throughout the planning process and input on the technical analysis and the community outreach efforts. The TAC met five times through the plan development. In addition to the TAC, meetings were held in each of the nine counties with bicycle advisory committees and local agency staff throughout the planning and project identification process.

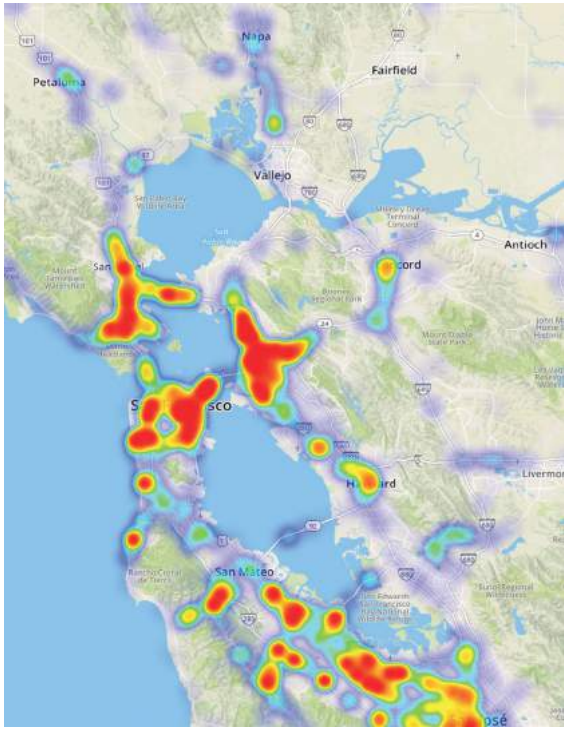
Using a variety of tools and methods, stakeholder and public input was gathered through several engagement activities, including:

- Online survey
- Focus groups
- Community workshops
- Webinar
- Web input

Online Survey

Caltrans conducted a survey to collect public input on bicycle needs and issues across the Bay Area and recommendations to address existing barriers. The interactive map and survey were an opportunity for people who bike and others to share their on-the-ground knowledge about mobility, barriers and safety on and across the State transportation network. A total of 4,721 people visited the survey between February and June 2017.

There were 3,498 respondents who answered questions and placed over 20,157 map “pins” on a map, representing locations where they currently bike along or across State highways, where they would be interested in biking in the future, potential barriers and related information. These responses informed the demand analysis.



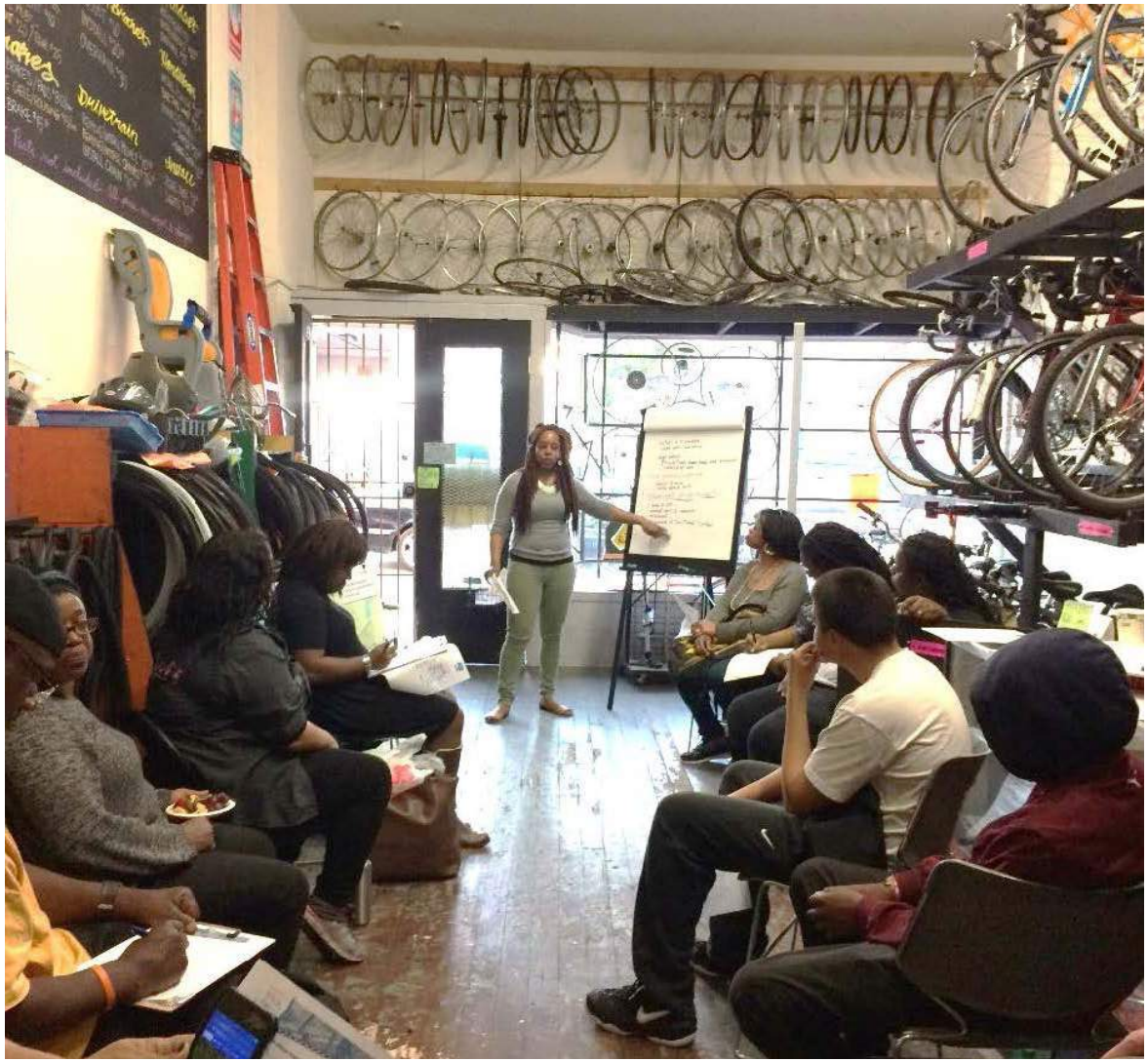
An online map allowed respondents to ‘drop pins’ where they bike along or across the State highway system, where the State highway system is a barrier (shown above), and where there are opportunities for improvement.

Focus Groups

As part of the outreach process, Caltrans hosted six focus groups across the Bay Area to collect targeted input from a diverse cross–section of residents on their experiences biking in their communities. Caltrans worked with local community-based organizations to recruit interested participants, including Bike Concord, Cycles of Change, First Community Housing, Peninsula Conflict Resolution Center, Rich City Rides, and the Sonoma County Bicycle Coalition. A total of 87 individuals participated in the focus groups.

Most focus group participants were from minority and low-income communities. Some of the key themes that emerged across the six focus group conversations included social and health benefits of bicycling, safety concerns with exposure to motor traffic, a lack of comfortable and convenient facilities, secure bike parking, and access to transit and schools.

The focus group findings helped inform the development of the Plan's strategies to improve bicycling and the needs analysis.



Focus groups were held in partnership with community-based organizations to gather input from traditionally underrepresented groups. Photo courtesy MIG, Inc.

Community Workshops

Caltrans hosted two rounds of workshops in May and November 2017. The goals of the first round of workshops included: highlighting the new vision and mission of Caltrans; informing the public of the Bike Plan purpose and goals; and collecting input on bicycle safety and mobility needs. The second round of workshops informed participants of the project prioritization process and solicited feedback on a draft list of project priorities by county.

Workshops were conducted in an interactive format, soliciting community input through live audience polling, presentations, maps, and comment forms. Large display boards were arranged around the rooms in an "Open House" style to engage the public on the needs, barriers and opportunities for bicycling in the Bay Area.

Webinar

During the second round of workshops, Caltrans also hosted an online webinar to reach individuals who could not attend a workshop in person. There were 88 individuals participated in the webinar, which included a Q&A session that addressed both general questions and specific potential improvements on and across the State-owned transportation network in District 4.

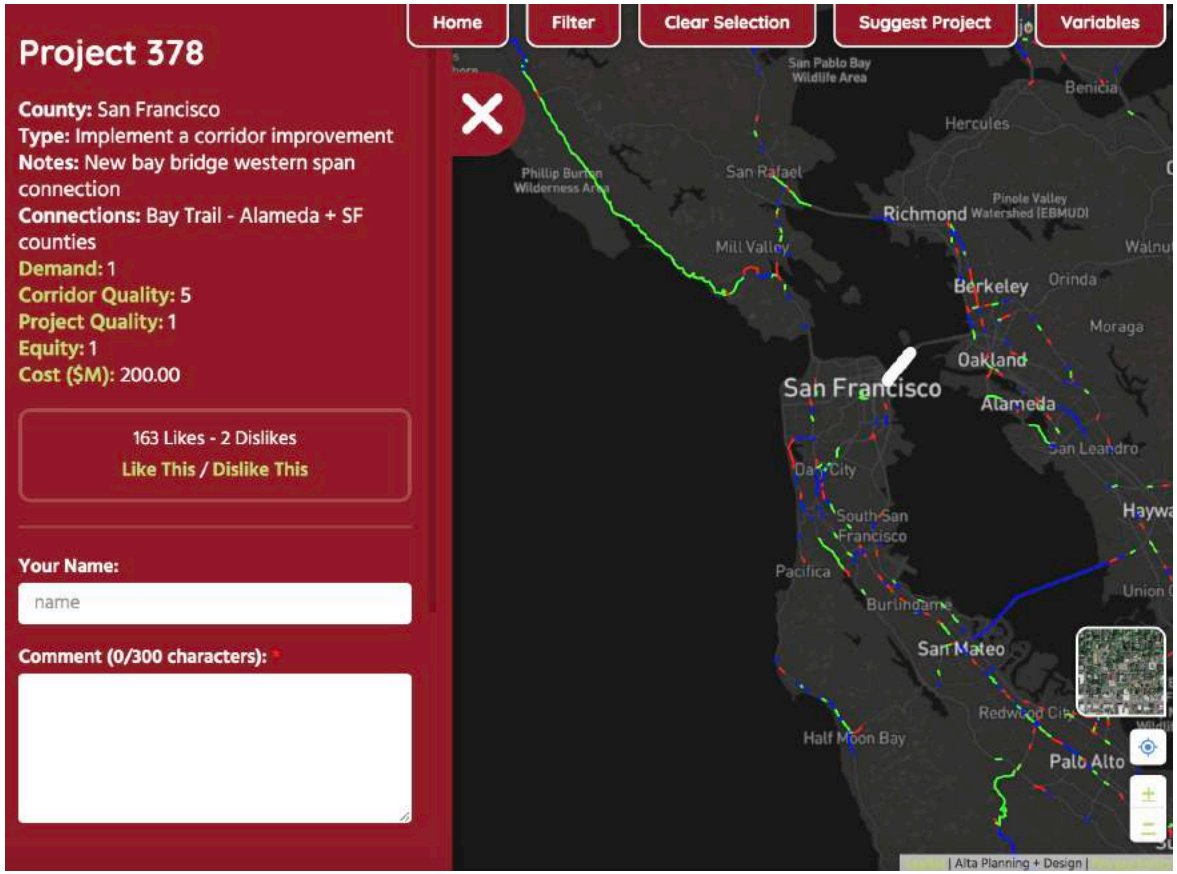
Workshops were held throughout the Bay Area to present information and collect feedback on the planning process. Photo of a workshop in West Oakland courtesy MIG, Inc.

Web input

The Project Team developed two interactive web tools during the project. The first allowed stakeholders to identify projects for potential evaluation, including information about the type of project — from improving signage and striping through an interchange, to a corridor improvement — and the connections the project would serve.

A second web tool, open to the public, supported the project prioritization process, allowing for a review of projects, the ability to "like" or "dislike" projects, and to clarify project details. These web tools significantly expanded the reach of the public engagement program by allowing a wider range of participants to learn about the District 4 Bike Plan, share input and ideas, and stay connected to the process.

A technical memo summarizing the public engagement process can be found in Appendix C.



Screenshot of the online comment tool used to gather information from the public and stakeholders about proposed projects.

Bikeway Classification

A bikeway classification guide was created for this Plan to increase awareness of and planning for bikeways by both Caltrans staff and local agency partners.

Bikeways

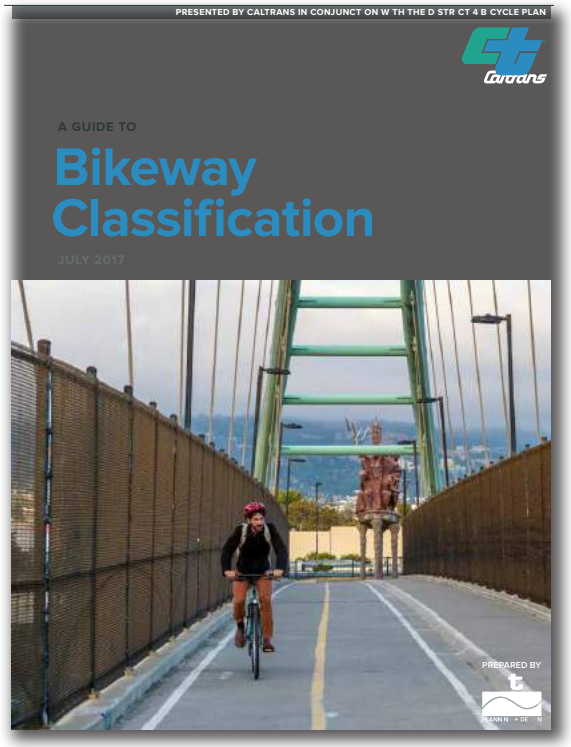
The bikeway classification guide serves as a visual reference for the four classes of bikeways identified by Caltrans:

- **Path**
  Class I bikeways, also known as bike paths or shared-use paths, are facilities with exclusive right of way for bicyclists and pedestrians, away from the roadway and with cross flows by motor traffic minimized.
- **Bike Lane**
  Class II bikeways are bike lanes established along streets and are defined by pavement striping and signage to delineate a portion of a roadway for bicycle travel. Bike lanes are one-way facilities, typically striped adjacent to motor traffic traveling in the same direction.
- **Bike Route**
  Class III bikeways, or bike routes, established by placing bike route signs and optional shared roadway markings (sharrow), designate a preferred route for bicyclists on streets shared with motor traffic. Bike routes are generally not appropriate for roadways with higher motor traffic speeds or volumes. These facilities are sometimes combined with traffic-calming improvements and landscaping to create neighborhood greenways or bicycle boulevards that are comfortable for children and families.
- **Separated Bikeway**
  Class IV separated bikeways, often referred to as cycle tracks, are for the exclusive use of bicycles, physically separated from motor traffic with a vertical feature. The separation may include, but is not limited to, grade separation, flexible posts, inflexible barriers, or on-street parking. Separated bikeways can be designed for one-way or two-way travel.

Intersection Treatments

The Guide also includes information about intersection treatments and other improvements that can support bicycling, including improvements for both conventional highway intersections and crossings of ramps to access controlled freeways and expressways. The following page presents examples of treatments described in the Guide.

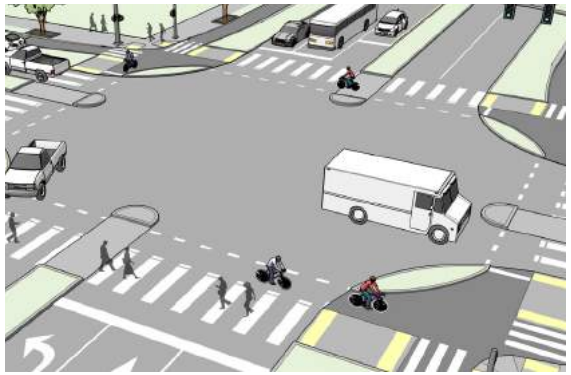
The Guide also includes references to Caltrans and national design guidance with more information on specific treatments.



Caltrans *Guide to Bikeway Classification* can be found on the District 4 Pedestrian and Bicycle Program website at http://www.dot.ca.gov/d4/transplanning/pedbikeprogram.html

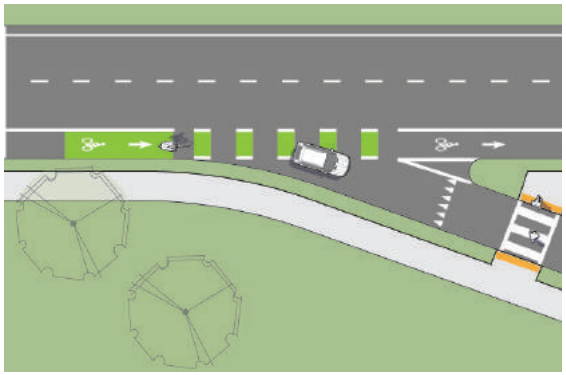
Bicyclists at Roundabouts

Roundabouts are circulatory intersections where motorists and bicyclists yield to enter. While roundabouts have been shown to reduce the number and severity of crashes overall, it is important to design them for all users by minimizing the design speed and the number of lanes and conflict points to reduce exposure for all users. Bicyclists are allowed to take the lane with vehicle traffic, but can also be provided a separated bikeway or a shared use path that circulates around the roundabout to reduce the level of stress. While single-lane roundabouts are easier for bicyclists to navigate, multilane roundabouts require additional considerations at conflict points and bikeway crossings.



Protected Intersections

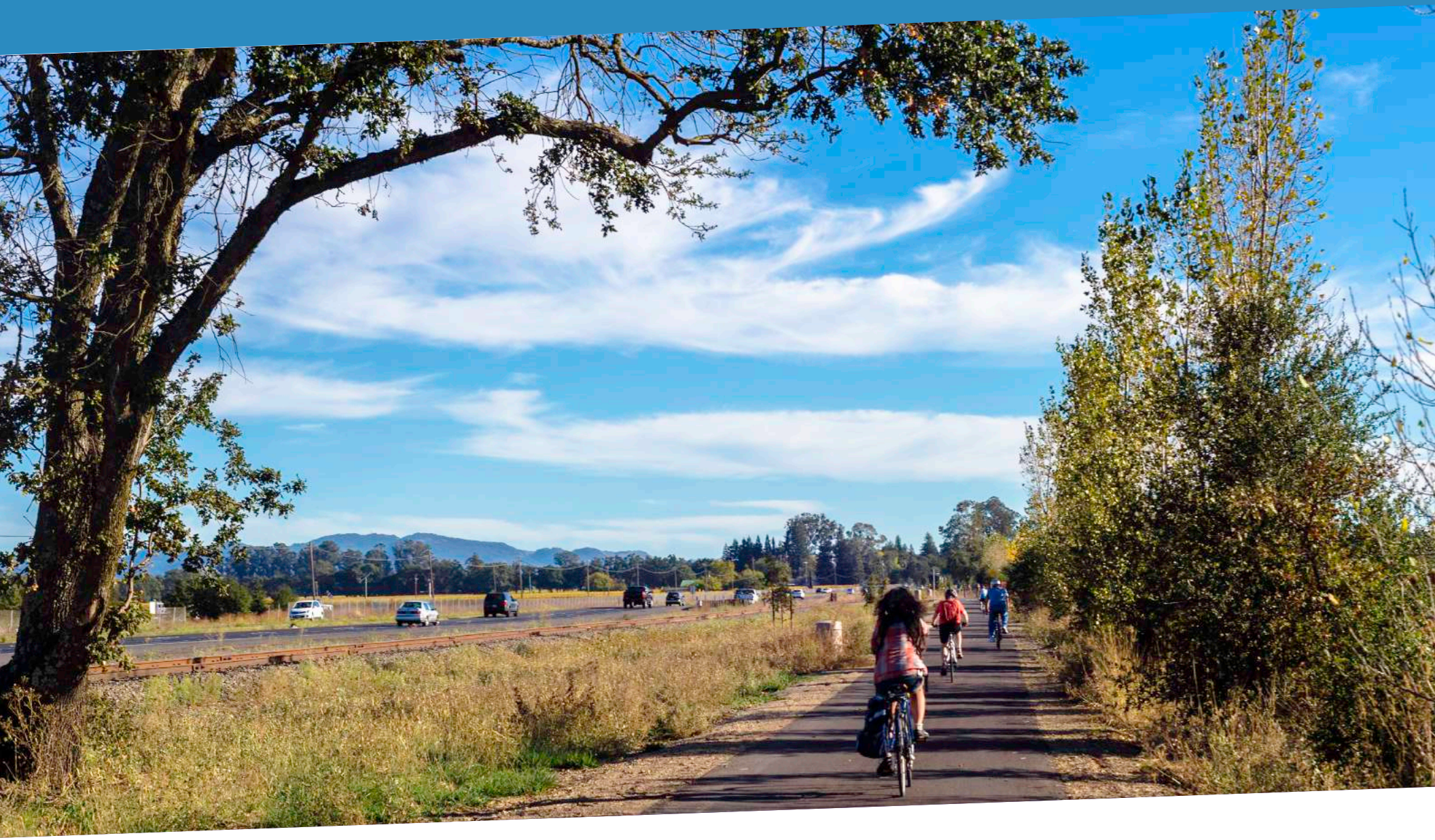
Separated bikeways at intersections can be designed as a protected intersection—providing greater separation and protection for bicyclists and minimizing the number of conflict points with motor traffic. Corner islands keep bicyclists to the right, placing them downstream of the cross street and allowing right-turning motorists to complete a turn before interacting with bicyclists. Bicycle crossings are placed next to, but separated from, pedestrian crossings. Protected intersections can facilitate left turns for bicyclists by providing a waiting area to complete the crossing in two stages.



Green-Colored Pavement Through Conflict Areas

Green-colored pavement can be used on Class II or Class IV bikeways. When bikeways cross intersections or motorists need to merge across a bikeway, green-colored markings become dashed. This can be useful at ramp intersections to increase visibility and draw attention to the presence of bicyclists.

Right: This concept from the Santa Clara Valley Transportation Authority's *I-680 Corridor Study* includes ramp crossing treatments along Calaveras Road (State Route 237) as it crosses Interstate 680.



Needs and Opportunities

Promoting bicycling requires addressing known safety challenges and real and perceived barriers that make bicycling too stressful or impractical for most people.

Bicycling in District 4

The State transportation network in District 4 includes freeways, expressways, and non-freeway State routes, known as conventional highways, in a variety of urban, suburban, small town and rural settings. State highway corridors serve an essential function for intercity and interregional travel and the regional economy. They are a key feature of the built environment throughout the region. Freeways and major highways often act as a barrier to bicycling and, in many areas, their effects disproportionately impact low income and minority communities. State highways also act as main streets through many communities, providing access to local destinations. In rural areas, State highways are often the only option for travelers, including bicyclists.

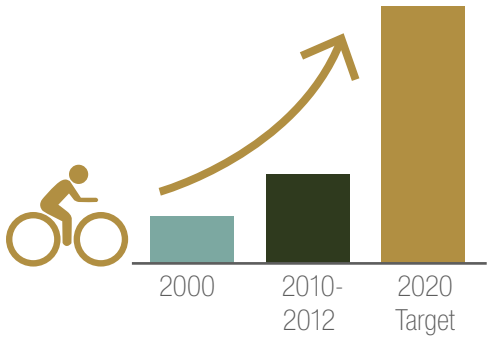
Bicycle transportation has a long history in California. While most State highways allow bicycling, many lack low-stress facilities and crossings to meet the needs of users of all ages and abilities. Because of this, most bicycling occurs on local streets and bikeways. Many cities in the Bay Area are starting to plan and develop low-stress bicycle facilities within their jurisdictions, resulting in a patchwork of bicycle networks that don't always cross jurisdictional lines and often exclude State highways.

Bicyclists in downtown San Francisco; photo by Sergio Ruiz

Facing Page: Vine Trail in Napa County parallel to State Route 29; photo by Sergio Ruiz

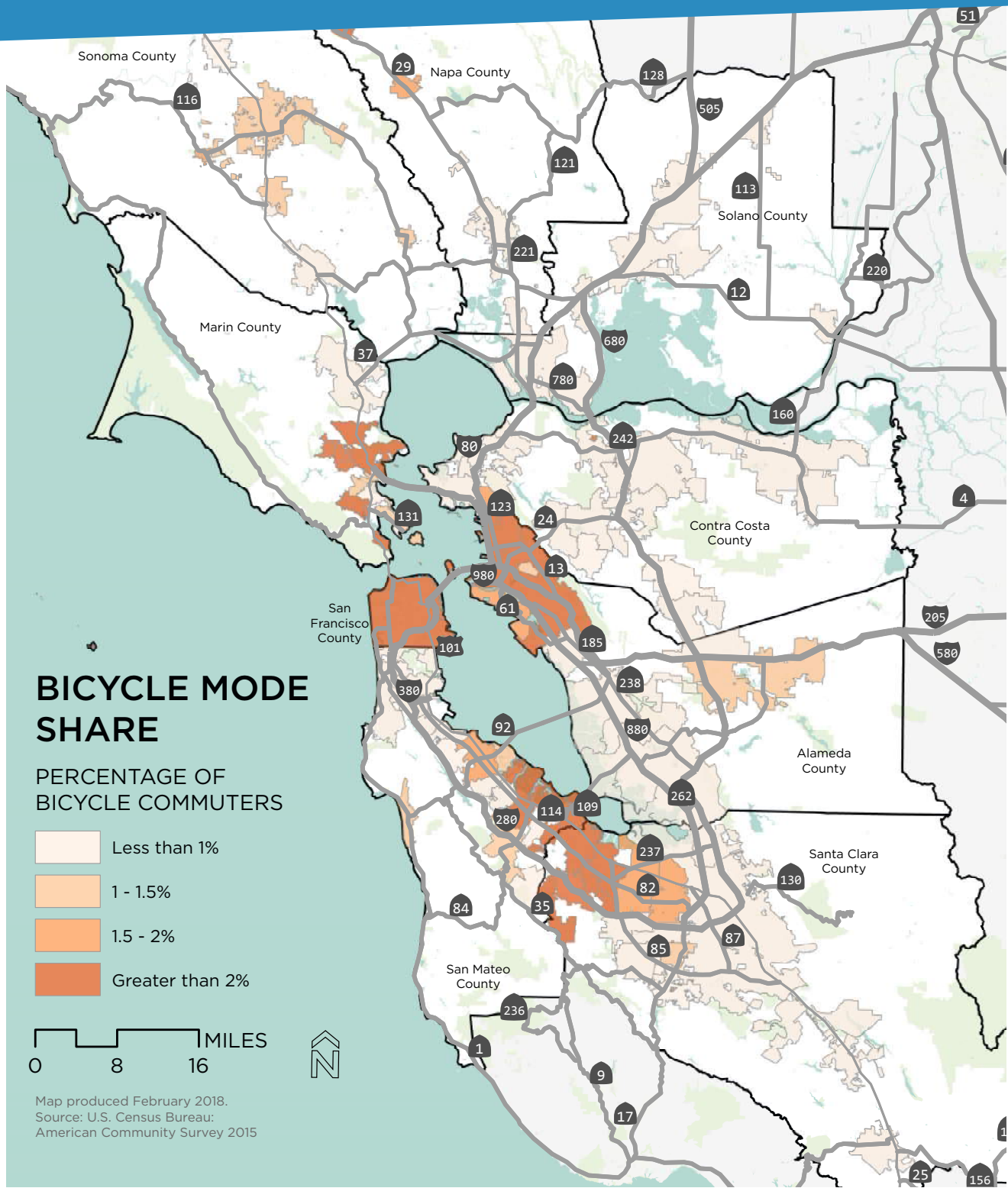
Bicycle Mode Share

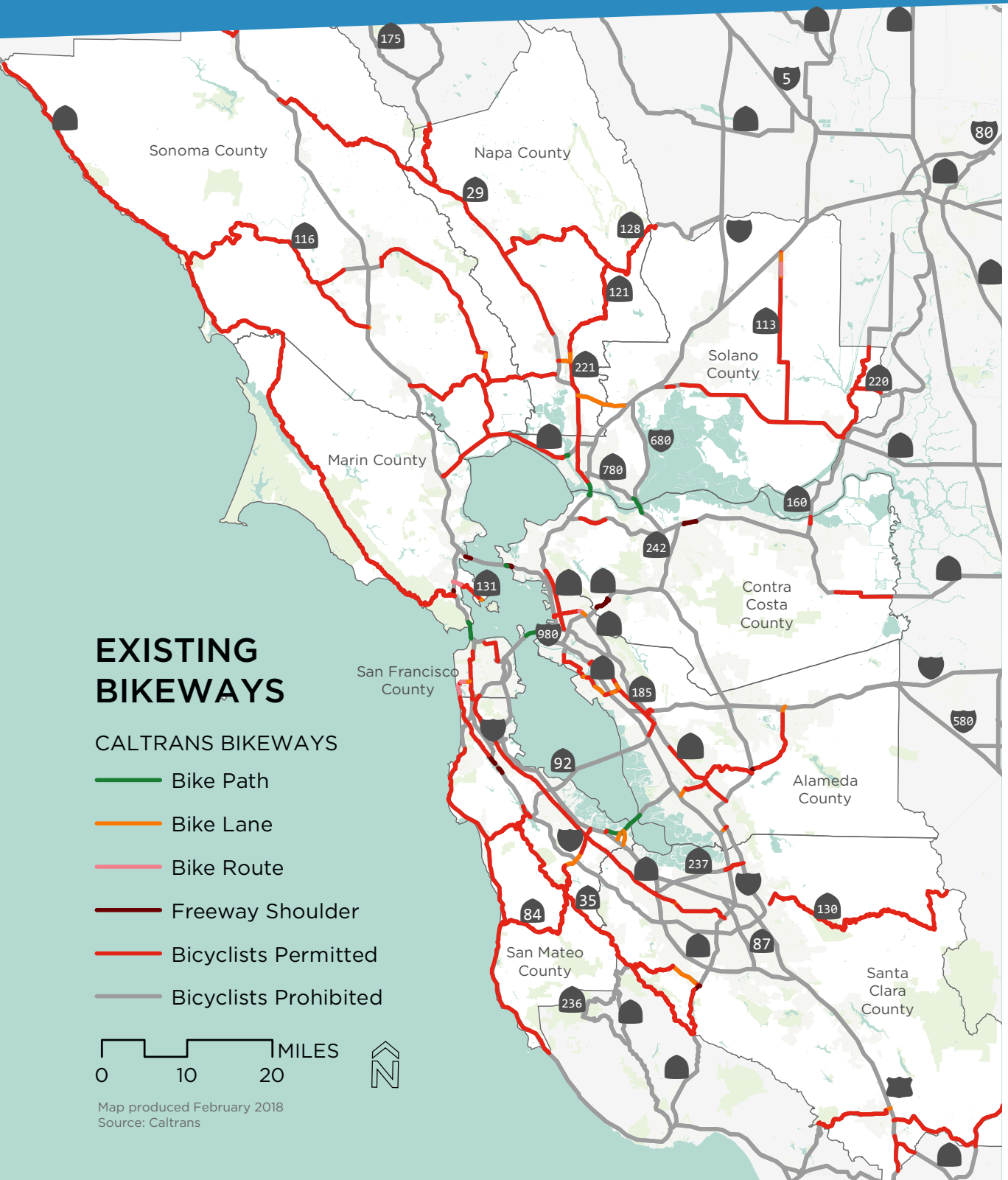
Caltrans has established a target to triple bicycling by 2020, using the 2010-12 California Household Travel Survey as a baseline, which showed a 1.5% bicycle mode share as a percentage of all trips in California. According to the U.S. Census Bureau: American Community Survey (ACS), the 2015 commute mode share for bicycling in the Bay Area was 1.8%, compared to 0.9% in the Los Angeles metropolitan area and 0.7% in the New York metropolitan area. The map shows the 2015 bicycle mode share for cities throughout the Bay Area, based on ACS data.



Above: The *Caltrans Strategic Management Plan* set a target to triple bicycling by 2020; source: California State Bicycle and Pedestrian Plan

Right: Bicycle mode share by city. Adapted from Metropolitan Transportation Commission's *Vital Signs* website





Existing Bikeways

The District 4 Bike Plan began by identifying existing bicycle networks in the Bay Area. Prior to the Plan, Caltrans District 4 developed an online State Highway System Bike Map that identified available bikeways along the State highway system within the nine Bay Area counties. This map identifies State highways that are open to bicyclists, the type of bicycle facility, if any, and where bicycling is prohibited.

This information was combined with available data from regional, county and local agencies to help ensure that the Plan considered connections to local bicycle networks, where most bicycle travel tends to occur.

Left: Map of existing bikeways on State highways. A webmap of the District 4 Bike Map is available on the District 4 Pedestrian and Bicycle Program website at http://www.dot.ca.gov/d4/transplanning/pedbikeprogram.html

Bicycling Needs on State Highways

Caltrans District 4 covers the nine Bay Area counties and nearly 1,400 miles of State highways. It ranges from dense cities to suburbs, small towns, and rural areas. Defining bicycle needs in these varying contexts requires data sources and methods that can be replicated and useful across the region.

Two broad questions shaped the needs analysis:

- How much **demand** is there for bicycle travel on or across the State transportation system?
- How significant a **challenge** is there to bicycling on or across the State transportation system?

These questions were evaluated using several data sources, helping to gauge areas of need. Because of the size and complexity of the region, using multiple sources allowed for a more robust evaluation of needs.

Demand and Use

Demand was estimated using two data sources:

- **Travel Demand Model**
  The Metropolitan Transportation Commission (MTC), the metropolitan planning organization for the Bay Area, estimates trips made throughout the Bay Area using a travel demand model. This model was used to identify locations with significant numbers of short trips.
- **District 4 Bike Plan public survey**
  Respondents to a public survey conducted as part of the public outreach for this Plan identified where they currently bicycle or would like to bicycle, helping identify areas of existing and potential use.

Challenges and Barriers

The following data sources were used to identify potential challenges and barriers:

- **State safety data**
  The Statewide Integrated Traffic Records System (SWITRS) captures a record of traffic collisions. The density of these collisions, weighted by severity, provided insight on existing challenge areas
- **Level of traffic stress**
  Each segment and crossing of the State highway system was coded for its level of traffic stress (see definitions below), measuring how comfortable various users are bicycling on different types of facilities.
- **District 4 Bike Plan public survey**
  The public survey also included questions about existing barriers that helped identify challenges.

Level of Traffic Stress

Level of Traffic Stress (LTS) evaluates the quality of the transportation network from the perspective of different types of bicyclists.

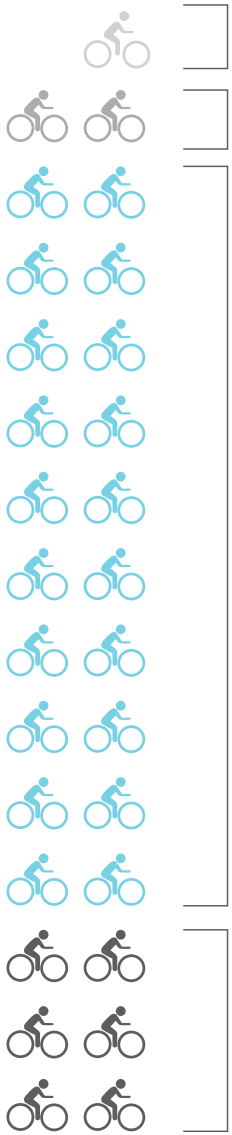
Bicycle planning professionals typically categorize bicyclists into four broad categories:

- **Strong and fearless** bicyclists are willing to ride in traffic
- **Enthused and confident** bicyclists prefer some separation, but are comfortable on many facilities
- **Interested but concerned** bicyclists are not comfortable biking in mixed traffic and prefer trails, separation from automobiles, and lower speeds and volume streets
- **No way, no how** individuals are not interested in bicycling

Generally, facilities rated LTS 1 are understood to be comfortable for children, LTS 2 for other “interested but concerned” , LTS 3 for the “enthused and confident” and LTS 4 for the “strong and fearless.”

For the District 4 Bike Plan, the entire State highway system and each crossing was given an LTS score. For highways open to bicyclists, the team used available Caltrans data on vehicle speeds, volumes, and available space for bicyclists.

Highway crossings were scored using Caltrans and Open Street Map (OSM) data on highway ramps and intersections. Intersections and ramps were scored using data on the quality of the mainline facility and the approach on local streets (e.g., presence of local bikeway). OSM data were particularly useful for providing data on local facilities.



Classification of Bicyclists, from *Toward an Active California*

Summarizing Needs

The maps on pages 18-20 show excerpts of the findings from the needs analysis as they were presented to the public in Spring of 2017. High resolution, full scale images of these maps are available on the Caltrans District 4 Bike Plan website.

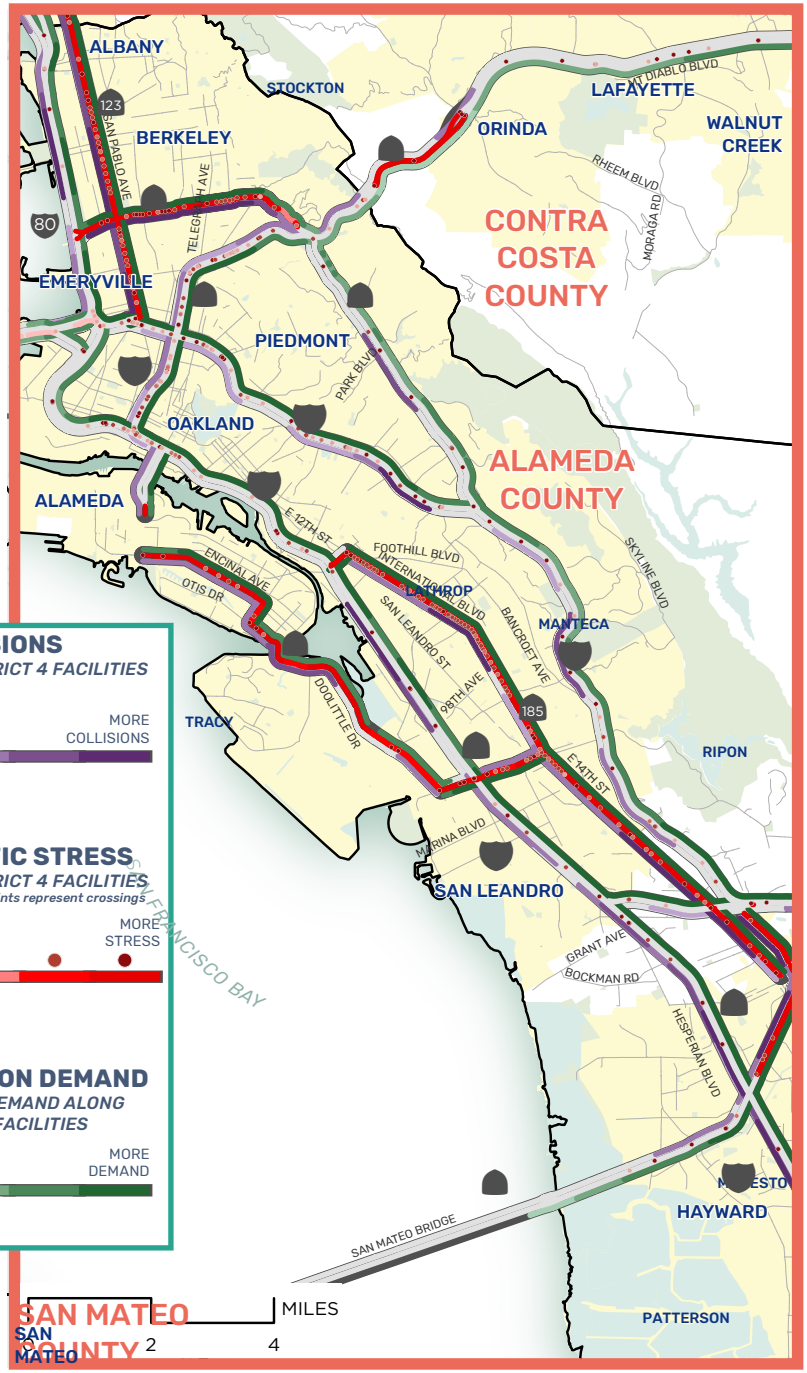
Level of traffic stress was also used to measure a State highway's permeability, or the frequency of low stress crossing opportunities. The map on page 21 summarizes the State highway network permeability for Caltrans District 4.

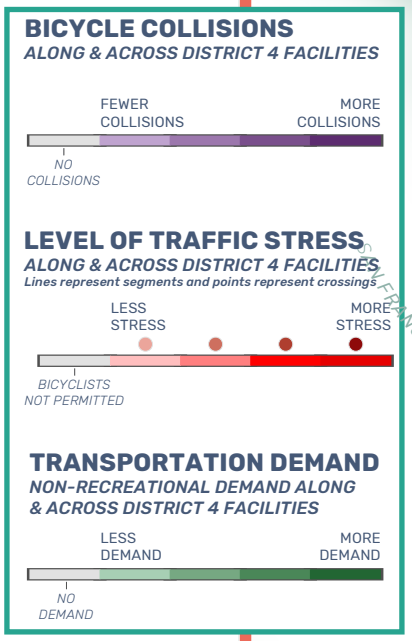
A technical memo summarizing the detailed approach and sources for the Needs Assessment can be found in Appendix D.

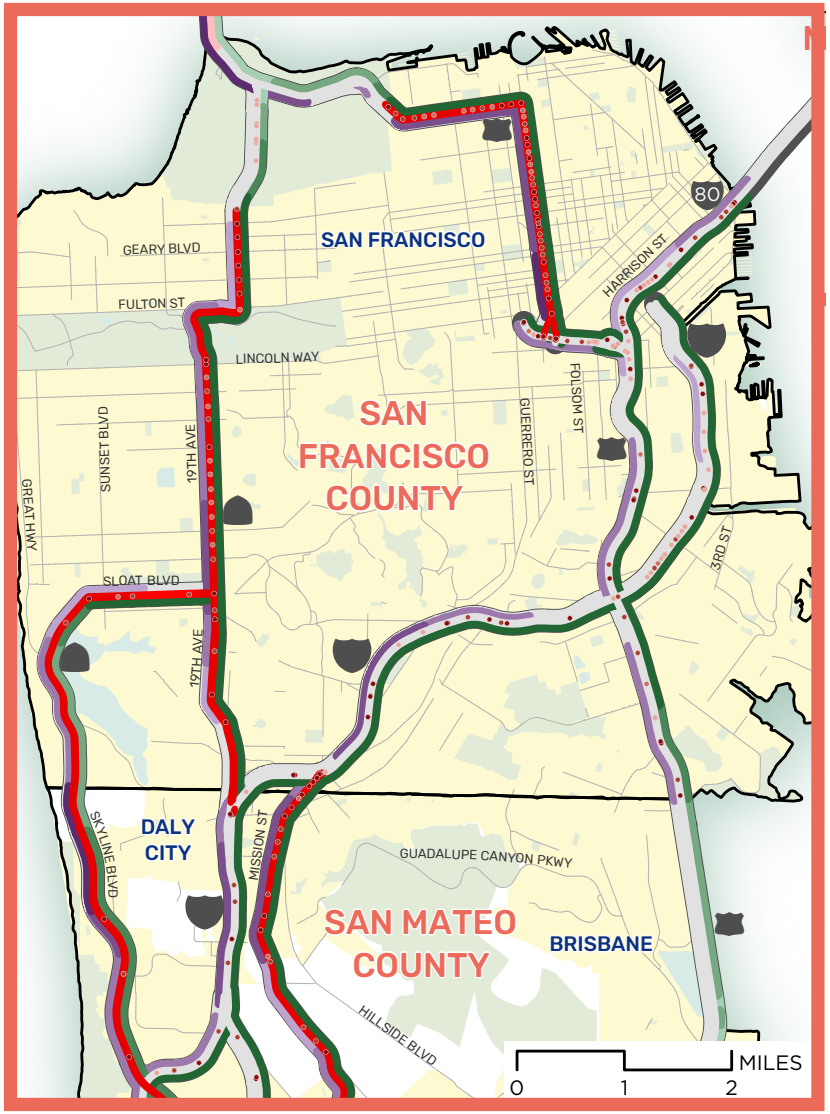
Dashed green bike lane markings help improve awareness of appropriate positioning through conflict areas. Photo of Adeline Street and San Pablo Avenue in Emeryville by Caltrans District 4 Photography / John Huseby

Needs Analysis Results

San Francisco and East Bay (Excerpt)



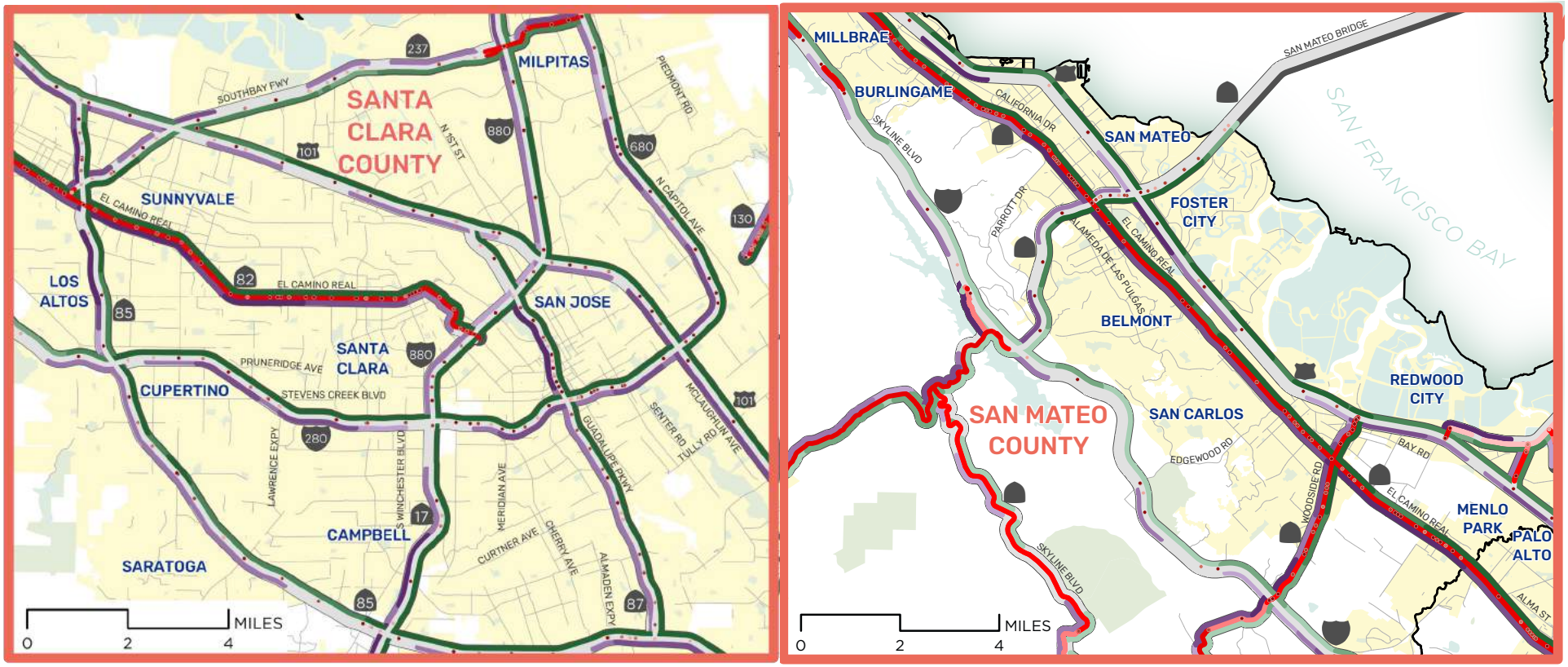




Needs Analysis maps are available in full resolution on the Caltrans District 4 Bike Plan website at www.dot.co.gov/d4/bikeplan.

Needs Analysis Results

South Bay and Peninsula (Excerpt)



BICYCLE COLLISIONS
ALONG & ACROSS DISTRICT 4 FACILITIES

FEWER COLLISIONS — MORE COLLISIONS

NO COLLISIONS

LEVEL OF TRAFFIC STRESS
ALONG & ACROSS DISTRICT 4 FACILITIES
Lines represent segments and points represent crossings

LESS STRESS — MORE STRESS

BICYCLISTS NOT PERMITTED

TRANSPORTATION DEMAND
NON-RECREATIONAL DEMAND ALONG & ACROSS DISTRICT 4 FACILITIES

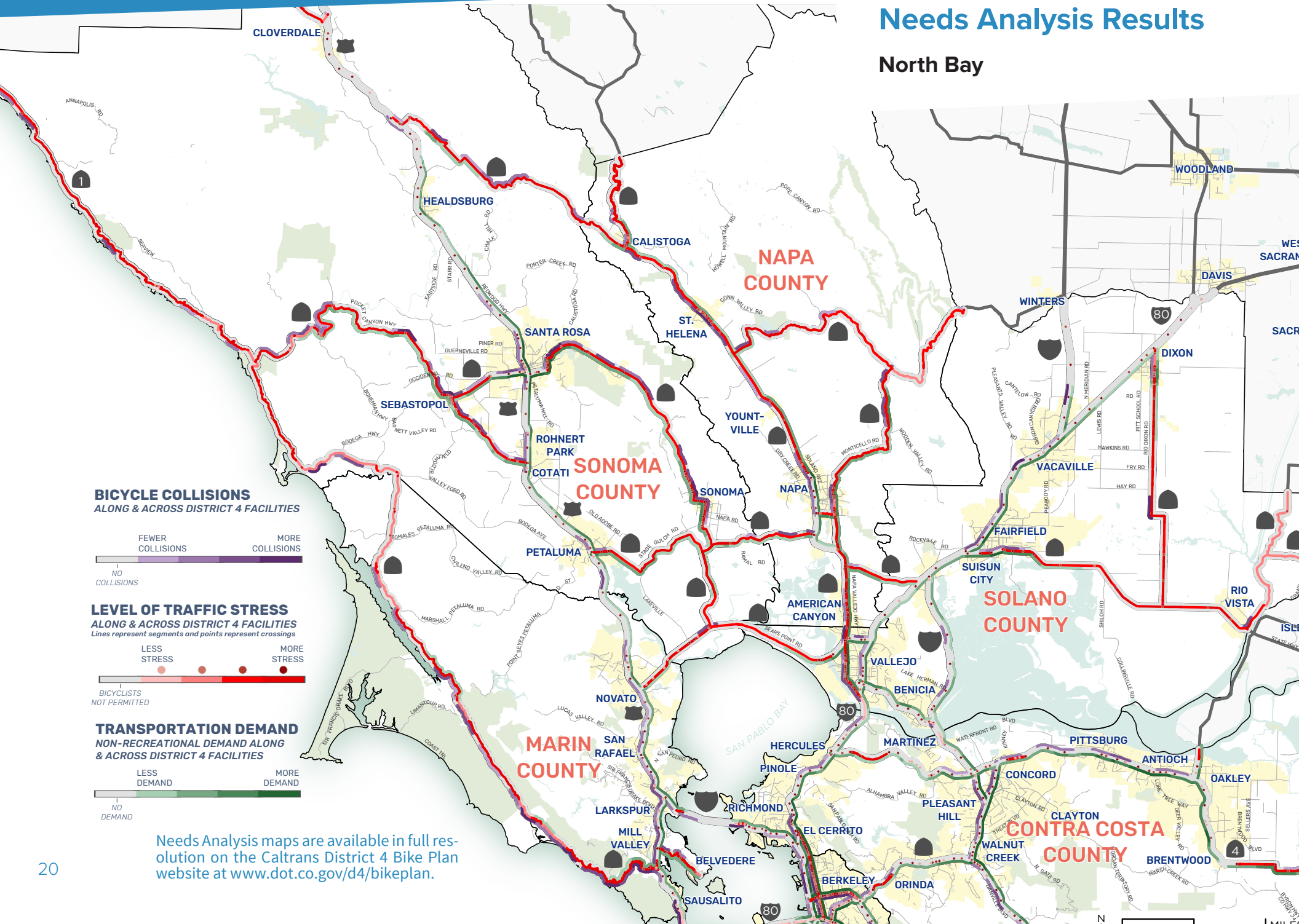
LESS DEMAND — MORE DEMAND

NO DEMAND

Needs Analysis maps are available in full resolution on the Caltrans District 4 Bike Plan website at www.dot.co.gov/d4/bikeplan.

Needs Analysis Results

North Bay



BICYCLE COLLISIONS
ALONG & ACROSS DISTRICT 4 FACILITIES

FEWER COLLISIONS — MORE COLLISIONS

NO COLLISIONS

LEVEL OF TRAFFIC STRESS
ALONG & ACROSS DISTRICT 4 FACILITIES
Lines represent segments and points represent crossings

LESS STRESS — MORE STRESS

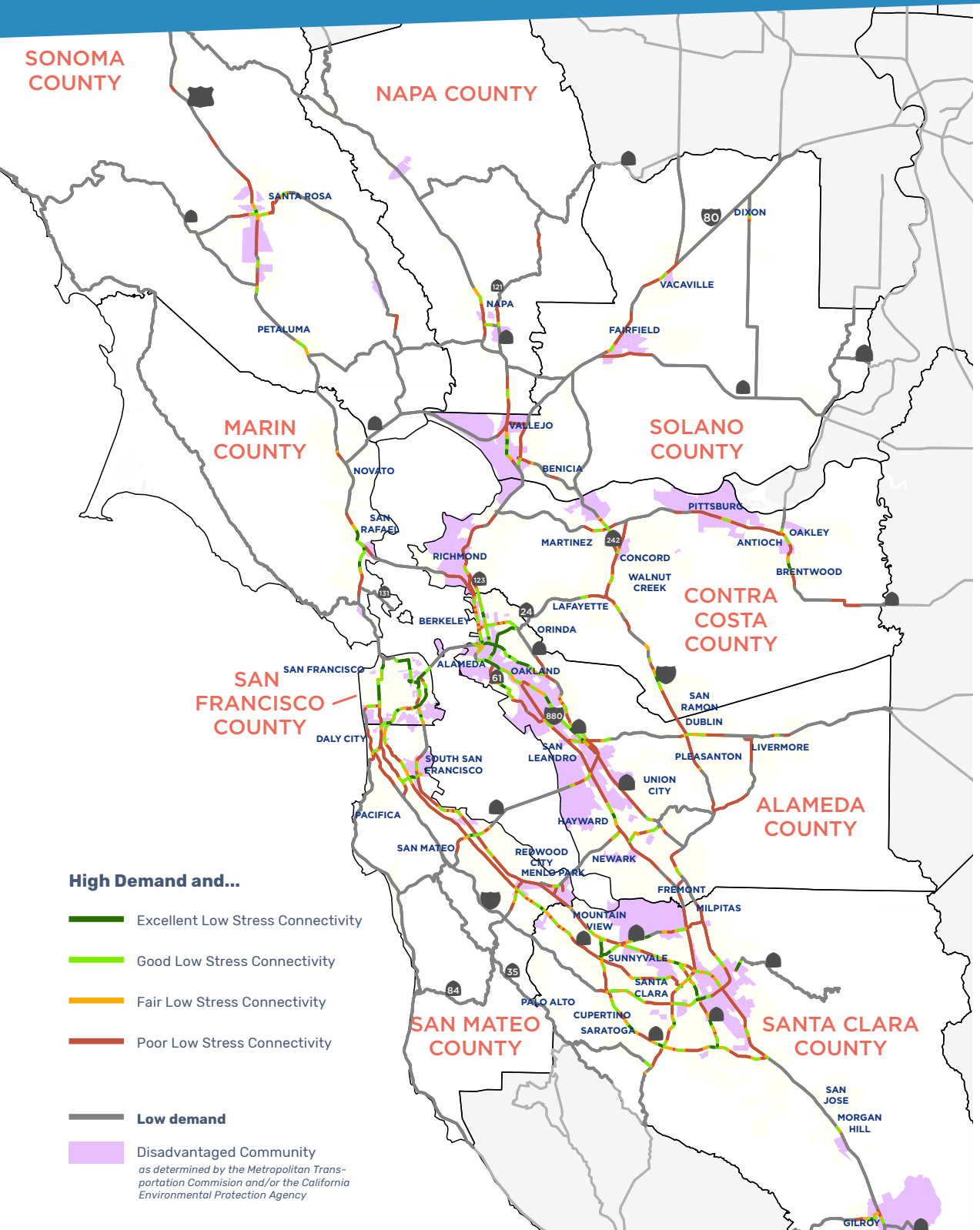
BICYCLISTS NOT PERMITTED

TRANSPORTATION DEMAND
NON-RECREATIONAL DEMAND ALONG & ACROSS DISTRICT 4 FACILITIES

LESS DEMAND — MORE DEMAND

NO DEMAND

Needs Analysis maps are available in full resolution on the Caltrans District 4 Bike Plan website at www.dot.co.gov/d4/bikeplan.



Permeability

The permeability analysis for this Plan was conducted as a part of a case study for the Federal Highway Administration (FHWA) *Guidebook for Measuring Multimodal Connectivity*. Available low stress crossings were measured for each quarter mile segment of the State transportation network, and for the surrounding half mile and mile. These three observations — at a quarter mile, half mile, and one mile — provide a comprehensive indication of how easy it is to cross a State highway by bike.

This map summarizes the availability of low stress crossings of the State highway system in the Bay Area, using the information on the level of traffic stress of each existing crossing, as described on page 16. Where more low stress crossings are available, the highway network is more permeable — it is easier for bicyclists to cross.

The FHWA Guidebook is available at https://www.fhwa.dot.gov/environment/bicycle_pedestrian/

Bicycle Parking Needs

Providing end-of-trip facilities is a critical element to supporting bicycling — places to park bicycles short and long term, showers and lockers for commuters, and other amenities can eliminate some of the barriers that make bicycling impractical for many people.

Caltrans has a relatively small role to play in delivering these facilities on the State highway system. Local agencies and employers provide most bicycle parking infrastructure through racks on the street or in building secure facilities.

Increasingly, transit agencies in the Bay Area — such as the Bay Area Rapid Transit (BART) District, Amtrak and Caltrain — are providing secure parking for commuters. Caltrans has some limited bicycle lockers at park and ride locations throughout the Bay Area. This Plan included an evaluation of these park and ride lots to assess the need for additional lockers.

Electronic bike lockers at the Lake Merritt BART Station; photo by Sergio Ruiz

Bicycle Parking Facility Types

Caltrans currently provides keyed lockers that can be reserved when available and used by a single user. These lockers are managed by District 4 staff. In recent years, several technologies been introduced by transit agencies for secure bicycle parking, including electronic lockers, stand-alone bicycle parking structures, and even automated bicycle parking kiosks. Many of these facilities and features require additional operating costs. While capital costs to purchase secure bicycle parking lockers are often available, resources to cover ongoing operating costs are often hard to come by. One option could be to have part of the operating costs covered by charging a small user fee, similar to the way BART operates bike lockers at its stations. One option to increase the amount of secure bike parking is to have operating costs covered by a small user fee.

Electronic lockers are the most secure for individual bicycles in areas, like park and ride lots, that do not have all day surveillance. Caltrans should continue to work with other jurisdictions and transit agencies to install and manage bicycle lockers and amenities at facilities within Caltrans right of way.

Bike Lockers at Park and Ride Locations

Park and ride locations with potentially higher demand for bike parking were identified based on the facility's proximity to segments of the State network that scored higher in transportation demand in the needs analysis.

While these locations are highlighted as opportunities on the map, other locations may benefit from having bicycle lockers based on factors not accounted for in the needs analysis. Caltrans will work with local jurisdictions and stakeholders where there is a demonstrated need and indication of potential use for secure bike lockers.

Future park and ride bike parking should include the following features:

- Electronic locks that can be accessed via a key card or similar technology
- Connected lockers that can provide information to potential users about their availability and potentially facilitating an on line check out process for these lockers
- Partially see through lockers (BART's lockers use perforated steel) to improve security.

Left: Demand for bicycle travel in the vicinity of existing State-owned park and ride lots.

Bicycle Highway Opportunities

The California State Bicycle and Pedestrian Plan, *Toward an Active California*, includes a strategy to define and implement "bicycle highways" that separate bicyclists from both motor traffic and pedestrians, bicycle-specific interchanges that minimize the need for stopping, and wider bikeways that allow passing. Based on experiences in other countries such as Denmark and the Netherlands, bike highways can support longer distance commuting, increase the number and types of trips that can be made by bicycle, and encourage more people to bike by providing greater separation from other modes of travel.

In California, low-speed electric bikes, or e-bikes, are permitted on bicycle facilities, unless expressly prohibited by a local jurisdiction. In recent years, e-bikes have become increasingly affordable and accessible. They also have the potential to increase the distance and terrain most people can comfortably travel by bike for commuting. Planning for intercity bicycle highways should consider and accommodate trips by people using e-bikes and other electric-assist mobility devices.

Bay Area Trails

In the Bay Area, there is an opportunity to build on a growing network of trails and off-street paths that have been established in the region. With regional trails like the San Francisco Bay Trail to trails that link communities within one or more counties (Iron Horse Trail, Guadalupe River Trail, Sonoma-Marin Area Rail Transit (SMART) Trail, Napa Valley Vine Trail, California Coastal Trail, and others), there is an emerging network that serves longer distance bicycle travel needs.

While most trails in the Bay Area do not meet typical European design standards for bicycle highways, they do form a potential core network of routes that could help serve intercity and regional travel.

Right: Rendering of Richmond-San Rafael Bridge Path Pilot Project, courtesy Metropolitan Transportation Commission and Bay Area Toll Authority

Separated Bikeways on Conventional Highways

Several urban conventional State highways in District 4, such as El Camino Real (State Route 82) on the Peninsula and San Pablo Avenue (State Route 123) in the East Bay, serve as the backbone to many communities. These streets often lack dedicated bikeways that would make bicycling practical and comfortable for many people, despite serving concentrated housing and commercial land uses that are within biking distances.

Urban conventional highways typically pass through multiple jurisdictions and have constrained right of way, making it challenging to develop a consistent vision that meets the needs of all users. Providing dedicated bikeways on highways may require design trade-offs with existing features, such as parking or traffic lanes. Some corridors have parallel bike routes, but these vary in quality, are often discontinuous, and/or do not access destinations along the highway. Continuous, high-quality bikeways along these highway corridors would help make biking a viable option for many people.

Some conventional highway corridors have a long history of planning by jurisdictions at the local, regional, and state level. The Grand Boulevard Initiative — a group of 19 cities, counties, and regional agencies — collaborated to develop a shared vision to link transportation and land use along El Camino Real. These efforts focus on safety, access, and livability with an emphasis on complete streets.

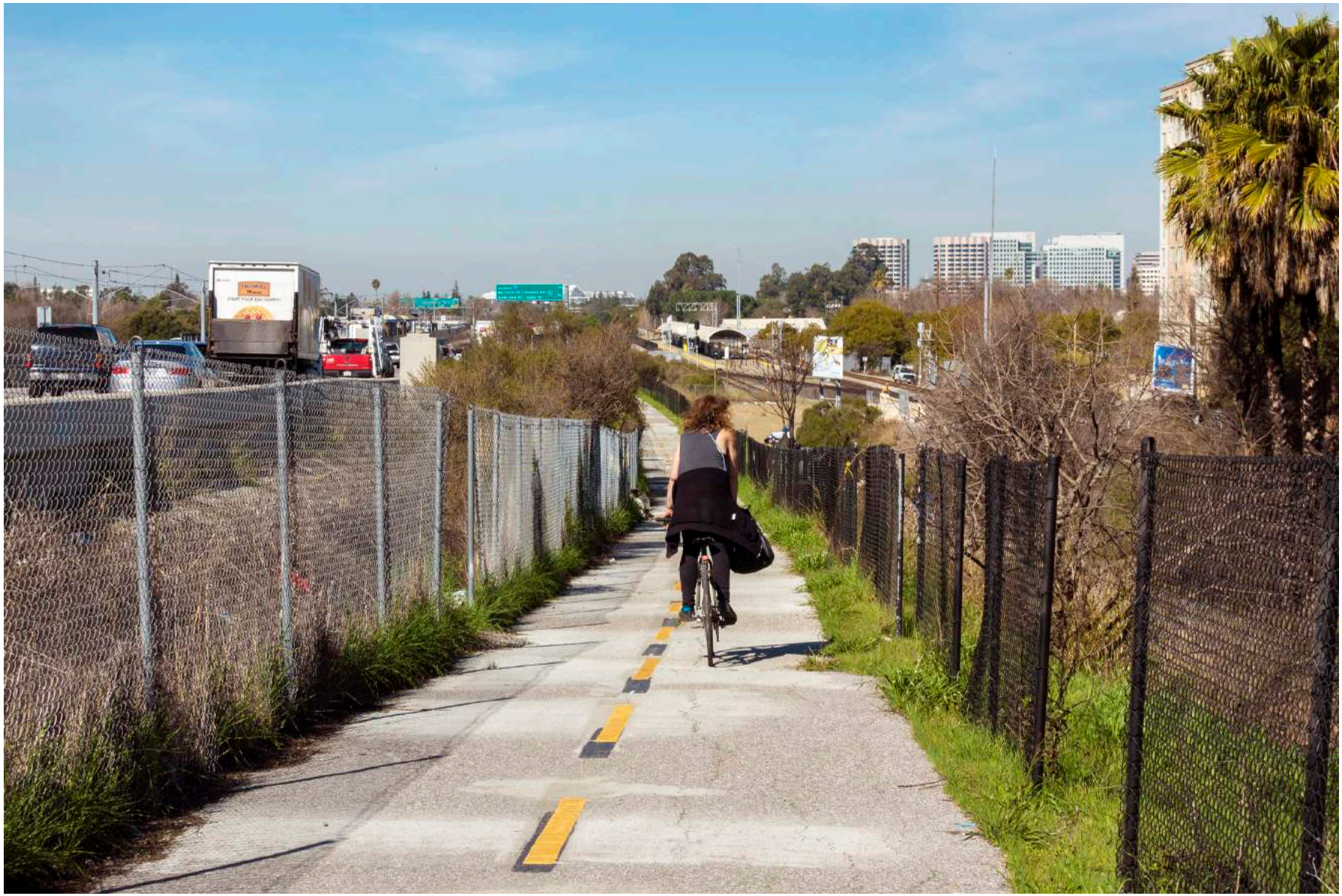
Some jurisdictions are already planning and developing separated bikeways on conventional highways in District 4. Redwood City's recently adopted El Camino Real Corridor Plan envisions separated bikeways through much of the City's corridor while acknowledging some of the challenges in implementing such a vision. Redwood City, Menlo Park, Palo Alto and Mountain View are working together on plans to improve biking safety and accessibility along El Camino Real and on parallel streets.

In the East Bay, the Alameda County Transportation Commission has initiated the San Pablo Avenue Multimodal Corridor Project to identify and evaluate short and long-term improvements in an effort to enhance safety and mobility for all modes, meet growing demand along the corridor, and support the local economy. A range of concepts are being considered with input from cities and stakeholders, taking into account the local context and limited roadway width.

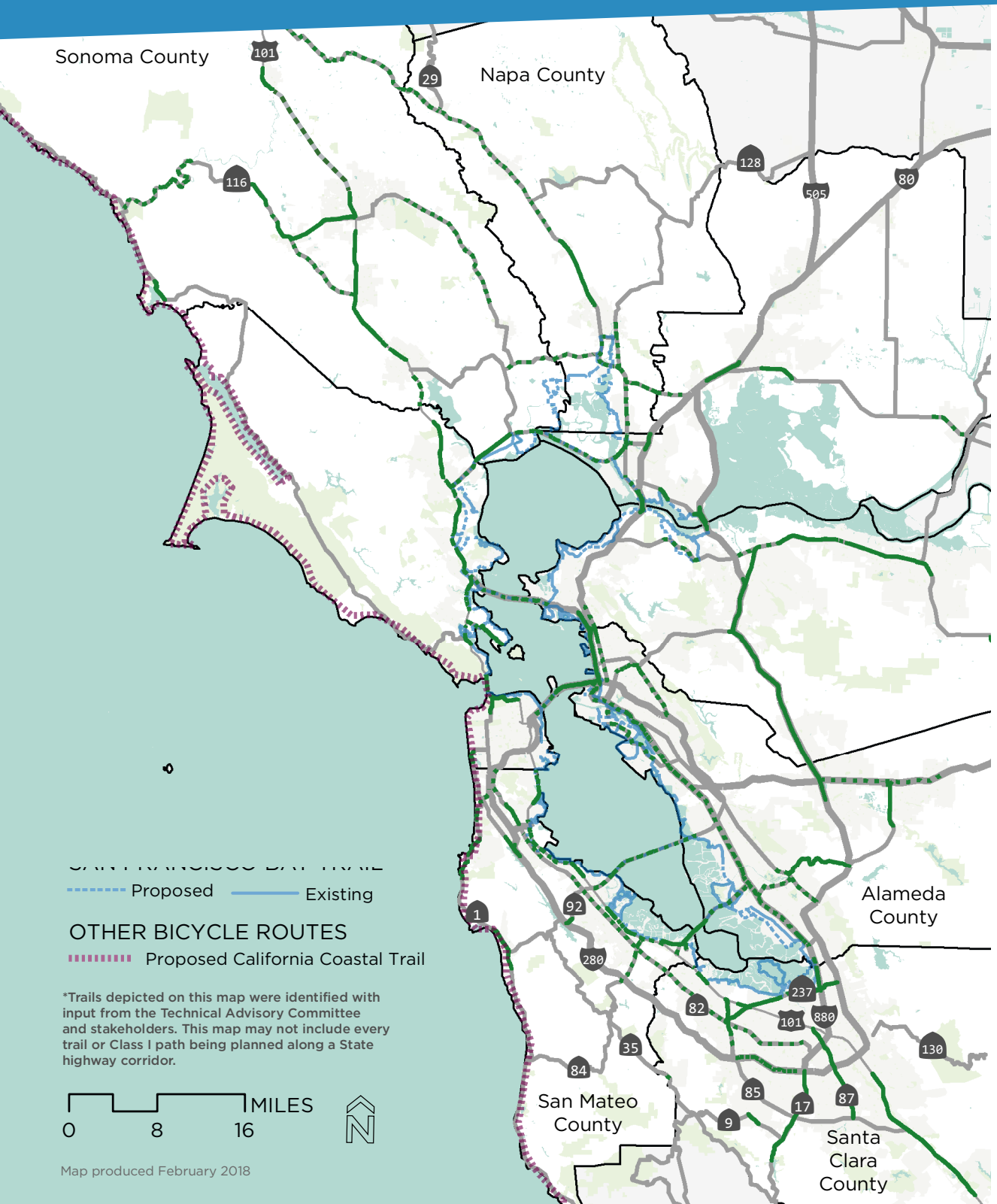
The City of Albany worked closely with the University Village development and Caltrans to construct a raised, two-way separated bikeway on San Pablo Avenue — the first of its kind on a State highway. The bikeway includes vertical curb separation between bicyclists and pedestrians, dedicated bicycle signals, and connections to other bikeways in Albany. This project is an example of what a bicycle highway could look like along a State highway. A photo of this bikeway is featured on the introduction page of this report

With Caltrans endorsement of National Association of City Transportation Officials (NACTO) guidance and Caltrans design guidance on separated bikeways, there are new opportunities to develop visions and plans that include bicycling as a viable option on State highways.

Concept of El Camino Real and Roosevelt Avenue, Redwood City El Camino Real Corridor Plan, 2017



The Highway 87 bike path in Santa Clara County is a route that supports longer distance bike commuting. Photo by Sergio Ruiz



Bay Area Bicycle Highway Opportunities

The District 4 Bike Plan identifies existing and proposed trails and separated bikeways along State highway corridors. The map on the left shows State highways with existing and proposed parallel paved trails and on-highway separated bikeway opportunities. The map also shows the spine network of the San Francisco Bay Trail, a planned 500-mile walking and cycling path surrounding the San Francisco Bay, and the proposed California Coastal Trail alignment.

For trails, the map shows paved trails only and not soft surface hiking or mountain biking trails. These unpaved trails are primarily used for recreation, while the Plan focuses on transportation needs.

Many of the proposed bikeways shown in this map will require further study and coordination with stakeholders and endorsement by local agency partners.

Left: Existing trails and separated bikeways along with proposed projects or concepts that could serve as the backbone of a set of bicycle highways in the Bay Area.

Priority Improvements

The District 4 Bike Plan identifies the highest priority bicycle investments on State highways throughout the Bay Area.

Improvements Considered

The District 4 Bike Plan complements the policy focus of *Toward an Active California* by identifying specific improvements for Caltrans to pursue individually or in cooperation with other agencies. These improvements range from simple striping or signage on existing facilities to new trails, bike lanes, cycle tracks, or entirely new highway crossings.

The District 4 Bicycle Plan considered both short-term, easier to implement improvements and more significant improvements that require substantial planning and investment. Following Caltrans Complete Streets policy (Deputy Directive 64), all Caltrans projects need to be evaluated to meet the needs of all users, including bicyclists, and appropriate to the function and context of the facility. Maintenance and resurfacing projects are typically funded through the State Highway Operations and Protection Program (SHOPP) and low-cost countermeasures that can be incorporated into these existing projects are appropriate.

Facing page: US 101 Ralston Avenue Pedestrian/ Bicycle Bridge; photo by Caltrans District 4 Photography / John Huseby.

This Plan focuses on the more challenging and significant improvements, recognizing that basic striping should be incorporated into regular maintenance and preservation projects wherever there are bicycle needs.

What is a Project?

A project in the context of this Plan refers to proposed improvements, most of which will need further planning, design, and coordination to determine feasibility. In this Plan, **the terms 'improvements' and 'projects' are used interchangeably** to refer to proposed improvements that will continue to need planning and design work before they can be programmed for funding.

Implementing complete street features on State highways often involves trade-offs and competing needs, such as parking, traffic operation, or environmental resources. Caltrans design standards allows for flexibility and consideration of context to facilitate the development of complete streets, recognizing that State highways are multimodal. Local jurisdictions also play an important role in identifying local priorities and supporting a vision that aligns with State goals. Improvements that prioritize safety for people walking and bicycling should be incorporated in the design of roadways, intersections, and trail crossings.

Local Coordination

The process for identifying and prioritizing projects considered local and regional bicycle plans to the greatest extent possible to ensure that the investments proposed by Caltrans would support the local networks that carry most bicycle travel.

A technical memo summarizing the detailed approach and sources for Project Identification and Prioritization can be found in Appendix E.

Project Identification

Projects were identified for the Plan from three primary sources:

- **City, county, and regional bike plans and related plans**
  To the extent that these plans were readily available, they were reviewed and relevant projects incorporated. For example, if a plan identified proposed bicycle lanes through a State highway interchange, improvements were identified at that interchange that were consistent with the proposed facility type.
- **Meetings with county advisory committees and staff**
  Individual meetings were held in each of the nine counties with staff from county planning agencies and their relevant bicycle advisory committees or local agency staff.
- **Based on needs**
  The project team identified potential projects using the needs analysis where no other plan defined a specific project.

Four types of projects were identified for inclusion in the District 4 Bicycle Plan, addressing both improvements along State highways and crossings:

- **Corridor improvements**
  The addition of a roadway improvement or bicycle facility for a segment of a State highway where bicycling is permitted. This can include shoulder improvements, a Class I shared use path, a Class II bike lane, a Class II buffered bike lane, or a Class IV separated bikeway. These are primarily on conventional (surface) highways, but in some cases are proposed for access controlled freeways and expressways.
- **Interchange improvements**
  Improving bicycle accommodation at an existing interchange include minor improvements, such as new ramp merge treatments, or adding bike lanes and other supportive elements through the intersection. Major improvements include reconstructing the full interchange or the ramps to accommodate a bikeway.
- **Conventional highway crossings**
  Conventional highways interact with local streets (and other conventional highways) and include both controlled crossings (e.g., signals, stop signs) and uncontrolled intersections (where the traffic on the highway does not stop . Potential projects for controlled intersections include intersection striping improvements, signal improvements (such as a bike signal or bike detection), or other advanced treatments (such as a bike box, two-stage turn box, or protected intersection). Improvements may also include changing intersection control (to stop, signal, pedestrian hybrid beacon or flashing beacon) or traffic calming methods (such as curb extensions, median refuge, and narrowing travel lanes).
- **Separated crossings**
  Separated crossings include overcrossings, undercrossings, and adding a bikeway under an elevated freeway, completely separating bicycle and pedestrian travel from automobiles.

The Don Burnett Bicycle-Pedestrian Bridge — formerly known as the Mary Avenue Bridge — crosses Interstate 280, connecting the cities of Cupertino and Sunnyvale with direct access for residents to schools, play fields, and other community destinations; Photo by Alta Planning + Design

Project Prioritization

Following project identification, the projects were prioritized based on several measures of potential benefit and the relative cost of the improvements.

Factors

Project prioritization considered six factors:

- **Demand**
  How many bicyclists are expected to use the facility?
- **Existing Quality**
  What is the comfort and safety of the existing facility?
- **Project Quality**
  How much improvement is made by the new facility?
- **Equity**
  Does the project support a disadvantaged community?
- **Local Priority**
  Did the projects receive support from countywide plans or bicycle advisory committees or during the public outreach process?
- **Cost**
  What is the range of expected cost for the project?

Each of these factors was scored between 1 (high) and 4 (low).

Tiers

The projects were sorted into tiers based on all of these factors. Lower cost projects (under $250,000) that are most likely to be implemented through ongoing maintenance and preservation activities were evaluated separately from more expensive projects.

Three tiers of projects were defined:

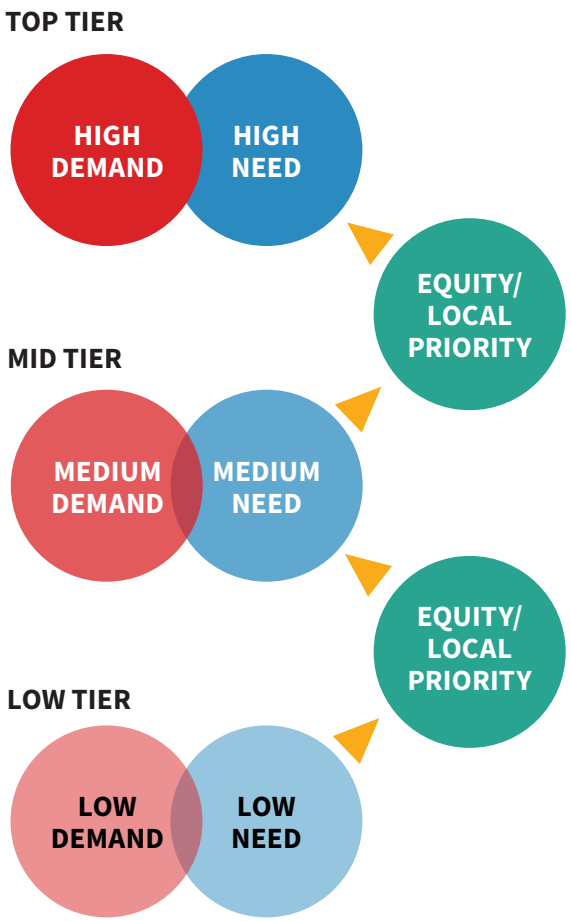
TOP Tier projects generally had high levels of demand, were in locations with significant need for improvement, and had a significant proposed improvement.

MID Tier projects had somewhat lower, but still substantial demand and existing challenges.

LOW Tier projects generally had lower levels of demand, relatively minor challenges, and more modest proposed improvements that do not significantly improve bicycle conditions.

MID or LOW tier projects that were either a local priority or would benefit a disadvantaged community (scored high on the equity score) were raised into the next highest tier.

The following pages present maps of the proposed projects in each of the nine Bay Area counties by type and tier and lists of the top tier projects. A detailed list of all projects can be found in Appendix A.



Alameda County Top Tier Projects

NO.	HWY	CITY	LOCATION	IMPROVEMENT	COST
Ala-112-C01	112	San Leandro	Doolittle Dr - E. 14th St	Corridor Improvement- Class IV	$$
Ala-123-C01	123	Albany, Berkeley	Dartmouth St - Haskell St	Corridor Improvement- Class IV	$$$
Ala-123-C02	123	Emeryville	53rd St- 36th St	Corridor Improvement- Class IV	$$
Ala-123-X05	123	Berkeley	Channing	Intersection Improvement at uncontrolled intersection	$$
Ala-123-X06	123	Berkeley	Parker St	Intersection Improvement at uncontrolled intersection	$$
Ala-13,80-X01	13,80	Berkeley	Ashby Rd	Interchange reconstruction - full reconstruction- Class I	$$$$
Ala-13-X06	13	Oakland	Park Blvd	New separated crossing	$$$$
Ala-13-X08	13	Oakland	Carson St	New separated crossing	$$$$
Ala-185-C02	185	San Leandro	Davis St - Fairmont Dr	Corridor Improvement- Class IV	$$
Ala-238-C01	238	Fremont	I-680 - King Ave (Fremont border)	Corridor Improvement- Class IV	$$$
Ala-260-X01	260	Oakland, Alameda	Embarcadero -Marina Village Pkwy	New separated crossing	$$$$
Ala-580-X06	580	Castro Valley	Castro Valley Blvd	Interchange reconstruction - ramps only- Class IV	$$$$
Ala-580-X10	580	Dublin, Pleasanton	Santa Rita Rd	Interchange reconstruction - ramps only- Class IIB	$$$$
Ala-61-C02	61	Oakland	Swan Way - Shoreline Center	Corridor Improvement- Class I	$$
Ala-61-C03	61	Alameda, Oakland	Harbor Bay Pkwy - MLK Shoreline Center	Corridor Improvement- Class I	$$
Ala-61-C04	61	San Leandro	Airport Access Rd - Davis St	Corridor Improvement - Class IV	$$
Ala-680-X01	680	Pleasanton	Stoneridge Dr	Interchange reconstruction - full reconstruction- Class II	$$$$
Ala-680-X02	680	Pleasanton	Arroyo de Laguna	New separated crossing	$$$$
Ala-680-X05	680	Fremont	Scott Creek Rd	Interchange reconstruction - ramps only- Class IV	$$$$
Ala-680-X08	680	Fremont	Washington Blvd	New separated crossing	$$$$
Ala-80-X01	80	Berkeley	Gilman St	New separated crossing	$$$$

The table only identifies Top Tier projects that are expected to cost over $250,000 to implement. A full list of projects included in the District 4 Bike Plan are available in Appendix A.

$ Under $250,000

$$ $250,000 - $1,500,000

$$$ $1,500,000 - $7,000,000

$$$$ Over $7,000,000

Alameda County Top Tier Projects (continued)

NO.	HWY	CITY	LOCATION	IMPROVEMENT	COST
Ala-80-X02	80	Emeryville	Powell St	Minor interchange improvements (signage and striping)- Class I	$$
Ala-84-C01	84	Fremont	I-880 - Mission Blvd	Corridor Improvement- Class IV	$$$
Ala-84-C03	84	Livermore	Arroyo Valle - Vineyard Ave	Corridor Improvement- Class I	$$
Ala-880-X02	880	Hayward	Eden Greenway	New separated crossing	$$$$
Ala-880-X03	880	San Leandro	Washington Ave	Interchange reconstruction - ramps only- Class IV	$$$$
Ala-880-X04	880	Hayward	Winton Ave	Interchange reconstruction - ramps only- Class II	$$$$
Ala-880-X06	880	Hayward	W Tennyson Rd	Interchange reconstruction - ramps only- Class IV	$$$$
Ala-880-X07	880	Union City, Hayward	Whipple Rd	Interchange reconstruction - full reconstruction- Class IIB	$$$$
Ala-880-X08	880	Hayward, Union City	Industrial Pkwy W	New separated crossing	$$$$
Ala-880-X10	880	Fremont	Paseo Padre Pkwy	New separated crossing	$$$$
Ala-880-X11	880	Fremont	Decoto Rd	New separated crossing	$$$$
Ala-880-X12	880	Fremont	Thornton Ave	Interchange reconstruction - ramps only- Class IIB	$$$$
Ala-880-X13	880	Fremont	Mowry Ave	Interchange reconstruction - ramps only- Class IIB	$$$$
Ala-880-X14	880	Fremont	Stevenson Blvd	Interchange reconstruction - ramps only- Class II	$$$$
Ala-880-X19	880	Oakland	Hegenberger Rd	Minor interchange improvements (signage and striping)- Class II	$$
Ala-880-X20	880	Oakland	66th Ave	New separated crossing	$$$$
Ala-880-X21	880	Oakland	54th Ave	New separated crossing	$$$$
Ala-880-X23	880	Oakland	Grand Ave	New separated crossing	$$$$
Ala-92-X01	92	Hayward	Industrial Blvd	Interchange reconstruction - ramps only- Class II	$$$$
SMAl-92-C01	92	San Mateo, Hayward	Foster City - Hayward	Corridor Improvement- Class I	$$$$

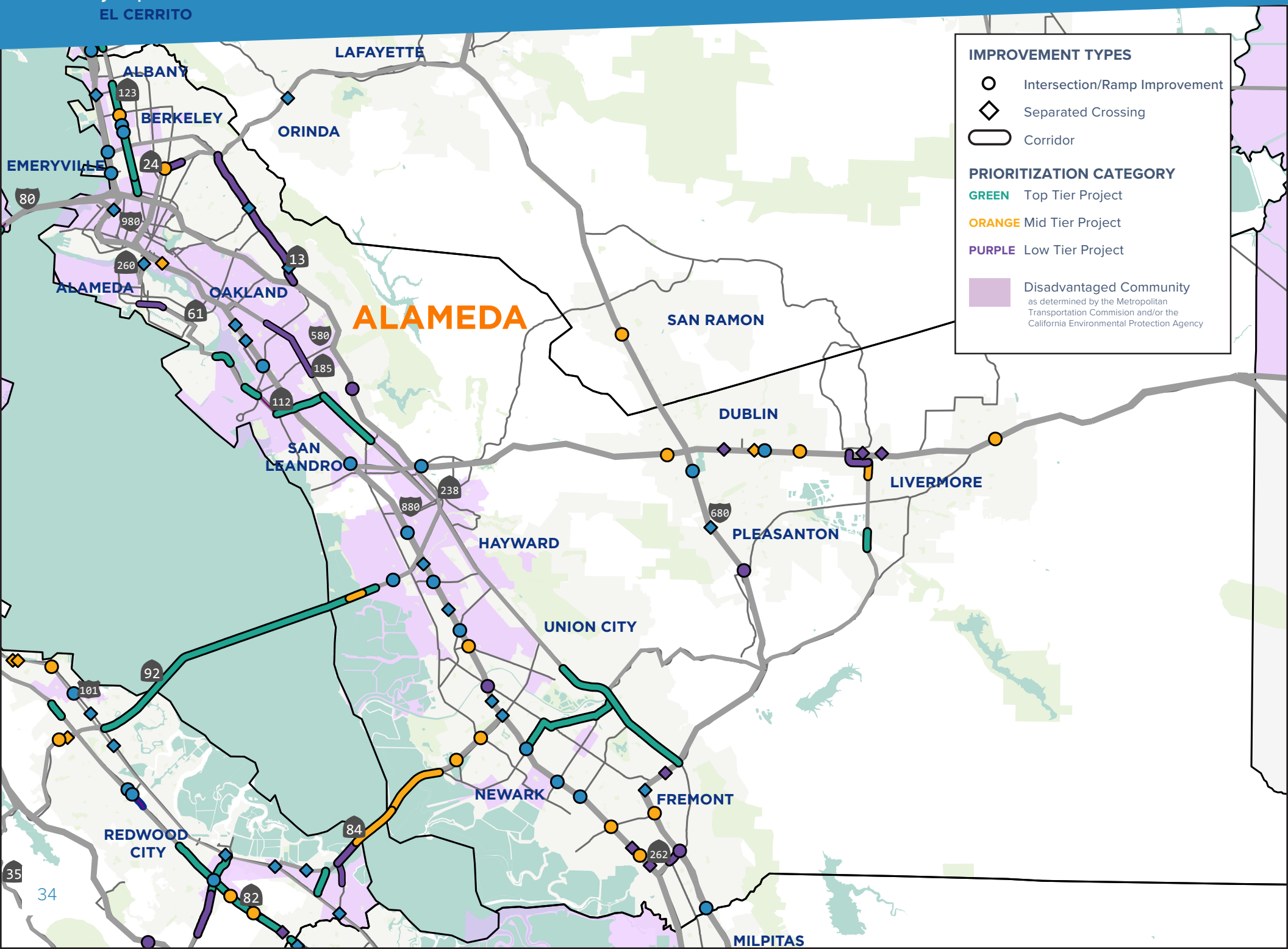
The table only identifies Top Tier projects that are expected to cost over $250,000 to implement. A full list of projects included in the District 4 Bike Plan are available in Appendix A.

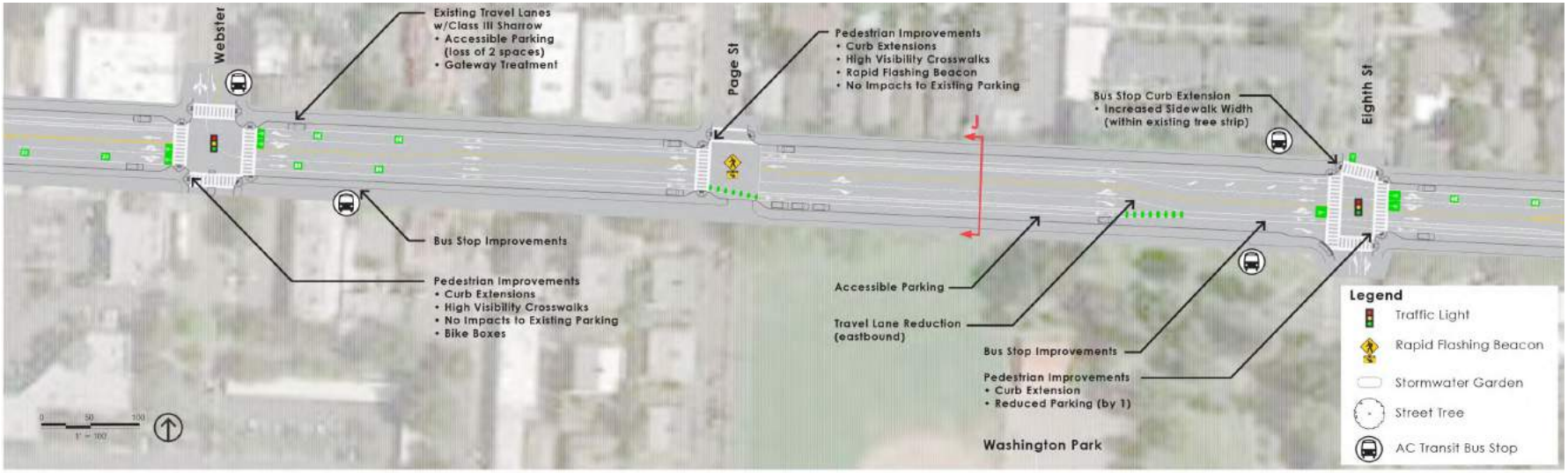
$ Under $250,000

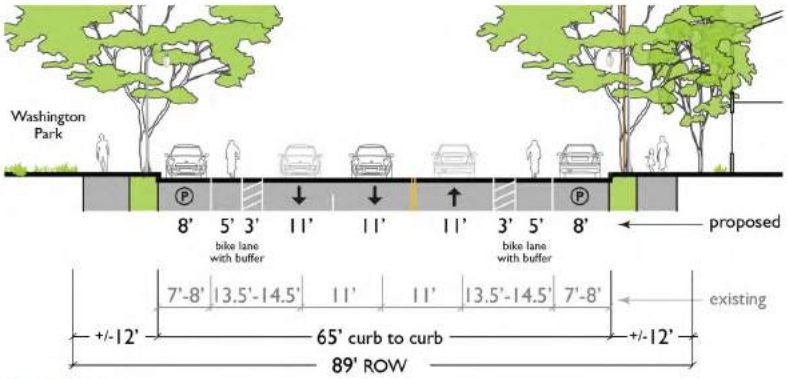
$$ $250,000 - $1,500,000

$$$ $1,500,000 - $7,000,000

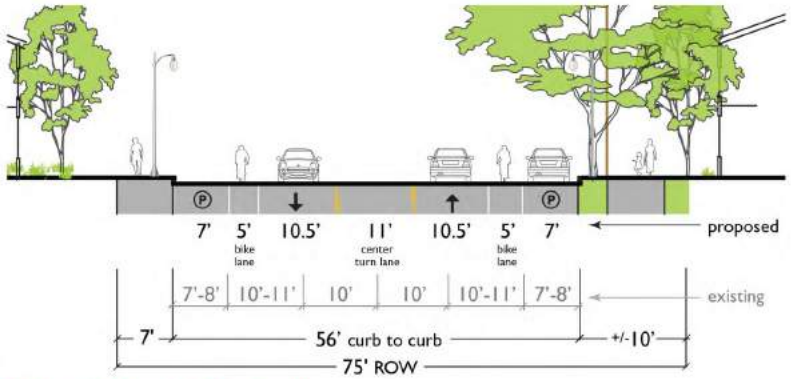
$$$$ Over $7,000,000


EL CERRITO
LAFAYETTE
ALBANY
BERKELEY
ORINDA
EMERYVILLE
ALAMEDA
OAKLAND
ALAMEDA
SAN RAMON
DUBLIN
SAN LEANDRO
LIVERMORE
HAYWARD
PLEASANTON
UNION CITY
NEWARK
FREMONT
REDWOOD CITY
MILPITAS
80
123
24
980
260
13
61
580
185
112
238
880
680
92
101
84
262
35
82
IMPROVEMENT TYPES
Intersection/Ramp Improvement
Separated Crossing
Corridor
PRIORITIZATION CATEGORY
GREEN Top Tier Project
ORANGE Mid Tier Project
PURPLE Low Tier Project
Disadvantaged Community
as determined by the Metropolitan Transportation Commision and/or the California Environmental Protection Agency





Section J



Section K (see next sheet)

The City of Alameda *Central Avenue Complete Streets Study* was funded by Caltrans and includes an improvement to both local roads and State Route 61. The State highway portion includes a road diet, bike lanes, bike boxes, and green markings at conflict zones. Alameda is currently undergoing final design for this project and has received funding from the Active Transportation Program and other sources to implement these improvements.

Contra Costa Top Tier Projects

NO.	HWY	CITY	LOCATION	IMPROVEMENT	COST
CC-123-C01	123	El Cerrito	Central Ave - Potrero Ave	Corridor Improvement- Class IV	$$
CC-242-X01	242	Concord	Concord Ave	Interchange reconstruction - ramps only- Class II	$$$$
CC-242-X03	242	Concord	Olivera Rd	Interchange reconstruction - ramps only- Class II	$$$$
CC-24-X01	24	Orinda	Camino Pablo	New separated crossing	$$$$
CC-4-C02	4	Pittsburg	Crestview Dr - Harbor St	Corridor Improvement- Class I	$$
CC-4-X02	4	Pittsburg	Bailey Rd	Minor interchange improvements (signage and striping)- Class I	$$
CC-4-X03	4	Pittsburg	Loveridge Rd	Minor interchange improvements (signage and striping)- Class IV	$$
CC-4-X04	4	Antioch	Sommerville Rd	Minor interchange improvements (signage and striping)- Class I	$$
CC-4-X06	4	Antioch	Lone Tree Way	Interchange reconstruction - ramps only- Class II	$$$$
CC-4-X09	4	Concord	Walnut Creek	New separated crossing	$$$$
CC-580-C01	580	Richmond	Bridge touchdown - Castro St	Corridor Improvement- Class I	$$$$
CC-580-C02	580	Point Richmond	Garrard Blvd - Castro St	Corridor Improvement- Class I	$$
CC-580-X01	580	Richmond	Marina Bay Pkwy	Interchange reconstruction - ramps only- Class I	$$$$
CC-580-X02	580	Richmond	Cutting Blvd	Interchange reconstruction - ramps only- Class IIB	$$$$
CC-680-X04	680	Concord	Willow Pass Rd	Interchange reconstruction - ramps only- Class IIB	$$$$
CC-80-X01	80	Richmond, El Cerrito	Cutting Blvd	Minor interchange improvements (signage and striping)- Class I	$$
CC-80-X04	80	Richmond	Central Ave	Minor interchange improvements (signage and striping)- Class I	$$
CC-80-X06	80	Richmond	Barrett Ave	Minor interchange improvements (signage and striping)- Class IV	$$
CC-80-X10	80	Richmond	Hilltop Dr	Interchange reconstruction - ramps only- Class IIB	$$$$
CC-92,680-C01	92,680	Martinez	Mococo Rd	Corridor Improvement- Class I	$$
CCMa-580-C01	580	Richmond, San Rafael	Western Ave - Main St	Corridor Improvement- Class I	$$$

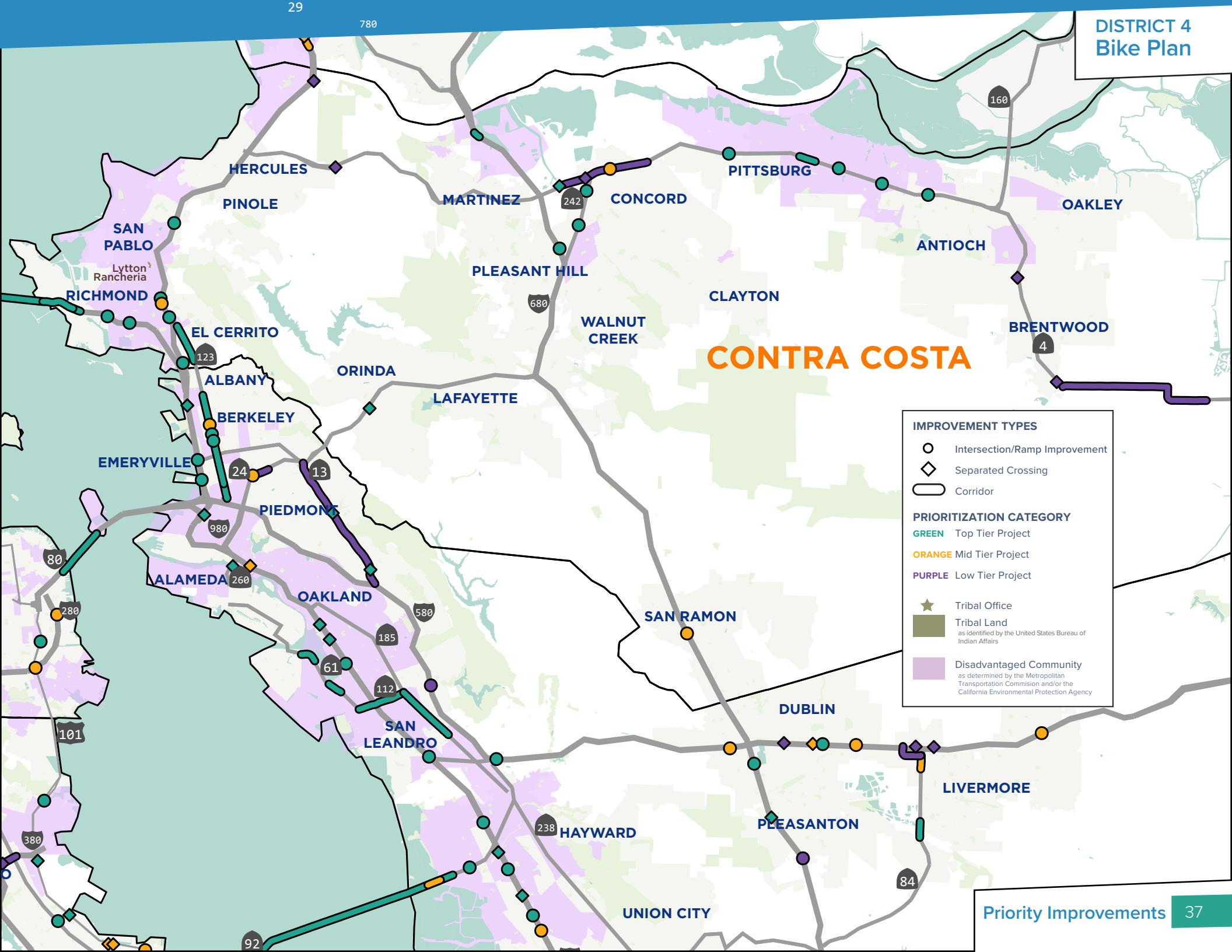
The table only identifies Top Tier projects that are expected to cost over $250,000 to implement. A full list of projects included in the District 4 Bike Plan are available in Appendix A.

$ Under $250,000

$$ $250,000 - $1,500,000

$$$ $1,500,000 - $7,000,000

$$$$ Over $7,000,000


DISTRICT 4
Bike Plan
CONTRA COSTA
HERCULES
PINOLE
SAN PABLO
Lytton Rancheria
RICHMOND
EL CERRITO
ALBANY
BERKELEY
EMERYVILLE
PIEDMONT
ORINDA
LAFAYETTE
MARTINEZ
PLEASANT HILL
WALNUT CREEK
CONCORD
PITTSBURG
OAKLEY
ANTIOCH
CLAYTON
BRENTWOOD
ALAMEDA
OAKLAND
SAN LEANDRO
SAN RAMON
DUBLIN
LIVERMORE
PLEASANTON
HAYWARD
UNION CITY
IMPROVEMENT TYPES
Intersection/Ramp Improvement
Separated Crossing
Corridor
PRIORITIZATION CATEGORY
GREEN Top Tier Project
ORANGE Mid Tier Project
PURPLE Low Tier Project
Tribal Office
Tribal Land
as identified by the United States Bureau of Indian Affairs
Disadvantaged Community
as determined by the Metropolitan Transportation Commision and/or the California Environmental Protection Agency

Marin County Top Tier Projects

NO.	HWY	CITY	LOCATION	IMPROVEMENT	COST
CCMa-580-C01	580	Richmond, San Rafael	Western Ave - Main St	Corridor Improvement- Class I	$$$
Mar-101,131-X01	101,131	Strawberry, Alto	US 101/Hwy 131 interchange	Interchange reconstruction - full reconstruction- Class IIB	$$$$
Mar-101-X03	101	Corte Madera	Casa Buena Dr	New separated crossing	$$$$
Mar-101-X04	101	Corte Madera	Tamalpais Dr	Interchange reconstruction - ramps only- Class I	$$$$
Mar-101-X07	101	San Rafael	N San Pedro Rd	Interchange reconstruction - ramps only- Class II	$$$$
Mar-131-C01	131	Strawberry, Tiburon	Strawberry Dr - Greenwood Cove Rd	Corridor Improvement- Class I	$$
Mar-131-C02	131	Tiburon	US 101 - Main St	Corridor Improvement- Class IV	$$$
Mar-1-C04	1	Tamalpais-Homestead Valley	Maple St - Almonte Blvd	Corridor Improvement- Class I	$$
Mar-580-X01	580	San Rafael	Bellam Blvd	Interchange reconstruction - full reconstruction- Class I	$$$$
Mar-580-X02	580	San Rafael	Main St - I-580 Bridge landing	Minor interchange improvements (signage and striping)- Class IV	$$

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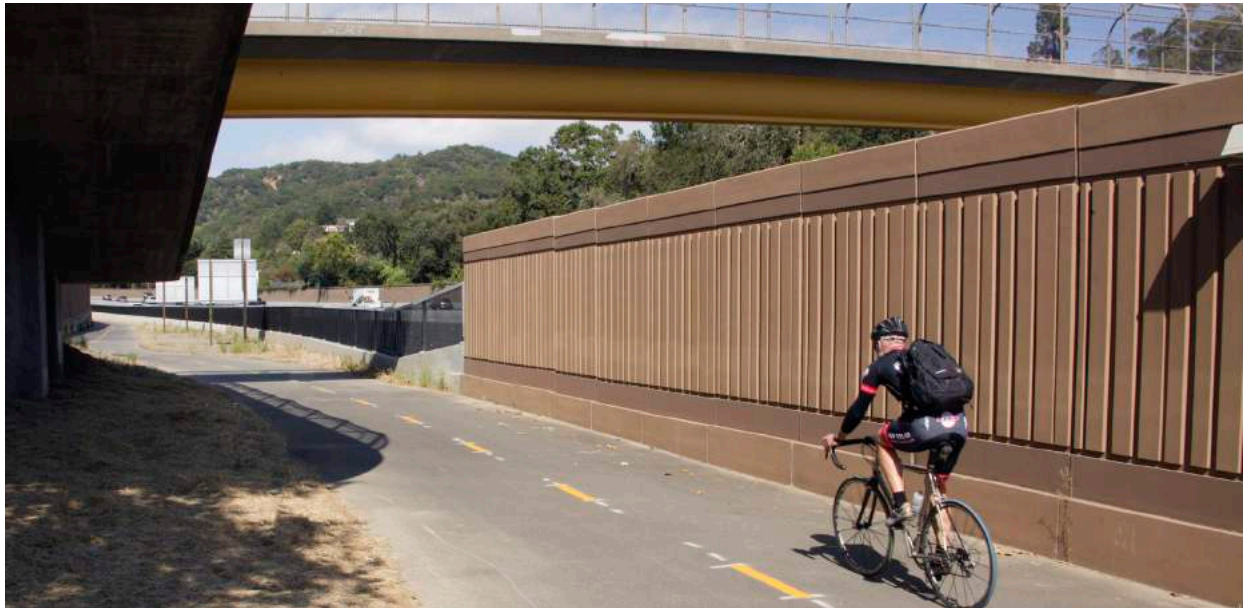
$	Under $250,000
$$	$250,000 - $1,500,000
$$$	$1,500,000 - $7,000,000
$$$$	Over $7,000,000



Right: The Lincoln Hill Pathway is part of Marin County's planned North-South Greenway, a 25-mile bicycle and pedestrian corridor that parallels US 101 from the Golden Gate Bridge to Novato. Photo by Caltrans District 4 Photography/John Huseby

IMPROVEMENT TYPES

- Intersection/Ramp Improvement
- Separated Crossing
- Corridor

PRIORITIZATION CATEGORY

- GREEN Top Tier Project
- ORANGE Mid Tier Project
- PURPLE Low Tier Project
- Disadvantaged Community
  as determined by the Metropolitan Transportation Commision and/or the California Environmental Protection Agency

Napa County Top Tier Projects

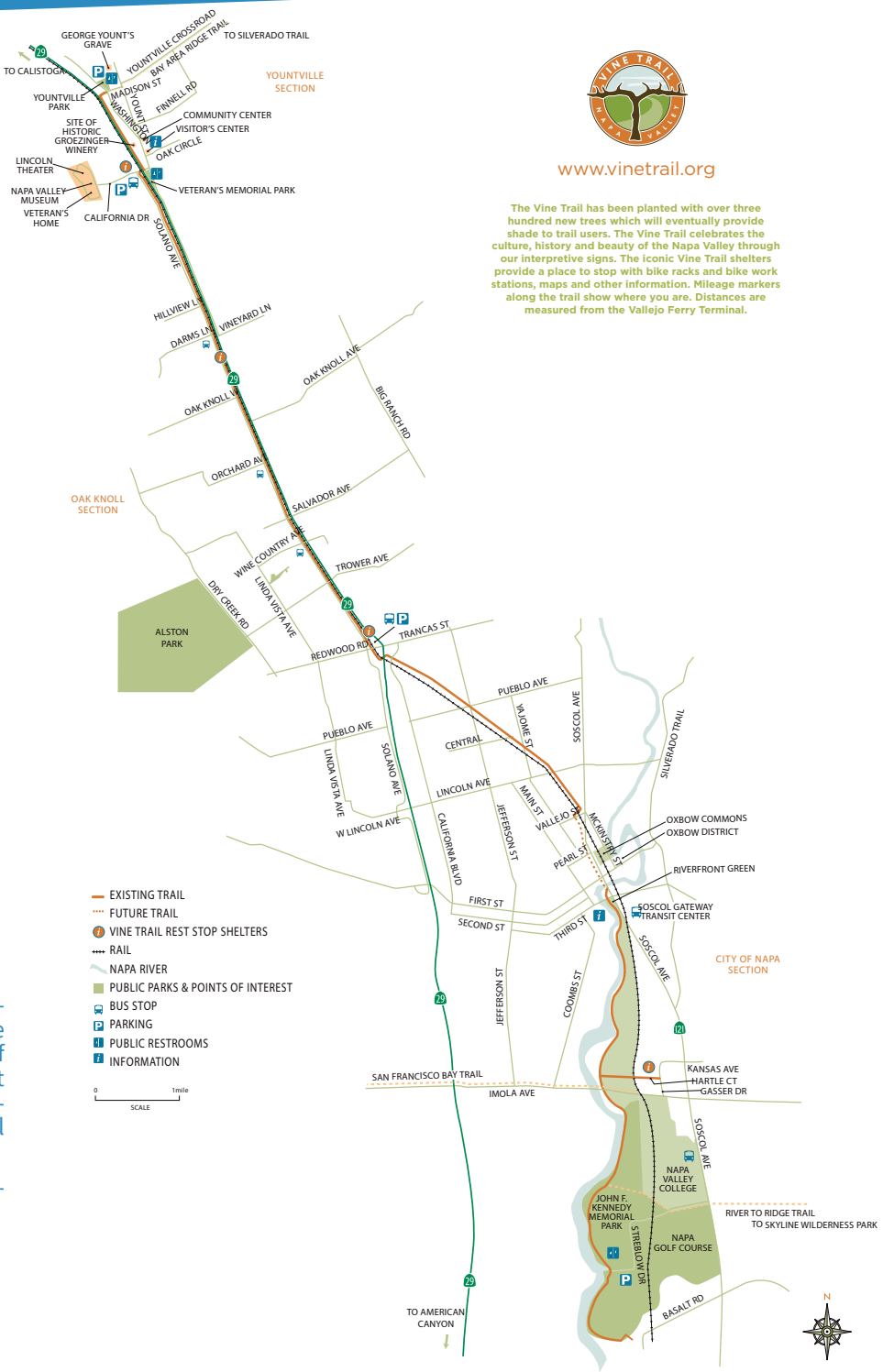
NO.	HWY	CITY	LOCATION	IMPROVEMENT	COST
Nap-121-C03	121	Unincorporated	Duhig Rd - Old Sonoma Rd	Corridor Improvement-Class IV	$$
Nap-128-C05	128	St Helena	Sage Canyon Rd - Conn Creek Rd	Corridor Improvement-Class IV	$$
Nap-29-C07	29	American Canyon	American Canyon Rd - Jameson Canyon Rd/Hwy 12	Corridor Improvement-Class I	$$$
Nap-29-X11	29	Napa	Imola Ave W	Minor interchange improvements (signage and striping)- Class I	$$

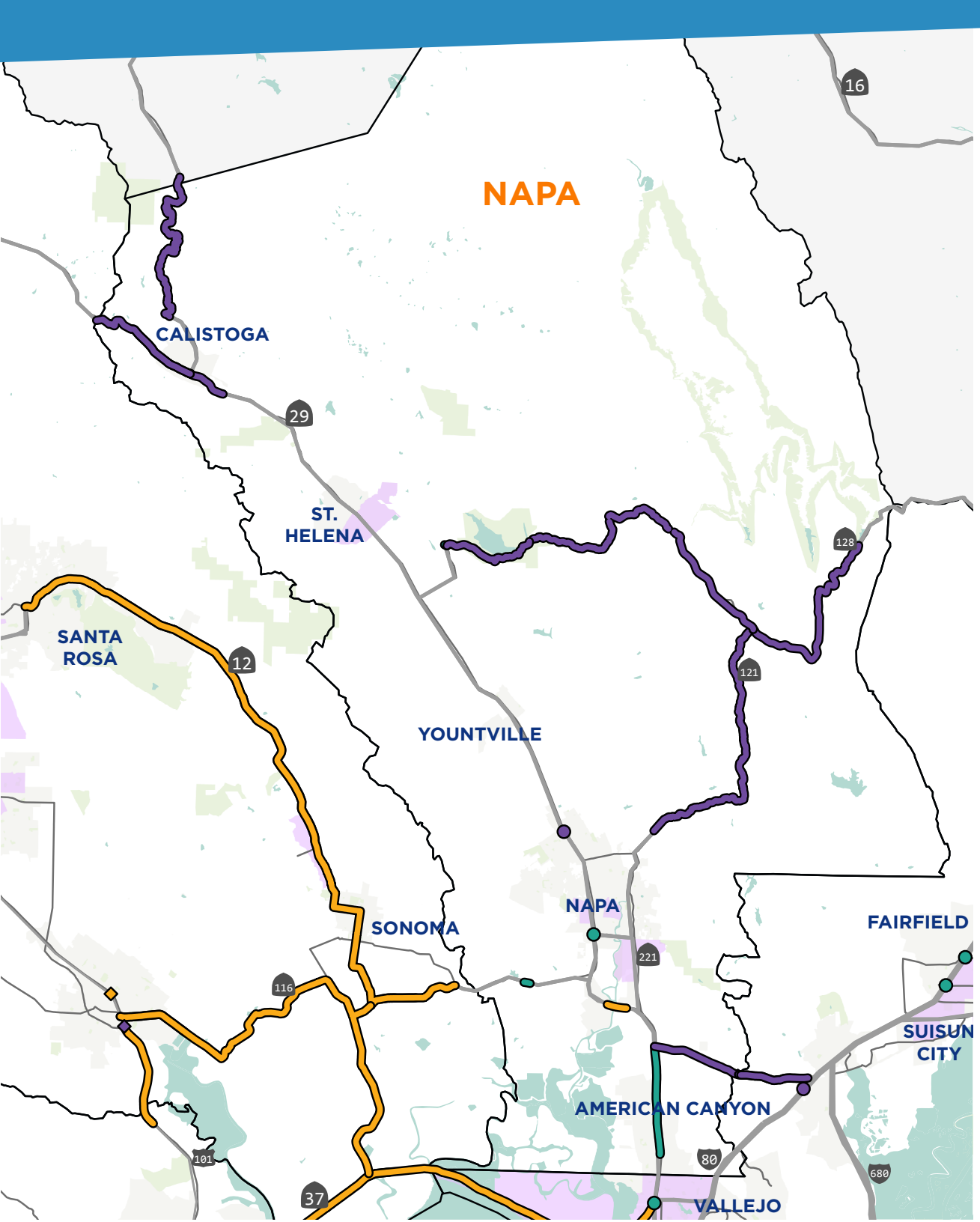
The table only identifies Top Tier projects that are expected to cost over $250,000 to implement. A full list of projects included in the District 4 Bike Plan are available in Appendix A.

$	Under $250,000
$$	$250,000 - $1,500,000
$$$	$1,500,000 - $7,000,000
$$$$	Over $7,000,000

Right: The Napa Valley Vine Trail is a planned 47-mile walking and biking facility connecting the entire Napa Valley from the Vallejo Ferry Terminal to Calistoga along State Route 29. A 12.5-mile segment of the trail has already been completed from the City of Napa to the Town of Yountville. Several segments of the trail are within Caltrans right of way, including the initial segment in Yountville, completed in 2010. Caltrans will continue to work with the Napa Valley Transportation Authority, the Napa Valley Vine Trail Coalition, and other stakeholders on future segments of the Vine Trail as needed.

Map at right is for the completed segment of trail; from vinetrail.org (Note: minor modifications have been made to increase map legibility in this document)





IMPROVEMENT TYPES

- Intersection/Ramp Improvement
- Separated Crossing
- Corridor

PRIORITIZATION CATEGORY

- GREEN Top Tier Project
- ORANGE Mid Tier Project
- PURPLE Low Tier Project

Disadvantaged Community
as determined by the Metropolitan Transportation Commision and/or the California Environmental Protection Agency

San Francisco County Top Tier Projects

NO.	HWY	CITY	LOCATION	IMPROVEMENT	COST
SF-101-X01	101	San Francisco	Cesar Chavez St	Interchange reconstruction - full reconstruction- Class IV	$$$$
SF-101-C01	101	San Francisco	Duboce St - Mission St - Division St	Corridor Improvement - Class IV	$$
SF-1-X03	1	San Francisco	Brotherhood Way	New separated crossing	$$$$
SF-280-X02	280	San Francisco	Ocean Ave/Geneva Ave	Interchange reconstruction - ramps only- Class IIB	$$$$
SF-35-X01	35	San Francisco	Great Highway	Interchange reconstruction - ramps only- Class I	$$$$
SF-35-X02	35	San Francisco	Sloat Ave/Skyline Blvd	Intersection Improvement at uncontrolled intersection	$$
SF-35-X03	35	San Francisco	Sunset Blvd	Interchange reconstruction - ramps only- Class II	$$$$
SF-80-C01	80	San Francisco	SF touchdown - Yerba Buena Island	Corridor Improvement- Class I	$$$$

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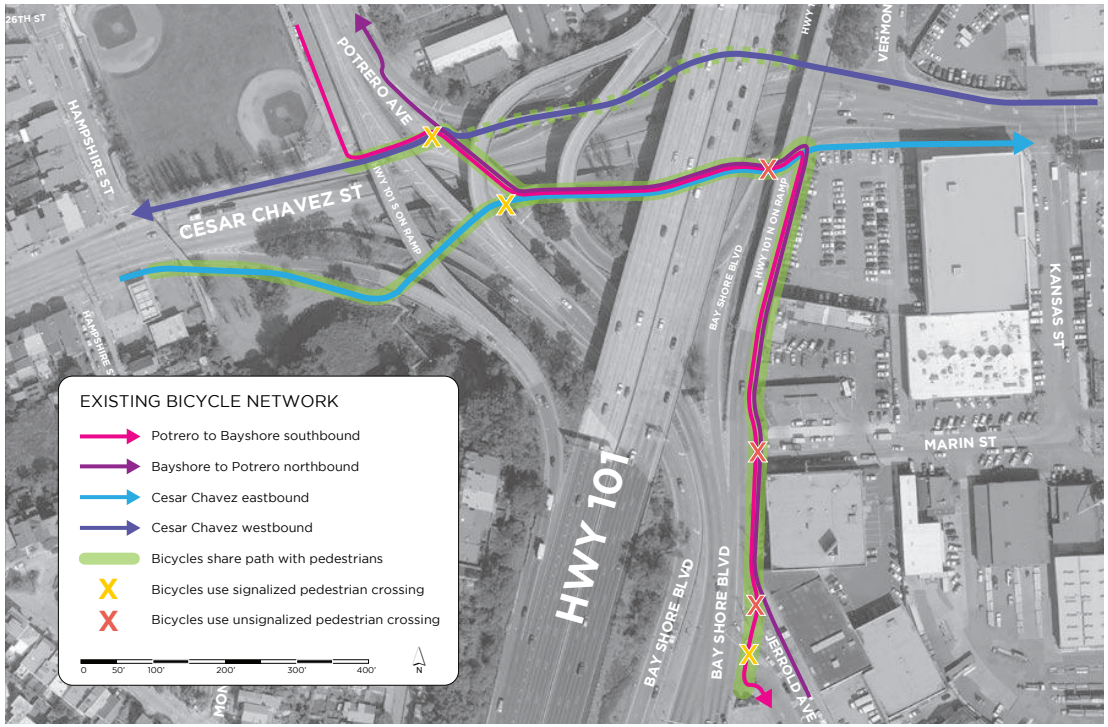
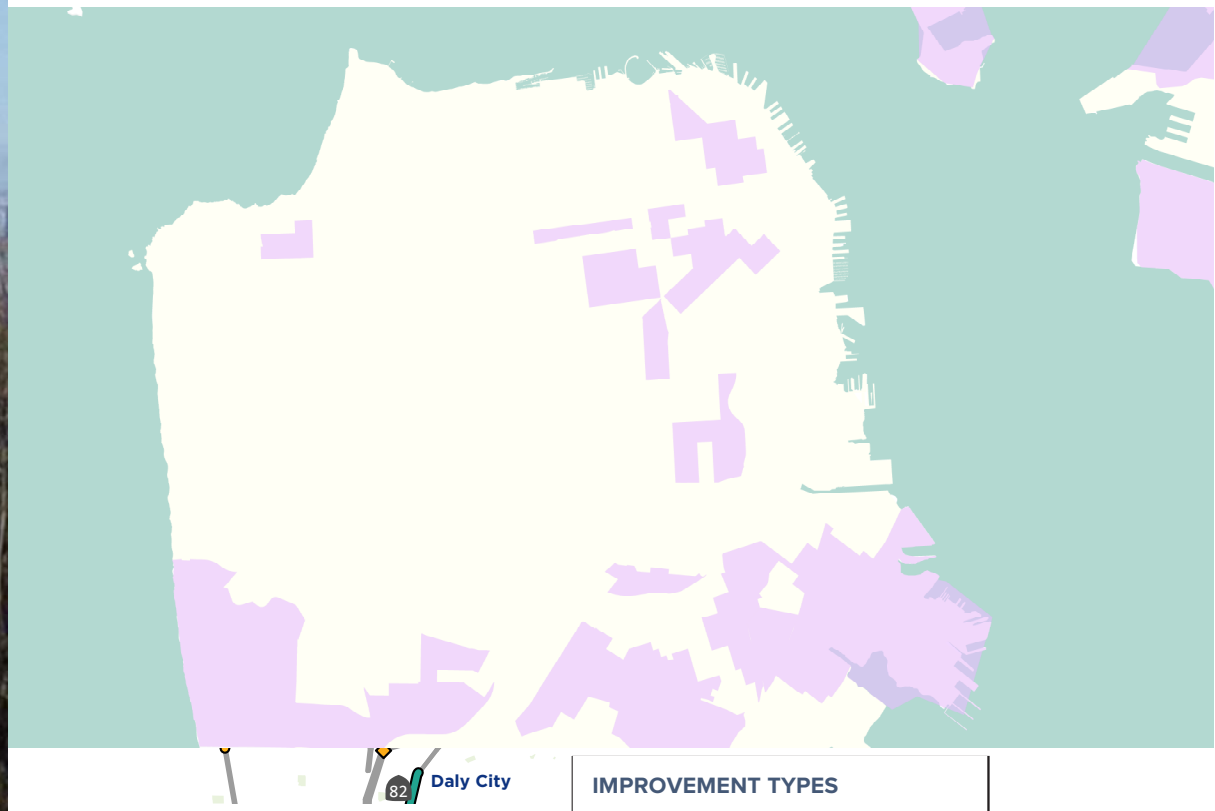
$	Under $250,000
$$	$250,000 - $1,500,000
$$$	$1,500,000 - $7,000,000
$$$$	Over $7,000,000

The area where Cesar Chavez Street, Bayshore Boulevard and Potrero Avenue intersect with US 101 — known as "The Hairball" — is a complex arrangement of ramps and grade-separated structures with pedestrian and bicycle paths intertwined. The San Francisco Municipal Transportation Agency (SFMTA) has identified near-term and capital improvements for walking and biking as part of The Hairball Interchange Improvement Project. Longer-term solutions are also needed to address the underlying challenges of navigating through existing ramp structures and conflict areas.

Right: Existing Bicycle Network from the *Cesar Chavez East Community Design Plan*, 2012





Left: The Metropolitan Transportation Commission and Bay Area Toll Authority are coordinating with Caltrans to develop preliminary engineering alternatives for a Class I path along the San Francisco Bay Bridge West Span between Yerba Buena Island and Downtown San Francisco. The rendering shows an alternative with the path cantilevered along the north side of the bridge.

IMPROVEMENT TYPES

- Intersection/Ramp Improvement
- Separated Crossing
- Corridor

PRIORITIZATION CATEGORY

- **GREEN** Top Tier Project
- **ORANGE** Mid Tier Project
- **PURPLE** Low Tier Project

Disadvantaged Community
as determined by the Metropolitan Transportation Commision and/or the California Environmental Protection Agency

San Mateo County Top Tier Projects

NO.	HWY	CITY	LOCATION	IMPROVEMENT	COST
SM-101-X01	101	San Bruno	San Bruno Ave E	New separated crossing	$$$$
SM-101-X02	101	Millbrae, Burlingame	E Millbrae Ave	New separated crossing	$$$$
SM-101-X06	101	South San Francisco	Sister Cities Blvd	Minor interchange improvements (signage and striping)- Class IV	$$
SM-101-X09	101	Redwood City	Chestnut/Seaport	New separated crossing	$$$$
SM-101-X10	101	San Mateo	E Hillsdale Blvd	New separated crossing	$$$$
SM-101-X11	101	San Mateo	Lodi Ave/Haddon Dr	New separated crossing	$$$$
SM-101-X12	101	San Mateo	3rd Ave/4th Ave	Interchange reconstruction - ramps only- Class IV	$$$$
SM-101-X14	101	Redwood City, Menlo Park	Marsh Rd	New separated crossing	$$$$
SM-101-X16	101	East Palo Alto	University Ave	New separated crossing	$$$$
SM-114-C01	114	Menlo Park, East Palo Alto	Hwy 84 - US 101	Corridor Improvement- Class IV	$$
SM-1-C03	1	Unincorporated	Gray Whale Cove parking area - Devils Slide Trail	Corridor Improvement- Class I	$$
SM-1-C04	1	Pacifica	San Pedro Ave - Devils Slide Trail	Corridor Improvement- Class I	$$
SM-280-X02	280	Daly City	Serramonte Blvd	Minor interchange improvements (signage and striping)- Class IV	$$
SM-280-X05	280	South San Francisco	Westborough Blvd	Minor interchange improvements (signage and striping)- Class IIB	$$
SM-35-C01	35	Daly City	Shelbourne Ave - Hwy 1	Corridor Improvement- Class IV	$$
SM-35-C02	35	San Bruno	Berkshire Dr - San Bruno Ave	Corridor Improvement- Class IV	$$
SM-82-C01	82	Daly City, Colma	John Daly Blvd - Collins Ave	Corridor Improvement- Class IV	$$$
SM-82-C01	82	Daly City, Colma	John Daly Blvd - Collins Ave	Corridor Improvement- Class IV	$$$
SM-82-C06	82	San Mateo	Baldwin Ave - 9th Ave	Corridor Improvement- Class IV	$$
SM-82-C08	82	Atherton, Menlo Park	Atherton Ave - Encinal Ave	Corridor Improvement- Class I	$$
SM-82-C09	82	Redwood City	Cordilleras Creek to Berkshire Ave	Corridor Improvement- Class IV	$$
SM-82-C10	82	Atherton	Selby Ln - Encinal Ave	Corridor Improvement- Class IV	$$
SM-82-C11	82	Menlo Park	Encinal Ave - Middle Ave	Corridor Improvement- Class IV	$$
SM-82-X04	82	South San Francisco	Arlington Dr	Intersection Improvement at uncontrolled intersection	$$

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$	Under $250,000
$$	$250,000 - $1,500,000
$$$	$1,500,000 - $7,000,000
$$$$	Over $7,000,000

San Mateo County Top Tier Projects (continued)

NO.	HWY	CITY	LOCATION	IMPROVEMENT	COST
SM-82-X16	82	Millbrae	Linden Ave	Intersection Improvement at uncontrolled intersection	$$
SM-82-X30	82	Belmont	Middle Rd	Intersection Improvement at uncontrolled intersection	$$
SM-82-X38	82	Belmont	Emmett Ave	Intersection Improvement at uncontrolled intersection	$$
SM-84,82-X01	84,82	Redwood City	Manzanita St	Minor interchange improvements (signage and striping)- Class II	$$
SM-84-C03	84	Redwood City	US 101 - Hudson St/Central Ave	Corridor Improvement- Class IV	$$
SM-84-X09	84	Menlo Park	Chilco St	New separated crossing	$$$$
SM-92-C02	92	Half Moon Bay	Hwy 1 - Half Moon Bay border	Corridor Improvement- Class I	$$
SMAI-92-C01	92	San Mateo, Hayward	Foster City - Hayward	Corridor Improvement- Class I	$$$$
SMSC-82-C01	82	Palo Alto	Sand Hill Rd - San Antonio Rd	Corridor Improvement- Class IV	$$$

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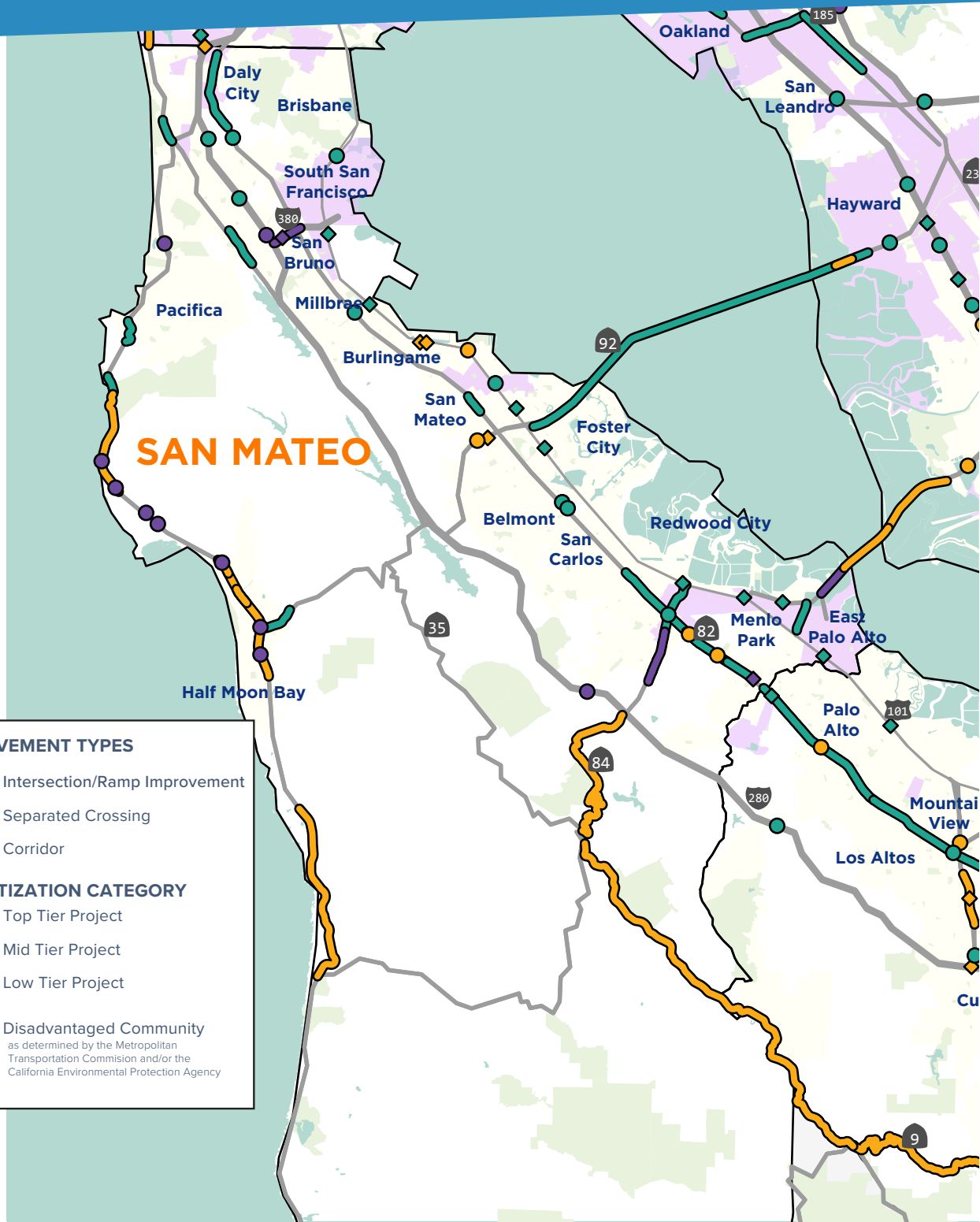
$ = Under $250,000 • $$ = $250,000 - $1,500,000 • $$$ = $1,500,000 - $7,000,000 • $$$$ = Over $7,000,000

The Devil's Slide Trail, a segment of the California Coastal Trail, is a 1.3-mile multi-use path, converted from a former segment of Highway 1 and relinquished to the County of San Mateo. Projects are identified in this Plan to improve connections to the Devil's Slide Trail across Highway 1. Photo by Matt Biddulph

The Naomi Patridge Trail along parts of State Route 1 in Half Moon Bay provides a connection for residents walking or bicycling from some of the neighborhoods in the area that have no other connection to downtown Half Moon Bay, shopping centers, and the beach. Photo by Alta Planning + Design



Currently under construction, the US-101 bicycle and pedestrian overcrossing in East Palo Alto will reconnect this City, providing direct bicycle and pedestrian connections that do not exist today. This project was funded through the California Active Transportation Program. Renderings courtesy of East Palo Alto and Alta Planning + Design

Santa Clara County Top Tier Projects

NO.	HWY	CITY	LOCATION	IMPROVEMENT	COST
SC-101-C02	101	Gilroy	Leavesley Rd - E Sixth St	Corridor Improvement- Class I	$$
SC-101-X03	101	San Jose	Blossom Hill Rd	Interchange reconstruction - ramps only- Class IV	$$$$
SC-101-X06	101	Palo Alto	Adobe Creek	New separated crossing	$$$$
SC-101-X07	101	San Jose	Tully Rd	Minor interchange improvements (signage and striping)- Class IV	$$
SC-101-X08	101	San Jose	Story Rd	Interchange reconstruction - full reconstruction- Class IV	$$$$
SC-101-X10	101	San Jose	Mckee Rd	Minor interchange improvements (signage and striping)- Class IV	$$
SC-130,-C01	130,	San Jose	White St - Mt Hamilton Rd	Corridor Improvement- Class I	$$$
SC-237,680,880-X01	237,680,880	Milpitas	Hwy 237/I-680/I-880 interchange	Interchange reconstruction - full reconstruction- Class IV	$$$$
SC-237-X01	237	Sunnyvale	Mountain View Alviso Rd	Interchange reconstruction - full reconstruction- Class IV	$$$$
SC-280-C01	280	Sunnyvale, Cupertino	Mary Ave - Calabazas Creek	Corridor Improvement- Class I	$$$
SC-280-X01	280	San Jose	Saratoga Ave	Minor interchange improvements (signage and striping)- Class IV	$$
SC-280-X02	280	Los Altos Hills	Page Mill Rd	Minor interchange improvements (signage and striping)- Class I	$$
SC-280-X06	280	San Jose	Las Plumas Rd	New separated crossing	$$$$
SC-280-X08	280	San Jose	McLaughlin Ave	Minor interchange improvements (signage and striping)- Class IV	$$
SC-280-X09	280	San Jose	11th St	Interchange reconstruction - ramps only- Class IV	$$$$
SC-680-X01	680	San Jose	Alum Rock Ave	Interchange reconstruction - ramps only- Class IV	$$$$
SC-680-X02	680	San Jose	S King Rd	Interchange reconstruction - ramps only- Class II	$$$$
SC-680-X03	680	San Jose	Capitol Expy	Interchange reconstruction - ramps only- Class IIB	$$$$
SC-680-X04	680	San Jose	Hostetter Rd	Interchange reconstruction - ramps only- Class IV	$$$$
SC-680-X05	680	San Jose	Capitol Expy	Interchange reconstruction - ramps only- Class IV	$$$$

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$ Under $250,000

$$ $250,000 - $1,500,000

$$$ $1,500,000 - $7,000,000

$$$$ Over $7,000,000

Santa Clara County Top Tier Projects (continued)

NO.	HWY	CITY	LOCATION	IMPROVEMENT	COST
SC-680-X06	680	San Jose	Mckee Rd	Interchange reconstruction - full reconstruction- Class IV	$$$$
SC-680-X09	680	Milpitas, San Jose	Montague Expy	Interchange reconstruction - full reconstruction- Class IV	$$$$
SC-680-X10	680	San Jose	Trimble/Capewood	New separated crossing	$$$$
SC-680-X11	680	San Jose	Alum Rock Ave	New separated crossing	$$$$
SC-680-X14	680	San Jose	Mather Dr	New separated crossing	$$$$
SC-82,85-X01	82,85	Mountain View	Yuba Dr	Interchange reconstruction - full reconstruction- Class IV	$$$$
SC-82-C01	82	Mountain View	San Antonio Rd - Bernardo Ave	Corridor Improvement- Class IV	$$$
SC-82-C02	82	Sunnyvale	Bernardo Ave - Lawrence Expwy	Corridor Improvement- Class IV	$$$
SC-82-X01	82	Palo Alto	Everette St	New separated crossing	$$$$
SC-85-X02	85	San Jose	Blossom Hill Rd	Interchange reconstruction - ramps only- Class IV	$$$$
SC-85-X06	85	Cupertino, Sunnyvale	Homestead Rd	Minor interchange improvements (signage and striping)- Class IV	$$
SC-87-X02	87	San Jose	Guadalupe Pkwy	New separated crossing	$$$$
SC-880-X01	880	San Jose	Stevens Creek Blvd	Interchange reconstruction - full reconstruction- Class IV	$$$$
SC-880-X02	880	San Jose	O'Toole Ave	New separated crossing	$$$$
SC-880-X04	880	San Jose	N 1st St	Interchange reconstruction - ramps only- Class IV	$$$$
SC-880-X06	880	San Jose	Brokaw Rd	Interchange reconstruction - ramps only- Class IV	$$$$
SC-880-X08	880	San Jose	Old Bayshore Hwy	Interchange reconstruction - ramps only- Class IV	$$$$
SC-880-X09	880	San Jose	Stevens Creek Blvd	Minor interchange improvements (signage and striping)- Class IV	$$
SMSC-82-C01	82	Palo Alto	Sand Hill Rd - San Antonio Rd	Corridor Improvement- Class IV	$$$

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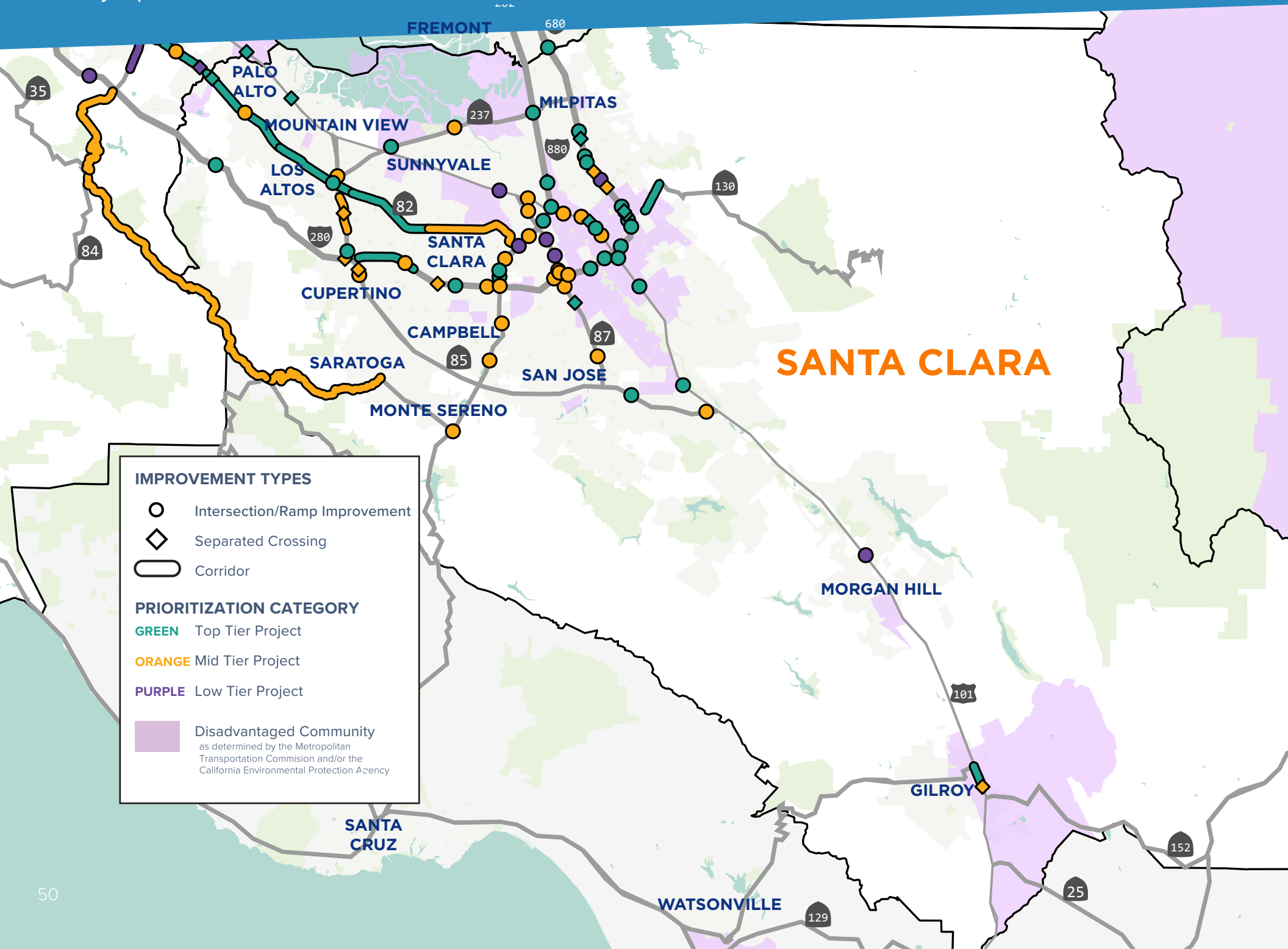
$$$$ Over $7,000,000


FREMONT
680
PALO ALTO
35
MILPITAS
237
MOUNTAIN VIEW
880
SUNNYVALE
LOS ALTOS
130
82
280
84
SANTA CLARA
CUPERTINO
CAMPBELL
87
SARATOGA
85
SAN JOSE
SANTA CLARA
MONTE SERENO
IMPROVEMENT TYPES
Intersection/Ramp Improvement
Separated Crossing
Corridor
PRIORITIZATION CATEGORY
GREEN Top Tier Project
ORANGE Mid Tier Project
PURPLE Low Tier Project
Disadvantaged Community
as determined by the Metropolitan Transportation Commision and/or the California Environmental Protection Agency
MORGAN HILL
101
GILROY
SANTA CRUZ
152
25
WATSONVILLE
129

The City of Palo Alto and Stanford University have worked together to develop a protected intersection on El Camino Real (State Route 82) and Embarcadero Road/Galvez Street. The design removes several slip lanes, provides a clear path for bicyclists through the intersection and connects to trails on either side of El Camino Real. Rendering courtesy of the City of Palo Alto and Calander Associates.

Solano County Top Tier Projects

NO.	HWY	CITY	LOCATION	IMPROVEMENT	COST
Sol-12-X02	12	Suisun City	McCoy Creek	New separated crossing	$$$$
Sol-29,37-X01	29,37	Vallejo	Hwy 29	Interchange reconstruction - ramps only- Class IIB	$$$$
Sol-37-C01	37	Vallejo	Wilson Ave - Sacramento St	Corridor Improvement- Class I	$$
Sol-780-X01	780		Home Acres Ave	New separated crossing	$$$$
Sol-80-X07	80	Vallejo	Tennessee St	Interchange reconstruction - ramps only- Class II	$$$$
Sol-80-X09	80	Fairfield	Air Base Pkwy	Interchange reconstruction - ramps only- Class IV	$$$$
Sol-80-X10	80	Fairfield	Travis Blvd	Interchange reconstruction - ramps only- Class II	$$$$
Sol-80-X12	80	Vacaville	Alamo Dr	Interchange reconstruction - ramps only- Class II	$$$$

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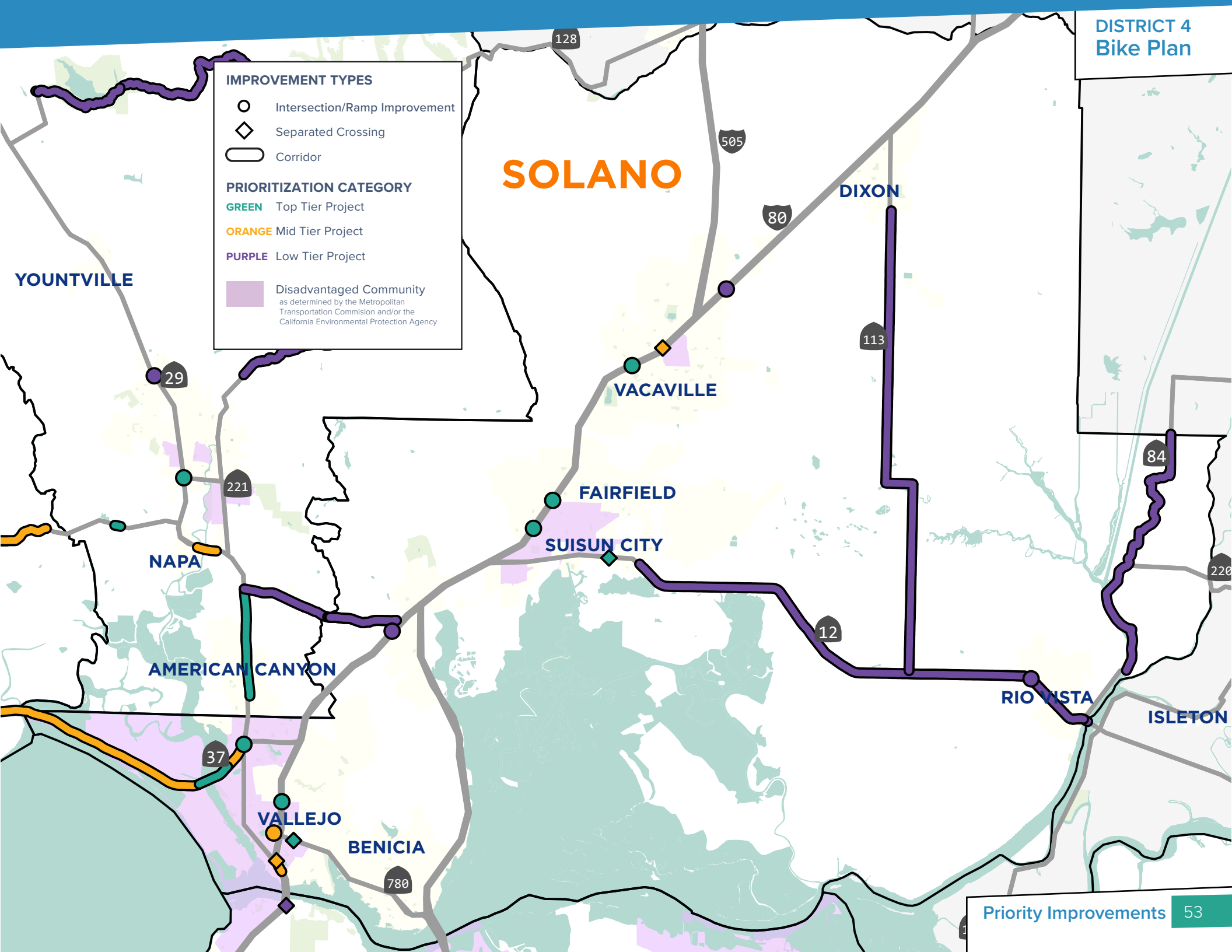
$ Under $250,000
$$ $250,000 - $1,500,000
$$$ $1,500,000 - $7,000,000
$$$$ Over $7,000,000

The Grizzly Island Trail and Central County Bikeway parallel State Highway 12 in Suisun City is a separated path for bicyclists and pedestrians traveling along this corridor. Photo by Alta Planning + Design


DISTRICT 4
Bike Plan
IMPROVEMENT TYPES
Intersection/Ramp Improvement
Separated Crossing
Corridor
PRIORITIZATION CATEGORY
GREEN Top Tier Project
ORANGE Mid Tier Project
PURPLE Low Tier Project
Disadvantaged Community
as determined by the Metropolitan Transportation Commision and/or the California Environmental Protection Agency
SOLANO
YOUNTVILLE
DIXON
VACAVILLE
FAIRFIELD
SUISUN CITY
NAPA
AMERICAN CANYON
VALLEJO
BENICIA
RIO VISTA
ISLETON
128
505
80
113
29
221
84
220
12
37
780
Priority Improvements 53

Sonoma County Top Tier Projects

NO.	HWY	CITY	LOCATION	IMPROVEMENT	COST
Son-101-X03	101	Santa Rosa	Steele Ln	Minor interchange improvements (signage and striping)- Class IV	$$
Son-101-X04	101	Santa Rosa	Bicentennial Way	Interchange reconstruction - ramps only- Class II	$$$$
Son-101-X05	101	Cotati, Rohnert Park	Redwood Dr	New separated crossing	$$$$
Son-101-X07	101	Cotati	Gravenstein Hwy/Hwy 116	Minor interchange improvements (signage and striping)- Class IV	$$
Son-101-X13	101	Windsor	Old Redwood Hwy/Healdsburg Ave	New separated crossing	$$$$
Son-101-X21	101	Larkfield-Wikiup	River Rd	Interchange reconstruction - ramps only- Class II	$$$$
Son-101-X22	101	Santa Rosa	Bear Cub Way	New separated crossing	$$$$
Son-101-X24	101	Santa Rosa	Colgan Ave	Interchange reconstruction - full reconstruction- Class I	$$$$
Son-101-X26	101	Rohnert Park	Rohnert Park Expy	Interchange reconstruction - ramps only- Class II	$$$$
Son-116-C03	116	Sebastopol	Sebastopol Ave - Stony Point Rd	Corridor Improvement- Class I	$$$$
Son-116-C05	116	Forestville	Pajaro Ln - Mirabel Rd	Corridor Improvement- Class I	$$
Son-12-C02	12	Santa Rosa, Agua Caliente	Melita Rd - Agua Caliente Rd	Corridor Improvement- Class I	$$$$

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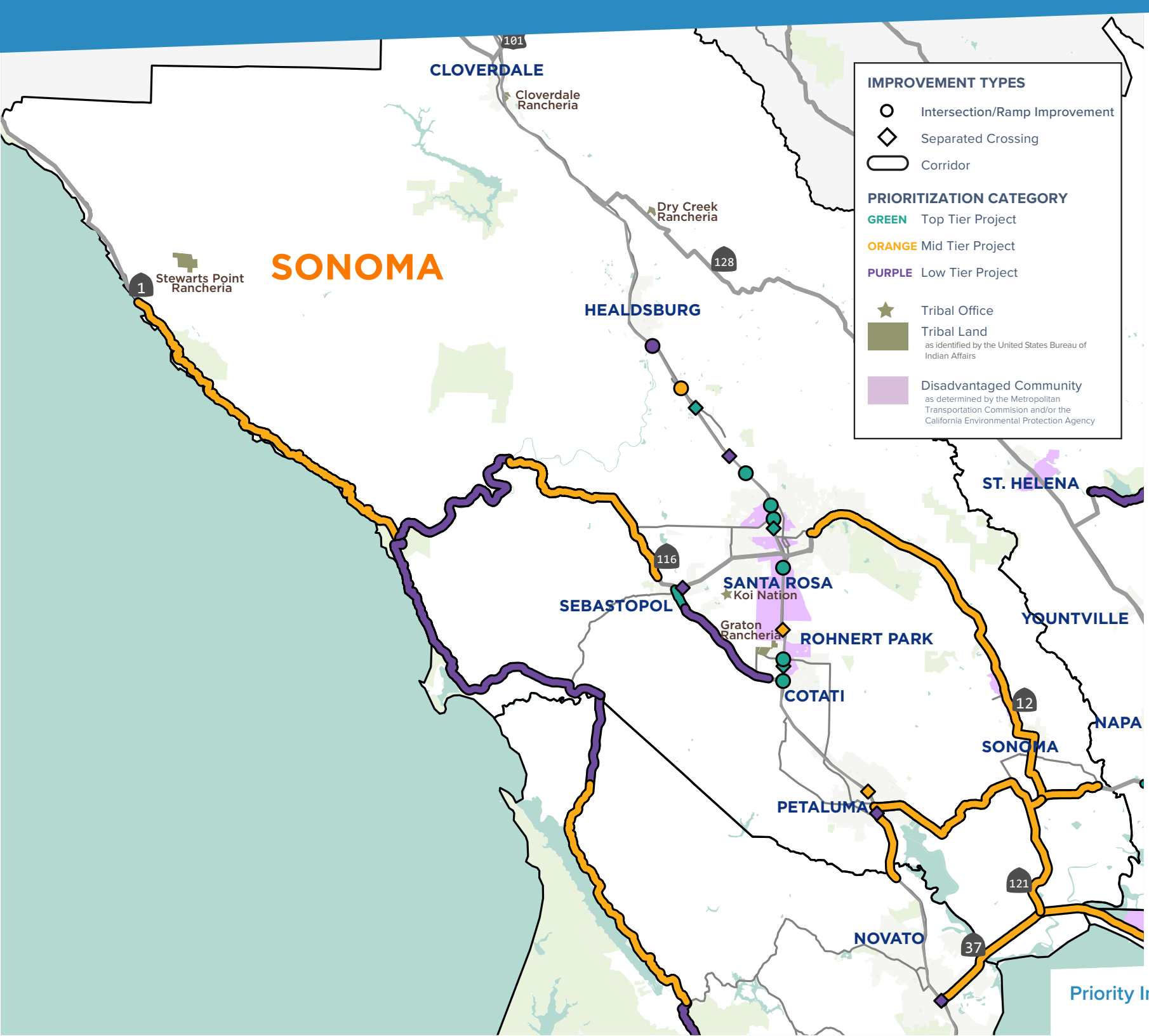
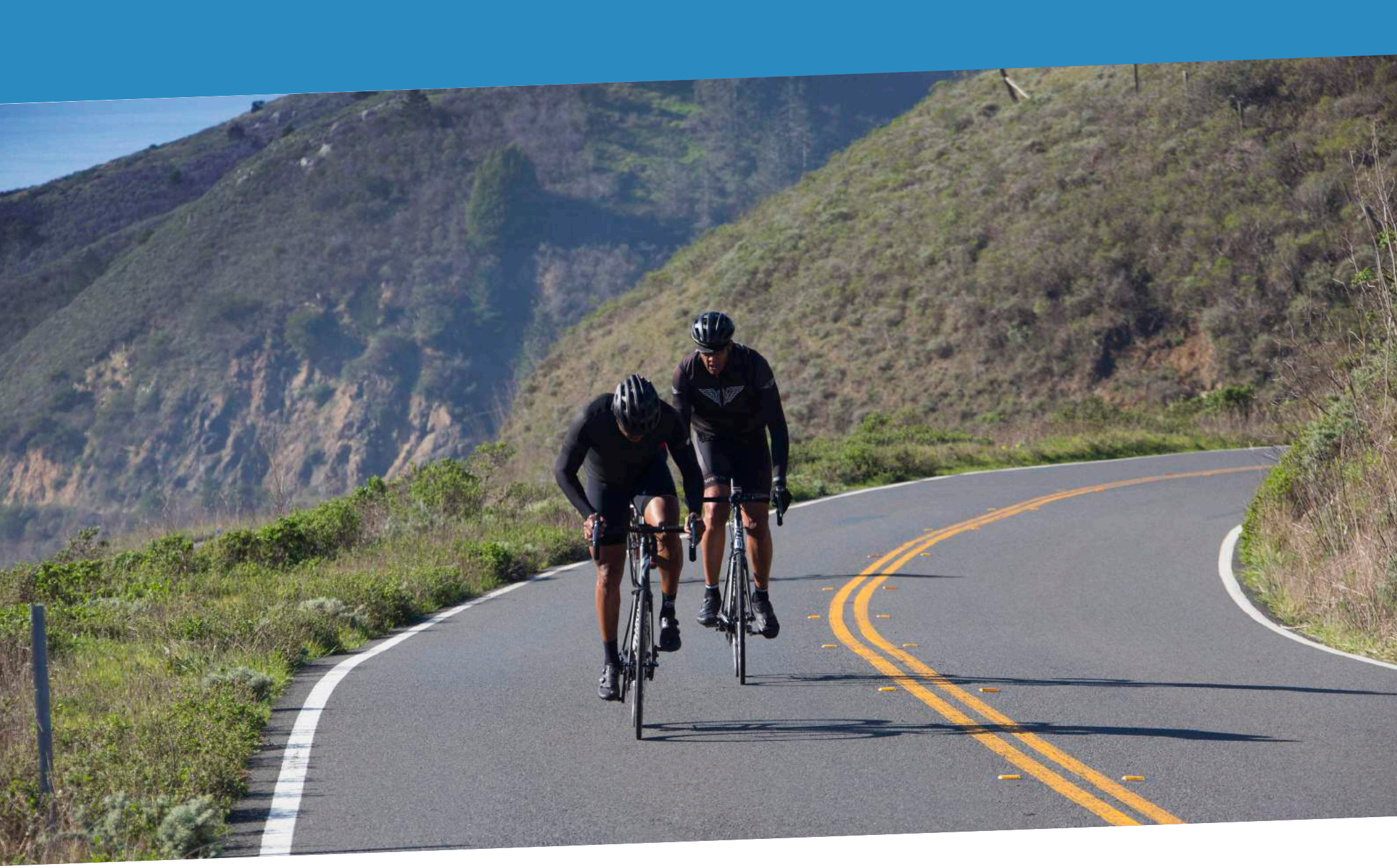
$	Under $250,000
$$	$250,000 - $1,500,000
$$$	$1,500,000 - $7,000,000
$$$$	Over $7,000,000

West County Regional Trail bicycle path alongside State Route 116 north of Sebastopol; photo by Alta Planning + Design


SONOMA
CLOVERDALE
Cloverdale Rancheria
Dry Creek Rancheria
Stewarts Point Rancheria
HEALDSBURG
ST. HELENA
SANTA ROSA
Koi Nation
SEBASTOPOL
Graton Rancheria
ROHNERT PARK
YOUNTVILLE
COTATI
NAPA
SONOMA
PETALUMA
NOVATO
101
128
1
116
12
121
37
IMPROVEMENT TYPES
Intersection/Ramp Improvement
Separated Crossing
Corridor
PRIORITIZATION CATEGORY
GREEN Top Tier Project
ORANGE Mid Tier Project
PURPLE Low Tier Project
Tribal Office
Tribal Land
as identified by the United States Bureau of Indian Affairs
Disadvantaged Community
as determined by the Metropolitan Transportation Commision and/or the California Environmental Protection Agency



Implementation

Implementing the proposed projects from the District 4 Bike Plan will take a concentrated effort from Caltrans and its partners.

Pathways for Implementation

This Plan identifies the need for several billion dollars in investment in bicycle infrastructure in the Bay Area. Implementing even the top priority improvements will take a concentrated effort and substantial resources.

Caltrans envisages **three pathways for implementation** of these projects.

Maintenance and Operations

The State Highway Operation and Protection Program (SHOPP) is the State's fix-it-first program that prioritizes and funds repair and preservation, emergency repairs, safety and some operational improvements on State highways and bridges. The SHOPP is guided by State policies, focused on asset management and is limited to projects that do not add highway capacity.

As individual SHOPP projects are developed and implemented, there are often opportunities to accomplish additional goals such as improving multimodal mobility and implementing complete streets. For example, SHOPP projects may include restriping a roadway after resurfacing with new or wider bike lanes, improved traffic control devices at intersections and ramp crossings, or overcrossing improvements for bicyclists as part of a retrofit project. Many of the lower-cost or simple improvements identified in this Plan and possibly some of the more significant improvements on Caltrans-owned facilities can be implemented through the SHOPP.

State Route 29 St. Helena Channelization Project in Napa, funded by the SHOPP, created a direct railroad crossing for bicyclists traveling along State Route 29. Photo by Caltrans District 4 staff.

Facing page: Highway 1 in Marin County; photo by Caltrans District 4 Photography/John Huseby

Other Funding Sources

Caltrans and the California Transportation Commission manage several funding programs that can be used to implement transportation projects. The Active Transportation Program (ATP), new funding programs created by Senate Bill 1 (2017), and the State Transportation Improvement Program (STIP) all present potential mechanisms to directly fund proposed projects.

The purpose of ATP is to encourage increased use of active modes of transportation. The ATP consolidated Federal and State transportation programs, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (SR2S), into a single program with a focus to make California a national leader in active transportation. Caltrans is eligible to apply for the statewide component of ATP funds or partner with local agencies to expand funding opportunities in the ATP for pedestrian and bicycle improvements on the State transportation network.

Caltrans has already begun to use the data and information generated by this process to inform State programs, including identifying bicycle needs in applications for the new Solutions for Congested Corridors program established by Senate Bill 1.

Locally Sponsored Projects and Programs

Many of the projects identified in this plan were drawn from local plans or were created to support the projects in those plans. Where local agencies are pursuing projects that cross or use State right of way, there may be opportunities for Caltrans to partner with these agencies to help implement the relevant project improvement. Caltrans will also share data from this planning process to support locally-sponsored plans and studies.

Upper Broadway Class IV separated bikeway parallel to State Route 24, implemented by the City of Oakland; photo by Alta Planning + Design

Strategies and Actions for District 4

A summary of Caltrans vision, goals, objectives, and strategies for bicycling, with emphasis areas for District 4, can be found in Appendix B. District 4 plays a key role in reaching toward the goals and objectives of the California State Bicycle and Pedestrian Plan, Toward an Active California. In addition to implementing the improvements identified in this Plan, District 4 can take the following actions to track progress and implement strategies that further these goals and objectives:

- Track implementation of bike improvements on and across the State transportation network in District 4
- Seek opportunities to provide bicycle transportation training for District and local agency staff in the Bay Area
- Initiate a bicycle count program for the State transportation network in District 4
- Provide guidance to local agency partners on the Caltrans approval process for complete street improvements on the State network
- Identify and promote best practices from District 4 and local jurisdictions developing low-stress bicycle facilities and networks on and along State highway corridors in the Bay Area
- Develop recommendations based on Bay Area best practices for future updates to Caltrans statewide guidance and policies
- Explore opportunities to partner with local agencies and organizations on short-term pilot projects and events to promote bicycling
- Support US Bike Route System (USBRS) designation efforts in the Bay Area and identify State highway segments for USBRS designation to support bicycle tourism, enhance public health, and promote economic benefits
- Strengthen engagement with low-income, minority, rural, and tribal communities during planning and project development to understand their mobility and safety needs on the State transportation network

What's Next?

District 4 recognizes that this Plan is a first step that, while significant, only begins to address the need for bicycle improvements on the State transportation network. Planning for a multimodal system is an ongoing process. As more projects are implemented, needs will evolve and change. To understand these changing needs, District 4 will continue to engage local agency partners and stakeholders and is committed to working with them on making the State transportation network safer and more comfortable for all users.

Alex Zuckermann Bay Bridge Path; photo by Caltrans District 4 Photography / John Huseby

Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability.