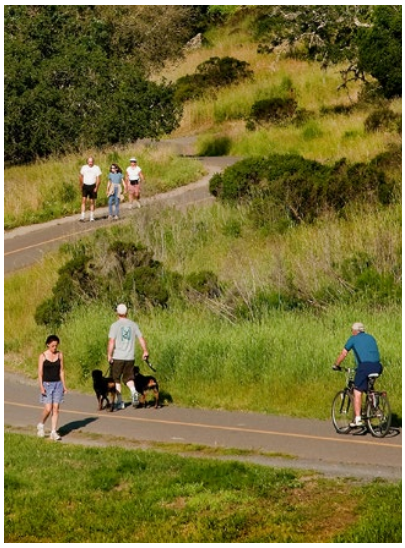
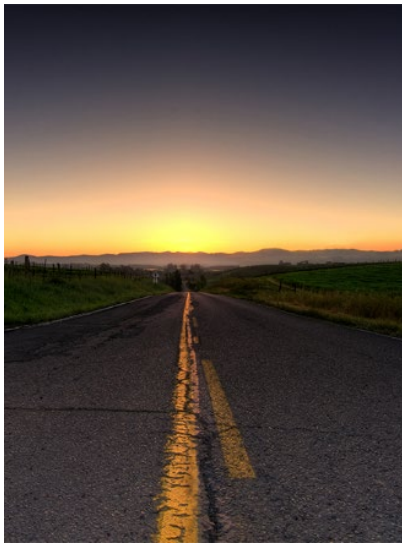


Bicycle & Pedestrian Plan:
The County of Sonoma Active Transportation Plan



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Bikeways & Pedestrian Plan: The County of Sonoma Active Transportation Plan

October 2025 Draft

FEHR PEERS

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1. Introduction

The 2025 Bikeways & Pedestrian Plan: The County of Sonoma Active Transportation Plan (Bikeways Plan) was developed as a component of the Sonoma County Transportation Authority's (SCTA) 2025 Countywide Active Transportation Plan (Countywide ATP) effort. This plan focuses on improving active transportation connections within Unincorporated Sonoma County (County) and creating low stress connections to surrounding jurisdictions. This Plan is also a stand-alone document to be used by Sonoma County to guide implementation of local projects, policies, and programs.

The primary emphasis of this planning effort is to increase access to active transportation modes by planning for infrastructure projects and supportive programs. Active transportation refers to "human-powered" modes of travel, like walking, biking, or using mobility devices. Creating an environment that encourages a shift from automobile trips to walking or biking trips also promotes improvements to mental and physical health, air quality, reduces noise, and improves social equity. A safer and more connected network will allow members of the community flexibility in their travel, where they do not need to rely on a personal vehicle to travel through the county.

Projects are prioritized based on the needs highlighted by the community and county staff at outreach events throughout the County. Policies and programs are in line with the County's near-term plans and funding priorities.

The previous *Sonoma County 2010 Bicycle and Pedestrian Plan* (2010 BPMP) identified a general expansion of walking and biking facilities. Since the 2010 BPMP was adopted, several changes and advancements have been made in the state of active transportation planning practices. For example, SCTA adopted Vision Zero in 2021, which is a regional commitment to eliminating traffic fatalities and serious injuries through engineering, programs, policies, and education. The County of Sonoma subsequently adopted the Vision Zero Action Plan, committing to these goals in the unincorporated County. There have also been policy changes at the national and state level acknowledging a greater need for more robust infrastructure, programs, and policies to make walking and biking safer. With those and other similar advancements in mind, this plan update focuses on:

All Ages and Abilities – Creating spaces for people to walk, bike, and roll that are low-stress and lower risk to create more opportunities for more people to walk, bike, and roll.

Regional Coordination – Identifying and planning regional routes between jurisdictions as part of the larger Countywide ATP.

Implementation – Prioritizing projects and identifying funding to focus and streamline implementation.

Low-stress network analysis was used to identify opportunities to upgrade or enhance existing or previously planned projects. The network analysis considered County and regional destinations, traffic safety, and gaps in existing facilities to help inform recommendations for enhanced or new active transportation improvements. Countywide input was gathered to ground truth and expand the findings from the network analysis to create a robust project list and supporting policy and programs.


sctransit.com
12 SONOMA SHUTTLE
NORTH SAGUA CALIENTE
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SonomaCountyTransit

2. Community Profile & Walking, Biking & Rolling Today

Community Characteristics and Travel Patterns

The County has a population of approximately 145,000.[1] Sonoma County is renowned for its stunning landscapes that range from rugged coastline to vineyards and redwood forests. Priorities for this Plan include creating an interconnected network of pedestrian and bicycle-friendly corridors that links the cities, towns, and activity centers of Sonoma County.

In the past two decades, Sonoma County has seen steady growth, both in the development of land uses and in the number of people residing within the County. Sonoma County spans approximately 1,400 square miles, and outdoor enthusiasts flock to the region for its climate, networks of hiking trails, cycling routes, and water sports along the Russian River. Leveraging these assets and investing in new and safe multi-modal connections could encourage more users to take active transportation modes while traveling through the County and region.

Approximately 57 percent of the County's population is between the ages of 18 and 64 years old, and 22 percent are 65 or older.[2] Creating an environment that accommodates those of all ages and abilities, and makes first and last mile connections to transit, is crucial in promoting and enabling more walking, biking, and rolling for daily travel needs. In Sonoma County, Census data indicates 73 percent of workers use single occupancy vehicles, 7 percent carpool, 1 percent take transit, 3 percent bike or walk, 15 percent work from home, and 1 percent take other means of transportation to work.

As the County continues to grow, there is a need for safer, low stress, and better-connected walking, biking, and rolling facilities.

Road Safety in Sonoma County

Per the California Office of Traffic Safety, as of 2020, Sonoma County as a whole ranked 46 (out of all 58 counties in California) in the total fatal and injury collision category[3]. This indicates Sonoma County had fewer fatal and injury collisions than most other counties in California. According to the SCTA's Sonoma County Vision Zero Data Dashboard, between

[1] Utilizing the 2020 U.S. Decennial Census data, the estimated Population of unincorporated Sonoma County was calculated by subtracting the total estimated populations of incorporated cities from the total estimated population of Sonoma County

[2] 2022 American Community Survey 1 Year Estimates, US Census Bureau

[3] https://www.ots.ca.gov/media-and-research/crash-rankings-results/?wpv_view_count=1327&wpv-wpcf-year=2020&wpv-wpcf-city_county=Sonoma+County&wpv_filter_submit=Submit

2015 and 2019 there were 133 fatalities and 610 severe-injury traffic collisions in the County. There were 25 fatal and 97 severe-injury collisions involving people walking or biking during this period. The 2020 *Sonoma County Local Roadway Safety Plan (LRSP)* identified the following locations with a history of collisions: River Road, Lakeville Road, Bennett Valley Road, Porter Creek Road, Calistoga Road, Bodega Highway, Todd Road/Santa Rosa Ave intersection, Adobe Rd / Frates Rd intersection, and Old Redwood Highway/East Railroad Ave intersection. The County LRSP also found that most pedestrian collisions occurred near urban areas, over half occurred during dark conditions, and 90% occurred outside of a crosswalk. Bicycle collisions were geographically spread out and the majority (89%) occurred during daylight and during clear, dry conditions.

Existing Active Transportation Network Characteristics in the County

Sonoma County is comprised of a tapestry of unique communities and cities that stretches from the Pacific Ocean to rich agricultural inland valleys. Area and specific plans have been developed across the County to ensure organized development and growth, and to ensure the active transportation needs of existing and future residents of Sonoma County and visitors are being met. Improved active transportation connections are needed between these communities and cities and throughout the County via new and existing trails and transit facilities.

- The Russian River Area runs along the Russian River from the Pacific Coast to the inland valley. River Road is an important east-west road in Sonoma County's transportation network that connects the communities of Duncans Mills, Guerneville, Rio Nido, Hacienda, Forest Hills, Mirabel Park to greater Sonoma County. Several segments of River Road are part of the Countywide High Injury Network (HIN). The community of Guerneville, with a population of approximately 5,000, is a primary hub for the Russian River recreation, with direct access to the Russian River and Armstrong Woods State Natural Reserve.
- Occidental is a small-town community in western Sonoma County. Occidental is located at the confluence of Coleman Valley Road, Graton Road, Occidental Road, and the main thoroughfare through town, the historic Bohemian Highway. Occidental's downtown Main Street is lined with shops, cafes, and restaurants in historic buildings. Like the rest of Sonoma County, Occidental is known for its outdoor activities. Occidental also hosts various community events and festivals throughout the year and is home to approximately 1,000 people.
- Forestville is situated near the Russian River and is surrounded by dense forests and rolling hills, and a great location for outdoor activities like hiking, camping, canoeing, tubing, and fishing. It's known for its wineries and vineyards. Forestville is home to approximately 3,500 people. The primary road through Forestville is Front Street, which is also designated as part of the Pocket Canyon Highway/SR 116.
- Coastal Sonoma County stretches from the communities of Gualala and Sea Ranch to Bodega Bay along the Pacific Coast linked by the Coast Highway (SR 1). Coastal Sonoma County features a diverse range of landscapes, from rugged cliffs and beaches to rolling hills and forests. The area is perfect for outdoor enthusiasts. There are numerous parks and protected areas like Doran Beach Regional Park, Sonoma

Coast State Park, and Armstrong Redwoods State Natural Reserves where residents and visitors can enjoy hiking, camping, and nature walks. In addition to Gualala, Sea Ranch, and Bodega Bay, Coastal Sonoma County includes the communities of Timber Cove, Fort Ross, Jenner, Sereno del Mar, Carmet, and Salmon Creek.

- The Airport Area encompasses approximately 810 acres with diverse land uses intended to reflect market conditions and community needs, and economic development and opportunities.

illustrates the existing bikeway network at a countywide level; the **Appendices** include maps of subareas within the County. The bikeway network is organized into several distinct facility types, further detailed below. Guidance related to the planning, design and implementation of these different types of bike facilities can be found in documents published by the Federal Highway Administration (FHWA), American Association of State Highway Transportation Officials (AASHTO), as well as Caltrans' Design Information Bulletin (DIB) 94.

Multi-Use Paths (Class I) are fully separated bike and pedestrian paths. They follow their own alignment sometimes parallel to a street, waterway, and/or other alignment through open space or undeveloped areas. Interactions with vehicles are limited to trail crossings of streets and driveways.

Bike Lanes (Class II) are on-street bike facilities that use a visual separation, such as a white line or stripe (i.e., longitudinal pavement marking) to designate space on the street for bicyclists that is adjacent to a vehicle lane.

Buffered Bike Lanes (Class IIB) increase space between the bike lane and vehicle travel lane(s) using a painted buffer. The painted buffer is often made up of two parallel white lines with diagonal white lines painted between them. Green pavement markings can be used at driveways or intersections to draw attention to where vehicle paths cross bicyclists' paths. Flexible vertical delineators or plastic posts can also be placed in the center of the painted buffer.

Bike Routes (Class III) are shared facilities between bicyclists and motor vehicles. Bicyclists ride in the vehicle lane. Bike routes are sometimes used to provide a connection to another bike facility or designated bike route. "Sharrows" (shared-lane markings) may be used to alert motorists of on-street bicyclists. Signs may also be used to mark the route.

Bike Boulevards (Class IIIB) are streets designed to give priority to people walking and biking. Bicycle boulevards are streets where there are at most one vehicle lane in each direction and traffic calming treatments are used to slow vehicle speeds to 25 mph or slower and discourage non-local vehicle traffic. Treatments can include some combination of speed tables, raised crosswalks, speed humps, traffic diverters, chicanes, curb extensions at crosswalks, and/or neighborhood traffic circles at intersections. Speed management tools on rural roadways may also include speed limit reductions, narrower lane widths, speed feedback signs and targeted enforcement, user education, and additional signage. Advisory Bike Lanes could be an alternative facility for existing or planned bike boulevards (or bike routes).[4]

Separated Bike Lanes (Class IV) are on-street bike facilities that include physical separation between where bicyclists ride and vehicle traffic. Ideally, in urban, suburban or rural town settings, the physical separation provides protection to the bicyclist through use of materials such as concrete medians (with or without landscaping), planters, and/or the bike lane could be separated by a curb to raise the bike lane to either sidewalk height or an intermediate height. In rural areas, separation could be provided through the use of similar materials or via vegetation. Green pavement markings can be used at driveways

[4] https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/small_towns/

or intersections to draw attention to where vehicle paths cross bicyclists' paths as well as additional intersection treatments to enhance safety.

The existing transit network, as illustrated in Figure 2 at the countywide level, includes transit services and amenities within or immediately adjacent to Sonoma County. The **Appendices** include maps of subareas within the County. Sonoma County Transit (SCT) is the primary public transportation provider for all of Sonoma County. It operates a network of intercity bus and local shuttle routes that serve both incorporated cities and communities in the County. The SCT routes described in

Table 1 exclude local shuttles and routes that primarily serve local city trips. SCT buses are equipped with bike racks and major transit hubs provide bike parking.

Table 1. Sonoma County Transit (Intercity Routes)

Route	Route Type	Service Area	Headways
20	Zone (East-West)	Russian River Area, Forestville, Sebastopol, Santa Rosa	Weekday: 35-75 minutes Weekend: 50-75 minutes
28	Local (Loop)	Occidental, Camp Meeker, Guerneville, Monte Rio, Duncan Mills	Weekday: ~ 2 hours Saturday: ~2-4 hours
30/30X	Zone (East-West)	Santa Rosa, Sonoma Valley	Weekday: ~1-3 hours Weekend: 55-75 minutes
34	Zone (East-West)	Santa Rosa, Sonoma, Kenwood, Agua Caliente, Boyes Hot Springs, El Verano	Weekday: 1 run per day
40	Zone (East-West)	Sonoma, Petaluma, Temelec	Weekday: ~2-4 hours
44	Zone (North-South)	Petaluma, JC, SSU, Santa Rosa, Rohnert Park	Weekday: 40-150 minutes Weekend: ~2-3 hours
48	Zone (North-South)	Santa Rosa, Rohnert Park, Cotati, Petaluma	Weekday: 30-70 minutes Weekend: ~2-3 hours
60	Zone (North-South)	Cloverdale, Healdsburg, Windsor, Santa Rosa, Geyserville	Weekday: 30-120 minutes Weekend: 35-120 minutes
62	Zone (North-South)	Santa Rosa, Sonoma County Airport, Windsor	Weekday: 105-130 minutes

Source: Sonoma County Transit: https://sctransit.com/all-routes/

Regional and greater Bay Area connections can be made via Golden Gate Transit (GGT), Sonoma-Marin Area Rail Transit (SMART), and Mendocino Transit Authority. Golden Gate Transit operates a network of bus routes connecting various cities within Sonoma, Marin, and San Francisco Counties. SMART is a regional passenger rail service servicing Sonoma and Marin Counties. Within Sonoma County, there are existing SMART Stations in Petaluma, Rohnert Park, Santa Rosa, and the Sonoma County Airport. There are currently three additional stations planned for Windsor, Healdsburg, and Cloverdale. Mendocino Transit Authority Routes 65 (CC Rider) and 60 (The Coaster) provide limited daily service to Mendocino County from destinations in Sonoma County including Sonoma County Airport, Santa Rosa/Santa Rosa SMART Station, Sebastopol, Bodega Bay, and Jenner.

Transit routes in Sonoma County are provided along major arterials, streets, and highways throughout the county. However there remains a need for improved walking and bike

connections, continuous sidewalks and upgraded bike facilities, and traffic calming to support people walking and biking to transit stops. See the **Appendices** for locations with existing sidewalks in Unincorporated Sonoma County.

As described above, to enable more people to walk, bike, roll, and to use these modes to access transit, the spaces built to support those uses need to be safe and comfortable. Figure 3 illustrates the results of a Level of Traffic Stress at a countywide level; the **Appendices** includes maps of subareas within the County. Figure 3 also denotes the streets within the County that were identified as part of SCTA's High Injury Network[5] (HIN) developed as part of SCTA's Vision Zero Action Plan.[6]

An LTS 1 rating indicates the least stressful (most comfortable) facilities. Low stress (LTS 1 or 2) facilities in the County include low-speed and low-volume residential streets and trails such as the Joe Rodota Trail and the SMART Trail. LTS 4 indicates the most stressful (least comfortable) facilities. High stress facilities in the County overlap with many of the HIN segments such as on Dry Creek Road (community of Geyserville) and segments of River Road and SR 116 including through the communities of Monte Rio, Guerneville, Mirabel Park and Forestville.

Defining Level of Traffic Stress

Level of Traffic Stress (LTS) analysis takes different travel corridor characteristics into consideration, including the number of travel lanes, speed of traffic, number of vehicles, presence of bike lanes, width of bike lanes, and presence of physical barriers providing protection from traffic. Based on these variables, a bike facility can be rated with an LTS ranging from 1 to 4.

The least stressful (most comfortable) facilities are given an LTS 1 rating. Facilities with this rating are typically shared-use paths, separated bikeways, low-volume and low-speed bike routes, and bike lanes on calm and narrow streets. The most stressful (least comfortable) facilities are given an LTS 4 rating. Facilities with this rating are typically major arterials with multiple lanes of traffic (with or without bike lanes in some cases, depending on speeds) or narrower streets with higher speed limits.

[5] The High Injury Network is a compilation of road segments with an elevated risk of crashes resulting in an injury or fatality, identified through an analysis of the frequency, severity, and mode of past crashes. https://scta.ca.gov/wp-content/uploads/2022/03/Sonoma-Vision-Zero-Action-Plan_Final-1.pdf

[6] https://scta.ca.gov/wp-content/uploads/2022/03/Sonoma-Vision-Zero-Action-Plan_Final-1.pdf

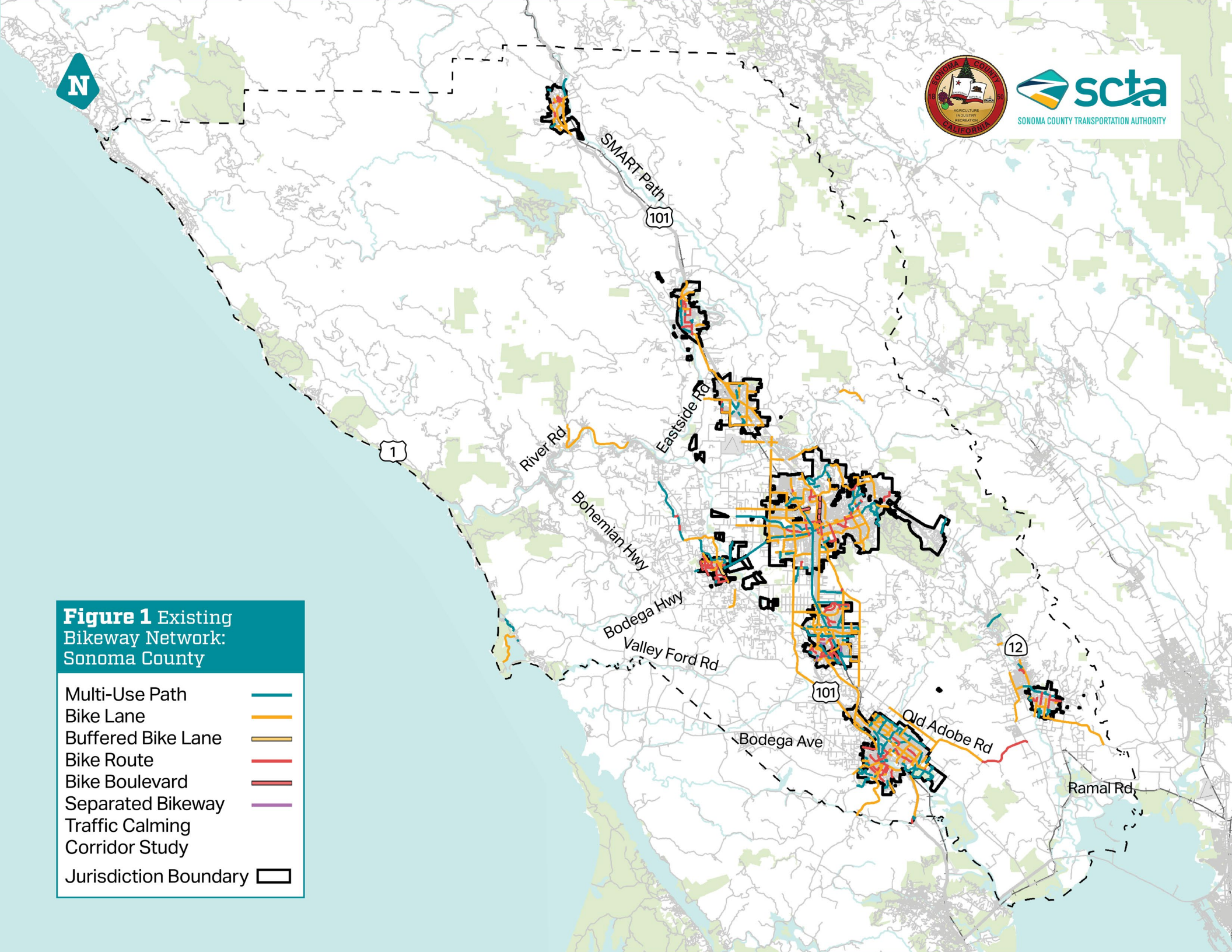


Figure 1 Existing Bikeway Network: Sonoma County

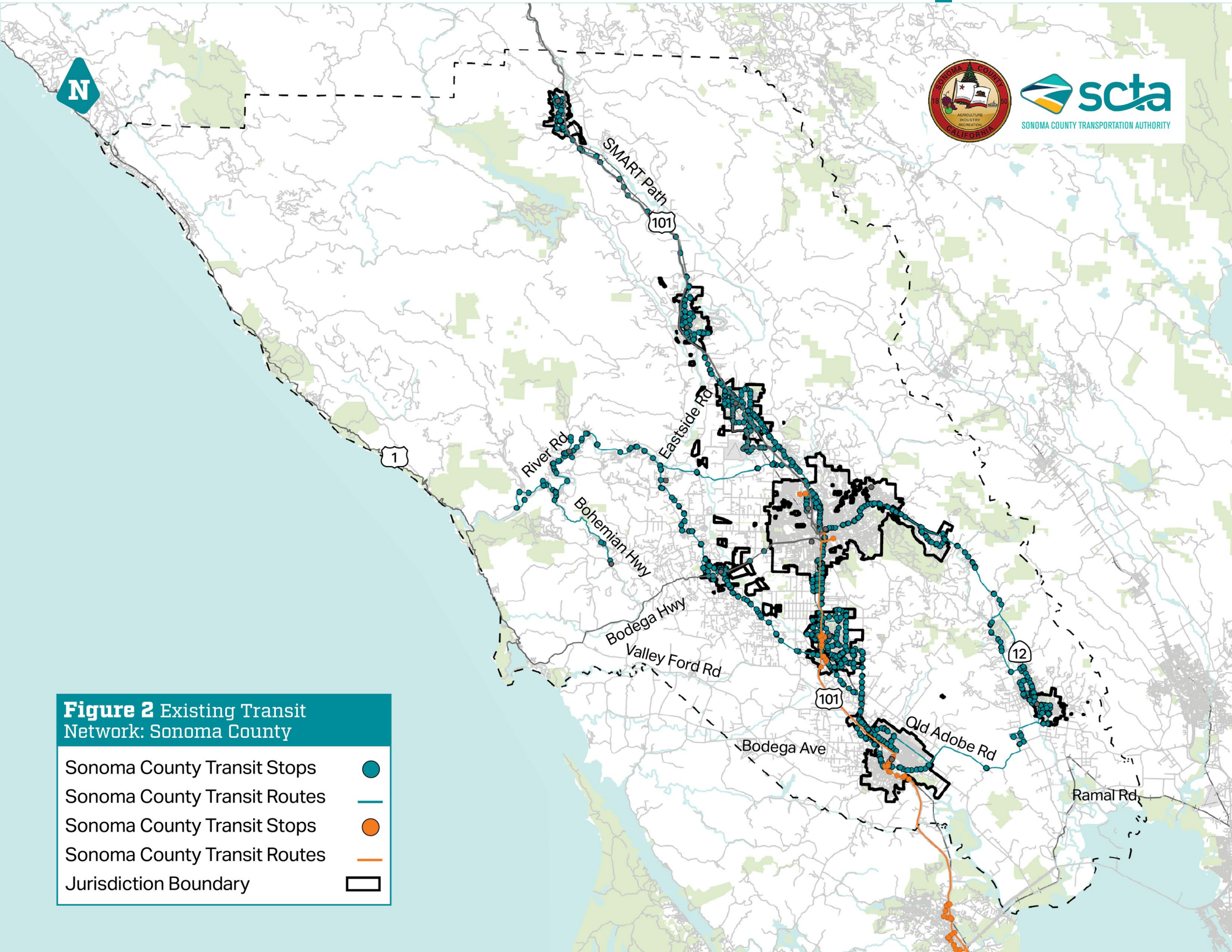


Figure 2 Existing Transit Network: Sonoma County

SONOMA COUNTY TRANSPORTATION AUTHORITY

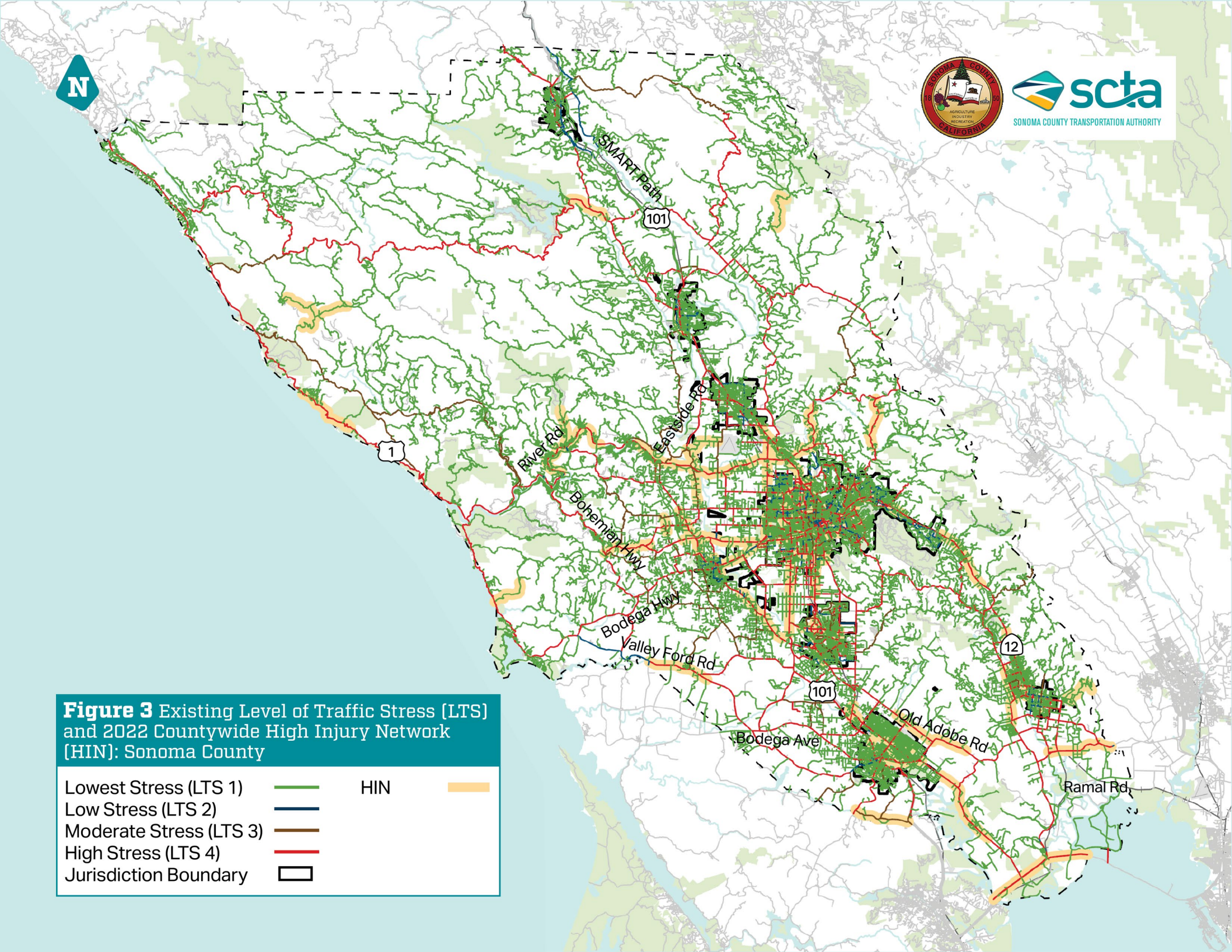


Figure 3 Existing Level of Traffic Stress (LTS) and 2022 Countywide High Injury Network (HIN): Sonoma County

3. Community & Stakeholder Engagement

Initial outreach for this Plan began in the Fall of 2023. In coordination with County staff, staff from other participating jurisdictions, and SCTA, the Countywide ATP project team prepared a Stakeholder Coordination Plan and Community Engagement Plan to guide community engagement and milestone presentations to local and regional advisory bodies and relevant committees.

From September to November 2023, the project team completed community engagement for Phase I: Needs and Concerns. The project team introduced the project and gathered feedback on existing conditions and the draft plan vision and goals from the Sonoma County Bicycle and Pedestrian Advisory Committee (BPAC) in October 2023. The project team also used online and in-person engagement strategies to share the Plan's goals and scope. The project team solicited feedback on residents' lived experiences with active transportation today and asked them to identify needs, barriers, and opportunities for active transportation travel. All engagement materials and the website were prepared in both English and Spanish.

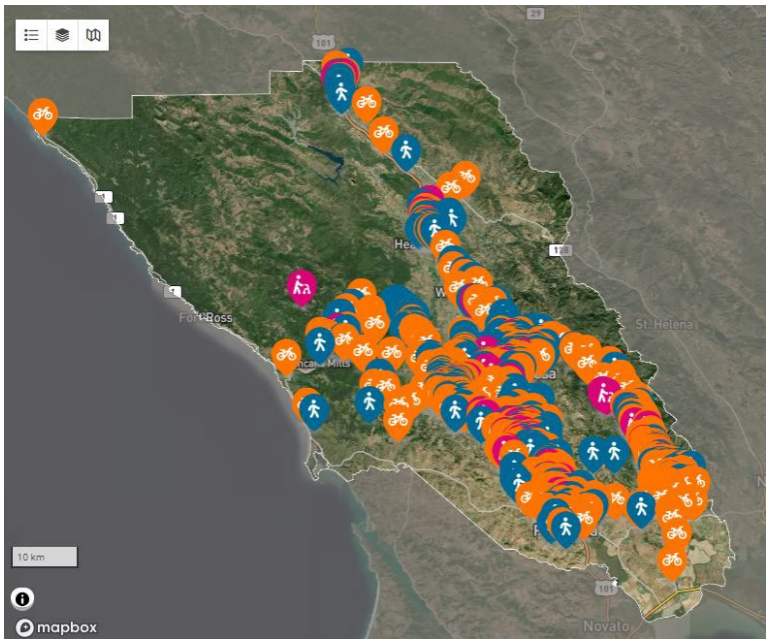
The project team attended 14 events throughout unincorporated and incorporated Sonoma County. For unincorporated Sonoma County, pop-up events were held in unincorporated Santa Rosa and Glen Ellen and at the Countywide Sonoma County Bicycle Coalition Advocacy Summit. Information about the public-facing engagement events was posted on the online engagement platform, Social Pinpoint. Events included farmers' markets, a walk and roll to school day, grocery stores, community listening events, and a State of the Latinx Community Address. Most tabling events were 2-4 hours long and engaged visitors through large-format maps of the surrounding roadway network and posterboards with QR codes linking to the online map and survey.

Social Pinpoint was the online engagement platform throughout the Plan development; it was included directly on the SCTA project website. The website introduced the project and let users place pins on a map indicating where accessibility, pedestrian, or bicyclist improvements were needed. A survey was also included on the website that asked respondents for their home zip code, their current active transportation behavior, their use of mobility devices, key destinations they walk or bike to, and ideas for programs or services that would encourage them to walk, bike, and roll more often. The interactive map and survey were active from September through November 2023.

The planning team promoted the Social Pinpoint page via Community-Based Organizations (CBOs), SCTA's website and social media, California Human Development, and in-person engagement events.

Between online and in-person engagement, approximately 1,200 map contributions and 500 survey responses were received. Feedback from previous engagement efforts including LRSPs and Safe Routes to School Parent Surveys were also incorporated.

In October 2023, the Countywide ATP project team published a project webpage and online survey and distributed it through the County of Sonoma website, social media, and the County's November newsletter. SCTA/RCPA also distributed the webpage and survey through its newsletter, mailing list, and social media. During the first round of outreach in Fall 2023, 271 comments were received in Unincorporated County. During the second round of outreach, an additional 27 comments were received, for a total of 298 comments. Across the County, a total of 1210 comments were received in Phase I and 265 comments in Phase II.



Project Web Map Survey with 298 comments in Unincorporated County

Focus groups were also held in Sonoma County to receive programmatic feedback from youth, people who work in service, manufacturing, agriculture, or other shift jobs, and people with disabilities. In total, two focus groups were held, including a youth focus group held January 2024 in partnership with Latino Service Providers. Students were primarily vehicle-dependent and often worked or went to school in a town different from where they lived. Key themes from the focus group included access, safety, and convenience.

From April to June 2024, the project team completed community engagement for Phase II. Draft project, program and policy recommendations were shared with the public for review and feedback. Feedback was gathered in Phase I and was synthesized into project and program lists for jurisdiction staff to review. The project team also presented and discussed the draft projects with potential policy and program topics with the SCBAC in March 2024. For Phase II public engagement, Social Pinpoint was updated to receive feedback on the

draft project and program lists and the priorities for implementation. The website also included information about how projects would be funded and implemented. The project team supported ten pop-ups throughout the County, including four pop-ups in the Unincorporated County (in Guerneville, Occidental, Forestville, and the Springs Area) and the distribution of project cards countywide for Bike to Work Day. The project team also hosted open house events countywide, including in each incorporated community.

Draft vision and goals, and a draft proposed projects list were presented to community Planning Commissions, Bicycle and Pedestrian Advisory Committees, and other relevant groups throughout the County to provide feedback. Feedback from outreach events and presentations was incorporated into the final plans.

In general, public feedback received through the first and second rounds of outreach throughout the County in 2023 & 2024 revealed the following themes:

Project team hosting a pop-up event in Unincorporated County

Biking: more bike lanes, protected facilities (paths, protected bikeways, intersection treatments)

Walking: close sidewalk gaps, improve existing and add new crossings

Traffic calming: implement on collectors and residential streets, especially on rural roadways and in areas around schools

Trails: maintain existing trails and improve trail access and connections, improve trail entrances and transitions from trails to streets and explore feasibility of new trails

Destinations: better pedestrian/bike access to downtowns and along key corridors, implement wayfinding to help residents and tourists connect to key destinations

In November 2024, the Draft Plan was brought back to the BPAC for review. Finally, in 2025, County staff and the project team presented the Final Plan to the Sonoma County Board of Supervisors for adoption.

4. Vision & Goals

The vision and goals statements were developed to be consistent with SCTA's Comprehensive Transportation Plan, *Moving Forward 2050*. They were refined based on input provided by the County's Bicycle and Pedestrian Advisory Committee as well as other countywide and local advisory bodies. The Sonoma County active transportation vision is:

> *"Our guiding principles are to improve safety, connectivity, equity, and quality of life. Walking, biking, and rolling shall be safe and appealing modes for people of all ages and abilities to use for everyday transportation and recreation."*

The County's active transportation goals are:

1. **Connected and Reliable –** Deliver a continuous active transportation network that links daily activities and housing, and that allows people of all ages and abilities to use a variety of transportation types easily, affordably, and dependably.
2. **Safe and Well-Maintained –** Create and sustain a high-quality and low-stress active transportation network. Employ Vision Zero and Safety Plan policies and strategies to advance this goal.
3. **Community Oriented and Place-Based –** Tailor projects to the surrounding community contexts and user profiles. Support a diversity of uses and users and create community through active transportation programs and policies that prioritize walking, biking, and rolling.

Sonoma County has also developed a series of Policies and Actions to guide implementation of this Plan, which are aligned with these three goals and presented in *Chapter 5's Programs & Policies* section.

5. Advancing Active Transportation

The following are the planned infrastructure and programmatic improvements for enhancing active transportation in the County.

Infrastructure Improvements

Enhancing the safety and comfort of existing facilities as well as expanding the infrastructure and spaces available for active transportation modes are critical to being able to provide opportunities for people of all ages and abilities to walk, bike, and roll. The section below presents the considerations and approach for developing proposed project descriptions followed by a summary of treatments and engineering resources the county may use in designing and implementing the planned projects. The full, detailed proposed project list is included in **Appendix E**.

Considerations for Facility Type

Roadways in unincorporated Sonoma County vary in terrain. The roads may wind through hills, mountains, cliffs, follow the base of canyons, run along rivers, or through long rolling stretches of agricultural lands. They may also interface with suburban and urban built environments where they may serve as main streets for unincorporated communities. Many County roadways are constrained or limited in width due to these varying conditions and land uses. As a result, under existing roadway conditions, existing roadway width may not be consistently or readily available to add or enhance separate or designated space for people walking and biking.

While the project team understands those existing constraints, this Plan seeks to identify planned projects that will enhance safety and comfort for a broad range of people interested in riding their bikes – as a result, the planned projects in this Plan reflect the desired facility type and improvements. Implementation of the planned projects will take time and investment.

Given the above considerations, the bikeway facility selection for roadways in the County was informed by several factors:

- Existing Bike Facilities
- Level of Traffic Stress Analysis based on Existing Bike Facilities and Existing Roadway Characteristics
- Planned Bike Facilities Identified in the 2010 BPMP
- Desire for Low Stress Routes between Unincorporated Communities as well as to/from Incorporated Areas
- Industry Guidance Regarding Bikeway Selection

- Community Input including from the Sonoma County Bicycle and Pedestrian Advisory Committee (BPAC)

The primary industry guidance used to inform bikeway selection were (1) Bikeway Selection Guide (FHWA 2019),[7] and (2) Urban Bikeway Design Guide (NACTO 2017).[8] Both sets of guidance identify approximate vehicle volume and speed thresholds at which increased space and/or separation for people biking is recommended. The thresholds are identified under different general land use contexts (urban, suburban, rural town, and rural). The FHWA guide more explicitly considers rural conditions relative to the NACTO guide. As such the project team used the FHWA guidance more heavily to inform planned projects in rural areas of the county. Generally, the planned projects are consistent with both FHWA and NACTO guidance.

Table 2 and Table 3 summarizes the conditions under which each bike facility type is ideally applied based on the Bikeway Selection Guide, FHWA (2019).

Table 2. Bike Facility Selection for Urban, Suburban, Rural Town Centers[1]

Bike Facility Type	Vehicle Volume (vehicles per day)
Multi-Use Paths (Class I)[2]	n/a
Bike Lanes (Class II)[3]	3,000 to 6,500
Buffered Bike Lanes (Class IIB)[3]	3,000 to 6,500
Bike Routes (Class III)[4]	Less than 3,000
Bike Boulevards (Class IIIB)[4]	Less than 3,000
Separated Bike Lanes (Class IV)[5]	6,500 and Above

Notes:
(1) Table content summarized based on information in FHWA's Bikeway Selection Guide.[9]
(2) Multi-use paths are off-street and follow their own alignment. They can be useful for providing parallel, low-stress routes to existing streets regardless of those streets' volumes or speeds.
(3) Buffered Bike Lanes are preferred over Bike Lanes.
(4) Bike Boulevards are preferred over Bike Routes.
(5) Separated Bike Lanes physically separate bikes from moving vehicles using treatments that provide protection such as medians, planters, or raising the bike lane to a height similar to a sidewalk.

[7] https://highways.dot.gov/sites/fhwa.dot.gov/files/2022-07/fhwasa18077.pdf
[8] https://nacto.org/publication/urban-bikeway-design-guide/designing-bikeways-for-all-ages-and-abilities/

Table 3. Bike Facility Selection for Rural Roadways[1]

Bike Facility Type	Vehicle Volume (vehicles per day)
Multi-Use Paths (Class I)[2]	n/a
Bike Lanes (Class II)[3]	1,000 to 2,000
Buffered Bike Lanes (Class IIB)[3]	2,000 to 10,000
Bike Routes (Class III)[4]	Less than 1,000
Bike Boulevards (Class IIIB)[4]	Less than 1,000
Separated Bike Lanes (Class IV)[5]	10,000 and above

Notes:
(1) Table content summarized based on information in FHWA's Bikeway Selection Guide.[10]
(2) Multi-use paths are off-street and follow their own alignment. They can be useful for providing parallel, low-stress routes to existing streets regardless of those streets volumes or speeds.
(3) Buffered Bike Lanes are preferred over Bike Lanes.
(4) Bike Boulevards are preferred over Bike Routes.
(5) Separated Bike Lanes physically separate bikes from moving vehicles using treatments that provide protection such as medians, planters, or raising the bike lane to a height similar to a sidewalk.

The planned projects identify a facility type to either enhance existing facilities or close gaps in the network. Generally, facility type selection was informed by the information summarized in

Table 2 and Table 3 as well as considerations for feasibility and continuity with existing land use and street context. There are instances where the planned projects may require widening of roadway to create the necessary width to implement the selected bicycle facility. For those and all planned projects, additional project development will be needed to advance towards implementation.

Planned Projects

Table 4 summarizes the planned projects for enhancing walking, biking, and rolling conditions in Unincorporated Sonoma County, including bikeway, pedestrian crossing, and ADA improvements. The **Appendices** includes a list of the projects, brief descriptions, their extents, and their priority level. Tier 1 indicates high priority, Tier 2 medium priority, and Tier 3 low priority. Chapter 6 describes the prioritization process.

[9] https://safety.fhwa.dot.gov/ped_bike/tools_solve/docs/fhwasa18077.pdf

Table 4. Summary of Planned Infrastructure Improvements

Planned Project Type	Tier 1	Tier 2	Tier 3	Total
Multi-Use Path (Class I) (miles)	136.3	74.7	36.1	247.1
Bike Lane (Class II) (miles)	10.5	63.2	42.8	116.5
Buffered Bike Lane (Class IIB) (miles)	48.1	89.9	33.0	171.0
Bike Route (Class III) (miles)	-	5.9	5.2	11.2
Bike Boulevard (Class IIIB) (miles)	3.1	41.2	66.3	110.6
Separated Bike Lanes (Class IV) (miles)	71.9	64.1	7.6	143.6
Crossing Improvement (Unsignalized) (# of Projects)	11	3	-	14
Crossing Improvement (Signalized) (# of Projects)	3	1	-	4
Corridor Study (miles)	10.5	-	-	10.5
Traffic Calming (miles)	-	1.1	-	1.1

Source: Fehr & Peers, 2024

Figure 4 illustrates the location of the planned bikeway and corridor improvements at a countywide level; the **Appendices** includes the maps of subareas within the county. Figure 5 shows planned improvements as well as the existing biking network at the countywide level; the **Appendices** includes the maps of subareas within the county.

Figure 6 shows ideas for aspirational routes which community members have expressed interest in through community engagement; the aspirational routes are not planned projects. Specific alignments have not been formalized, but the community has expressed interest for these connections to be made by an off-street trail. Advancing these trails will require future study and additional community engagement. The dashed lines shown in the figure are an approximate location only; the final alignment will depend on a number of factors. Examples of factors that would need to be considered include opportunities for land dedication, topography, utilities, maintenance needs and responsibilities, insurance, constructability, and funding availability.

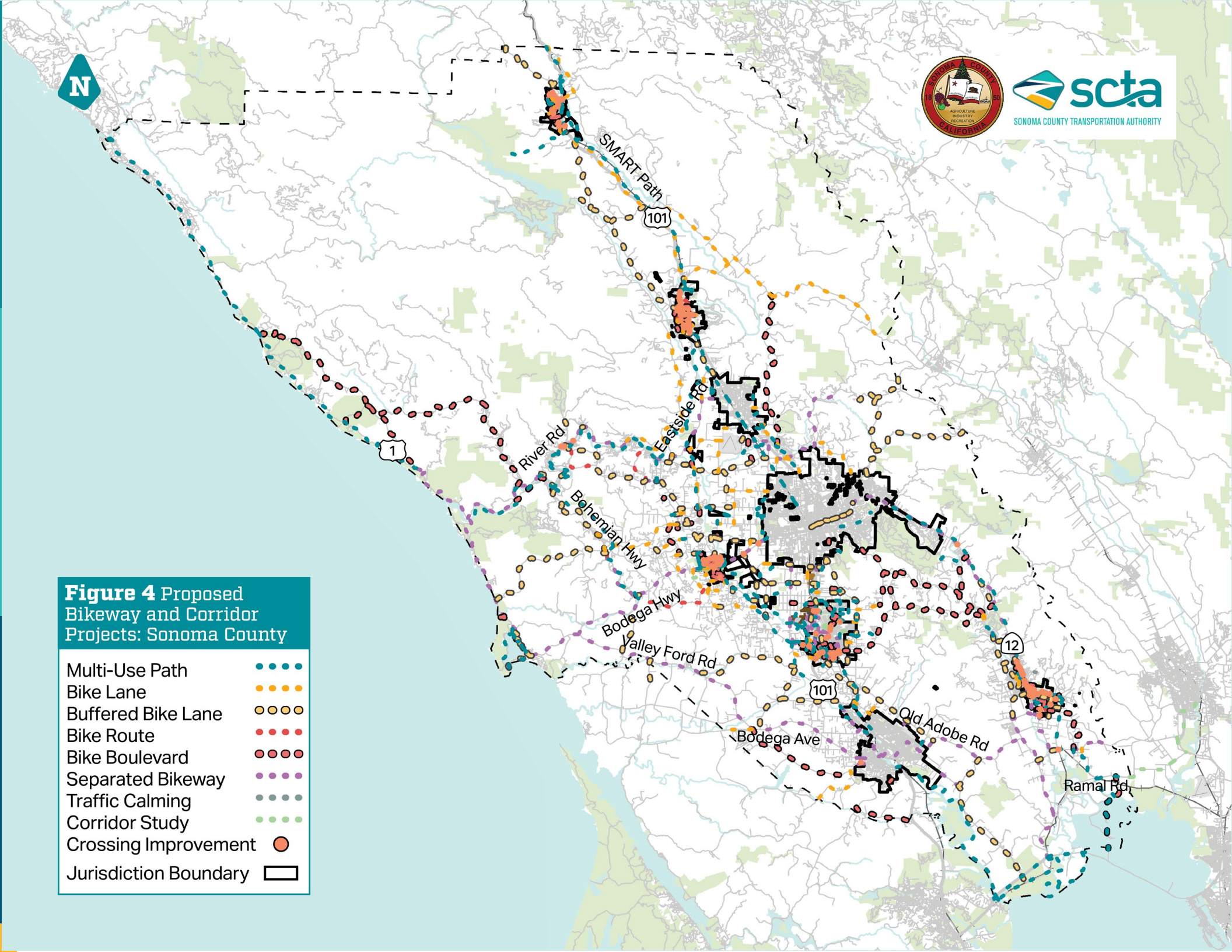


Figure 4 Proposed Bikeway and Corridor Projects: Sonoma County

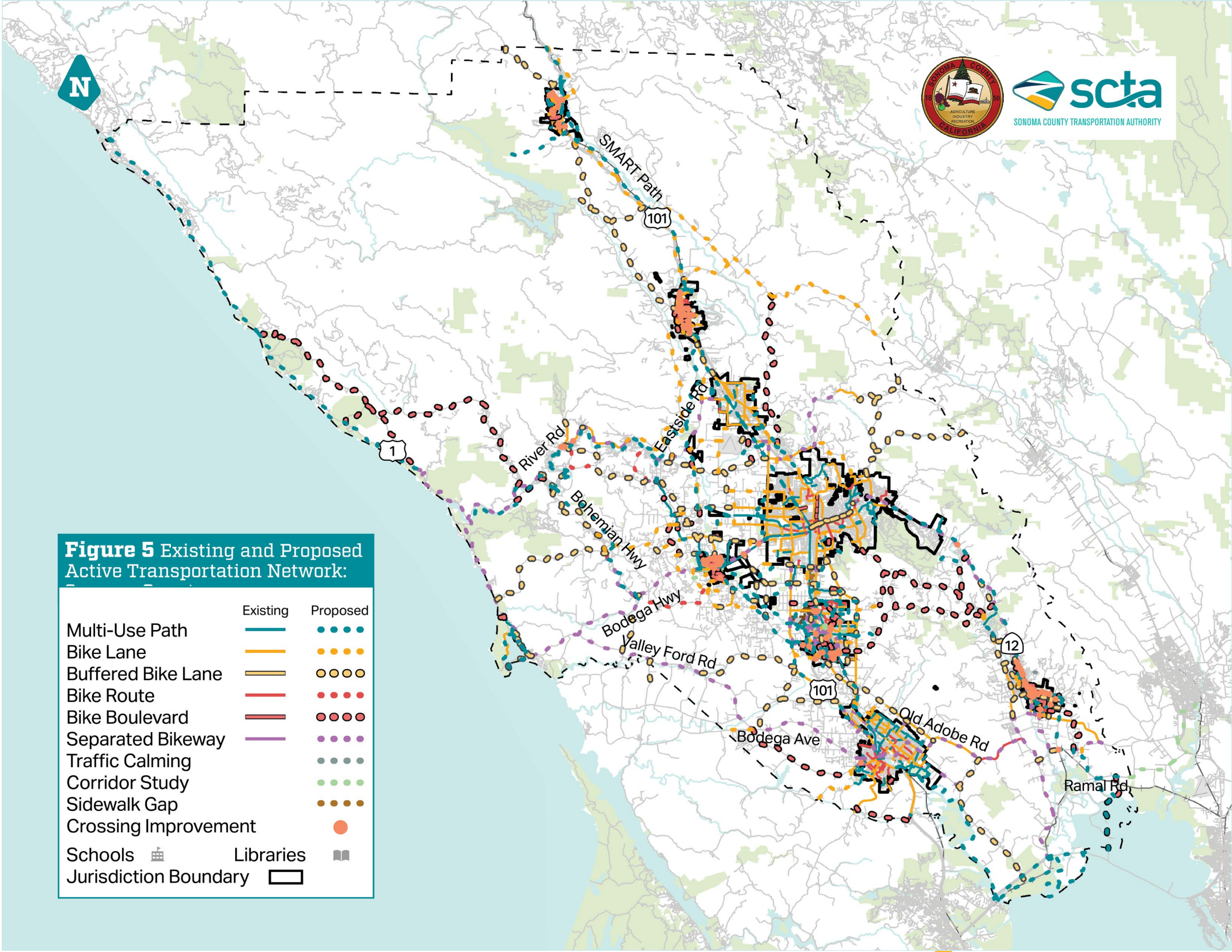


Figure 5 Existing and Proposed Active Transportation Network:

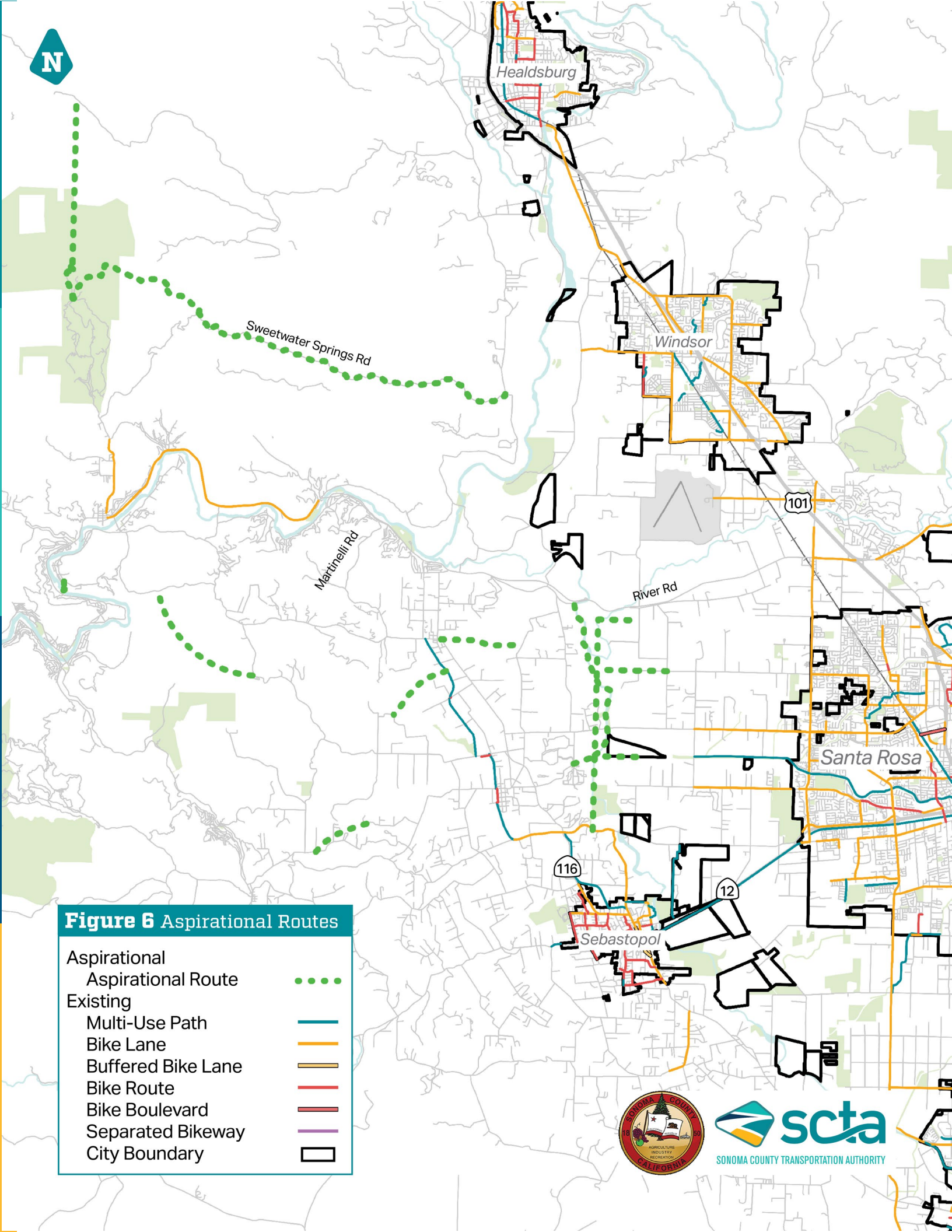


Figure 6 Aspirational Routes

Aspirational
- Aspirational Route

Existing
- Multi-Use Path
- Bike Lane
- Buffered Bike Lane
- Bike Route
- Bike Boulevard
- Separated Bikeway
- City Boundary

Engineering Treatments Toolbox

In designing and implementing the 2025 Active Transportation Network projects, and taking actions to fulfill the policies and goals identified in this Plan, County staff will use engineering treatments consistent with established industry resources and guidance published by reputable organizations such as the Federal Highway Administration (FHWA), National Association of City Transportation Officials (NACTO), American Association of State Highway Transportation Officials (AASHTO), California Department of Transportation (Caltrans), and California Manual on Uniform Traffic Control Devices (CA MUTCD). The following tables include examples of the types of engineering treatments the County may use in the design and implementation of enhanced active transportation infrastructure.

Table 5 provides a list of available resources the County can use when designing new active transportation infrastructure. While the design guidance in these resources offer options for a wide range of contexts, this is not an exhaustive list of potential resources.

Table 5. Catalog of Resources

Resource	Description
California Manual on Uniform Traffic Control Devices (MUTCD)	State standards on traffic signs, road surface markings, and signals.
A Policy on Geometric Design of Highways and Streets (Green Book)	National guidance on roadway geometric design
AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities, 2nd Edition	Guidance on the planning, design, and operation of pedestrian facilities
FHWA Small and Rural Multimodal Networks	Reference guide on active transportation facilities in small towns and rural areas
Caltrans DIB -94 Complete Streets: Contextual Design Guidance	Design guidance to support implementation of complete streets projects on roads owned by Caltrans
FHWA Bikeway Selection Guide	Guidance on selecting and designing different types of bikeways based on street and land use contexts
FHWA Separated Bike Lane Planning and Design Guide	Guidance for planning and designing separated bike lanes under different contexts
NACTO Guides: Urban Street Design Guide, All Ages and Abilities Guide	Reference guides on best practices for street design
NCHRP Report 926 – Guidance to Improve Pedestrian and Bicyclist Safety at Intersections	Step-by-step process for selecting intersection safety treatments
FHWA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations	A reference guide on what type of crosswalk and crossing treatments are most applicable in a given location
Public Rights of Way Accessibility Guidelines (PROWAG)	Guidelines that provide best practices for accessibility
LRFD Guide Specifications for Design of Ped Bridges	Guide Specifications address the design and construction of typical pedestrian bridges
Caltrans Traffic Calming Guide	Guide of design-based traffic calming solutions.

Opportunities for Quick Builds

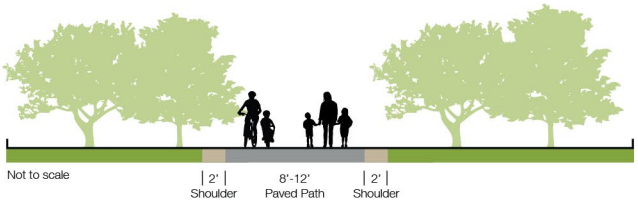
Routine maintenance, grant funding, paving projects, and capital improvement program funding provide excellent opportunities for Quick Build projects. These projects take a phased, incremental approach to implementing permanent infrastructure changes.

Requiring fewer resources and less planning, Quick Builds can be implemented with cones, bollards, A-frame signage, plastic jersey barriers, and other low-cost materials. While not permanent solutions, Quick Builds are effective interim steps toward long-term infrastructure improvements.

Bicycle Facility Toolbox

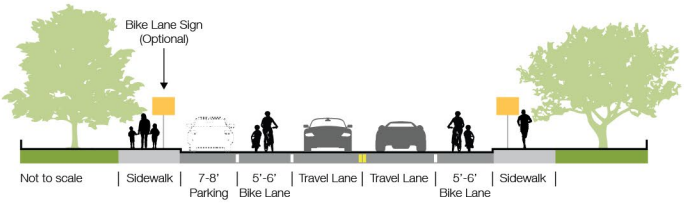
Multi-Use Paths

Completely separated right-of-way for exclusive use of bicycles and pedestrians



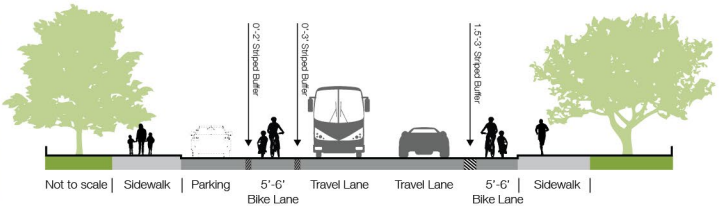
Bike Lanes

On-street striped lane for one-way bike travel



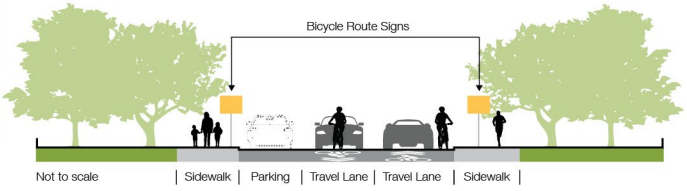
Buffered Bike Lanes

Modified on-street bike lane with painted buffer



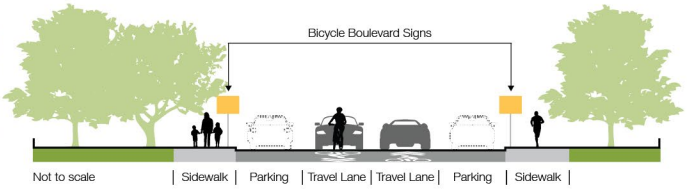
Bike Routes

Shared on-street facility



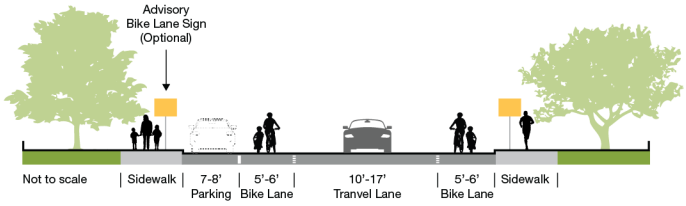
Bike Boulevards

Shared on-street facility with improvements to prioritize bicycle traffic



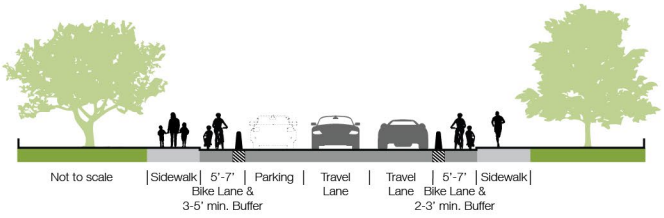
Advisory Bike Lane

An alternative to a bike boulevard or bike route.



Separated Bike Lanes

Physically separated bike lane



Pedestrian Facility Toolbox

Along Streets: Space for Walking

From left to right: Neighborhood Narrow Sidewalk, Residential Ribbon Sidewalk, Paved Shoulder, Shared-Use Path




Along Streets: Sidewalk Widths

Residential Areas=6' Minimum; Downtown/Mixed-Use Area=8' Minimum.
Sidewalk should be on both sides. Sidewalk should not be obstructed.



Along Streets: Frontage Zone

Immediately adjacent to the property line, wide frontage zones with shade and activities enhance pedestrian comfort. On commercial streets, the frontage zone should be a minimum of 2 feet.



Along Streets: Furnishing Zone

Between the curb and walking areas, the furnishing zone buffers traffic and hosts street elements like furniture and landscaping.

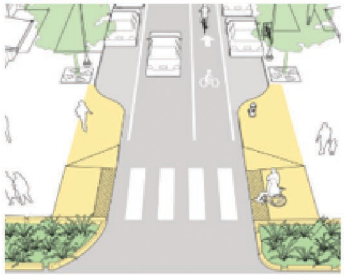


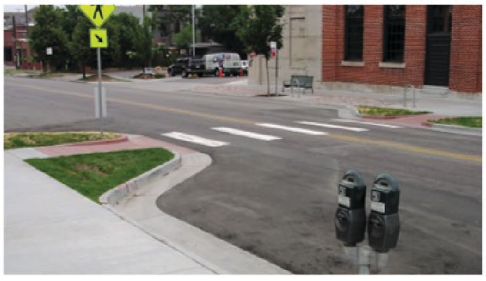
Along Streets: Lighting

Key considerations: Scale of the lights, spacing of lights, lamp type, color temperature, smart management, adding character.

Along Streets: Curb Buffer

Parklets provide space to sit and enjoy the space adjacent to the sidewalk. Curb extensions extend the sidewalk to shorten crossing distances and also make pedestrians more visible to approaching vehicles. Both help to reduce vehicle speeds.





Along Streets: Pervious Pavement

Improve water quality. Reduce ponding. Maintenance agreements are necessary to establish responsibility for the upkeep of the facility.



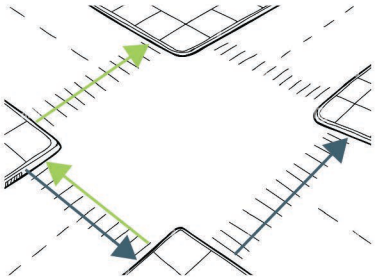
Along Streets: Watershed & Bioswale

Improve water quality. Reduce ponding. Maintenance agreements are necessary to establish responsibility for the upkeep of the facility.



At Crossings: Pedestrian Friendly Signal Timing

Crossing Time - 3.5 feet / seconds →
Leading Pedestrian Interval – 3 seconds →




At Crossings: Accessible Pedestrian Push Buttons

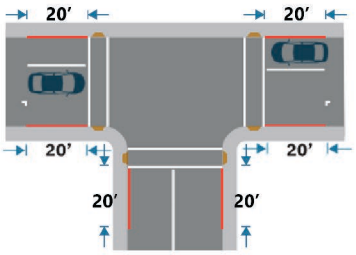
Accessible Pedestrian Signal (APS) & Touchless Pedestrian Push Button.

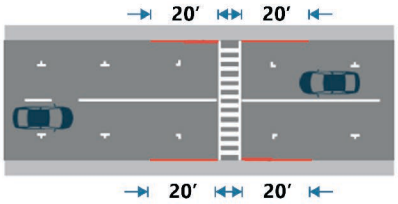
At Crossings: Uncontrolled Crosswalks

FHWA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations recommends crossing enhancements for uncontrolled crossings based on characteristics such as vehicle speeds, vehicle volume, and number of vehicle lanes. Enhancements include treatments such as Rectangular Rapid Flashing Beacons (RRFBs), pedestrian refuge islands, and others.

At Crossings: Parking Restrictions

Parking restrictions improve road user visibility of crosswalks and the people using them. Parking restrictions informed by AB 413 and CA MUTCD 2014, Revision 8 Figure 3B-21(CA) Examples of Parking Space Markings.





At Crossings: High Visibility Crosswalk Striping

CA MUTCD and the Caltrans Highway Design Manual include standard plans for high visibility crosswalk striping. To increase awareness for motorists and improve their yielding behavior.


Source: FHWA

Traffic Calming Toolbox

Chicanes

Create horizontal deflection along a roadway requiring motorists to slow their speeds as they travel between intersections. They can be designed to include space for landscaping or bioswales.


Source: Los Angeles Department of Transportation


Source: Caltrans Traffic Calming Guidance


Source: NACTO

Curb Extensions

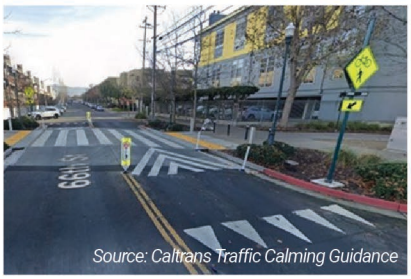
Extend the curb area available to pedestrians waiting to the cross the street. They can include areas for landscaping. They shorten crossing distances while also slowing vehicle speeds at the intersection.

Neighborhood Traffic Circles or Mini Roundabouts

Include a raised central island at two intersecting streets requiring motorists to slow their speed to drive around the island at the intersection. The approaching streets can be stop or yield control. Including landscaping in the central island also creates a terminal vista for approaching motorists which further helps reduce vehicle speeds.

Raised Crosswalks

Elevate the crosswalk to sidewalk height requiring motorists to drive at slower speeds while also making people in the crosswalk more visible.



Speed Humps

Create a vertical deflection requiring motorists to slow their speeds as they travel along a street between intersections.

Traffic Diverters

Prevent or limit vehicle access to a street while allowing people walking and biking full access. They help reduce the amount of vehicle traffic along a neighborhood street or bike boulevard.

Source: : City of Long Beach, CA

Source: : Caltrans Traffic Calming Guidance

Programs & Policies

In addition to the infrastructure improvements described above, this Plan also includes programmatic and policy recommendations to support the Plan's Vision and Goals.

Existing Programs

The following describes current programs to support walking and biking in the County. The County intends to continue the programs below in support of this Plan's Vision and Goals.

Bikeways Signage

Signs are a low-cost measure that can be used to improve safety and provide an identity for the County bicycle and pedestrian system. Effective signage will enhance existing facilities and improve user safety by signaling the presence and location of facilities to existing users, potential users, and motorists. Signs can encourage more people to walk and bicycle by leading residents and visitors to existing facilities and destinations. Finally, signs promote motorist awareness by alerting them to expect the presence of bicyclists and pedestrians either on the roadway or at crossing locations.

Bike routes should be identified with a modified Caltrans SG45 bike route sign. The modifications may include logos, route name and route number. Route signs should be placed on all bikeways. Unique logos should be developed for multi-use paths and be included on all route-finding signage used to define the bikeway. Bikeways that form the primary arterial bikeways network should be assigned route numbers to aid bicyclists along routes that traverse various types of facilities. The numbers should use a route numbering system similar to the Federal Highway System methodology where routes are numbered based on their north-south and east-west alignment.

In addition to signage identifying a specific route, way-finding signs should be placed at appropriate locations. These signs include directional arrows and distance information to significant local and regional destinations and connecting bicycle facilities.

Warning Advisory Signs and Pavement Markings

A variety of warning advisory signs and pavement markings may be used in conjunction with the signs described above to further reinforce the presence of bicyclists and pedestrians and inform motorists. These include bicycle and pedestrian warning signs that can be combined with a variety of messages such as "Share the Road", "Watch for Bikes", "Pass with Care", "Bikes on Roadway Next xx Miles", and others.

Regulatory Signs

Regulatory signs should be installed to inform bicyclists, pedestrians, and motorists of their rights and responsibilities. Examples of regulatory signs include "Bikes May Use Full Lane", "Wrong Way, Ride with Traffic", and "No Parking, Bike Lane".

Sign Placement

Signs should be placed at route start and stop points, route junctions, and turns within a route. Reassurance signs should be placed along long uninterrupted segments and at wide or odd-angled intersections. Share the road signs and similar should be installed on routes with little or no shoulder space for bicyclists, at the County boundaries, and at transition points between jurisdictions to alert motorists. The County shall work with Caltrans to site and maintain the signs on State Routes.

Data Collection & Count Location

Limited trip generation, vehicle counts, and accident data makes it difficult to plan for future bicycle and pedestrian improvements. Without accurate and consistent data, it is difficult to measure the positive benefits of bicycle and pedestrian investments, especially when compared to other types of transportation such as the automobile. In order to supplement Census Journey to Work data, to attain a better understanding of existing usage and travel patterns, and to be able to project demand, regular bicycle and pedestrian counts are needed.

Count Methodology

In 2003, MTC developed the Bicyclist and Pedestrian Data Collection and Analysis Project. The project resulted in the Metropolitan Transportation Authority Handbook for Bicyclist and Pedestrian Counts. This methodology represents standard guidelines typically used when conducting counts of bicycle and pedestrian activity. Using the procedures outlined in this handbook maintains consistency with other local jurisdictions, as well as with regional data collection conducted by MTC throughout the Bay Area.

Count Locations

Count locations will be established by the BPAC and should be reviewed on an annual basis. Count locations should include points along bikeways located on arterial streets, and population centers, attractors and generators, and community gateways along multi-use paths.

Sidewalk Inventories

Maintaining a database of sidewalk locations and their condition is an effective tool to identify gaps in the pedestrian network, prioritize maintenance, and take advantage of maintenance and upgrade opportunities, such as those provided by new development or road improvement projects. Sonoma Public Infrastructure (SPI) currently maintains a centralized inventory and database. The database information is presented in the **Appendices**. This database should be updated on a regular basis.

Pedi/Bike-bus

The “Pedi/Bike-Bus” is a program where students are met at their homes and taken to school on foot and/or bicycle using volunteer parents. It operates in all weathers and picks up students at various points or stops along the way, in accordance with a pre-defined, fixed timetable. The program is based on the school bus model: Students wait for the Pedi/Bike-

Bus at "stops" in front of specified signs (giving Pedi/Bike-Bus schedules, and volunteer parent details) and then join the “bus” to complete their journey to school, with volunteer parents. The program is based on voluntary parental collaboration with organizational and logistic support from school districts.

The purpose of the Pedi/Bike-Bus program is to:

- Reduce road traffic in front of the school and in that way reduce greenhouse gas emissions.
- Give students the opportunity to spend time together outside the classroom.
- Make daily physical activity a part of students’ lives and reduce childhood obesity.
- Teach younger students how to follow fixed timetables, acquire independence and understand how to safely use streets and sidewalks.

Bridge Safety

A consistent and interconnected transportation network that safely transports users between destinations is desired, including on bridge infrastructure. It’s desirable for BPAC to coordinate with Sonoma Public Infrastructure to establish priorities for needed improvements to these bridges based on hazards involved, gap closures, and anticipated usage by bicycles and pedestrians. Multi-Use Path Maintenance & Operation Funding

While maintenance of on-street bike facilities is funded as part of overall road maintenance, a similar reliable source of maintenance funding does not exist for multi-use paths. This program will establish a strategy to identify and secure a permanent funding mechanism for maintenance and operation of multi-use paths.

New Programs

The following section describes programs to support the implementation of the policies and projects identified in this Plan.

Active Transportation Program

The County will establish an Active Transportation Program that is comprised of:

- Staff from Sonoma Public Infrastructure assigned to lead and monitor the implementation of the County’s Bikeways Plan, with responsibilities such as:

(i) ensuring planned projects are incorporated into the County’s CIP list;
(ii) coordinating with Caltrans and cities within the region regarding active transportation projects and topics including shared mobility programs and the Safe Routes to School Program;
(iii) oversight and management of all elements of the County’s Active Transportation Program;
(iv) participating in and leading staff training related to industry guidance for planning, design, and maintenance of active transportation improvements making use of guidance from Federal Highway Administration (FHWA) and National Association of City Transportation Officials (NACTO); and

(v) identifying and helping to pursue grant funding for larger active transportation investments.

- As funding becomes available, invest in the planning and design of planned projects identified in the County's Bikeways Plan.
- Pursue regional, state, or federal grant funds to support planning, design, and construction of planned projects identified in the County's Bikeways Plan.
- Explore developing and implementing a quick build program to facilitate the design and implementation of low-cost active transportation improvements at planned project locations identified in the County's Bikeways Plan. This would include identifying improvements that could be implemented via the County's repaving program and/or as part of other routine maintenance activities.
- Develop and implement a bike parking program consistent with the policies and actions identified in the County's Bikeways Plan.
- Partner with Sonoma County Bicycle Coalition, local police departments, the Sonoma County Sherriff's Department and Sonoma County Department of Health Services to develop and distribute educational materials and/or host community events that promote safe road user behavior in support of improving walking, biking, and rolling for all ages and abilities.

Transportation Demand Management Supportive Programs

The County will work with incorporated Sonoma County cities to implement a Transportation Demand Management (TDM) program objectives to encourage non-auto trips (such as walking, biking, and transit), to reduce single occupancy vehicle trips. This may include education and encouragement activities targeted at larger residential developments and employers. Potential actions could include:

- Work with incorporated Sonoma County cities to develop local TDM ordinances based on SCTA's *Shift Model TDM* Ordinance, including considerations for employers and developers, infrastructure, and programs.
- Support in coordinating with employers on the development and implementation of commute programs by engaging with employers, transit agencies, and shared mobility programs.
- Market existing TDM programs to employers and developers through business assistance programs, green business certifications, and commute fairs.
- Assist employers with the development of commute programs and marketing alternative modes of transportation to employees.
- Coordinate countywide policy actions via the Regional Climate Protection Agency (RCPA).

Sidewalk/Crosswalk Maintenance and Gap Closure Program

Building off the existing Sidewalk Inventories program, the County will establish a local sidewalk maintenance and gap closure monitoring program. Program elements could include:

- Develop a sidewalk repair program to ensure the County maintains or enforces maintenance of current and future sidewalks.
- Prioritize closure of sidewalk gaps that connect people to activity centers, schools, transit, parks, and between communities.
- Regularly evaluate where new crosswalks may be needed and/or where there are needs for crosswalks enhancements (e.g., high visibility paint, RRFB, HAWK signals)
- Continue to engage with the community to prevent obstruction of sidewalks and pedestrian facilities with parking, trash bins, signs, etc.
- Monitor and update tracking of sidewalks built and/or percentage of roadways with sidewalks in the County.

Bicycle Parking Program

The County will establish a Bicycle Parking Program. The program will include the following activities:

- Update existing Bicycle Parking Design Guidelines to create an updated standard type or types of bike rack for use within the County.
- Review and/or update Municipal Code to ensure adequate bike parking is included in all new development projects, multifamily and commercial renovations, and Use Permit approvals.
- Assess bike parking needs within the Sonoma County Regional Park district and rights-of-way. Develop a program to provide adequate bike parking near amenities and at key destinations.
- Require temporary bike parking (e.g., racks, bike valet) at limited term and special events.
- Create incentives for businesses to install bike parking of their own (in accordance with County standards).
- Support local transit providers in providing and maintaining convenient and secure bicycle parking facilities that accommodate bicycles of all shapes and sizes.

AB 43 Speed Limit Setting Guidance

In 2025, the Sonoma County Transportation Authority (SCTA) will provide guidance to support local jurisdictions in implementing AB 43 (2021). AB 43 expands the factors local jurisdictions can consider when establishing speed limits, making it easier to reduce speed limits in areas with youth and seniors, business districts, a history of collisions, and other land-use factors.

Objectives & Policies

Sonoma County also has identified objectives and supporting policies to guide the implementation of this Plan. The objectives and policies have been refined or updated to modernize them since the Sonoma County 2010 Bicycle and Pedestrian Master Plan.

Objectives

Objective 1: Design, construct and maintain a comprehensive Active Transportation Network that links the County's cities, unincorporated communities, and other major activity centers including, but not limited to, schools, public facilities, commercial centers, recreational areas and employment centers.

Objective 2: Reduce Sonoma County's greenhouse gas emissions by achieving a non-motorized trips mode share of 10% for all trips and 20% for trips under five miles long by 2050.

Objective 3: Encourage pedestrian, bicycle, and transit-oriented development.

Objective 4: Increase use of non-motorized modes for commute trips by providing safe, convenient routes and adequate end of trip facilities at workplaces, with an emphasis on facilities that have potential to close gaps in the network and/or reduce shorter trips.

Objective 5: Provide incentives for business and government to increase the use of walking and bicycling by employees for both commuting and daily operations.

Objective 6: Eliminate traffic fatalities and serious injury collisions involving people walking and biking by 2030 by proactively investing in roadway infrastructure that reduces the risk of severe and fatal injury collisions for people walking and biking.

Objective 7: Provide a diverse range of recreational opportunities through a well-designed network of bikeways, multi-use trails, sidewalks, and related support facilities.

Objective 8: Increase the safety, convenience, and comfort of all pedestrians and bicyclists, by eliminating the potential obstacles to this mode choice that is associated with the lack of continuous and well-connected pedestrian walkways and bicycle facilities, and the lack of safe crossing facilities, especially focusing on short trips that could result in a decrease in automobile travel.

Objective 9: Develop alternative mode trip and collision databases, to improve safety, allow regional coordination of improvements, and travel model development to improve the level of quantitative evaluation.

Objective 10: Improve and maintain traffic safety for all user groups including motorists, pedestrians, and bicyclists.

Objective 11: Increase oversight across relevant departments of this plan and its implementation to ensure the objectives, policies, and programs are duly enacted.

Policies

General

Policy 1.01: Use the adopted Bikeways Plan as the detailed planning document for existing and proposed bikeways and pedestrian facilities.

Policy 1.02: Use the policies of the Bikeways Plan whenever reviewing development projects to ensure that projects are consistent with the Bikeways Plan and incorporate necessary bicycle and pedestrian improvements identified in the Bikeways Plan.

Policy 1.03: The Bicycle and Pedestrian Advisory Committee (BPAC) shall be responsible for advising the Board of Supervisors, Planning Commission, Board of Zoning Adjustments, Zoning Administrator, Project Review Advisory Committee, and County staff on the ongoing planning and coordination of the County's bicycle and pedestrian transportation network.

Policy 1.04: The Regional Parks Department shall be responsible for establishing and maintaining regional multi-use paths, and Sonoma Public Infrastructure shall be responsible for establishing and maintaining bike lanes, buffered bike lanes, bike boulevards, bike routes, and pedestrian facilities along public rights-of-way in unincorporated areas. The Sonoma-Marin Area Rail Transit (SMART) is responsible for developing and maintaining the multi-use path (aka SMART Pathway, Great Redwood Trail) within and along the SMART railroad right of way.

Policy 1.05: Regional Parks and Sonoma Public Infrastructure shall be responsible for periodically collecting bicycle and pedestrian counts per current Metropolitan Transportation Commission standards. The BPAC, in consultation with Regional Parks and Sonoma Public Infrastructure, shall review this data annually to determine effectiveness in applying such data for County improvement projects and update the count locations as needed.

Policy 1.06: The Board of Supervisors shall designate the County department(s) responsible for providing a bicycle and pedestrian coordinator to oversee implementation of the County Bikeways Plan, provide staff support to the BPAC, and coordinate activities between County agencies, the Cities, and other jurisdictions.

Policy 1.07: Revise County Traffic Guidelines to require that traffic studies identify impacts to existing and planned bicycle and pedestrian facilities. Include development of adequate bicycle and pedestrian facilities as mitigation measures for congestion and greenhouse gas emission impacts.

Policy 1.08: Develop a Level of Service standard for identifying performance of the bicycle and pedestrian transportation network that takes into consideration travel distance, potential bicycle and pedestrian transportation needs, potential for improved mode split with improved facilities, and existing network deficiencies.

Policy 1.09: Use the Level of Service standard developed by Policy 1.08 to evaluate impacts to bicycle and pedestrian facilities that may result from discretionary projects, and identify corrections and/or improvements necessary to mitigate those impacts.

Policy 1.10: Pedestrian and bicycle facilities located in the State right of way shall be maintained by the State unless a maintenance agreement is executed between the County and State.

Policy 1.11: Permit Sonoma shall explore creation of additional density bonuses for housing development projects that incorporate active transportation through location, active transportation focused design, and amenities.

Policy 1.12: Require discretionary land-use projects to incorporate active transportation studies in any traffic impact studies to identify the nexus for new development to include Bicycle and Pedestrian Plan projects, to identify how, and in what proportion, the development affects Sonoma County active transportation infrastructure, and other impacts. This analysis will be used to inform appropriate mitigation of impacts and promote construction of facilities identified in this plan. Mitigation may include but is not limited to contribution to a Vehicle Miles Traveled mitigation bank program as available, direct construction of facilities identified in this plan, etc.

Policy 1.13: In compliance with state law, all Class III facilities (travel lanes shared with motor vehicle and bicycle traffic) are prohibited on roads with a speed limit greater than 30mph. Class III facilities proposed in this plan are to be designated as allowed by State Law when conditions permit, including but not limited to decreasing speed limits. Sonoma Public Infrastructure and Permit Sonoma shall review these facilities annually in accordance with Policy 2.34.

Policy 1.14: State Regulations prohibit Class III facilities on roads with speed limits greater than 30 miles per hour, thus bicycles may occupy all roads where safe to do so and in compliance with all applicable laws and regulation. During road construction, road maintenance projects, and road sign maintenance on roads in the County right of way with speed limits greater than 30 miles per hour, any speed limits signs in the affected area shall be updated to include signage consistent with the “Bikeways Signage” and “Catalog of Resources” sections in this document.

Policy 1.15: Sonoma Public Infrastructure shall develop a workplan to ensure that bicycle and pedestrian facilities are maintained and cleaned to a level coequal with that of vehicular traffic.

Bikeway Selection

Policy 2.01: Table 2 and Table 3 above should be used in combination with the following criteria to determine the appropriate type, location and priority of bicycle facilities when selecting new routes in the future:

1. Skill level of anticipated users – Consideration should be given to the skills and preferences of the types of bicyclists that are likely to use the bikeway. Facilities near schools, parks, and residential neighborhoods are likely to attract a greater percentage of children and beginner cyclists and should have a very high emphasis on safety. While inexperienced bicyclists prefer more lightly-traveled streets, more experienced cyclists tend to prefer the most direct route possible.
2. Accessibility – Consider ADA requirements when developing routes and bikeway design. Consideration should be given to the scope of upgrades and improvements that may be necessary to meet ADA standards when selecting routes. Attention should be paid to routes that serve schools, parks, major medical centers, and government facilities.

3. Motor Vehicle Parking – Turnover and density of on-street parking in retail and commercial areas may affect bicycle safety due to the high potential for conflicts with motor vehicles. Consider alternative routes or reconfiguration of on-street parking in these areas.
4. Directness – Bikeways should be located along the most direct line of travel that is convenient for users, and provide logical connections between residential areas, retail, commercial, industrial, and employment centers, recreational facilities, and public facilities. Routes should be chosen that minimize the number of stops, intersections, and mid-block crossings.
5. Pavement surface quality – Bikeways should free of surface defects that compromise bicycle safety. Utility covers and drains should be at grade and, if possible, outside the bikeway. When feasible, Drainage grates shall be aligned perpendicular to the direction of travel in order to avoid catching bicycle wheels.
6. Transit – Where bus stops are located along bikeways, consideration shall be given to avoid conflicts between passengers, buses, and bicycles. Railroad crossings should be improved as necessary to provide safe bicycle crossings.
7. Traffic volumes and speed – Experienced bicycle commuters generally prefer arterial streets because they are often the most direct route, assuming that traffic speed and volume are appropriate. If adequate right-of-way exists, it may be more desirable to improve arterial streets with bike facilities than adjacent lower volume streets. Continue to create plans and policies to provide greater provide greater separation and protection from moving vehicles and/or significantly slow vehicle speeds for bicycle facilities where vehicle volumes and/or vehicle speeds are higher. Such changes in infrastructure are needed to enable more people to bike as well as to proactively reduce the risk of fatal and/or serious injury collisions involving people biking. Consideration shall still be provided for improvement of parallel lower volume streets to provide people route choices.
8. Bridges – Many bridges are narrower than the adjacent roadway and lack adequate shoulders. Widening a bridge is likely to be expensive and alternative routes should be considered if equal connectivity and convenience for bicyclists and pedestrians can be provided by the alternative route. On existing and proposed routes with narrow bridges or bridges that are otherwise unsafe for bicyclist and pedestrians, safety-related bridge improvements shall be assigned a high priority regardless of the priority assigned to the remainder of the bike route. Consider width of bridges and shoulders given the expected users and whether widening is desirable or appropriate
9. Costs and Funding – Bikeway selection normally will involve a cost analysis of alternatives. While funding availability may limit alternatives, it is very important to avoid choosing poor routes or an inadequate design solely on the basis of available funds. The decision to improve bikeways or create new facilities should be made with a conscious, long-term vision. When funding is limited, emphasis should be given to low-cost improvements such as bicycle parking, removal of barriers, and gap closures. Identification of a reliable source of funds to support maintenance and operation must be considered before developing new multi-use paths. Bikeway design

and route selection should always seek to maximize public benefit and safety per dollar invested.

Policy 2.02: Use the most recent Caltrans design standards to inform bike facility design. As of August 2024, Caltrans Design Information Bulletin 94 (DIB-94) provides the most current standards for on-street bike facilities. Additional design guidance includes Chapter 1000 of the Caltrans Highway Design Manual, AASHTO's "Guide for the Development of Bicycle Facilities", "California Manual on Uniform Traffic Control Devices" (CA MUTCD), and other applicable publications prepared by other transportation officials such as the Federal Highway Administration and National Association of City Transportation Officials as general design guidelines for design, construction and maintenance of Sonoma County bikeways. Table 5 above provides a catalog of resources that may be used.

Policy 2.03: In addition to the general standards found in Policy 2.02 above, use the Bikeways Plan policies as specific standards for the selection, design, construction and maintenance of Sonoma County bikeways.

Policy 2.04: Use the Bikeways Planned Project List to establish the priority, facility type, and location of Sonoma County active transportation projects. The BPAC shall periodically review the Bikeways Planned Project List and recommend updates to the Board of Supervisors. The Bikeways Planned Project List shall be updated at least once every five years in collaboration with Sonoma Public Infrastructure and Permit Sonoma.

Policy 2.05: Where several bikeways of different types follow a similar route or provide similar connectivity, the BPAC shall be consulted when construction of one facility appears to reduce the need or function of other facilities.

Policy 2.06: Electric bicycles are allowed on multi-use paths, bike lanes, buffered bike lanes, bike routes, bike boulevards, separated bike lanes and roadways wherever conventional bicycles are allowed unless a sign specifically prohibits electric bicycles. Maximum speed limits of 15mph are enforced on multi-use paths.

Policy 2.07: If two alternative alignments are identified for a bicycle facility (e.g. multi-use path), a study will be conducted to determine which alignment can be constructed. When one of the alignments is constructed, the second alternative alignment can be removed from the Bikeways Plan.

Policy 2.08: Due to ongoing Climate Change driven conditions including but not limited to:

Sea level rise,
Flooding,
Bluff retreat, and
Frequent wildfire

Planned and existing pedestrian/bicycle facilities affected by natural disasters and changed conditions due to climate change, the pedestrian/bicycle facilities shall be relocated either prior or simultaneous to the roadway realignment and designed to maintain the function including use levels and types, safety, and continuity between destinations.

Policy 2.09: Use the following criteria to determine consistency of public and private projects with the Bikeways Plan:

Development of lands traversed or adjoined by an existing or future multi-use path shall not preclude establishment of the bikeway, nor conflict with use and operation of the bikeway or adversely affect long term maintenance and safety of the facility.

Construction, widening, or maintenance of roads with designated bikeways meets the design and maintenance standards for the appropriate type of bikeway as specified by the Bikeways Plan.

Standards for Multi-Use Path

Policy 2.10: Pavement surface shall be concrete, asphalt concrete, or other ADA compliant all-weather surfaces. The BPAC may consider exceptions where an alternative route provides similar connectivity and accessibility.

The recommended width is 10 feet with an 8-foot minimum for multi-use path with two-way traffic. A 5-foot minimum width may be used for one-way multi-use path. Wherever possible, widths less than 10 feet should be limited to neighborhood connector paths less than one mile in length, or if total usage, including pedestrians, is anticipated to be fewer than 300 users during the peak hour.

12 feet is the preferred minimum width for multi-use paths if more than 300 users per peak hour are anticipated, and/or if there is heavy mixed bicycle and pedestrian use. Use a yellow centerline stripe to separate travel in opposite directions. Consider providing a separate third lane, or additional shoulder for pedestrians where heavy mixed use creates conflicts between users.

Wherever possible, provide a minimum 3-foot-wide graded area adjacent to the bikeway to accommodate equestrians, runners and other users that prefer unpaved surfaces. Where it is not possible to provide a 3-foot graded shoulder on both sides of the bikeway, consider providing a single graded area on one side of the paved surface.

Provide a minimum horizontal clearance of 2 feet and a minimum vertical clearance of 8 feet, as measured from the edge of the bikeway, from trees, poles, walls, guardrails, and other obstructions.

When trimming vegetation adjacent to a multi-use path, provide a minimum horizontal clearance of 4 feet and a minimum vertical clearance of 8 feet as measured from the edge of the bikeway.

Use standard traffic controls and signage at all street, roadway, or railway intersections. Including using the most recent version of the “California Manual on Uniform Traffic Control Devices” (CA MUTCD) and other applicable publications as general design guidelines for multi-use path crossing treatments at roads and driveways.

Wherever multi-use paths intersect road and driveway crossings, give bicyclists and pedestrians the right of way where the daily vehicle volume is lower than the bicycle/pedestrian cross traffic.

Improve safety by avoiding intersections with roads whenever possible.

Evaluate the need for signalization or grade separation at intersections between multi-use path and roadways where traffic volume is anticipated to exceed 20,000 average daily trips.

Bollards, gates, and fences located within the traveled way on multi-use paths must comply with ADA accessibility standards and shall be clearly marked with reflectors and diamond stencils per AASHTO. Consider using break-away material to avoid injuring bikeway users.

Design multi-use paths to accommodate emergency medical and maintenance vehicles whenever possible.

Provide advance noticing and clearly marked warning and detour signs when a multi-use path is closed for maintenance, improvements, or repairs.

Direct pedestrians to the right side of multi-use paths with signage.

Evaluate the need for trailhead parking, trash receptacles and collection, and other facilities such as restrooms and drinking fountains, and provide adequate facilities at appropriate locations. Trailhead parking should be considered at intervals of between 1 and 5 miles along multi-use paths, at intersections with arterial roads, or at connections with recreational facilities, job centers, and/or major retail areas.

Unpaved multiuse trails developed without Federal funding are not subject to Caltrans design standards and may be used as a portion of a paved multi-use path.

Where construction of a multi-use path along a scenic corridor or within a scenic landscape unit involves tree removal, require an analysis of visual resources to identify impacts. If impacts are identified, either modify the bikeway to avoid tree removal, or require replacement of removed trees with trees of comparable aesthetic and arboreal value.

Wherever multi-use paths are designated on or next to existing vehicle bridges, install a separated bicycle/pedestrian bridge or a structure for bicycle/pedestrian use, or adjust travel lanes and sidewalks to provide a multi-use path for two-way travel on one side of the bridge.

Standards for Bike Lanes

Policy 2.11: Bike lanes should be selected for a given roadway based on vehicle volume and vehicle speed thresholds identified in Table 2 and Table 3 above. Minimum width is 5 feet as measured from the edge of the maintained paved surface to the motor vehicle traveled way; or 3 feet measured from the gutter pan seam to the motor vehicle traveled way, provided an overall lane width of 5 feet is provided. Gutter pan seams shall be blended to road surface without gaps or vertical misalignment that would create a safety hazard for bicyclists.

Where a bike lane shares an existing or proposed shoulder, no more than 8 feet of the overall shoulder width may be funded with bicycle-specific funding sources, unless the improvement project has been reviewed and recommended by the BPAC.

Locate drainage grates outside of the bikeway whenever possible. Where drainage grates are within the bikeway, align drainage grates perpendicular to the direction of travel and use as narrow as possible gratings, consistent with maintaining adequate drainage (Exhibit 1).

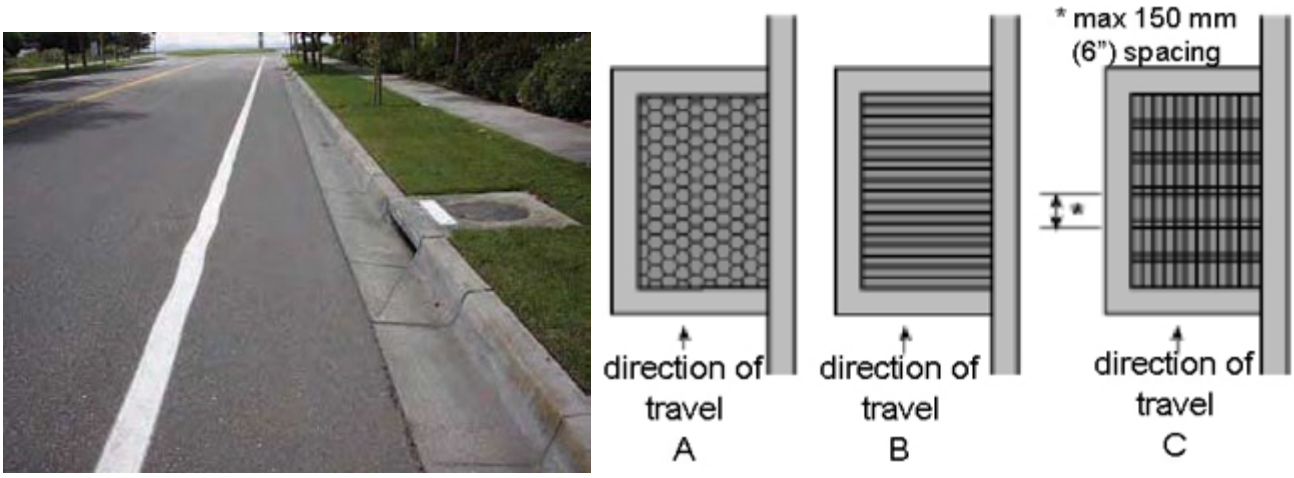


Exhibit 1. Drainage Design

Parking must be adjacent to and not block any portion of a bike lane. Parallel or reverse diagonal parking is preferred, and configurations that require exiting drivers to back into traffic, such as conventional diagonal parking, should be discouraged when adjacent to bike lanes. Areas with parallel parking shall provide a minimum of 9.5 feet between the curb or edge of pavement and the right-hand edge of the bikeway in order to avoid hazards created by opening of vehicle doors.

Consider tandem parking for residential development along bike lanes where existing road width is inadequate to accommodate on-street parking adjacent to the bikeway.

Identify bike lanes with symbol, signage, and word pavement marking per Chapter 1000 of the Caltrans Highway Design Manual and MUTCD specifications.

Delineate bike lanes from motor vehicle travel lanes with a 6-inch line per MUTCD.

Maintain geometry, pavement surface condition, debris removal, markings, and signage on bike lanes to the same standards and condition as adjacent motor vehicle lanes.

When trimming vegetation adjacent to roadways with bike lanes, provide a minimum horizontal clearance of 4 feet and a minimum vertical clearance of 8 feet as measured from the edge pavement.

Provide a minimum horizontal clearance of 2 feet from the edge of pavement and a minimum vertical clearance of 8 feet for all signs, including temporary signage, along bike lanes.

Require that refuse collection containers are placed at least 2 feet outside the edge of pavement along bike lanes. A notice of this requirement shall be included as part of customer billing for refuse collection.

Where a right turn only lane is present along a bike lane, provide a bike lane pocket at least 4 feet wide between right turn lanes and through lanes at intersections. Where providing a bike lane pocket is infeasible due to limited right-of-way, terrain, or intersection configuration, and right turn volume is less than 150 vehicles during peak hour, provide alternative bikeway markings such as dotted line or green lanes.

When new signalization is installed at roadway intersections with existing or proposed bike lanes, provide reliable bicycle sensing detectors, and identify bicycle detectors with MUTCD-compliant stencils and signage.

At all signalized intersections with existing or proposed bike lanes, adjust traffic signal timing to accommodate bicycle speeds.

Where a bike lane is designated along roads in hilly or steep terrain and inadequate right-of-way exists to provide a bike lane on both sides of a road, provide a bike lane in the uphill direction and bike route in the downhill direction.

Where construction of a bike lane along a scenic corridor involves tree removal, require an analysis of visual resources to identify impacts. If impacts are identified, either modify the bikeway to avoid tree removal, or require replacement of removed trees with trees of comparable aesthetic and arboreal value.

Standards for Buffered Bike Lanes

Policy 2.12: Standards for bike lanes should be applied to buffered bike lanes with the addition that buffered bike lanes include a painted or marked horizontal separation one to four feet in width between moving vehicles and the left-hand edge of the rideable bike lane. Buffered bike lanes should be selected for a given roadway based on vehicle volume and vehicle speed thresholds identified in Table 2 and Table 3 above.

Standards for Bike Routes

Policy 2.13: Bike routes should be selected on the basis of vehicle volume and vehicle speed thresholds identified in Table 2 and Table 3 above as well as considerations related to parking, traffic control devices, surface quality, and connectivity for bicycle travel.

Maintain geometry, pavement surface condition, debris removal, markings, and signage on bike routes to the same standards and condition as the adjacent motor vehicle lanes.

Motor vehicle parking on bike routes should be avoided.

Where appropriate, the MUTCD W16-1 (“Share the Road”) plaque may be used in conjunction with the W11-1 bicycle warning sign.

Where possible, shoulders should be at least 4 feet wide, provided these improvements do not result in significant grading, removal of trees, or adverse effects on existing structures, driveways or drainage.

When trimming vegetation adjacent to roadways with bike routes, provide a minimum horizontal clearance of 4 feet and a minimum vertical clearance of 8 feet as measured from the edge pavement.

Locate drainage grates outside of the bikeway whenever possible. Align drainage grates perpendicular to the direction of travel and use as narrow as possible gratings, consistent with maintaining adequate drainage (Exhibit 1).

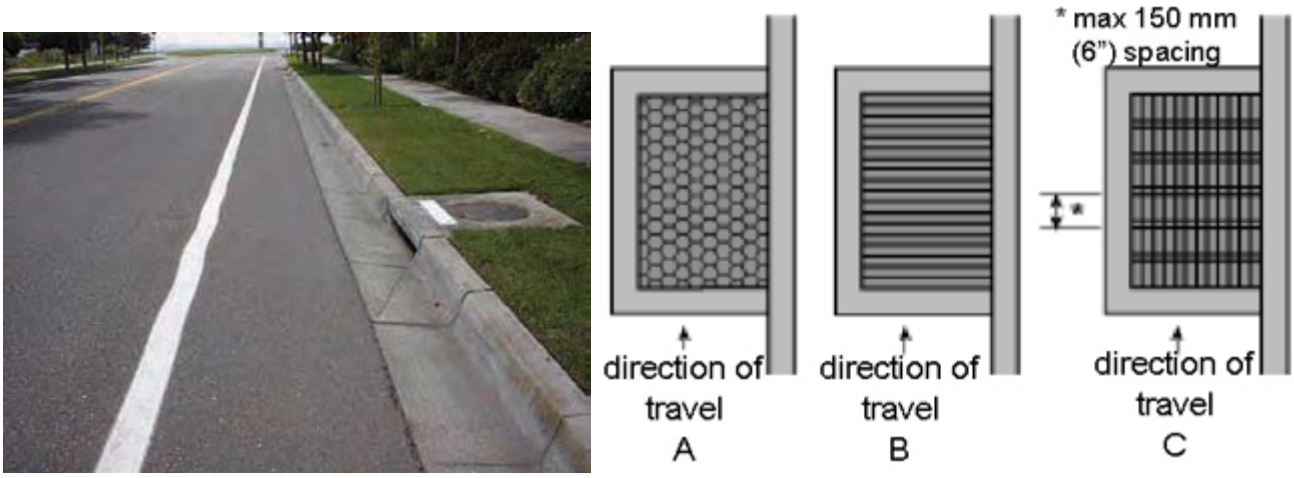


Exhibit 1. Drainage Design

Where a bike route is designated along a Scenic Corridor, avoid tree removal and/or grading wherever possible if these activities are likely to affect the scenic resources.

Bicycle Boulevards

Policy 2.14: Consider development of Bicycle Boulevards in urbanized areas and unincorporated communities on routes that offer alternatives to bikeways on high-speed collector and arterial roadways. Bicycle boulevards are streets optimized for travel by bicycles rather than automobiles through reduction of traffic speed and volume using traffic calming measures such as diverters, chicanes, neighborhood traffic circles, and roundabouts. Traffic controls should be optimized to assign right of way to bicycles. Signage and street design should encourage use by bicyclists and informs motorists that the roadway is a priority route for bicyclists. See Table 2 and Table 3 above for guidance related to vehicle volume and vehicle speed thresholds for a bicycle boulevard.

Standards for Separated Bike Lanes

Policy 2.15: Separated bike lane facilities should be selected for roads based on the vehicle volume and vehicle speed thresholds identified in Table 2 and Table 3 above. Separated bike lanes, also known 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.

Consider the use of separated bike lanes along vehicle routes that have moderate-high volume and/or moderate to high vehicle speeds.

Instances of Constrained Right-of-Way

Policy 2.16: In areas where road right of way width is inadequate to accommodate both on-street parking and multi-use path, bike lanes, buffered bike lanes and/or separated bike lanes, the on-street parking can be eliminated after findings of insignificant impacts.

Freeway Interchanges

Policy 2.17: Freeways are controlled access roads where bicycle and pedestrian use is generally prohibited. Very few roads cross Highway 101 without an interchange, creating a significant barrier to east/west connectivity for non-motorized travel. Existing ramps are designed for high-speed merging, exposing pedestrians and bicyclists to unnecessary risk of serious injury or death. Use the following recommendations for design, striping and signage at freeway interchanges:

- Design ramp intersections with local roads with 90-degree intersections rather than free flowing ramps with high-speed connections.
- Restrict local road speed to 35 mph or less through the interchange.
- Decrease the radii of ramp intersections such that right hand turn speeds are reduced to 25 mph or less.
- Control off-ramp traffic with stop sign or traffic signal, or roundabouts as appropriate for each intersection.

Policy 2.18: Design, construct, and implement the planned project list found in the Appendices.

Policy 2.19: Work with the nine Cities and Sonoma County Transportation and Climate Authority (SCTA) to implement the Countywide Regional Routes identified in the SCTA Countywide ATP.

BPAC Review of Projects

Policy 2.20: Refer the following projects to the BPAC to review consistency with the Bikeways Plan and to evaluate potential for creating hazards or barriers to walking or bicycling:

- Road widening projects.
- Road capacity improvement projects.
- Resurfacing, restoration, and/or rehabilitation of roads with existing or proposed bike lanes, buffered bike lanes, bike routes or bike boulevards.
- Resurfacing, restoration, and/or rehabilitation of roads that include the installation of rumble strips, AC berms or similar barriers, and/or roadway dots in the shoulder area.
- Traffic calming improvements.
- Discretionary projects adjacent to existing or proposed multi-use paths and/or roads with existing or proposed bike lanes, buffered bike lanes, bike routes or bike boulevards.
- Discretionary projects anticipated to be conditioned with roadway improvements along existing or proposed multi-use paths, bike lanes, buffered bike lanes, bike routes or bike boulevards.

Policy 2.21: Require that bikeway improvements be included as part of all road maintenance or improvement projects along road segments with existing or proposed bikeways to the maximum extent feasible.

Policy 2.22: Upgrade or adjust existing traffic signal detectors on County roadways to reliably detect bicycles. On streets without dedicated right turn lanes where upgrading the existing traffic signal loop detector is not feasible, install additional buttons to trigger the signal located such that bicyclists do not have to leave the bikeway to use the button.

Policy 2.23: Where nexus exists as to a project's impacts, consider requiring private or public development to plan, design, and construct bicycle and pedestrian facilities to integrate with the existing and planned bicycle and pedestrian network.

Policy 2.24: Where discretionary projects in Urban Service Areas and unincorporated communities are found to create additional demand for bicycle travel, require the project to directly provide or participate in the funding of bikeway improvements such as gap closures, shoulder widening, safety improvements and signage that will improve bicycle access to destinations located within 3 miles of the project site.

Policy 2.25: Require mitigation either through in-lieu fees, contribution to a Vehicle Miles Traveled Mitigation Bank supportive of local active transportation facilities, or development of alternative facilities that have been recommended by the BPAC, when development projects or road improvements are anticipated to result in a loss of existing bicycle and pedestrian facilities or jeopardize development of future facilities identified in the Bikeways Plan.

Policy 2.26: Develop a maintenance reporting system for bikeways with a central point of contact that can be used to report, track, and respond to routine bicycle and pedestrian maintenance issues in a timely manner.

Policy 2.27: Require road construction projects to minimize their impacts on bicyclists and pedestrians through the proper placement of construction signs and equipment and by providing adequate, safe, well-marked detours. Where it is safe to do so, allow bicyclists and pedestrians to pass through construction areas in order to avoid detours. Where two-way bicycle and pedestrian travel can be safely accommodated in a one-way traffic control zone, adequate signage shall be placed to alert motorists of bicycles and pedestrians in the lane.

Policy 2.28: Encourage cooperation between Regional Parks, Sonoma Public Infrastructure (SPI), SCTA, Sonoma-Marin Area Rail Transit District (SMART), Great Redwood Trail Agency, Sonoma Water, Caltrans, and the Cities, to coordinate and prioritize projects that close gaps and provide greater regional connectivity in the bikeway network and ensure the system is constructed and maintained.

Policy 2.29: Require dedication or purchase of right of way for multi-use paths as part of open space requirements for development, when a nexus can be established between the proposed development and the need for bikeways in the affected area.

Policy 2.30: Review the status of abandoned railroad rights-of-way, natural waterways, flood control rights-of-way and public lands on an annual basis or as often as needed for opportunities to develop new multi-use paths.

Policy 2.31: Develop a multi-use path "Rails with Trails" bikeway along the SMART and Great Redwood Trail Agency rights-of-way. Give highest priority to segments that provide connections between cities along the Highway 101 corridor from Windsor to Petaluma.

Policy 2.32: Encourage the use of flexible parking, circulation and road design standards for higher density residential and mixed-use projects that make walking and bicycling the preferred mode of transportation within the project and surrounding area.

Policy 2.33: Permit Sonoma Planning shall designate a staff member to coordinate referrals of land-use development projects and relevant planning initiatives to the BPAC. This staff member will perform the following duties:

a. Bring planning initiatives that incorporate active transportation before the BPAC for comment. These include but are not limited to relevant updates to the Sonoma County General Plan, updates to or creation of Specific Plans, etc.

b. Work with Permit Sonoma staff to ensure all land-use entitlement review for projects situated along Active Transportation Plan project sites are referred to the BPAC, unless the proposed project is subject to a limitation on the number of public hearings under state law and the referral would cause the total number to exceed the statutory limit.

c. Create policy and procedure documents dictating how the above referrals are to be processed to create consistency and set expectations for the public and staff.

d. Educate Permit Sonoma staff on the referral process and benefits of active transportation. This will include education on and promotion of mixed-use and other development that inherently encourage active transportation and minimize reliance on private vehicle use.

e. Designated Staff shall coordinate with Sonoma County Regional Parks, Sonoma Public Infrastructure, the incorporated cities of Sonoma County, and CalTrans to obtain grant funding for Active Transportation Plan Projects, promotion of active transportation throughout the County, and facilitate review and construction of these projects. Additionally, these agencies shall routinely examine projects and identify "quick-builds" from the project list of this plan which can be implemented rapidly at minimal cost.

f. Annually audit land-use entitlement projects for compliance with the above and report the findings to the BPAC.

g. Staff member shall attend meetings of the BPAC whenever possible

Bicycle Parking and End of Trip Facilities

Policy: 2.33: Provide adequate bicycle parking as part of all new school, public transit stops, public facilities, and commercial, industrial, and retail development. Retrofit of existing uses and facilities is recommended whenever feasible. Use the following standards for bicycle parking:

Use	Bike Parking Location	Bicycle Capacity
Park	Adjacent to restrooms, picnic areas, fields, and other attractions.	1 bicycle rack space per 10 automobile parking spaces, with a minimum of 8 bicycle rack spaces per location.
School	Near school building main entrances with good visibility. A secure, fenced area is recommended.	1 bicycle rack space per 5 students, with a minimum of 8 bicycle rack spaces per location.
Public Facilities (County Center, libraries, community centers)	Near main building entrances with good visibility. When applicable, use entrances closest to transit stops.	1 bicycle locker per 20 employees, with a minimum of two lockers. 1 bicycle rack space per 20 public automobile parking spaces, with a minimum of 8 bicycle rack spaces per location.
Commercial and industrial over 10,000 gross square feet	Near main entrance with good visibility.	1 bicycle rack space per 15 employees with a minimum of 8 bicycle rack spaces per location. Bicycle lockers may be substituted for bicycle rack spaces.
Retail over 10,000 gross square feet	Near main entrance with good visibility.	8 bicycle rack spaces per 10,000 gross square feet. Bicycle lockers may be substituted for bicycle rack spaces.
Districts in Urban Service Areas	Near main entrance with good visibility. Must not obstruct pedestrian or automobile movement.	2 bicycle rack spaces per 200 feet of retail/commercial frontage.
Transit Stops	Near shelter, bus stop or rail station area.	1 bicycle rack space per 10 parking spaces with a minimum of 8 bicycle rack spaces per location. Bicycle lockers are preferred at all locations and recommended for transit hubs.

A “bicycle locker” is an individually locked weatherproof enclosure or supervised area within the occupied portion of a building providing protection from theft, vandalism and weather. A “bike rack” is a securely mounted stand or other device constructed so as to enable the user to secure the bicycle by locking the frame and at least one wheel. Racks must be easily usable with both U-locks and cable locks. Racks must hold bicycles in a stable upright position and support bicycles, so they resist falling over when bumped. Racks supporting a bike by wheel only, such as standard “wire racks”, are not acceptable. Racks must hold bikes with at least two points of contact.

Policy 2.34: Provide shower and locker facilities for employees, and bicycle parking consistent with Policy 2.27 at existing and future public facilities. The bicycle support facilities should be designed to accommodate walking or bicycling by at least 5 percent of the full-time workforce.

Integration with Transit

Policy 3.01: Encourage local and regional transit agencies to provide and maintain convenient and secure bike parking facilities, all-weather shelters, and other amenities at major transit stops and transportation centers.

Policy 3.02: Encourage local and regional transit agencies to accommodate bicycles on buses, trains and ferries.

Policy 3.03: Require periodic consultation between the BPAC and transit agencies to review bicycle parking at transit facilities and accommodations to carry bicycle on-board buses, trains and ferries to assure that anticipated demand for parking and on-board accommodations can be met.

Policy 3.04: Encourage local and regional transit agencies to consult with the BPAC when major service changes are proposed.

Policy 3.05: Work with transit providers to implement a Safe Routes to Transit program for bicycle and pedestrian access to transit stops and stations.

Policy 3.06: Give highest priority to safety related improvements of pedestrian facilities in the vicinity of schools, public transit facilities, and crossings in Urban Service Areas and unincorporated communities.

Policy 3.07: On County-owned rights –of-way, easements, or County property where transit stops exist, the County shall promote installation of bicycle repair stations and racks at locations where high-ridership transit stations and facilities identified in this plan exist or are proposed to encourage safe operation of bicycles and promote multimodal transportation.

Pedestrian Facilities

Policy 4.01: Require new development in Urban Service Areas and unincorporated communities to provide safe, continuous and convenient pedestrian access to jobs, shopping and other local services and destinations. Maintain consistency with City standards for pedestrian facilities in Urban Service Areas that are within a city's Sphere of Influence or Urban Growth Boundary.

Policy 4.02: Encourage development of amenities that enhance the walking experience, such as landscaping, public art, seating and drinking fountains, in Urban Service Areas and unincorporated communities.

Policy 4.03: Require centrally located shared parking in Urban Service Areas and unincorporated communities whenever feasible for commercial uses rather than requiring individual businesses to provide separate parking areas.

Policy 4.04: Where discretionary projects in Urban Service Areas and unincorporated communities are found to create additional demand for pedestrian travel, require the project to directly provide or participate in the funding of pedestrian improvements such as sidewalks, gap closures, steps, safety improvements, and/or trails that will improve pedestrian access to destinations located within ½ mile of the project site.

Policy 4.05: Require discretionary projects within the Urban Growth Boundary or Sphere of Influence of a city to provide sidewalks consistent with city design standards.

Policy 4.06: Use pedestrian-level lighting rather than conventional full height lighting standards within the Urban Service Areas and unincorporated communities wherever appropriate.

Policy 4.07: Provide high-visibility crosswalk marking at all intersections in Urban Service Areas, unincorporated communities, and wherever feasible countywide. Wherever possible, avoid mid-block pedestrian crossings, and where mid-block crossings are necessary, install enhancements consistent with FHWA *Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations* which include treatments such as signalization, refuge islands and signage warning vehicles to stop for pedestrians and watch for cyclists.

Policy 4.08: Require development projects in Urban Service Areas and unincorporated communities that conflict or interfere with development of future planned pedestrian facilities to provide development of equivalent facilities within the same area.

Policy 4.09: Design sidewalks and pedestrian paths to provide defensible space and adequate sight lines between adjoining development to insure safety and security. Sidewalks should feel comfortable and welcoming at all times of the day and night.

Policy 4.10: Require pedestrian-oriented street design in Urban Service Areas and unincorporated communities.

Safe Routes to School

Policy 5.01: Encourage ongoing development of the Safe Routes to School program by coordinating efforts of advocacy groups, school districts, Cities, and County departments.

Policy 5.02: Encourage development of a Pedi/Bike-Bus Program by coordinating efforts of advocacy groups, parents, school districts, Cities, and County departments.

Policy 5.03: Inventory safety needs/hazards along routes to and around schools in order to identify improvements necessary to improve safety and create a priority list of projects necessary to correct these hazards.

Policy 5.04: Encourage school districts to participate in providing safe bicycle and pedestrian connections that serve students from surrounding neighborhoods when constructing or improving schools. Encourage school districts to provide secure bicycle parking areas for students, faculty, and staff. Require private schools to provide continuous pedestrian pathways and bicycle facilities from adjacent residential communities to the school grounds.

Policy 5.05: Coordinate Bicycle Safety Education Programs at schools, with law enforcement agencies, school districts, advocacy groups, local bicycle shops, and other interested organizations. The program shall include traffic rules, bicycle handling skills, the importance of good helmets, lights and reflectors, bicycling clothing, and bicycle maintenance courses in cooperation with local bicycle shops and organizations.

Education, Safety & Promotion

Policy 6.01: Distribute bicycle and pedestrian safety, educational, and promotional materials to students, parents, faculty, and staff at school orientations. Consider other opportunities for public education such as driver's training and citation diversion programs.

Policy 6.02: Work through the Department of Health Services programs to promote the health benefits of bicycling and walking. Work in compliance with policies found in the Environmental Justice element as applicable.

Policy 6.03: Develop a bicycle and pedestrian safety campaign that produces comprehensive driver, bicyclist and pedestrian educational materials and information, and increases public awareness of the benefits of walking and bicycling as healthy alternatives to motorized transportation.

Policy 6.04: Collect bicycle and pedestrian crash data in the unincorporated areas on an annual basis. The BPAC shall review this data and identify high risk areas, prioritizing improvements, or additional needs for future collision data collection.

Policy 6.05: Educate motorists, bicyclists, and pedestrians with regard to safety, rights, and responsibilities associated with use of the County transportation system.

Policy 6.06: Support constructive efforts from advocacy groups to address bicycle and pedestrian transportation issues.

Policy 6.07: Support and encourage events that enhance Sonoma County's reputation as a world-class bicycling destination.

Policy 6.08: Encourage events, such as festivals and rallies that introduce Sonoma County residents to walking and bicycling, bike-to-work days, walk and bike-to-school days, senior walks and historic walks.

Policy 6.09: Provide the option of flexible work schedules to County employees in order to accommodate commuting by bicycle, walking, or transit.

Policy 6.10: Develop a Guaranteed Ride Program for County workers and employees of other employers with participating programs who regularly bicycle, walk, vanpool, carpool, or use transit for their trip to work. The program would encourage use of alternative transportation modes by providing free transportation in the event of personal emergencies, illness, or unscheduled overtime.

Funding

Policy 7.01: Consider establishing greenhouse gas impact fees for new development. Use a portion of this fee to fund planning, design, and construction of bikeways and pedestrian facilities.

Policy 7.02: Work with Federal, State, regional, and local agencies and any other available public or private funding sources to secure funding for bikeways and pedestrian facilities.

Policy 7.03: Encourage multi-jurisdictional funding applications for design, construction and maintenance of bikeways and pedestrian facilities that provide regional connectivity.

Policy 7.04: Develop a long-range strategy to provide long term funding necessary to maintain and operate the multi-use path network.

Policy 7.05: Collaborate with SCTA and others to create a Vehicle Miles Traveled (VMT) mitigation bank that allows development projects to offset project related VMT by paying an in-lieu fee that will fund construction of sidewalks and bicycle facilities. The mitigation bank will identify specific projects along transportation corridors and identify the estimated VMT reduction that will result from implementing the project.

Policy 7.06: Program funding for road projects shall comply with the Bikeways Plan.

Policy 7.07: Require public and private development projects on parcels affected by projects identified in the Bikeways Plan to construct the project as part of development.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6. Implementation: Local Considerations

The following outlines a timeline and potential funding sources Sonoma County can use to make consistent, steady progress towards achieving its vision and goals for enhancing walking, biking, and rolling.

Timeline

Policies and Programs

Putting into action this Plan's policies and programs is a critical first step for providing a foundation to build and use the network. Many of the policies and the broader Active Transportation Program identified in this Plan are ongoing or recurring considerations and activities, that once initiated, will sustain investment in active transportation improvements as well as normalize designing streets for safe and comfortable walking, biking, and rolling.

Table 6 summarizes the timeline and the responsible party (or parties) or the mechanism for implementing programs.

Table 6. Implementation Timeline and Responsibility for Programs

Program or Policy Action	Timeline	Responsible Party or Mechanism for Implementation
Active Transportation Program (Establish and Initiate Program)	0 to 2 years	Sonoma Public Infrastructure, Permit Sonoma, Sonoma County Regional Parks, Board of Supervisors
Transportation Demand Management Program (Establish and Initiate Program)	0 to 3 years	Sonoma Public Infrastructure, Permit Sonoma, Sonoma County Regional Parks, Board of Supervisors
Sidewalk Maintenance and Gap Closure Monitoring Program (Establish and Initiate Program)	0 to 5 years	Sonoma Public Infrastructure, Permit Sonoma, Sonoma County Regional Parks, Board of Supervisors
Bicycle Parking Program (Establish and Initiate Program)	0 to 1 years	Sonoma Public Infrastructure, Permit Sonoma, Sonoma County Regional Parks, Board of Supervisors

Planned Projects

Prioritization

Opportunities to advance specific projects towards implementation will be dependent on external factors (e.g., land use projects, successful grant applications). With this in mind, the planned projects identified in this Plan are prioritized into three tiers:

Tier 1 – High Priority
Tier 2 – Medium Priority
Tier 3 – Low Priority

The criteria used to sort the projects into each tier were:

Safety – Extent to which the project is on a portion of the SCTA Vision Zero HIN and/or if it has been identified in the County's Local Road Safety Plan as a priority location.
Equity – Extent to which the project would improve active transportation access or conditions for an equity-focus population as defined at the regional, state, or federal level.
Proximity to Existing and Future Transit – For a given project, the distance from existing or future bus stop or transit station.
Proximity to Schools – For a given project, the distance from an existing school.
Low-Stress Gap Closure – Scored based on whether the project would close a gap in the low-stress network, with extra points for projects on the Sonoma County Regional Routes network.

For each criterion, each project received a score based on the extent to which it fulfilled the criteria. The collective scores across the criteria were normalized into a single number or index. Tiers 1, 2, and 3 were established to align with the top, middle, and bottom third of the project scores. Projects are presented by tier in Table 7.

Once sorted into each of the three buckets, projects are not sorted within each tier to allow County staff discretion and flexibility to respond to various opportunities that arise and can facilitate implementation. Within the broader Countywide ATP, the project prioritization criteria are aligned with project selection criteria for the Go Sonoma Act funding program.

Cost Estimates

This section presents the costs estimates for implementing the projects in this Plan. Project cost estimations were developed to provide a general idea of the anticipated cost for each proposed project type. These estimates are based on an engineering review of unit costs and quantities for the project types shown. They are based solely on construction costs and do not include other soft costs that may be associated with projects (e.g., design, environmental, permitting, construction management).

Table 7 summarizes project costs by project type and prioritization tier for the 2025 Active Transportation Network.

Table 7. Cost Estimates Summary

Project Type	Unit Cost	Quantity	Cost Estimate
Tier 1 Priority Projects			
Multi-Use Path (Class I)[1]	$1,023,500/mile	136.3 miles	$139,522,553
Bike Lane (Class II)[2]	$176,000/mile	6.3 miles	$1,108,800
Buffered Bike Lane (Class IIB)[3]	$574,000/mile	50.2 miles	$28,814,800
Bike Route (Class III)[4]	$12,500/mile	-	-

Project Type	Unit Cost	Quantity	Cost Estimate
Bike Boulevard (Class IIIB)[5]	$87,500/mile	3.1 miles	$271,160
Separated Bike Lanes (Class IV)[6]	$1,655,000/mile	58.1 miles	$96,155,500
Crossing Improvement (Unsignalized)[7]	$8,000 to $60,000	11	$660,000
Crossing Improvement (Signalized)[8]	$8,000 to $120,000	4	$480,000
Sidewalk Installation[9]	$480/linear feet	2,298 linear feet	$1,103,040
Corridor Study	$300,000/mile	9.5 miles	$2,850,000
Traffic Calming[10]	$75,000/mile	-	-
Total Tier 1 Priority Projects[11]			$269.9M to $271.0M
Tier 2 Priority Projects			
Multi-Use Path (Class I)[1]	$1,023,500/mile	83.5 miles	$85,462,250
Bike Lane (Class II)[2]	$176,000/mile	62.4 miles	$10,982,400
Buffered Bike Lane (Class IIB)[3]	$574,000/mile	90.7 miles	$52,061,800
Bike Route (Class III)[4]	$12,500/mile	5.9 miles	$73,803
Bike Boulevard (Class IIIB)[5]	$87,500/mile	41.2 miles	$3,602,292
Separated Bike Lanes (Class IV)[6]	$1,655,000/mile	72.8 miles	$120,484,000
Crossing Improvement (Unsignalized)[7]	$8,000 to $60,000	3	$180,000
Crossing Improvement (Signalized)[8]	$8,000 to $120,000	1	$120,000
Sidewalk Installation[9]	$480/linear feet	4,537.5 linear feet	$2,178,000
Corridor Study	$300,000/mile	-	$0
Traffic Calming[10]	$75,000/mile	1.1 miles	$82,500
Total Tier 2 Projects[11]			$275.0M to $275.2M
Tier 3 Priority Projects			
Multi-Use Path (Class I)[1]	$1,023,500/mile	36.1 miles	$36,932,237
Bike Lane (Class II)[2]	$176,000/mile	44.2 miles	$7,779,200
Buffered Bike Lane Class IIB)[3]	$574,000/mile	32.1 miles	$18,425,400
Bike Route (Class III)[4]	$12,500/mile	5.2 miles	$65,594
Bike Boulevard (Class IIIB)[5]	$87,500/mile	66.3 miles	$5,805,527
Separated Bike Lanes (Class IV)[6]	$1,655,000/mile	11.7 miles	$19,363,500
Crossing Improvement (Unsignalized)[7]	$8,000 to $60,000	1	$60,000

Project Type	Unit Cost	Quantity	Cost Estimate
Crossing Improvement (Signalized)[8]	$8,000 to $120,000	-	-
Sidewalk Installation[9]	$480/linear feet	-	-
Corridor Study	$300,000/mile	-	-
Traffic Calming[10]	$75,000/mile	-	-
Total Tier 3 Projects[11]			$88.4M
2025 Active Transportation Network			
Total All Projects[11]			$633.3M to $634.6M

Notes:
(1) 12' wide AC path, 2' gravel shoulders, striping and 4 signs per mile.
(2) Unidirectional bike lanes on each side of a two-way street. Striping, green thermoplastic for conflict markings at intersections and driveways (assumed to occur every 100feet and are 5' wide x 20' long), and 4 signs per mile.
(3) Unidirectional bike lanes on each side of a two-way street. Pavement marking in 3' wide AC buffer lane along entire length, green thermoplastic for conflict markings at intersections and driveways (assumed to occur every 100feet and are 3' wide x 20' long), and 4 signs per mile.
(4) "Sharrow" or similar type of pavement marking at 250-foot intervals and 8 signs per mile.
(5) "Sharrow" or similar type of pavement marking at 250-foot intervals, 8 signs per mile, and a combination of traffic calming treatments which could include, but are not limited to, neighborhood traffic circles, raised crosswalks, high visibility crosswalk markings, speed humps, chicanes, and curb extensions.
(6) Unidirectional bike lanes on each side of a two-way street. 7' wide AC Bikeway, concrete edge treatment/median in buffer, bikeway stripe, pavement marking, 4 signs per mile and three signalized intersection improvements per mile.
(7) Improvements at unsignalized intersections include, but are not limited to, pedestrian refuge islands, high visibility crosswalks, rectangular rapid flashing beacons, raised crosswalks, and curb extensions.
(8) Improvements at signalized intersections include, but are not limited to, two-stage bike turn boxes, bike signals, high visibility crosswalks, cross-bike or bike conflict markings, pedestrian count down signals, and implementing directional curb ramps.
(9) Both sides of street. 7' wide concrete sidewalk and underlying compacted base material, including curb and gutter.
(10) Traffic calming includes one, or a combination of improvements, including but not limited to treatments such as neighborhood traffic circles, raised crosswalks, added crosswalk markings, speed humps and curb extensions.
(11) Price per mile assumes "blank slate" and includes new pavement improvements only. (i.e., no demo, drainage, etc.). Mobilization, traffic control, etc., are excluded.

Funding

This section describes the funding sources available to fund the projects and programs identified in this plan. In addition to local funding sources such as the Capital Improvements Program and developer fees, Table 8 presents a list of competitive grants and formula-based funding programs have been reviewed for potential consideration to address financial needs of the projects identified in the plan. Further discussion of regional and federal funding options is included in the 2025 Countywide ATP.

Table 8. Potential Funding Sources, Competitive Grants, and Formula-Based Fundings

Regional Funding Sources	
Go Sonoma Act	https://scta.ca.gov/measure-m/gosonoma/
Transportation Development Act, Article 3 (TDA3)	https://scta.ca.gov/projects/funding/#tda3

Transportation Fund for Clean Air (TFCA)	https://scta.ca.gov/projects/funding/#tfca
State of California Funding Sources	
AHSC – Affordable Housing and Sustainable Communities	https://sgc.ca.gov/programs/ahsc/
ATP – Active Transportation Program	https://catc.ca.gov/programs/active-transportation-program
CleanCA – Clean California	https://cleancalifornia.dot.ca.gov/
HSIP – Local Highway Safety Improvement Program	https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/highway-safety-improvement-program
LPP – Local Partnership Program	https://catc.ca.gov/programs/sb1/local-partnership-program
PROTECT – Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation	https://dot.ca.gov/programs/local-assistance/fed-and-stateprograms/protect
REAP – Regional Early Action Planning	https://www.hcd.ca.gov/grants-and-funding/programs-active/regional-early-action-planning-grants-of-2021
RC:H2B – Reconnecting Communities: Highways to Boulevards	https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/rc-h2b
RMRA & HUTA – Road Maintenance and Rehabilitation Account & Highway Users Tax Account	https://www.sco.ca.gov/aud_road_maintenance_sb1.html
SCCP – Solutions for Congested Corridors Program	https://catc.ca.gov/programs/sb1/solutions-for-congested-corridors-program
Federal Funding Sources	
ATIIP – Active Transportation Infrastructure Investment Program	https://www.fhwa.dot.gov/environment/bicycle_pedestrian/atiip/
CMAQ – Congestion Mitigation and Air Quality Improvement Program	https://ww2.arb.ca.gov/resources/documents/congestionmitigation-and-air-quality-improvement-cmaq-program
RAISE – Rebuilding American Infrastructure with Sustainability and Equity	https://www.transportation.gov/RAISEgrants
RSTG – Rural Surface Transportation Grant Program	https://www.transportation.gov/grants/rural-surface-transportation-grant
SMART – Strengthening Mobility and Revolutionizing Transportation	https://www.transportation.gov/grants/SMART
SS4A – Safe Streets and Roads for All	https://www.transportation.gov/grants/SS4A
STIP – State Transportation Improvement Program	https://catc.ca.gov/programs/state-transportation-improvement-program
STP – Surface Transportation Block Grant	https://www.fhwa.dot.gov/specialfunding/stp/

Monitoring

Staff will track progress towards implementing this Plan's content as well as achieving this Plan's goals by using the measures shown in Table 9. On an annual basis, as part of Staff's update on the General Plan progress, they will report to the Sonoma County Planning Commission and Board of Supervisors the most recent status for each measure below.

Table 9. Monitoring Progress

Measures	Baseline	Data Source	Frequency
Goal: Connected & Reliable			
Miles of bikeway facilities (total)	113.7 miles	County data	Annual
Linear feet of sidewalk gaps (total)	n/a	County data	Annual
Goal: Safe & Well-Maintained			
KSI pedestrian and bike involved collisions with goal those are zero	Ped: 48/Bike: 74	2015-2019; SWITRS	Annual
Number of crossing improvements installed	n/a	County data	Annual
Goal Community Oriented & Place Based			
Number of active transportation improvements within a 1/4 mile of transit/bus stop	n/a	County data	Annual
Number of new or upgraded bike parking facilities	n/a	County data	Annual

Notes:
"n/a" Indicates a baseline number for the measure is not applicable.