



CITY OF SAN DIEGO BICYCLE MASTER PLAN

CHAPTER 6

Implementation

Implementation Pathways

Building the planned bicycle network will provide opportunities for people of all ages and abilities to ride bikes on safe and convenient bikeways throughout the City of San Diego. Completion of bikeways also will offer an affordable and easy transportation choice, and their construction can best be achieved through sustained investment, strategic improvements, and inter-agency coordination. While some bikeway facilities can be built as standalone projects, others are built as part of a larger capital improvement project within a street or as part of larger private development projects. Closing critical network gaps, upgrading key intersections, and constructing new low-stress corridors can help to build out the bikeway network.

Ongoing collaboration with the California Department of Transportation (Caltrans), San Diego Association of Governments (SANDAG), Metropolitan Transit System, North County Transit District, Port of San Diego, the County of San Diego, San Diego State University, University of California San Diego, local school districts, and neighboring cities helps to ensure bikeway continuity across the City's boundaries and connect to transit stops and stations and other regional destinations.

Street Resurfacing

Bikeways and other mobility improvements can be implemented in conjunction with roadway maintenance activities. The City's Pavement Management Plan provides a comprehensive overview of the existing citywide pavement conditions and outlines strategic investments needed to maintain the street network at desired levels. Guided by the street conditions in the plan, opportunities to bundle planned bikeway network improvements with upcoming roadway resurfacing projects can be considered. Coordinating these efforts can help deliver multiple benefits through a single project while improving implementation efficiency.

Underground Maintenance

Like street resurfacing projects, maintenance and replacement of underground infrastructure, such as sewer, water, and stormwater pipes, can provide opportunities to implement bikeway network improvements when streets are repaved after work is completed.

Developer-Initiated Improvements

Developers proposing large-scale improvements can also provide opportunities to construct bikeway network improvements. Often, these developments are required to implement infrastructure improvements needed to support the new development, such as new streets or the widening of existing ones, sewer and water pipes, drainage improvements, sidewalks, and bicycle infrastructure. Street improvements are determined in accordance with the Land Development Code.

Implementation Methods

Quick-Build



Pictured: Del Sol Roundabout in Otay Mesa Nestor

Quick-build is an approach to building infrastructure using low-cost, shorter-term materials to lessen construction impacts and implementation timelines. They are typically low- to medium-cost and use materials that can be quickly installed. By using temporary, cost-efficient, and readily available materials, quick-build projects can be implemented more quickly and without the long construction timelines of more traditional capital projects. They also allow the City to test the functionality of an improvement before making a larger investment in permanent infrastructure. For bikeway improvements, quick-build materials may include paint, planters, flex-posts, or low-profile traffic separators.

Capital Improvements Program Projects



Pictured: Pershing Bikeway

Capital Improvements Program (CIP) Projects are typically built with permanent materials and may include modifications to the curb line, utility work, and/or durable materials such as concrete. Project elements could include street trees, stormwater retention features, lighting, and sidewalk improvements. CIP projects are large-scale, long-lasting infrastructure projects that are constructed with permanent materials. These projects are intended to be permanent installations and typically incur higher costs and longer implementation timelines in comparison to quick-build projects. The City of San Diego's Capital Improvement Program Outlook provides a five-year, citywide assessment of infrastructure needs and outlines the proposed capital priorities. Bikeway projects are included in this Outlook and prioritized alongside other City needs, such as the repair and construction of city facilities like libraries and recreation centers, stormwater infrastructure, water and sewer pipe replacements, streetlights, and curb ramps.

Operations and Maintenance

The City maintains and operates the bikeway network. Each of the bikeway types included in the network (Class I through Class IV Bikeways and shared bus-bike lanes) has different maintenance and operations needs. Bikeways kept free of debris can reduce potential hazards to bicycle riders. While standard street sweepers may be suitable for many facilities, some locations may require a mini sweeper. Some examples of other maintenance needs include tree trimming, cleaning drainage systems, maintaining street and pavement surfaces, restriping worn or faded pavement markings, and replacing damaged wayfinding signage or flex posts.

As the bikeway network expands, the City will need to evaluate additional resources required to operate and maintain new facilities. These needs may include additional maintenance staff, specialized equipment such as compact bicycle lane sweepers, and fleet vehicles dedicated to bikeway maintenance. Planning for these resources will help make sure that new bikeways remain safe, functional, and well-maintained over time.

Funding Strategies

The Bicycle Master Plan establishes the City's long-term vision for a safe, connected, and convenient bikeway network. Achieving that vision will require continued investment in both bicycle infrastructure and supporting programs over time.

There are various funding opportunities through local, regional, state, and federal sources, as well as through partnerships and coordinated capital improvement projects. However, additional resources, particularly with regard to operations and maintenance, will need to be identified.

Capital Improvements Program

The City's Capital Improvement Program budget allocates existing funds and anticipated revenues to both new and continuing capital projects where funding is available. A number of funding sources appropriate for use on mobility infrastructure contribute to the Capital Improvement Program budget and/or fund repair or maintenance of City assets, including *TransNet*, the General Fund, Gas Tax, and Citywide Mobility Development Impact Fees.

Competitive Grants

Federal, state, and local grants provide an opportunistic funding source for mobility projects, including enhancements to the future bikeway network. These projects can supplement funds allocated in the City's CIP budget or may fully fund a project. This allows CIP funds to be redistributed to other projects.

Funding for these programs depends on regional, state, and federal budget decisions, which can shift from year to year. Applicants are often required to provide a local match, and even well-qualified projects are not guaranteed funding, since award amounts and program availability can vary based on competing priorities and available revenue. As funding becomes increasingly competitive, projects that deliver multiple community benefits are often better positioned for grants and other funding opportunities. By combining bicycle improvements with other City priorities, such as stormwater management, climate resilience, urban greening, accessibility, or street

reconstruction, the City can leverage a broader range of funding sources while delivering greater value to the community

Outreach for Bikeway Implementation

The City's [Inclusive Public Engagement Guide](#) provides City staff with best practices for implementing inclusive public outreach and engagement so that more perspectives can be included in the City's decisions.

Each bikeway included in the Bicycle Master Plan is unique. As such, there is no one-size-fits-all approach for public outreach and engagement. For example, some projects may include minor improvements to the street, and others may include more robust changes, such as the removal of a center left turn lane. Some projects may have regional significance if they connect to a bikeway in another jurisdiction or provide connectivity to a regional bikeway planned or implemented by SANDAG. As such, engagement efforts may vary on a project-by-project basis.

As individual projects move forward, the City will continue to evaluate existing conditions, engineering constraints, and public feedback to develop the most appropriate design for each corridor. **Appendix A** highlights several locations where additional analysis and collaboration will be especially important during project development.

Monitoring and Evaluation

Other complementary planning documents include actions to monitor the implementation of the Bicycle Master Plan. Progress on the Climate Action Plan is reported to the City Council and actions related to the implementation of the bikeway network and corresponding programs will be shared with the public and City Council as outlined below.

Table 6-1. Current Monitoring Programs

Bicycle Master Plan Goal	Performance Measure	Metric	Current Reporting Mechanism	Data Source
Safety	Collisions	Reduction in # of bicycle collisions	Vision Zero Action Plan	Transportation Injury Mapping System and City Vision Zero Dashboard
Equity	Access	New or improved bicycle facilities (Class I-IV) located in areas of greatest needs	Complete Streets Policy (Council Policy 900-23)	City of San Diego City Planning Department
Safety and Access	Bikeway Construction + Maintenance	Miles of new or improved bicycle facilities (Class I-IV)	Climate Action Plan Annual Monitoring	City of San Diego Transportation Department
Environmentally Friendly	Increase in bike trips	Increase the percentage of average weekday commuter trips taken by residents that are completed by bikes	Climate Action Plan Annual Monitoring	American Community Survey

Looking Ahead

Building the bikeway network envisioned in this Plan is a long-term process to be accomplished through individual projects, ongoing City programs, partnerships, and investments that collectively move San Diego toward a safer, more comfortable, and better-connected bikeway network. Each improvement, whether closing a critical gap, creating a safer crossing, or completing a new bikeway, represents progress toward that long-term vision.

Glossary of Terms

Accessibility: A general term used to describe the degree to which a system is usable by as many people as possible or the degree of ease with which it is possible to reach a certain location from other locations. In the Mobility Master Plan, one meaning of accessibility specifically focuses on people with disabilities and their ability to access entities. (As defined in the City of San Diego's General Plan.)

All Ages & Abilities: Design approach focused on safe, comfortable, and accessible networks for all ages, skill levels, and mobility needs.

Areas of Greatest Needs: The combined area of the City's Communities of Concern as identified in the City's Climate Equity Index and those priority areas identified in the Environmental Justice Element of the General Plan.

Best Practice: The most efficient (least amount of effort) and effective (best results) way of accomplishing a task based on repeatable procedures that have proven themselves over time. (As defined in the City of San Diego's General Plan.)

Bicycle Master Plan: A policy document that guides the development and maintenance of a bikeway network, including other roadways that bicyclists have the legal right to use, support facilities and other programs for San Diego over the next 20 years. These policies address important issues related to San Diego's bikeways such as planning, community involvement, utilization of existing resources, bikeway design, multimodal integration, safety and education, support facilities, as well as specific programs, implementation, maintenance, and funding. (As defined in the City of San Diego's General Plan.)

Big Data: Large and complex datasets.

Capital Improvements Program (CIP): A program established by a city or county government which schedules permanent improvements, usually for a minimum of five years in the future to fit the projected fiscal capability of the local jurisdiction. The program generally is reviewed annually, for conformance to and consistency with the General Plan. (As defined in the City of San Diego's General Plan.) The Mobility Master Plan refers to the development of these improvements as "capital projects" or "capital improvement projects."

Climate Action Plan (CAP): A climate action plan is a planning document that lays out a path for a community to meet sustainability and climate change mitigation goals through a variety of means. San Diego's 2022 CAP establishes a citywide goal of net zero greenhouse gas emissions by 2035. (As defined in the City of San Diego's Climate Action Plan.)

Climate Equity Index (CEI): Addressing historical inequities suffered by people of color, allowing everyone to fairly share the same benefits and burdens from climate solutions and attain full and equal access to opportunities regardless of one's background and identity. Also, a tool to measure the level of access to opportunity residents have within a census tract and assess the degree of potential impact from climate change to these areas. (As defined in the City of San Diego's Climate Action Plan and General Plan.)

Communities of Concern: A census tract that has been identified as having very low, low, or moderate access to opportunity as identified in the San Diego Climate Equity Index (CEI). Within the

scale of the CEI, Communities of Concern are determined by whether they fall within the 0-60 threshold of the CEI scale 0-100. (As defined in the City of San Diego's General Plan.)

Community Plan(s): The officially adopted land use plan of a local community that sets forth goals, policies, and recommendations intended to direct present and future physical development that occurs within the community. Community Plans within the City of San Diego are an integral part of the Land Use and Community Planning Element of the City's General Plan and therefore, must be consistent with the goals and policies of the General Plan. (As defined in the City of San Diego's General Plan.)

Complete Streets: Streets are designed and operated to enable mobility for all users. Users include people of all ages and abilities, regardless of whether they are traveling as pedestrians, bicyclists, transit users, or motorists. (As defined in the City of San Diego's Council Policy 900-23: Complete Streets Policy.)

Destinations: Defined as schools, parks, transit stops, libraries, shopping areas, and jobs.

Existing Bikeways: Bikeways on the ground or designed to be implemented as of November 2024.

Future Bikeway Network: In the Bicycle Master Plan, the Future Bikeway Network is the full citywide bikeway network including existing and planned bikeways.

General Plan: A long-range policy document to guide land use decisions about physical, economic, and environmental growth. California state law requires counties and cities to have a General Plan which contains multiple elements including, but not limited to, Land Use and Community Planning; Mobility; Urban Design; and Public Facilities, Services, and Safety. (As defined in the City of San Diego's Climate Action Plan.)

Level of Traffic Stress (LTS): Measures how comfortable and safe a roadway feels for cyclists, based on factors like traffic speed and volumes, and bikeway quality.

Mobility Master Plan (MMP): A comprehensive, data-driven resource that the City of San Diego uses when making decisions about mobility projects throughout the City. It guides the City in implementing programs and projects that will reduce greenhouse gas (GHG) emissions and shift mode share to meet the City's Climate Action Plan (CAP) targets. This comprehensive multimodal mobility plan links all mobility planning efforts together to create one hub for projects identified by the City. It creates a robust prioritization framework that can evaluate all mobility projects and help the City assess which projects can achieve the greatest benefits and address the greatest needs in a more sustainable and equitable way.

Planned Bikeways: In the Bicycle Master Plan, planned bikeways are bikeways that are proposed but have not been implemented or existing bikeways that are proposed to be changed or upgraded.

Planned Bikeway Network: Bikeway networks that are found in community plans, specific plans or other adopted City documents with planned bikeways.

Public Right-of-way: Public easements or public property that have been dedicated for use as streets, alleys, or other public purposes. (As defined in the City of San Diego's Municipal Code.)

Quick-Build: A construction approach in which public right-of-way space is redesigned using low intensity techniques, low-cost measures, and readily available and modifiable materials. (As defined in the City of San Diego's Council Policy 900-23: Complete Streets Policy.)

Regional Plan: A minimum 20-year plan that is required by state and federal law to guide the development of the region's transportation system. (As defined in the City of San Diego's General Plan.)

Rolling: A means of travel using wheelchairs or other assistive devices (e.g., hand cycles) or using other wheeled devices, including but not limited to, non-motorized scooters, skateboards, rollerblades, and roller skates.

Short Trips: Car trips three miles or less.

Street Design Manual: Provides information and guidance for the design of the public right-of-way that recognizes the many and varied purposes that a street serves. It includes technical information for the design of residential, commercial, collector, major streets, and rural roads; provides design options for traffic calming measures; and other street design standards. (As defined in the City of San Diego's General Plan.)

Traffic Calming: The combination of mainly physical measures that reduce the negative effects of car use, alter driver behavior, and improve conditions for nonmotorized street users. (As defined in the City of San Diego's General Plan.)

Wayfinding: Navigates readers through a city, hospital corridor or airport, calls attention to a storefront, or provides information about an exhibit; a succession of clues comprising visual, audible, and tactile elements. (As defined in the City of San Diego's General Plan.)