

Technical Memorandum

October 27, 2023

Project# 28476

To: Ozzy Arce, Senior Transportation Planner
City of Palo Alto, Office of Transportation

From: Kittelson & Associates, Inc.

CC: Sylvia Star-Lack, Transportation Planning Manager

RE: Bicycle and Pedestrian Transportation Plan Update – Literature Review

LITERATURE REVIEW

The City of Palo Alto (City) is updating the 2012 Bicycle and Pedestrian Transportation Plan. This Bicycle and Pedestrian Transportation Plan (BPTP) Update will serve as a comprehensive action plan for the City to provide improved bicycle and pedestrian facilities for its residents, employees, and visitors. The purpose of this memorandum is to provide a synthesis and summary of existing plans, programs, and policies from recent documents. This will help develop an understanding of the policy and planning environment for walking and biking in Palo Alto.

Document List

The following table lists the relevant documents and programs that were reviewed, summarized, and synthesized for this task.

Table 1: List of Documents Reviewed

No.	Document Name	Year of Adoption
1.	City of Palo Alto Bicycle and Pedestrian Transportation Plan	2012
2.	City of Palo Alto Comprehensive Plan	2017
3.	City of Palo Alto Sustainability and Climate Action Plan	2023
4.	City of Palo Alto Parks, Trails, Natural Open Space and Recreation Master Plan	2017
5.	City of Palo Alto Green Stormwater Infrastructure Plan	2019

6.	City of Palo Alto Public Art Master Plan	2016
7.	City of Palo Alto Safe Routes to School (SRTS)	2021
8.	Palo Alto SRTS Five-Year Work Plan, Safe Routes to School Partnership Consensus Statement	2021
9.	Adopted Palo Alto Unified School District (PAUSD) Safe Routes to School Policies	2021
10.	Santa Clara Countywide Bicycle Plan	2018
11.	The County of Santa Clara Stanford University Community Plan	2022 ¹
12.	2050 Plan Bay Area	2021
13.	VTA Bicycle Technical Guidelines	2022
14.	VTA Valley Transportation Plan (VTP) 2040	2014
15.	Metropolitan Transportation Commission's (MTC) Regional Bicycle Plan for the San Francisco Bay Area Update	2009
16.	Central Bikeway Feasibility Study Alternatives Analysis 2022 (Peninsula Bikeway Study)	2022
17.	VTA Bicycle Technical Guidelines	2012
18.	Caltrans District 4 Bike Plan	2018
19.	Caltrans District 4 Pedestrian Plan	2021
20.	Caltrans Bay Area Bike Highway Study	2022
21.	Palo Alto's Local Road Safety Plan by VTA	2022
<u>22.</u>	<u>Green Stormwater Infrastructure (GSI) Plan</u>	<u>2017</u>

¹ Track changes version available - <https://static1.squarespace.com/static/5ef397ab7a79e315cd9066ae/t/648a1d95f21c5553baf74820/1686773154192/SCP+Draft+Board+of+Supervisors+12.13.22+Tracked+Changes.pdf>



Topics and Key Themes

The following relevant topics were reviewed and summarized for each document and overall themes within each topic and across all reviewed documents are synthesized in this section.

- Vision and goal statements
- Existing policies and programs related to active transportation
- Established needs, issues, and concerns raised in the study
- Current/planned projects coming from the study
- Community feedback captured in the document
- Community partners/contact information if available
- Data documentation to incorporate

The complete summary for each document is provided as an attachment to this document. Key themes from this review are presented in this section.

Vision and Goals

There is strong alignment among the vision and goals established in the documents reviewed, particularly surrounding sustainability and climate action. For example, the 2012 Palo Alto Bicycle and Pedestrian Transportation Plan support the goals identified in the City of Palo Alto Comprehensive Plan and reflect specific targets mentioned in the 2007 Palo Alto Climate Protection Plan.

Common themes around vision and goals from the review of these plans include:

- Increasing biking and walking trips for all purposes
- Constructing and maintaining safe and accessible streets for walking and biking to all modes and people of all ages and abilities
- Developing a network of bikeways, pathways, and traffic-calmed streets that connects various business districts, residential areas, open spaces and parks
- Improving the aesthetics of walkways and bike paths to attract more walking and biking trips
- Reducing overall vehicle miles traveled
- Seeking to improve the quality of life, as well as environmental quality, economic health and social equity



Policies and Programs

Most of the policies and programs mentioned in each plan aim to promote the goals and vision of that specific plan. They are also in line with the vision of similar plans that promote non-motorized transportation.

For example, the 2030 City of Palo Alto Comprehensive Plan introduced programs and policies that focus on collecting bicycle counts and conducting surveys to understand bicycle use (Program T1.16.1); encouraging participation in local walking and biking events (Program T1.16.4); providing facilities that encourage walking and biking (policy T-1.19); prioritizing investments for enhanced pedestrian access and bicycle use within Palo Alto (Program T1.19.2) etc. These policies and programs are in line with the goals and visions of the Comprehensive Plan and are consistent with the 2021 City of Palo Alto Safe Routes to School (SRTS) Plan as well.

Metropolitan Transportation Commission's (MTC) Regional Bicycle Plan for the San Francisco Bay Area 2009 Update mentions programs and policies such as Bike-to-Work day, pedestrian and bicycle training, resolution 875², resolution 3765³ etc. developed by MTC that aim to make bicycling safer and more accessible throughout the region.

These existing programs and policies mentioned in the relevant plans are consistent with the purpose of Active Palo Alto and will be reflected in the Plan.

Needs and Challenges

Common themes surrounding needs and challenges per review of the plans include:

- Improving access to neighboring commercial centers
- Improving bicycle parking facilities
- Defining a core network of crosstown and recreational routes
- Introducing traffic calming strategies
- Drastic changes in future environmental conditions due to climate change
- Enhancing comfort and making parks more welcoming

² First adopted in 1980 and most recently amended in 2005, this resolution guides the allocation of the "Transportation Development Act, Article 3," which funds \$2.9 million worth of Bay Area bicycle projects annually

³ This resolution, adopted in 2006, requires agencies applying for regional transportation funds to document how the needs of bicyclists and pedestrians were considered in the process of planning and/or designing the project for which funds are requested



- Safety concerns such as unsafe crossings due to high vehicular speeds and volumes and unfriendly freeway interchanges
- Traffic congestion in educational districts during peak hours
- Issues related to optimizing bicycle safety such as angle of crossing, smoothness of crossing, gap between the flangeway and roadway, and closing bike paths at night
- Uncertainty of funding opportunities
- Improving level of traffic stress of bicycle facilities on major and minor bike corridors
- Failure to yield to pedestrians on the roadway
- Bicycle theft

Plans and Projects

Some plans and projects recommendations that have been initiated through adoption of these plans include:

- Across barrier connections across the City (Adobe Creek Highway 101 Overcrossing, Caltrain/Alma Barrier Crossing at Matadero Creek etc.)
- Trails and Shared Use Pathway projects (Embarcadero Road / Rinconada Park Sidepath, Adobe Creek Reach Trail etc.)
- Bicycle boulevard projects (Castilleja-Park-Wilkie Bicycle Boulevard, Bryant Street Bicycle Boulevard etc.)
- Intersection spot improvements (El Camino Real Intersection Through-Markings, Charleston Road at Middlefield Road Bicycle Through-Lanes etc.)
- Infrastructure Programs (Bicycle Parking Corral / Rack Installation Program, Pedestrian Countdown Signals & Crossings Program etc.)
- System rehabilitation and Maintenance (Castilleja Street-Park Boulevard, Lytton Avenue etc.)
- Design, Feasibility, and Planning (Middlefield Road "Complete Street" Plan Line Study, Embarcadero Road Plan Line Study etc.)
- Non-Infrastructure - Education Encouragement (Citywide Traffic Counts and Data Collection, Bike Palo Alto! / Palo Alto Sunday Streets etc.)
- Plan, design and construct 10.5-acre site in Baylands for park uses; plan, design and redevelop Cubberley Community Center
- Incorporate 7.7-acre site into Foothills Park
- Demonstration projects: Hale Avenue Extension, SkyLANE, 101/Blossom Hill Road, Lundy Place Connector, Diridon Bicycle Connections
- Freeway interchange improvements (I-280/Page Mill Interim Improvements)
- Planned Bicycle Bridge/Undercrossing (Stanford Avenue /Seale Avenue, San Francisquito Creek, Adobe Creek Bridge)



Public Input

Community feedback and public input is a crucial factor throughout long-term planning processes. It helps inform and shape the final recommendations of plans. Most plans significantly invested in conducting public workshops, public surveys, open houses and community engagement events to hear from the public throughout the development of the plan. Common themes and takeaways per the review of the relevant plans include:

- Providing accessible and safe active transportation (walking, biking, etc.) routes to natural open space, community centers and parks is a high priority
- Enhancing physical and mental well-being is a critical function of parks for people who live, work and play in Palo Alto. Loop trails, bicycle and pedestrian paths to parks and places to relax are top priorities, along with exercise equipment or additional classes
- Low-stress bicycle facilities are desired
- Frequently requested bicycle infrastructure improvements include more trail lighting, better accommodation at signalized intersections, better access and signage to bicycle paths, more frequent maintenance, more space to store bicycles on transit vehicles, secure bicycle parking
- Access to Berryessa BART, connections to east San Jose, completion of the Coyote Creek Trail and Guadalupe River Trail, north-south connections in east and central Santa Clara County are desired
- Design safer and more intuitive highway crossings and interchanges
- Streamline and communicate the process for local agencies to engage with Caltrans and for Caltrans to engage with local communities
- Increase investment in bicycle facilities on state highways
- Preference for fully dedicated bike facilities that is separate from traffic and has space for multiple modes
- Bike highways should prioritize access and connection for low-income and disadvantaged communities and people without personal access to vehicles

Community Partners and Champions

Community partners and champions involved in the formulation of some of these plans include:

- The Junior Museum and Zoo
- The Children's Theatre
- Cubberley Artist Studio Program (CASP)
- Palo Alto Art Center (PAAC)
- Police Department staff
- PTA Transportation Safety Representatives at each PAUSD school
- Student representatives



- School principals
- PAUSD staff in Sustainability
- County Department of Public Health
- Silicon Valley Bicycle Coalition
- Almaden Valley Cycling Club
- County Parks and Recreation Department
- Santa Clara Valley Water District
- Bicycling advocacy organizations
- Bay Area Air Quality Management District (Air District)
- Bay Conservation and Development Commission (BCDC)
- Business Community
- Community-Based Organizations, Advocates and Non-Profits
- County Transportation Agencies (CTAs)

Data and Other Resources

Data that would be relevant to this Plan based on the review of the relevant plans include:

- Percentage of workers who bike to work, by place of residence, in Santa Clara County (2015) – (Santa Clara Countywide Bicycle Network, 2018)
- Financially constrained projects in Santa Clara County - (VTA Valley Transportation Plan (VTP) 2040, 2014)
- Regional bikeway network mapping - (MTC's Regional Bicycle Plan for the San Francisco Bay Area Update, 2009)
- Average Bay Area weekday bicycle trips (2000) - (MTC's Regional Bicycle Plan for the San Francisco Bay Area Update, 2009)
- Motor vehicle/bicycle collision analysis - (MTC's Regional Bicycle Plan for the San Francisco Bay Area Update, 2009)
- Unbuilt regional bikeway network mapping - (MTC's Regional Bicycle Plan for the San Francisco Bay Area Update, 2009)
- Santa Clara County top tier projects – (Caltrans District 4 Bike Plan, 2018)
- Collision data – (Palo Alto's Local Road Safety Plan by VTA, 2022)
- Collision classification – (Palo Alto's Local Road Safety Plan by VTA, 2022)
- Bicycle/pedestrian collisions – (Palo Alto's Local Road Safety Plan by VTA, 2022)
- Top collision trends – (Palo Alto's Local Road Safety Plan by VTA, 2022)
- High injury network – (Palo Alto's Local Road Safety Plan by VTA, 2022)

