

RESOLUTION NO. 4905

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF EAST PALO ALTO
ADOPTING THE 2017 BICYCLE TRANSPORTATION PLAN**

WHEREAS, the Transportation Element of the 2035 General Plan encourages the City to build a comprehensive and well used bicycle network that comfortably accommodates bicyclist of all ages and skill levels; and

WHEREAS, the Bicycle Transportation Plan ('Bike Plan') establishes targets for increased bicycle commuters, proposes future bikeways, establishes targets for bicycle facilities, and identifies and prioritize projects; and

WHEREAS, the 2011 Bicycle Plan expired in 2016 and the City is ineligible for certain Active Transportation Program grants if it does not have an active bicycle transportation plan; and

WHEREAS, adoption of the Bike Plan is exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15306 of the CEQA Guidelines; and

WHEREAS, after notice having been lawfully given, a public hearing was scheduled before the Public Works and Transportation and Planning Commissions ('advisory bodies') at a the following meeting dates: April 19, 2017; May 8, 2017; July 24, 2017; September 11, 2017 and September 20, 2017, where all interested persons might appear and be heard, regarding the updated draft Bike Plan; and

WHEREAS, the City Council has reviewed the Bike Plan, including technical studies.

**NOW, THEREFORE, BE IT RESOLVED THAT THE CITY COUNCIL OF
THE CITY OF EAST PALO ALTO HEREBY:**

- 1) Approves the City of East Palo Alto Bicycle Transportation Plan, attached hereto as Exhibit A; and
- 2) Directs Staff to send the 2017 Bicycle Transportation Plan to the State of California Department of Transportation Office of Active Transportation and Special Programs Division.

[SIGNATURES ON THE FOLLOWING PAGE]

PASSED AND ADOPTED this 17th day of **October 2017**, by the following vote:

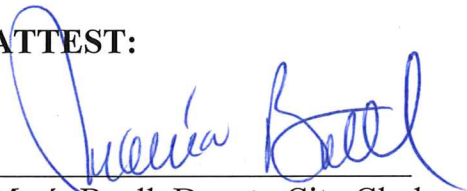
AYES: RUTHERFORD, ROMERO, ABRICA, MOODY, GAUTHIER
NOES: NONE
ABSENT: NONE
ABSTAIN: NONE

SIGNED:



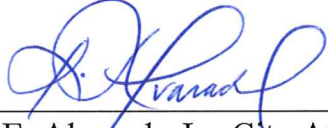
Larry J. Moody, Mayor

ATTEST:



María Buell, Deputy City Clerk

APPROVED AS TO FORM:



Rafael E. Alvarado Jr., City Attorney





Exhibit A

2017
EAST PALO ALTO
BICYCLE
TRANSPORTATION
PLAN



Acknowledgement

Thank you to all of the City Staff that helped in the process of updating the Bicycle Transportation.

BIKE PLAN UPDATE COMMITTEE

Yeni M Muñoz (*Chair*)

Michelle Daher

Maz Bozorginia

Irene Camarena

Irma Martinez

Vadim Sidelnikov

Patricia Del Castillo

COMMUNITY DEVELOPMENT

DEPARTMENT

Guido Persicone

Kamal Fallaha

Melvin Gaines

Lenin Melgar

Jay Farr

Daniel Berumen

Janet Nuñez

Fanny Yu

Mellissa Huang

Agripina Villegas

John Latu

Nicholas Todisco

Donald Timoteo

Tiffany Deng

Jerome Calubaquib

Bridget Grant

CITY HALL

Monica Ocampo

EPA POLICE DEPARTMENT

Commander Jeff Liu

Elizabeth Lam

Jaime Zarate

EPA PLANNING COMMISSION

EPA PUBLIC WORKS AND TRANSPORTATION COMMISSION

EPA CITY COUNCIL

SILICON VALLEY BIKE COALITION

Emma Shlaes

RAVENSWOOD CITY SCHOOL DISTRICT

SRTS

Kyle Tana

SAN MATEO COUNTY

Gwen Buckley

TABLE OF CONTENTS

INTRODUCTION	7
CHAPTER 1 VISION, GOALS & OBJECTIVES	8
VISION STATEMENT	8
GOALS, POLICIES AND ACTIONS	8
POLICY CONTEXT	14
CHAPTER 2 EXISTING CONDITIONS	15
EXISTING BIKEWAY NETWORKS	15
BIKEWAY CLASIFICATIONS & PROPOSED BIKEWAY NETWORKS	17
PROPOSED BIKEWAY CLASIFICATIONS	20
EXISTING BICYCLE SUPPORT FACILITIES	21
WAYFINDING.....	22
BIKE PARKING	23
LAND USE PATTERNS.....	26
EXISTING PROGRAMS.....	28
CHAPTER 3 EVALUATING AND MONITORING	32
CENSUS DATA	33
BICYCLE COUNTS	33
COLLISION ANALYSIS.....	36
POLICE DEPARTMENT DATA RESULTS.....	39
PUBLIC OUTREACH	40
COMMUNITY SURVEY.....	43
CHAPTER 4 RECOMMENDATIONS	45
BICYCLE NETWORK IMPROVEMENTS	46
CLASS I	46
CLASS II.....	48
CLASS III	49
CITY WIDE BICYCLE PROJECT PRIORITIES.....	49
PAST EXPENDITURES.....	50
FUTURE FINANCIAL NEEDS.....	50
MAINTENANCE.....	51
CHAPTER 5 IMPLEMENTATION	52
APPENDIX A	53
REQUIRED ELEMENTS OF THE BIKE PLAN	53
APPENDIX B	55
GLOSSARY	55
APPENDIX C	59
POLICY REVIEW	59
APPENDIX D	60
COMMUNITY SURVEY RESULTS.....	60

APPENDIX E	64
PRIORITIZATION OF PROJECTS.....	64
APPENDIX F	65
POC- STATUS.....	65
APPENDIX G	66
BAY TRAIL PROJECT	66
APPENDIX H	67
COMMUNITY COMMENTS.....	67

Charts

Chart 1. 2011-2017 Larcenies.....	28
Chart 2. San Mateo County 2016 Bike Counts	34
Chart 3. San Mateo County 2016 Pedestrian Counts	35

Figure

Figure 1. Class I Bike Path	17
Figure 2. Class II Bike Path.....	18
Figure 3. Class III Bike Path.....	19
Figure 4. NACTO Wayfinding Design Guidelines.....	22
Figure 5. NACTO Bike Box and Colored Bike Lane	22
Figure 6. NACTO Short Term Parking.....	23
Figure 7. SFMTA Bike Lockers.....	24
Figure 8. Duo-Guard Bike Cages	24
Figure 9. DERO Bike Room	25
Figure 10. DERO Fix It Station.....	25
Figure 11. May 11, 2017 Bike to Work Day.....	29
Figure 12. August 6, 2016, Bike Safety Rodeo funded by the Office of Traffic Safety	30
Figure 13. August 30, 2017 of Bay Road from Ralmar Avenue (first Image) to Gloria Way (second Image)	31
Figure 14. Bike Plan Update Website	40
Figure 15. April 19, 2017 Public Works and Transportation Commission.....	41
Figure 16. May 8, 2017 Planning Commission.....	41
Figure 17. Bike Tour Map and Photos	42

Maps

Map 1. East Palo Alto Bike Network (Existing and Planned)	16
Map 2. Existing Bike Parking Facilities near transit networks.....	21
Map 3. General Plan Land Use Designations and Key Uses.....	27
Map 4. Pedestrian and Bicycle Collisions.....	36
Map 5. Pedestrian and Bicycle Collisions (breakdown)	36
Map 6. Pedestrian and Bike Severe Injury and Fatalities	38

Tables

Table 1. Goals 8
Table 2. Existing Implemented Bikeways 15
Table 3. Proposed Bikeways..... 20
Table 4. Citations on Record..... 28
Table 5. 2017 Bike To Work Event 29
Table 6. Journey to Work Mode Splits 33
Table 7. East Palo Alto Bicycle Collisions 39
Table 8. Community Survey Common Themes 43
Table 9. Class I Recommended Improvements (Underway) 46
Table 10. Class I Recommended Improvements (Proposed) 47
Table 11. Class II Recommended Improvements 48
Table 12. Class I Recommended Improvements 49
Table 13. Past Expenditures 2011-2017 50
Table 14. Proposed Network Improvement Costs..... 50

This page was left intentionally blank.

INTRODUCTION

The East Palo Alto Bicycle Transportation Plan provides for a recommended city-wide network of bicycle paths, lanes and routes, along with bicycle-related programs and support facilities, intended to ensure biking becomes a more integral part of transportation for people who live, work and visit East Palo Alto. The purpose of this bicycle and pedestrian plan is to improve the bicycling environment in East Palo Alto by providing directions and goals for future bicycle planning and meeting the guidelines of the California Active Transportation Program, the requirements of which are contained in Senate Bill 99 (Chapter 359, Statutes of 2013).

CHAPTER 1 VISION, GOALS & OBJECTIVES

VISION STATEMENT

The Bicycle Transportation Plan looks to create a more balanced transportation system where bicycling is a viable, attractive and convenient way to travel in and around East Palo Alto.

GOALS, POLICIES AND ACTIONS

The East Palo Alto Bike Plan is organized around a Vision Statement, six overarching goals, and a series of specific policies and actions.

Table 1. Goals

Goal 1.	Improve safety through the design and maintenance of sidewalks, streets, intersections, and other roadway improvements.
Goal 2.	Foster the creation of complete, multimodal streets.
Goal 3.	Create a complete, safe, and comfortable pedestrian network for people of all ages and abilities.
Goal 4.	Build a comprehensive and well-used bicycle network that comfortably accommodates bicyclists of all ages and skill-levels.
Goal 5.	Adopt transportation performance measures.
Goal 6.	Adopt transportation demand management and roadway system efficiency strategies.

Goal 1.

Improve safety through the design and maintenance of sidewalks, streets, intersections, and other roadway improvements.

Intent: To ensure that human life and health is paramount and takes priority over mobility and other road traffic system objectives.

1.1 Vision Zero. Eliminate traffic fatalities and reduce the number of non-fatal injury collisions by 50% by 2030.

1.2 Traffic calming. Implement traffic-calming and traffic-slowing measures on roads and at intersections with a high level of existing or planned pedestrian and non-motorized vehicle activity and/or collisions.

1.3 Safe Routes to Schools. Actively promote safety around schools, pursue funding to implement physical improvements around schools and student education programs around traffic safety (such as “walking school buses”, walking audits, bike rodeos, classroom instruction and promotional events).

1.4 ADA-compliant Sidewalks. Ensure sidewalks are ADA compliant and free of blockage resulting from parked vehicles or other obstructions.

1.5 Coordination with public safety. Ensure that the Menlo Park Fire Protection District (MPFPD) and the City’s Police Department review construction plans for roadway modifications, internal circulation, and establish, if needed, temporary alternative emergency routes to be used the duration of any construction project.

During design review, ensure that roads and driveways are established that meet applicable code requirements for emergency access, including potentially including signal preemption mechanisms. Ensure that the MPFPD review related building plans for compliance with the Fire Code and establishes a future inspection schedule for continued compliance. Continue the existing practice of informing the MPFPD and the Police Department of projects and proactively engaging with the MPFPD and the Police Department through the Development Review Committee (DRC) and the plan check process.

Goal 2.

Foster the creation of complete, multimodal streets.

Intent: To encourage multimodal and attractive streets that provide for the needs of diverse members of the community, balance the different modes of transportation, promote physical activity, and support environmental sustainability.

2.1 Accommodating all modes. Plan, design and construct transportation projects to safely accommodate the needs of pedestrians, bicyclists, transit riders, motorists, people with disabilities, and persons of all ages and abilities.

2.2 University Avenue. As the main transportation spine of East Palo Alto, ensure that any future redesign of University Avenue include improvements for all modes of travel, focusing on its local function as a community centerpiece for local activity and travel. Design options could include buffered and painted bicycle lanes,

streetscape improvements such as benches and pedestrian scale lighting, and mid-block crossings, reversible lanes, and the reintroduction of on-street parking. The City shall maintain control of University Avenue (not Caltrans).

2.3 Fix It First. Maximize the value of past investments by prioritizing infrastructure spending to support the maintenance and upgrading of existing transportation infrastructure before incurring the cost of constructing new infrastructure.

2.4 Funding. Pursue adequate and sustainable funding sources for maintaining all existing city transportation infrastructure. Maintain an annual Bicycle Program budget to track and evaluate expenditure of program funding on both capital and staff costs. Through the City CIP process, assess and prepare for upcoming staffing, consultant, and capital funding needs as projects arise.

2.5 NACTO Design Guides. Adopt the NACTO (National Association of City Transportation Officials) Urban Street Design Guide and Urban Bikeway Design Guide as supplements to the street types in this Plan and the California Manual for Uniform Traffic Control Devices.

2.6 Pedestrian and bicycle crossings. Encourage pedestrian and bicycle crossings at key locations and across existing barriers such as Highway 101 and to local employment and schools, such as Bay Road.

Goal 3.

Create a complete, safe, and comfortable pedestrian network for people of all ages and abilities.

Intent: To encourage a livable, healthy, and connected city with a safe and comfortable pedestrian network among its various neighborhoods, parks, trails, employment centers, community facilities, and commercial areas.

3.1 Active transportation. Increase the levels of active transportation.

3.2 Loop road. Pursue the new multimodal Loop Road, including the Bay Trail connection, as described in the Ravenswood/4 Corners TOD Specific Plan to alleviate congestion and neighborhood traffic

3.3 Pedestrian network. Create a safe, comfortable, and convenient pedestrian network that focuses on a) safe travel; b) improving connections between neighborhoods and commercial areas, and across existing barriers; c) providing places to sit or gather, pedestrian-scaled street lighting, and buffers from moving vehicle traffic; and d) includes amenities that attract people of all ages and abilities.

3.4 Pedestrian and bicycling education, encouragement, and awareness. Actively engage the community in promoting walking and bicycling through education, encouragement (such as Bike to Work Day, Walk to Work Day, and Bike/Walk to School days and programs), and outreach on improvement projects and programs.

3.5 Coordination with neighboring jurisdictions. Coordinate pedestrian and bicycle improvements with the plans of neighboring jurisdictions and the region.

Goal 4.

Build a comprehensive and well-used bicycle network that comfortably

accommodates bicyclists of all ages and skill-levels.

Intent: To encourage a livable, healthy, and connected city with a safe and comfortable bicycle network and adequate bicycle parking to enhance bicycling as a convenient form of transportation for both commute and leisure trips.

4.1 Bicycle network. Improve facilities and eliminate gaps along the bicycle network to connect destinations across the city and create a network of bicycle facilities of multiple types that connect to neighboring cities, including a path along Newell Road between Highway 101 and San Francisquito Creek. The network should facilitate bicycling for commuting, school, shopping, and recreational trips by riders of all ages and levels of experience.

4.2 Community Events. Coordinate more community events that would encourage the community to ride safely throughout the City (such as supporting a first of the month night ride which would allow for a corridor to be only accessed by bikes). Allowing for local bicycle community groups to host a bike festival, bike fair, Cyclovia's, or bike races through the streets of East Palo Alto.

4.3 Wayfinding. Increase the convenience of walking and bicycling by supporting the phased implementation of a comprehensive citywide, consistent bicycle and pedestrian wayfinding system connecting major destinations.

4.4 Bicycle safety. Support bicycle education, encouragement, and enforcement activities that promote bicycle safety.

4.5 Public bicycle parking. Increase the amount of safe and convenient short- and long-term bicycle parking and storage available to the public throughout the city.

4.6 Bicycle parking standards. Require large public and private development projects to provide sufficient bicycle parking, shower and locker facilities.

4.7 Bikeshare. Support the expansion of the regional bike share pilot program, helping to identify appropriate locations for system expansion within East Palo Alto. Prioritize improvements of bike routes with a bike share station, acknowledging that bike share users are largely beginner bike riders and classified as an "Interested but Concerned" rider type. Ensure proper funding and staffing levels for development and operations for the entire length of the bike share contract.

4.8 San Francisco Bay Trail. Support the completion of the San Francisco Bay Trail, including relevant portions within EPA

Goal 5.

Adopt transportation performance measures.

Intent: To enable effective, informed transportation planning by using indicators, data and monitoring to evaluate the city's multi-modal transportation system.

5.1 Ensure that all traffic impact studies, analyses of proposed street changes, and development projects address impacts on bicycling and bicycling facilities.

Specifically, the following should be considered:

- Consistency with General Plan, Ravenswood 4Corners TOD Specific Plan, and Bicycle Plan policies and recommendations
- Impact on the existing bikeway network;
- Degree to which bicycle travel patterns are altered or restricted by the projects; and

5.2 Amend the East Palo Alto Municipal Code to update bicycle parking specifications and requirements to current best practice for both short- and long-term bicycle parking as part of both commercial and residential development projects and major renovations.

5.3 Capital project planning should include bikeways, consistent with the City's adopted Complete Streets Policy.

5.4 Integrate Vehicle Miles Traveled transportation impact analysis thresholds as a State mandated alternative to Level of Service.

5.5 Establish new City traffic analysis standards that consider all modes of transportation, including pedestrians, bicycles, and transit in addition to automobiles. Utilize Level of Traffic Stress to quantify bicycle transportation.

5.6 Multimodal transportation impact fee. Adopt a transportation impact fee for new development that raises funds for improving all modes of transportation.

Goal 6.

Adopt transportation demand management and roadway system efficiency strategies.

Intent: To increase transportation choices, improve public health, reduce

pollution, make effective use of roadway capacity and decrease automobile traffic by improving management of existing roadways and implementing complementary policies promoting transit, walking, bicycling and complete streets.

6.1 Transportation Demand Management (TDM). Promote effective TDM programs to reduce travel demand from existing and new development, shifting trips to alternative modes. Regularly update the TDM ordinance to establish effective requirements that reduce travel demand from existing and new development. Require projects to implement TDM programs, as defined in the TDM ordinance.

6.2 Avoidance of street widening. When feasible, avoid widening streets to increase automobile capacity, focusing instead on operational improvements such as signal timing optimization, modern roundabouts and other Transportation Systems Management (TSM) strategies that aim to improve traffic conditions and reduce cut-through traffic by maximizing the efficiency of existing vehicle infrastructure.

6.3 Adopt the National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide as the primary design guide for citywide bicycle facility design.

6.4 Utilize the most recent State and Federal design standards and guidelines.

6.5 Follow a multi-disciplinary design process that incorporates and balances the needs of all modes and stakeholders, both internal and external; the design process should include the City divisions, departments, and staff responsible for emergency response, parking, law

enforcement, maintenance, and other affected areas.

6.6 Work with transit providers to design bikeways to minimize transit-vehicle interactions and to provide low stress environments in areas heavily served by transit.

POLICY CONTEXT

The East Palo Alto Bike Plan is supported and influenced by existing plans, policies, and ordinances that support safe, high-quality bicycle environments and encourage greater bicycle mode share for all types of trips. This Bike Plan builds on and translates these documents and initiatives into recommendations for future bicycle-related improvements. All of the East Palo Alto's adopted planning documents were reviewed as part of the development of the Bike Plan along with neighboring City's adopted plans. A list of the City's plans and bicycle-related policy documents are located in Appendix C.

CHAPTER 2 EXISTING CONDITIONS

This section details the existing state of bicycle infrastructure in East Palo Alto and gives an update on the status of the recommendations set forth in the 2011 Bicycle Transportation Plan.

EXISTING BIKEWAY NETWORKS

East Palo Alto has two Class I bikeway (bike path), three Class II bikeways (bike lanes), and three Class III bikeways (bike routes). Distances of the existing bikeways are shown in miles in the table below. Four (4) new bikeways were added in the year 2016, they are identified in table 2.

Table 2. Existing Implemented Bikeways

Existing Implemented Bikeways						
#	Roadway	From	To	Class	Length	Width
1	Bay Trail	Ravenswood Regional Open Space	E. Bayshore	1	3.3 mi.	Varies
2*	Rail Spur	Bay Rd.	Pulgas Ave	1	.25mi	16ft
3	Bay Rd	Addison Ave.	Clarke Ave	2	0.7 mi	5-12ft.
4	University Ave.	Menlo Park City Limit	300 ft north of Donohoe	2	1.5mi	5ft.
5	Willow Rd.	Menlo Park City Limit	750ft. South of Newbridge St.	2	.3mi	5ft.
6*	Woodland Ave	University Ave	Manhattan Ave	3	.16mi	50ft
7*	Manhattan Ave	Woodland Ave	West Bayshore Rd	3	0.4mi	38ft
8*	West Bayshore Rd	Manhattan Ave	Euclid Ave	3	.12mi	32ft

* New bikeway that was added in the year 2016.

The Bike Network map (See Map 1) identifies twenty-five segments of Class I, II, and III bike lanes. Thirty-five percent are implemented. The existing bicycle network in East Palo Alto exhibits various gaps, particularly across Highway 101. Planned facilities, such as the bicycle and pedestrian bridge across Highway 101 and bicycle lanes along Pulgas Avenue will improve connectivity, though additional potential new bicycle corridors should be studied, and could include: University Avenue (buffered lanes), Bell Street, Clarke Avenue, Newell Road, an additional crossing over Highway 101 north of University, and various connections to the Bay Trail.

A comprehensive network of bikeways provides safe and convenient corridors for bicyclists to travel. While bicyclists may legally ride on any city street, many streets don't provide a friendly bicycling environment. Streets with high volumes of faster traffic can be intimidating - particularly when no roadway space or bikeways are provided for bicyclists. Disconnected and incomplete facilities can suddenly strand bicyclists before they reach their destinations. Similarly, bikeways must connect across city borders to neighboring cities. Completing a connected cohesive citywide bikeway network will create a truly bicycle friendly community.

Map 1. East Palo Alto Bike Network (Existing and Planned)



BIKEWAY CLASIFICATIONS & PROPOSED BIKEWAY NETWORKS

New bicycle facilities are proposed at several key locations and along key corridors throughout the City.

Class I Bike Path. Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with cross flow minimized.

This type of bicycle facility is recommended on streets within City limits, on proposed bridge connections over the United States 101 Highway, and the regional Bay Trail. In total there are twelve (12) proposed off-street bike path segments that would enable community members to move comfortably around the City (See Table 3). A Class I facility at these location will provide excellent connections to the Bay Trail and the future downtown. These new facilities would be particularly effective if there is a new transit/rail station near the University Avenue.

Figure 1. Class I Bike Path



Class II Bike Lanes. Provides a striped land for one-way bike travel on a street or highway adjacent to auto travel lanes.

Bike lanes already exist on portions of Bay Road and University Avenue within the Ravenswood Specific Plan Area. It is recommended that future Bay Road streetscape improvements also include Class II bike lanes. This will provide for bicycle connectivity in the Plan Area and also provide an enhanced connection to the Bay Trail and Cooley Landing. In addition, it is recommended that University Avenue be studied in detail to identify opportunities to close gaps in its bike lanes. Ultimately, the development of the proposed bike lanes on Pulgas Avenue and Newbridge Street would facilitate connectivity to more schools within the City and which could reduce the amount of traffic that is generated at peak traffic hours.

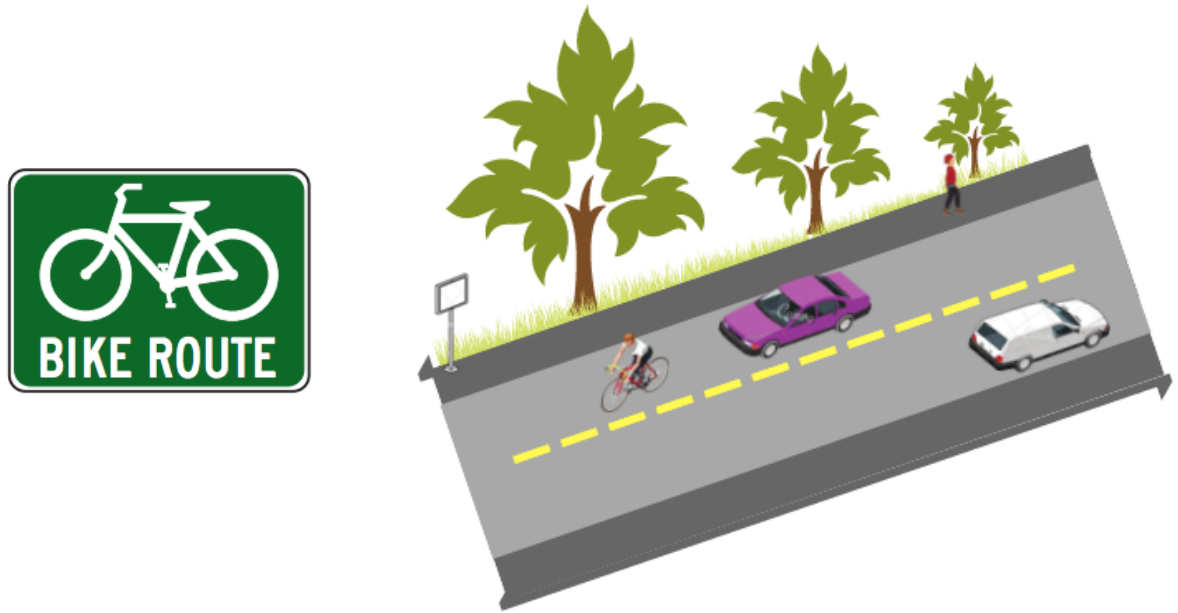
Figure 2. Class II Bike Path



Class III Bike Routes. Provides for shared use with pedestrian or motor vehicle traffic.

Special signage or bicycle icons painted on the street identify the street as a bicycle route and caution drivers that bicyclists are likely to be sharing the road with them. The City's General Plan shows bike routes at nine (9) locations. To date, a Manhattan Ave and Woodland Ave have been completed (See Map 1).

Figure 3. Class III Bike Path



PROPOSED BIKEWAY CLASIFICATIONS

“Proposed” bikeways refer to those which have not yet been adopted by ordinance or resolution, and would therefore not be implemented. Table 3 identifies all of the bikeways that are proposed and are visually illustrated in the Bikeway Network Map (Map 1).

Table 3. Proposed Bikeways

	Street Name	Class I	Class II	Class III
1	Bay Trail (Weeks St to University Ave)	X		
2	Beech St (Bay Trail Connection)	X		
3	Bay Trail to Tara Rd	X		
4	Clarke Ave to Newel Rd (U.S. Highway 101 Pedestrian OverCross)	X		
5	Daphne Way (Bay Trail Connection)	X		
6	Fordham St (Bay Trail Connection)	X		X
7	Garden St (Bay Trail Connection)	X		
8	O'Connor St (Bay Trail Connection)	X	X	X
9	Purdue Ave (Bay Trail Connection)	X		
10	Rail spur (Bay Trail Connection)	X		
11	University Overcrossing (Bridge over U.S. Highway 101)	X		
12	Woodland Ave (Bay Trail Connection)	X		
13	Bay Rd		X	
14	New Bridge St		X	
15	Pulgas Ave		X	
16	Addison Ave			X
17	Cooley Ave			X
18	Donohoe St			X
19	E Bayshore Rd			X
20	Euclid Ave			X
21	Green St			X
22	Runnymede St			X
23	W Bayshore Rd			X
24	Weeks St			X

EXISTING BICYCLE SUPPORT FACILITIES

In May of 2015, the Bay Area Air Quality Management District (Air District) awarded the City of East Palo Alto 65 new bicycle racks. The bicycle racks were installed in fourteen (14) locations, these locations are identified in Map2. The map identifies bicycle parking near current SamTrans, AC Transit, Dumbarton Express bus routes and Rail lines.

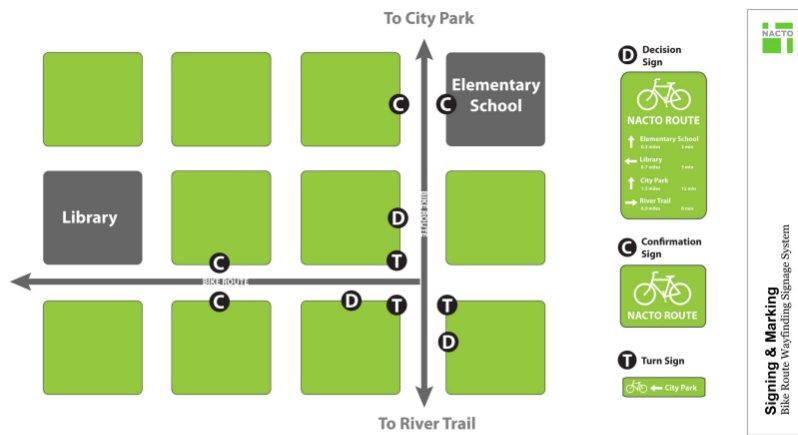
Map 2. Existing Bike Parking Facilities near transit networks



WAYFINDING

Existing signage for East Palo Alto bike facilities are infrequent. A high quality bicycling environment includes not only bicycle facilities, but also an easily navigable network. Bicycle wayfinding assists residents, visitors and tourist in finding key community destinations by bicycle. Signs may also include “distance to” information, which displays mileage to community destinations. In the case that new bicycle infrastructure projects are implemented it is highly recommended that wayfinding signs are a component of the project.

Figure 4. NACTO Wayfinding Design Guidelines



Bike Boxes & Colored Bike Lanes

In order to reduce the number of collisions on City streets, bike boxes and colored bike lanes are highly encouraged at intersections on bike lanes where permissive right turns are allowed (i.e. no dedicated right-turn-only lane). Colored bike boxes allow bicyclists to cue at red lights in front of motorists. This reduces risk of right-hook collisions, common in the region. Bike Lanes are also colored through intersections and other conflict zones to increase visibility.

Figure 5. NACTO Bike Box and Colored Bike Lane

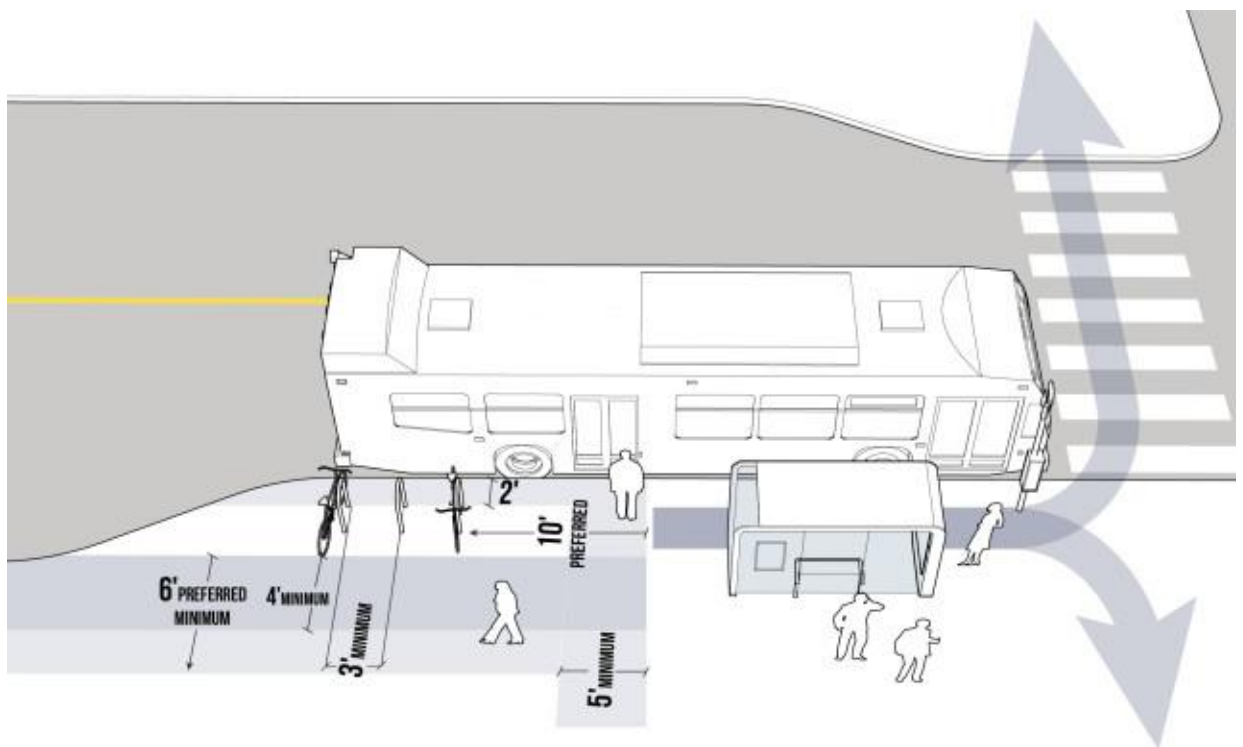


BIKE PARKING

Bicycle parking is an essential supporting element of a complete bikeway network. Map 3 shows the existing bike parking locations in East Palo Alto. Bicycle parking is generally classified into short-term or long-term facilities.

Short-term bicycle parking refers to traditional bike racks, which may be located on public or private property. Bike racks serve people who need to park their bikes for relatively short durations, approximately two hours or less. Short-term bicycle parking does not provide additional security, so locked bicycles and their accessories exposed to potential theft or vandalism. However, short-term bike racks are more numerous and often more conveniently located near a destination. Short-term parking should be within constant visual range of a building or destination or located in well traveled pedestrian areas to deter theft or vandalism. Within East Palo Alto there are over 26 on-street bike rack locations (providing over 180 spaces).

Figure 6. NACTO Short Term Parking



Bicycle Parking Corrals are groups of on-street bike racks that make efficient use of limited space where bicycle parking is in high demand. Corrals typically consist of five bicycle racks lined in a row, which typically accommodate ten bicycles in a space otherwise occupied by one to two on-street motor vehicle parking spaces. East Palo Alto currently has 12 bike corrals providing over 60 spaces. Long-term bicycle parking is the most secure form of parking and is ideal for individuals who need to park their bikes for

more than a few hours or overnight. Long-term bike parking requires more space than short-term racks, may be located farther away from the ultimate destination, and is generally more costly due to added security or space requirements.

- **Bike Lockers.** Fully enclosed and generally weather-resistant spaces where a single bicycle can be parked, secured by key or electronic lock. If bike lockers were to be installed in East Palo Alto, they would be most appropriate for outdoor or indoor environment such as a transit center, business, office building, or multifamily development with access limited to owners, tenants, or employees.

Figure 7. SFMTA Bike Lockers



- **Enclosed Bike Cages.** A fenced enclosure containing multiple bike racks. Entry to the enclosure is secured with a lock or key code, but within the cage, bicycles are exposed and secured to racks with the owner's own lock. Cages can be outside (ideally with a roof for weather resistance), or located inside building areas such as parking garages or utility rooms. Because contents are visible through the cage and bikes inside are accessible, the security of a bike cage is dependent on managing who has access to the entry key or code. Bike cages are most appropriate for closed environment such as a business, office building, or multifamily development with access limited to owners, tenants, or employees.

Figure 8. Duo-Guard Bike Cages



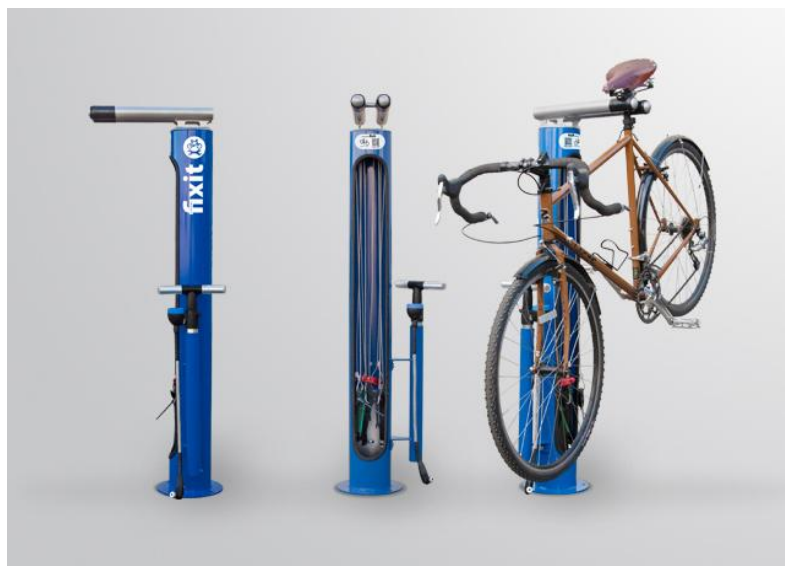
- **Bike Room.** Bicycle racks located within an interior locked room or a locked enclosure. Similar to a bike cage, but with increased security of being in a fully enclosed room without visibility. As with a bike cage, the security of a bike room is dependent on managing who has access to the entry key or code, and bike rooms are most appropriate where access is limited to owners, tenants, or employees.

Figure 9. DERO Bike Room



- **Bike Station.** A full-service bike parking facility offering controlled access and typically offering other supporting services such as attended parking, repairs, and retail space.

Figure 10. DERO Fix It Station



LAND USE PATTERNS

There are a number of existing significant “hubs” – activity centers with clusters of similar or active uses – located in close proximity to one another throughout the City. These hubs are shown in Map 5. These hubs function as focal points and destinations in the City, and are important places to encourage pedestrian activity and active land uses. Quality bicycle infrastructure, especially within the hubs, will lead to higher bicycle usage and further encourage community members to use a bike to connect to transit to reach their destinations rather than use a car. The existing and planned land uses in East Palo Alto will inform the recommendations of the Plan in an effort to maximize the number of residents who will have access to bicycle infrastructure. The most important hubs are:

Bell Street Recreation Hub

Recreational uses and social services, including the YMCA, Senior Center, a Community Health and Law Center, Bell Street Park and the School District.

Pulgas Avenue Education Hub

Multiple schools and associated facilities, including Brentwood Elementary School, Ronald McNair Academy, Eastside College Preparatory School, East Palo Alto Academy High School, the Boys & Girls Club of the Peninsula, and the Ravenswood Child Development Center.

Bay Road Community Service Hub

Various churches and schools such as Cesar Chavez & Green Oaks Academy, St. Francis Church, Magnolia Head Start, the St. Vincent De Paul Society and the Officer Rich May field.

4 Corners Civic Hub

Public uses including the existing City Hall, the San Mateo County library and County offices and the United States Postal Service Office.

Gateway Retail Hub

Primary retail center of the City, including several national chain stores located adjacent to Highway 101 and south of University Avenue.

Willow Road/Newbridge Retail Hub

Small retail/commercial area, with food markets, a laundromat, salon, taquería, and other stores.

University Circle Hub

Office and hotel uses with the Four Seasons Hotel, several Class A offices, and other ancillary uses.

Map 3. General Plan Land Use Designations and Key Uses



- | | | |
|---|--|---|
| Low Density Residential | General Commercial | |
| Medium Density Residential | Neighborhood Commercial | |
| High Density Residential | Office | |
| Urban Residential | General Industrial | |
| Mixed Use Low | Industrial Buffer | |
| Mixed Use Corridor | Resource Management | Activity Center |
| Mixed Use High | Parks/Recreation/Conservation | New Projects |
| | Public/Institutional | Schools |

EXISTING PROGRAMS

Bicycle education, encouragement, and enforcement programs are an integral part of a bicycle-friendly city. The City of East Palo Alto supports and participates in bicycling enforcement, encouragement, education, evaluation, and engineering, which are described below. Program recommendations are included in Chapter 1.

Enforcement

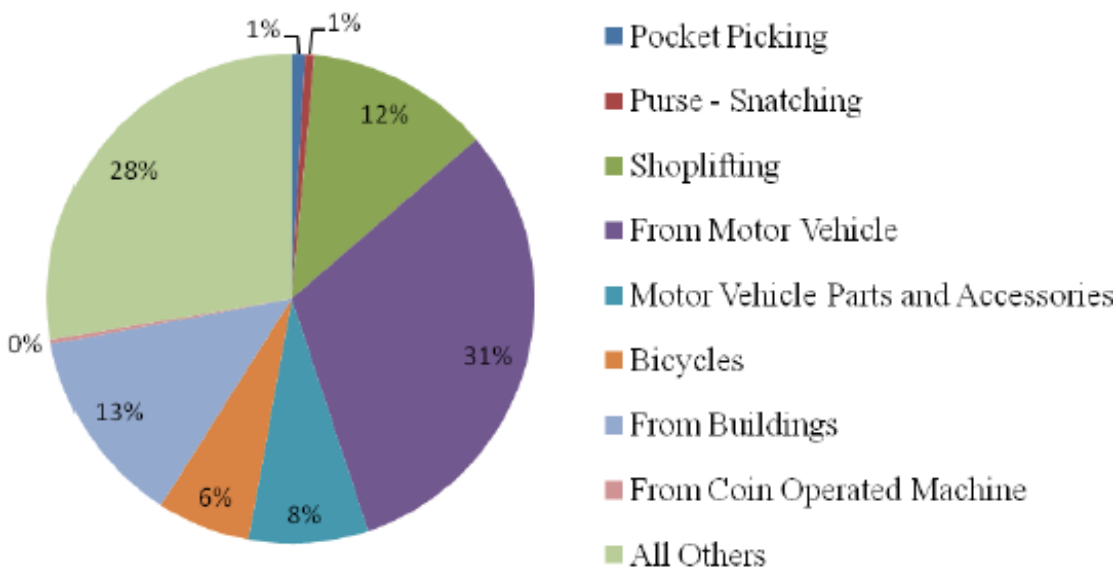
The East Palo Alto Police Department is currently keeping track of the bicycle related incidents. Albeit the police department does not have an accurate way to account for all citations issued during January 1, 2011 through March 2, 2017, there is record of citations being issued for the following offenses within the time specified.

Table 4. Citations on Record

21201(D) –A bicycle operated during darkness requires a white or yellow reflector.
21209[A]VC –No person shall drive a motor vehicle in a bicycle lane established on a roadway
21212 VC –No bicycle helmet
21200 (A) -operating a bicycle on highway
21201(D)(1) A bicycle operated during darkness requires (1) with a lamp emitting a white light which, while the bicycle is in motion, illuminates the highway in front of the bicyclist and is visible from a distance of 300 feet in front and from the sides of the bicycle
21208(a) VC -Bike lane required slow speed

There were a total of 107 bicycles reported as stolen between January 1, 2011 and March 2, 2017. This comprised of 6% of the total thefts in East Palo Alto.

Chart 1. 2011-2017 Larcenies



Encouragement

Every year the City participates in Bike to Work Day, which is managed by the Silicon Valley Bike Coalition. The City hosts four (4) energizer stations in order to celebrate and encourage one less vehicle on the road. Every year the number of cyclist that ride through the City increases, considering the City's modest infrastructure. Three (3) energizer stations are located on existing class I or class II bike lanes and in 2017 the City was able to establish a fourth (4) station near the newly constructed Class I (rail spur) bike lane (See Table 5). In 2016, a total of 769 bike counts were recorded. In 2017 the City recorded a total of 1,257 bike counts, which amounts to a 63.46% increase from the previous year.

Table 5. 2017 Bike To Work Event

	2017 Bike To Work Station Locations	Total Ride By's	Total Stop By's
1	Bay Trail at the end of O'Connor Street near Pump Station/ Friendship Bridge	519	89
2	East Palo Alto, Post Office @ University Ave & Bay Rd	140	61
3	Rail Spur at Bay Road	320	24
4	East Palo Alto, University Ave @ Woodland	63	41
	2017 Total Bike Counts for each category	1042	215
	2017 Total Bike Counts in the City	1257	

Figure 11. May 11, 2017 Bike to Work Day

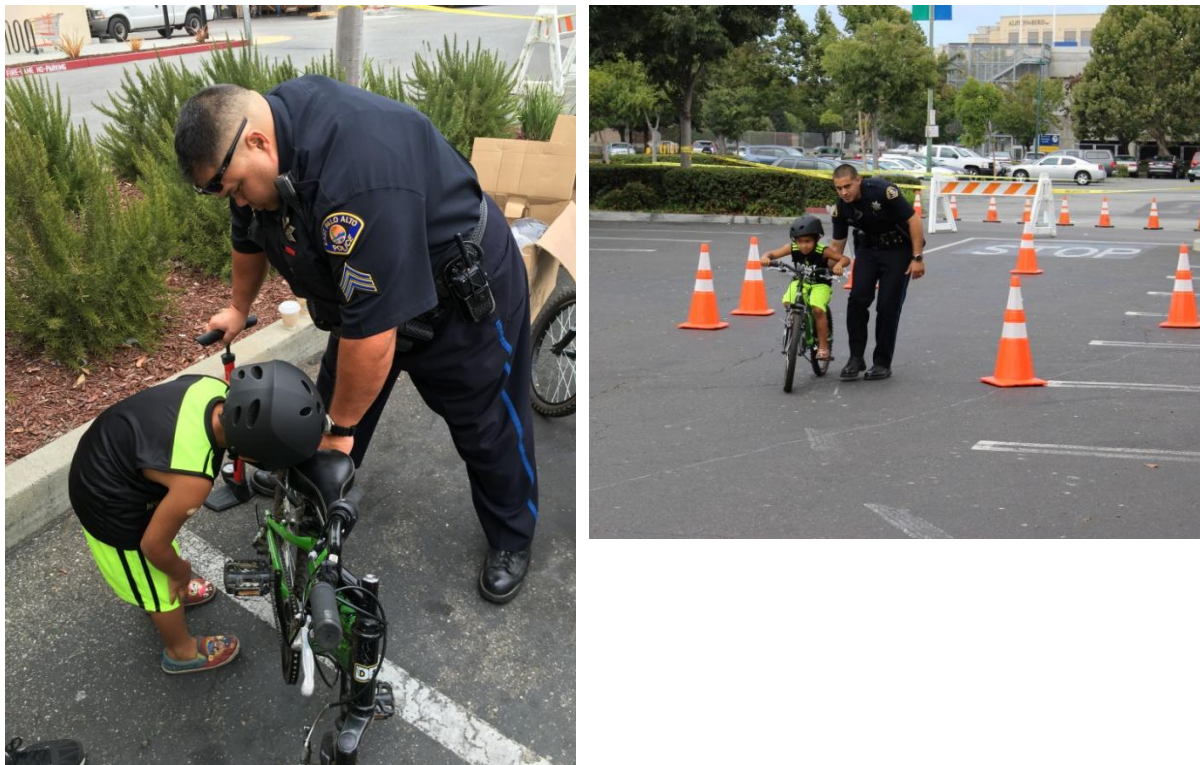


Bicycle Safety Education

The FIT Zone program was an innovative initiative that aimed to improve public safety and reduce violent crimes using health related strategies in high crime neighborhoods in East Palo Alto. In August 2012, the program was officially launched at two sites in East Palo Alto as a multi-agency collaboration between the Ravenswood Family Health Center, the Ravenswood School District, the San Mateo County Health System, and other community-based organizations.

The first of two sites, known as the “Jack Farrell FIT Zone,” is a residential area of approximately 2,300 residents in the northeastern part of East Palo Alto. The second site, the “Martin Luther King (MLK) FIT Zone,” is located in the southeastern part of the city, where nearly 2,000 East Palo Alto residents live.¹ In collaboration with Get Healthy San Mateo, Office of Traffic Safety and Silicon Valley Bicycle Coalition, the program hosted five (5) bicycle related events. The events included, bicycle safety training at Cesar Chavez Elementary School and two (2) family bike workshops/repair days and a Bike Safety Rodeo (see figure 11).

Figure 12. August 6, 2016, Bike Safety Rodeo funded by the Office of Traffic Safety



¹ R. T., & S. L. (2014, December). Tublitz - Public Safety Impacts of a Public Health intervention: Assessing East Palo Alto's Fitness Improvement Training Zone Program Retrieved August 31, 2017. <https://www.law.berkeley.edu/wp-content/uploads/2015/05/Public-Safety-Impacts-of-a-Public-Health-Intervention-FINAL.pdf>

Evaluation and Engineering

The Engineering Division has continuously strived to assess the City's existing pedestrian and bicycle networks in the public right of way. Their efforts have led them to win several Safe Route To School grants that enable them to build the necessary infrastructure to close the gaps in the City. On June 21, 2017, the Engineering division began the endeavor of removing existing and installing new curb, gutter, sidewalk, bulbous, curb ramps, textured crosswalks, signing and striping. The infrastructure improvements project focuses on Bay Road from University Avenue to Newbridge Street; Fordham Street, between Notre Dame and Purdue Avenue; Runnymede Street from Pulgas to the Bay Trail; and Puglas Avenue between O'Connor and Myrtle Street. The project is funded through a Safe Routes to School grant. The grant is geared towards making bicycling and walking to school a safer and more appealing transportation alternative.

Figure 13. August 30, 2017 of Bay Road from Ralmar Avenue (first Image) to Gloria Way (second Image)



CHAPTER 3

EVALUATING AND MONITORING

The needs of people bicycling within East Palo Alto are diverse and dependent on an individuals' level of experience, comfort, and confidence, to name a few factors. To understand the needs of people bicycling in East Palo Alto, this chapter examines a number of data sources including:

- Estimated bicycle trips of the number of residents who bike to work, school, shopping, and other non-recreational trips, collected by the US Census
- Bicycle counts of the number of people bicycling at selected locations on the East Palo Alto bikeway network, collected by San Mateo County
- Bicycle-related collisions to understand locations potentially in need of bicycle related improvements
- Community input on challenges to bicycling in East Palo Alto gathered from public outreach events and a citywide resident survey
- The “Three Types of Cyclists” typologies applied to people who bicycle in East Palo Alto based on a citywide resident survey
- Level of Traffic Stress analysis to identify locations within the existing street network that may attract or deter people from riding bicycles in East Palo Alto
- Bicycle demand analysis to identify existing and potential origin and destination locations for people riding bicycles
- Gap analysis to identify potential missing links in the citywide bikeway network

CENSUS DATA

The ways in which people get around are important indicators of the success of a transportation system, shedding light on which modes are most popular, convenient, and safe. According to the U.S. Census' American Community Survey, East Palo Alto residents currently own cars at a much lower rate than the county average (9% of households have no vehicle, as compared to 6% Countywide), but are almost as likely to use a car to get to work and are less likely to take transit given the lack of convenient alternatives to the car.

Comparing vehicle ownership rates to journey to work mode split data, shown in Table 6, it is clear that East Palo Alto exhibits a larger than average vehicle dependent population. The poor east west transit connectivity and little bicycle and pedestrian infrastructure discourages travel via-non car modes. This dynamic serves and commuting patterns are thus dominated by automobile travel, be it persons driving alone or as part of a carpool. As such, there likely exists a sizeable latent demand for improved transit service and bicycle and pedestrian facilities. Improving transit, bicycle, and pedestrian connectivity will help decrease traffic, increase mobility and access to jobs, reduce greenhouse gas emissions, and improve East Palo Alto's overall health, wellness, and quality of life.

Table 6. Journey to Work Mode Splits

Mode	East Palo Alto	San Mateo County
Drive Alone	69%	71%
Carpool	14%	11%
Transit	6%	8%
Bicycle	4%	1%
Walk	4%	3%
Telecommute	2%	5%

Source: American Community Survey, 2007-2011 5-year estimates

BICYCLE COUNTS

In September 14, 2015, San Mateo County collected bike counts on Bay Road at the intersections of Ralmar Avenue University Avenue. The count took place in the morning at 7:00am-9:00am (in increments of 15min) and in the afternoon at 5:00pm-7:00pm (in increments of 15min). East Palo Alto generated more than 50+ counts in a brief timeframe. This demonstrates that there is a desire to bike and walk in East Palo Alto and bike facilities and pedestrian infrastructure should accommodate to all modes of travel. Additional bike counts will be completed by the county in 2017.

Chart 2. San Mateo County 2016 Bike Counts

City	Intersection	Bicycles
Belmont	Alameda de las Pulgas & Notre Dame	2
San Carlos	Bayport Ave & Howard Ave	6
Brisbane	Old County Rd & San Francisco Ave	6
South San Francisco	El Camino & Orange	7
Millbrae	Broadway & Hillcrest Blvd	8
Pacifica	Oceana Blvd & Paloma Ave	9
Pacifica	Palmetto Ave & Manor	12
Hillsborough	Walnut Ave & Floribunda Ave	12
Burlingame	El Camino & Oak Grove	12
South San Francisco	Mission & McLellan	13
Redwood City	Hampshire & Fair Oaks	13
Millbrae	Rollins & Millbrae	18
Daly City	Mission St & John Daly Blvd	18
Pacifica	Cabrillo Hwy & Crespi Dr	20
South San Francisco	Airport & Grand Ave	20
San Mateo	Van Buren & Kehoe	21
Millbrae	El Camino & Millbrae	22
Belmont	Alameda de las Pulgas & Ralston Ave	22
Belmont	6th Ave & Ralston Ave	31
San Mateo	El Camino & Hillsdale	35
Redwood City	Industrial Way & Whipple Ave	38
Foster City	Edgewater Blvd & Beach Park Blvd	40
Menlo Park	Willow & Ivy	41
Burlingame	California Dr & Burlingame Ave	46
Redwood City	El Camino & Oakwood	48
Burlingame	California Dr & Broadway	48
East Palo Alto	Bay & Ralmar & Newbridge	49
Menlo Park	Middlefield & Semicircular	50
San Carlos	San Carlos Avenue & Laurel St	56
Redwood City	Charter & Middlefield	66
East Palo Alto	University Ave & Donohoe St	73
Menlo Park	El Camino & Glenwood	89
Belmont	Hiller & Ralston	107
East Palo Alto	University & Woodland	120
Menlo Park	Ravenswood & El Camino	140

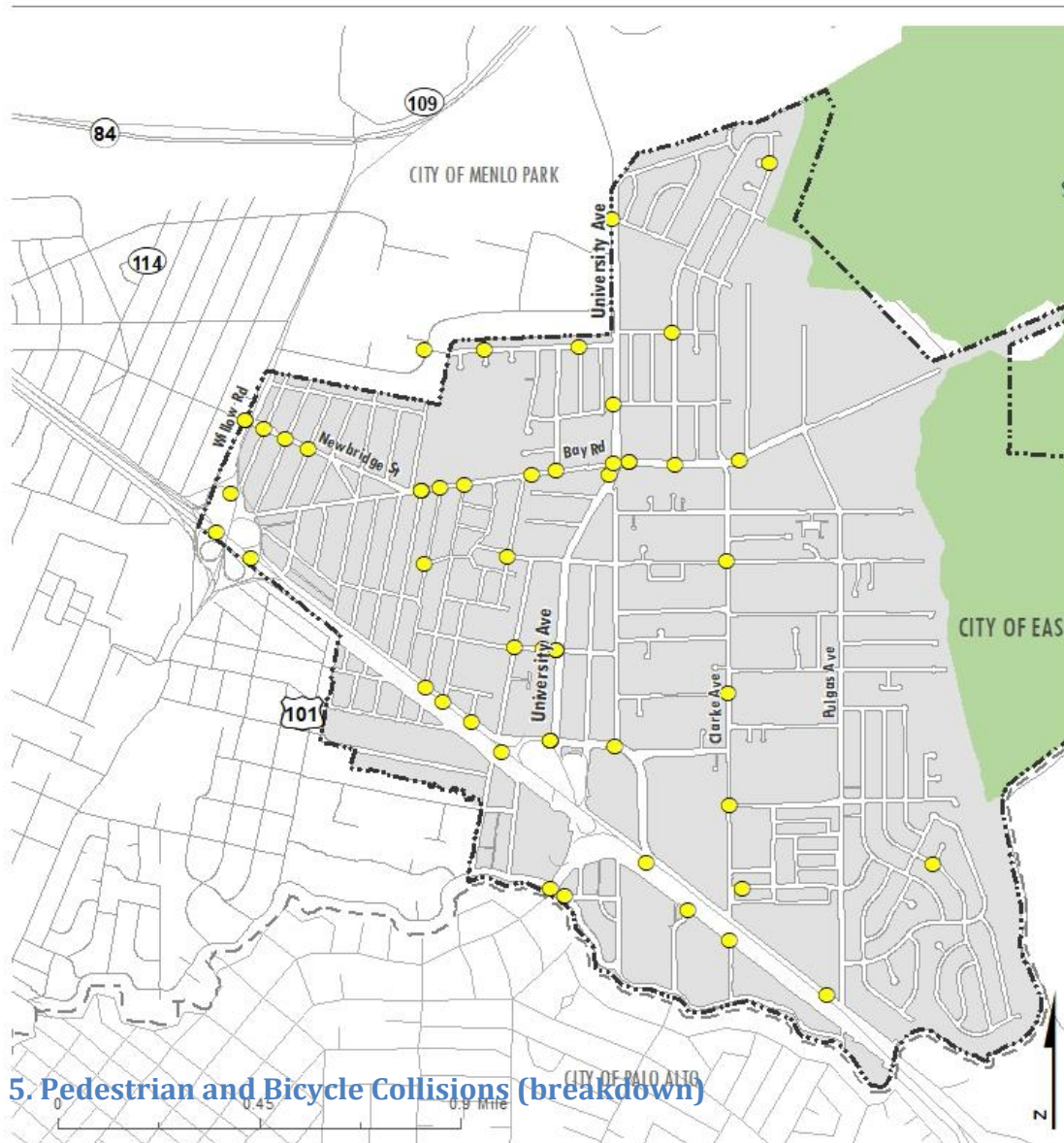
Chart 3. San Mateo County 2016 Pedestrian Counts

City	Intersection	Pedestrians
Belmont	Alameda de las Pulgas & Notre Dame	14
San Carlos	Bayport Ave & Howard Ave	31
Hillsborough	Walnut Ave & Floribunda Ave	34
Menlo Park	Willow & Ivy	45
East Palo Alto	University Ave & Donohoe St	50
Redwood City	Industrial Way & Whipple Ave	62
Menlo Park	El Camino & Glenwood	63
Foster City	Edgewater Blvd & Beach Park Blvd	66
Pacifica	Palmetto Ave & Manor	81
Redwood City	Hampshire & Fair Oaks	84
South San Francisco	El Camino & Orange	90
Redwood City	Charter & Middlefield	98
Redwood City	El Camino & Oakwood	100
Pacifica	Oceana Blvd & Paloma Ave	100
Brisbane	Old County Rd & San Francisco Ave	109
Belmont	6th Ave & Ralston Ave	117
South San Francisco	Airport & Grand Ave	127
East Palo Alto	University & Woodland	128
East Palo Alto	Bay & Ralmar & Newbridge	129
San Mateo	Van Buren & Kehoe	130
Belmont	Hiller & Ralston	139
Burlingame	El Camino & Oak Grove	139
South San Francisco	Mission & McLellan	141
Millbrae	Rollins & Millbrae	141
Belmont	Alameda de las Pulgas & Ralston Ave	152
Pacifica	Cabrillo Hwy & Crespi Dr	197
San Mateo	El Camino & Hillsdale	232
Menlo Park	Ravenswood & El Camino	233
Millbrae	El Camino & Millbrae	323
Daly City	Mission St & John Daly Blvd	345
Menlo Park	Middlefield & Semicircular	350
Burlingame	California Dr & Burlingame Ave	389
Burlingame	California Dr & Broadway	526
San Carlos	San Carlos Avenue & Laurel St	550
Millbrae	Broadway & Hillcrest Blvd	1339

COLLISION ANALYSIS

The City of East Palo Alto’s existing bicycle network is relatively modest, even though the bicycle mode share in the City is four times the countywide average (4% versus 1%). Existing facilities do afford both north-south and east-west bicycle connectivity, but key facility gaps exist, particularly across Highway 101. The University Avenue corridor – particularly at Bay and University – is the most common site of vehicle collisions with bicycles. Map 4 shows the number of bicycle collisions from 2007 to 2011, and helps illustrate the need for improved bicycle accommodations. The City has made it a priority to reduce the number of pedestrian and bicycle collisions recognizing that the Vision Zero goal needs to be implemented. One way that the City is applying Vision Zero is by improving key intersections such as Bay and University (specific plan) and Clarke and West Bayshore (POC location). Additional bike infrastructure will allow bikes to cross streets safely and navigate to their destinations.

Map 4. Pedestrian and Bicycle Collisions

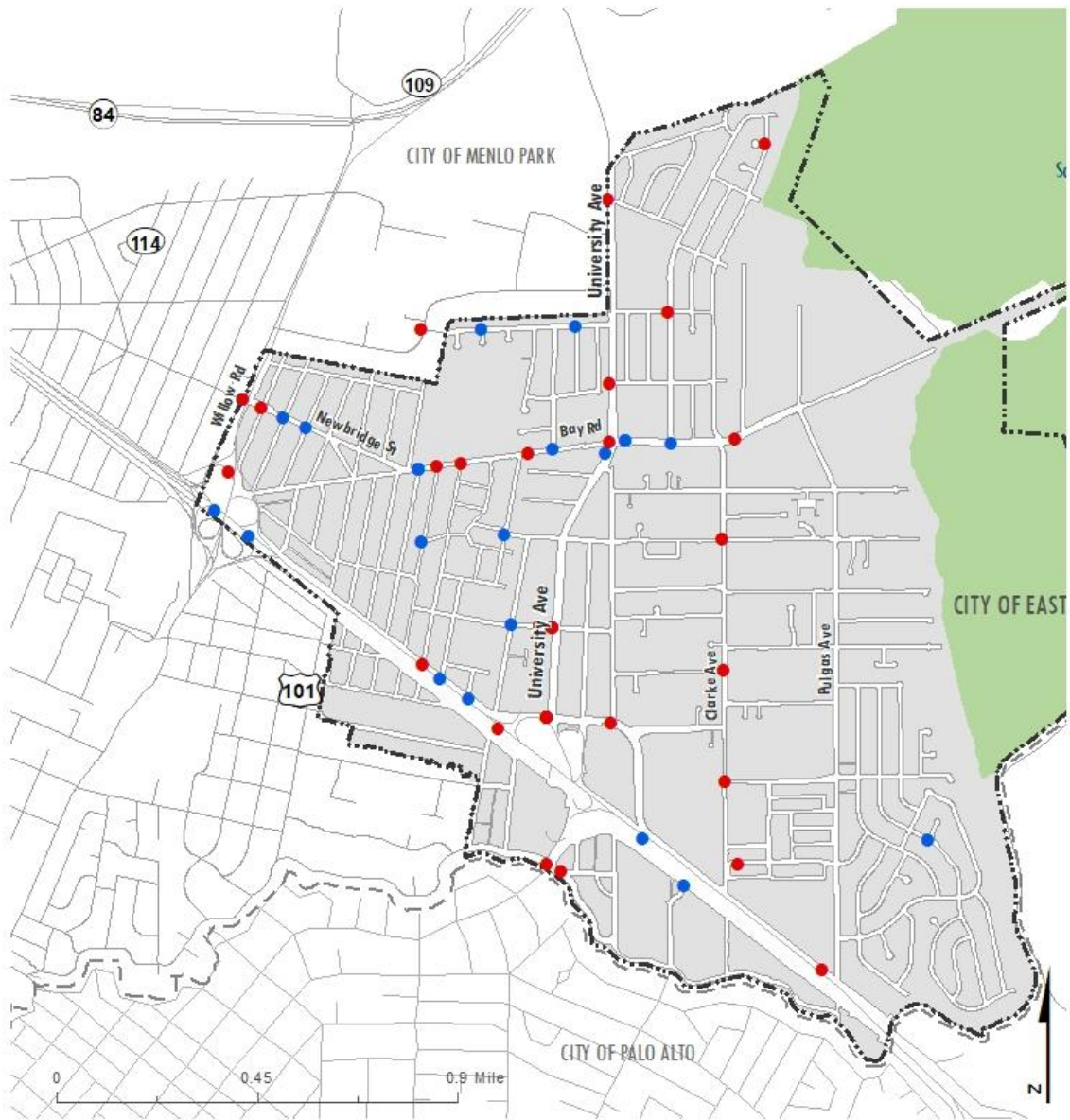


Map 5. Pedestrian and Bicycle Collisions (breakdown)



Pedestrian and Bike Collisions, Five Year Total (2011-2016)

● Ped_Bike_Collisions
Count: 56

▭ East Palo Alto City Limits
▭ San Mateo County Boundary



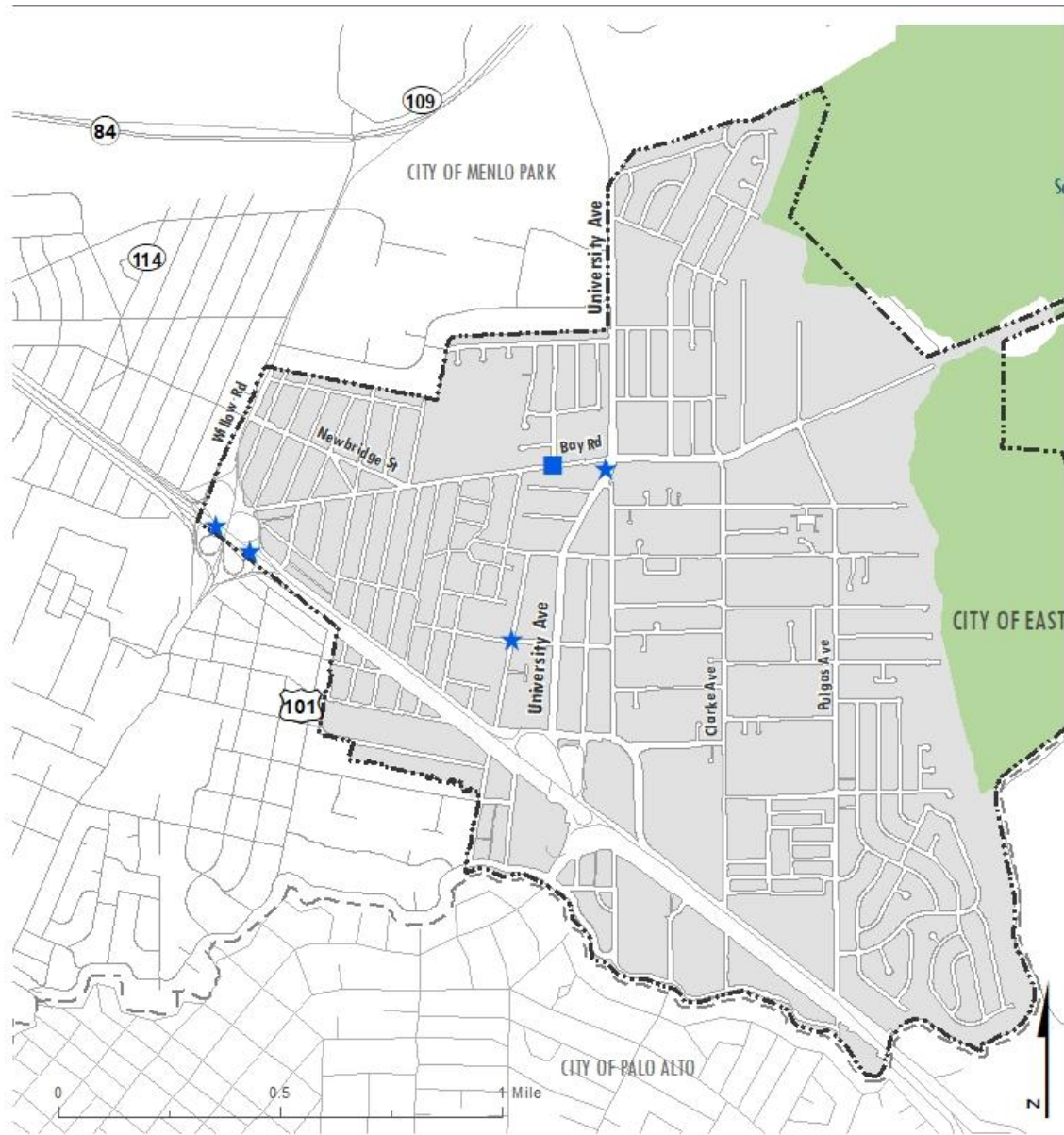
Pedestrian and Bike Collisions, Five Year Total (2011-2016)

- Bike_Collisions
Count: 30 Percentage : 53.6%
 - Ped_Collisions
Count: 26 Percentage: 46.4%
-  East Palo Alto City Limits
 San Mateo County Boundary



Source: 2000/2010 U.S. Census, San Mateo County GIS Enterprise Database and Santa Clara County, 2012.

Map 6. Pedestrian and Bike Severe Injury and Fatalities



Ped and Bike Severe Injury and Fatality, Five Year Total (2011-2016)

- ★ Ped_Severe Injury
Count: 4 Percentage: 7.1%
- Ped_Fatality
Count: 1 Percentage: 1.7%
- East Palo Alto City Limits
- - - San Mateo County Boundary

There were no bike fatalities or severe injuries



Source: 2000/2010 U.S. Census, San Mateo County GIS Enterprise Database and Santa Clara County, 2012.

POLICE DEPARTMENT DATA RESULTS

It should be noted that the numbers provided by the EPAPD are subject to change as vehicle accidents are sometimes reported at a later date and are not always reported to the Police Department. For more complete statistics please reference the Statewide Integrated Telecommunications System.¹

During the specified time frame there were a total of 1,578 vehicle collisions in East Palo Alto. 89 of those collisions involved a bicycle. For further details please refer to the chart below and to the attached excel spreadsheet.

Table 7. East Palo Alto Bicycle Collisions

Year	Bicycle Collisions	Total Collisions
2011	12	219
2012	15	194
2013	19	203
2014	18	199
2015	15	347
2016	8	367
2017 YTD	2	49
Total YTD	89	1,578

YTD indicates as of March 2, 2017

PUBLIC OUTREACH

Prior to the adoption of the Bike Plan extensive community outreach was conducted to ensure that all members of the community were included in the bike plan update process. In order to involve the public in the Bike Plan Update process the following tools were used to hear from the community:

Website

A “Bicycle Plan Update” webpage was created on the City of East Palo Alto’s website. The webpage included: links to all social media accounts, a link to the community survey that was created in Survey Monkey, links to the latest newsletters that were sent via Mail Chimp, access to the City Managers Newsletters were announcements for community meetings were mentioned, links to the flyers (Spanish and English), a description of the timeline of Bike to work community event and the 2 community meetings.

Figure 14. Bike Plan Update Website

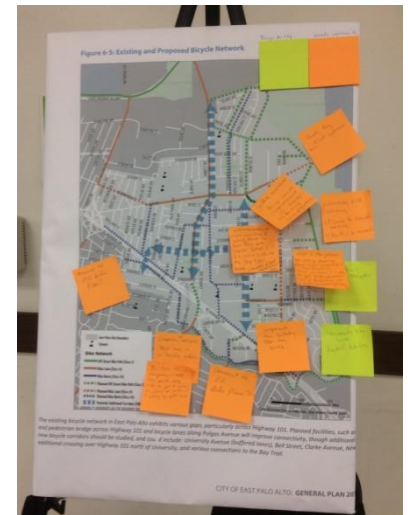


Community Meetings

In efforts to hear from the community, two (2) public hearings before the Public Works and Transportation Commission (April 19, 2017) and Planning Commission (May 8, 2017) were conducted. Each event was more successful than the last. The community and commissioners were able to interact with large maps and they were able to provide verbal and written comments to City staff.

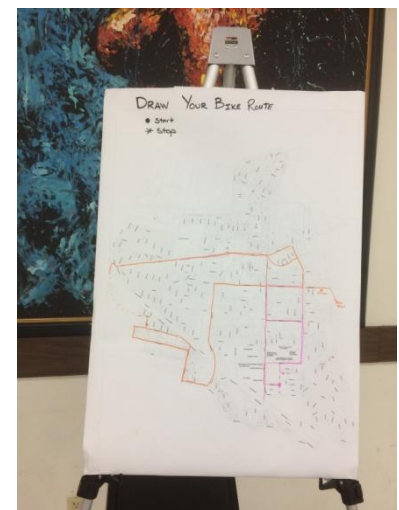
The map below encouraged residents to identify bicycle infrastructure constraints with orange post-it's and identify bicycle infrastructure that they enjoyed using. This activity reinforced the notion that City residents would like to see more regional and local connectivity.

Figure 15. April 19, 2017 Public Works and Transportation Commission



The map below encouraged residents to identify their preferred bicycle route within East Palo Alto City limits. This activity reiterated the lack of safe bicycle infrastructure between the west side of the City to the east side of the City where all of the schools are located.

Figure 16. May 8, 2017 Planning Commission



Bike Tour

A one hour bike tour with four staff members occurred on June 23, 2017. The goal of the bike tour was to gather staffs perspective on exiting bike infrastructure and potentially identify new bike infrastructure that could be implemented with the development of all new public and private projects in the City. As part of the first bicycle tour on June 23, 2017, East Palo Alto conducted a survey to gather information about existing bike infrastructure, and to obtain feedback to assist in the selection of the proposed locations for new bike infrastructure. While one location for a bicycle boulevard has been reviewed, referred to as the “Fordham option”, more research needs to occur.

Figure 17. Bike Tour Map and Photos



COMMUNITY SURVEY

Over 115 community surveys were received throughout the Bike Plan update process. Over 75 responses dealt with these six (6) main themes:

Table 8. Community Survey Common Themes

Rank	Theme	Description
1	Regional Connections	Regional Connections was the number one theme that was discussed in the community survey. Residents would like to see bikeways in East Palo Alto better integrated with the Dumbarton bridge and neighboring cities. Providing regional connections would be an opportunity to reduce the amount of vehicles on City streets.
2	Protected Bike Lanes	Protected Bike Lanes inside of the City limits are currently hard to come by. Currently the Bay trail is segmented and makes it difficult to use. The survey responses emphasized that there was a desire to see the Bay Trail completed.
3	Local Connectivity	Even the bravest of the bicycle riders fear riding through some of the major streets in the City, such as University Ave. The responses showed that there is an interest from residents to ride within the City if there were more visible bicycle infrastructure. Residents would be interested in riding to shopping centers and for recreational purposes. The Pedestrian Over Cross bridge will be able to provide a safe connection from the West side to the East side of the City.
4	Civic Events	Responses showed that residents would like to see more civic events done throughout the year such as: Family bike workshops, monthly night rides, pop up repair shops and bike events for kids and teens.
5	Enforcement	Some responses suggested that there was not enough enforcement regarding street cleaning and violating the rules of the road. It is difficult to ride and discouraging when the streets are not clean. Often un clean streets can result in accidents and flat tires. It was identified that cyclist need to be more visible on the road, often cyclist wear dark clothing and are not making vehicles aware of their intentions when coming to intersections. Considering that the City has a modest bike network, several cyclist bike on the sidewalks and impede pedestrians from using their designated space to move on the sidewalk.
6	Education	It was clear from the comments that there is a need for more educational events for all residents because they do not have the confidence to ride on the road with a vehicle.

CHAPTER 4

RECOMMENDATIONS

This chapter presents the recommended bikeway network, which supports a vision for East Palo Alto where bicycling is safe, comfortable, and convenient for people of all ages and abilities. Recommendations were guided by the General Plan’s goals and policies, local and regional data driven safety and demand analysis, and extensive community input. Through this process emerged an overarching bikeway network vision: a continuous and connected system of bikeways that provide safe and comfortable travel for all users and link to all key destinations in East Palo Alto.

As envisioned, the Bike Plan would further increase non-motorized use and mode choices for the general population. The Bike Plan would identify primary and secondary routes for those commuting to and from the cities of East Palo Alto, Palo Alto, and Menlo Park. The Bike plan would also establish safe routes to and from school, with a large consideration for safety especially to accommodate parents and students. Safety considerations are especially important for parents riding with their children, or for older children riding independently. For those who are shoppers, the Bike Plan would provide safe access to commercial businesses. For senior citizens, the Bike Plan would reduce conflicts between pedestrians and cars, and pedestrian and vehicles.

BICYCLE NETWORK IMPROVEMENTS

The project prioritization in the following section was developed through a qualitative analysis based on stated priorities of the 2035 General Plan, Ravenswood Specific Plan, Capitol Improvements Projects and priorities communicated by the public at the East Palo Alto Public Works and Transportation and Planning Commission public meetings held on April 19, 2017, May 8, 2017 and June 24, 2017, and lastly priorities from the 2011 East Palo Alto Bicycle Transportation Plan that were not achieved.

The City should review the priority projects list on an annual basis to ensure that it reflects the most current priorities, needs, and opportunities for implementing the bikeway network in a logical and efficient manner (See Appendix E). In particular, the list should be adjusted to take advantage of all available funding opportunities and grant cycles. As projects are implemented and taken off the list, new projects should be moved up into priority projects status.

Based on the prioritization criteria, the following bicycle class facilities are priorities for the City of East Palo Alto and are planned for implementation in the following projects:

CLASS I

Class I Bikeways recommended in the plan focuses on filling critical gaps in the off-street network and providing access to key destinations. For example, the completion of the Bay Trail was identified by members of the public as a high priority so that bicyclists and pedestrians could travel from East Palo Alto to neighboring communities. Along the same theme, an extension of the Class I facilities cut through East Palo Alto inside of the Specific Plan Area known as the Rail Spur. The completion of the Class I facility would provide greater north-south connectivity and access to the Ravenswood Open Space. The completion of those two facilities would help create safe routes to three schools. Details of the proposed segments can be found in Table 9.

Table 9. Class I Recommended Improvements (Underway)

Bikeway Project (Underway)	Begin	End	Class	Length	Cost	Description
Ravenswood Bay Trail Project*	University Ave	Ravenswood Open Space	I	0.6 mi.	\$2,400,000	The project is spearheaded by Midpeninsula Regional Open Space. Construction is estimated to begin in 2019.
U.S. Highway 101 Pedestrian Overcross Bridge	Clarke Ave/East Bayshore	Newell Rd/Westbayshore	I	.2 mi.	\$8,000,000	The project is spearheaded by the City. Construction is estimated to begin 2017.

Table 10. Class I Recommended Improvements (Proposed)

Bikeway Project (Proposed)	Begin	End	Class	Length	Cost	Description
Completion of Bay Trail*	Ravenswood Open Space	Weeks Street	I	0.4 mi.	\$2,000,000	Pave a small section of unpaved pathway along the Bay Trail. Environmental permits may be required.
Rail Spur Connection to the Bay Trail	Bay Road	Bay Trail	I	1.0 mi.	\$4,000,000	Extend Rail Spur North East from Bay Road past Purdue Ave towards Bay Trail. Environmental permits may be required.
Fordham St.	Bay Road	Bay Trail	I	1.0 mi.	\$4,000,000	Consider paving formal path from the Bay trail on Fordham St to Bay Road.
U.S. Highway 101 University Avenue Overcross Bridge	University Avenue	Woodland Avenue	I	.2 mi.	\$10,000,000	Consider creating a new POC at University Ave to create a safe East to West connection. Environmental permits may be required.
*Excludes proposed multi-jurisdictional Class I projects listed						

CLASS II

East Palo Alto’s bikeway network does not currently have many Class II Bicycle Lanes. Residents identified the need for bicycle lanes along three roadway segments that would provide improved east-west connectivity and one roadway segment to facilitate north-south bicycle travel. The highest priority Class II facility is along University Avenue from The Bay Trail near Tulane Avenue to Donohoe Street. This project would require lane reconfiguration but would serve as a main bicycle artery between shops, schools, and parks on the east side of East Palo Alto and open space and homes on the west side of East Palo Alto. Other priority Class II bikeway facilities include bike lanes on both sides of the street on Clarke Avenue from East Bayshore Ave to O’Conner, and northbound on Pulgas Avenue from East Bayshore to O’Conner Ave. Details of all the bicycle lane proposals can be found in Table 11.

Table 11. Class II Recommended Improvements

Bikeway Project (Proposed)	Begin	End	Length	Cost	Description
Stanford POC Connection Project	East Bayshore ave/Clarke Avenue	O’Conner/Bay Trail	1.0 mi.	\$600,000	The project is spearheaded by Stanford University as they continue to explore ways to support multimodal paths in East Palo Alto as a healthy alternative.
University Avenue Update	Donohoe St	University Ave (Bay Trail near Tulane Ave)	1.5 mi.	\$2,000,000	The project would need to be further explored by multiple agencies including the City of EPA and Cal Trans.
Pulgas Avenue	O’Conner Rd	East Bayshore	0.4 mi.	\$600,000	Continue exploration of potential options for this proposed network. The width of Pulgas Avenue is not consistent from East to West and only this segment of the proposed network might be feasible for class II.

CLASS III

Several potential Class III Bicycle Routes were identified by residents. Limited right-of-way along Pulgas Avenue, Weeks Street, O’Conner Street and East Bayshore Avenue make them a prime candidates for bicycle route designation. Additional signage along East Bayshore Avenue and Pulgas Avenue would help minimize unsafe bicycling speeds. Details of the proposed segments can be found in Table 11.

Table 12. Class I Recommended Improvements

Bikeway Project (Proposed)	Begin	End	Class	Length	Cost	Description
Pulgas Avenue	Bay Road	O’Conner	III	.08 mi.	\$50,000	Stencil Class III bicycle route on Pulgas Avenue.
Weeks Street	Bay Trail	Cooley Avenue	III	1.0 mi.	\$50,000	Stencil Class III bicycle route on Weeks Street.
O’Conner Street	Pulgas Ave	Bay Trail	III	.03 mi.	\$10,000	Stencil Class III bicycle route on O’Conner Street.
East Bayshore	Holland St	San Franciscqito Creek	III	1.5 mi.	\$70,000	Stencil Class III bicycle route on all of East Bayshore bordering the U.S. 101 Highway.

CITY WIDE BICYCLE PROJECT PRIORITIES

In addition to Class I, II and III bicycle facilities, several other proposed projects will provide enhanced bicycle and pedestrian access. Three of the five projects identified are informational documents that attempt to assess and help residents safely navigate themselves throughout East Palo Alto. These projects are described below.

1. Bicycle Parking Master Plan
2. ADA Master Plan
3. Dumbarton Transportation Corridor Study
4. Bicycle Detection at street lights.
5. Bicycle Wayfinding

PAST EXPENDITURES

East Palo Alto has started improving roadways at a faster pace than in the past, and major progress has been achieved in building the infrastructure to accommodate automobiles and to ensure that transit is more convenient to users of all ages and abilities. A summary of past expenditures is illustrated in table 13. The past expenditures consisted of bikeway network infrastructure that was installed between 2011-2017.

Table 13. Past Expenditures 2011-2017

Type	Length	Total Cost
Class I	3.3 mi.	50,000
Class II	0 mi.	0
Class III	.98 mi.	50,000
Other *	N/A	6,000
Total		106,000
*BAAQMD Bike Racks		

FUTURE FINANCIAL NEEDS

A summary of potential costs for the recommended bikeway network is presented in Table 14. It is important to note the three following assumptions about the cost estimates. First, all cost estimates are conceptual, since there is no feasibility or preliminary design completed, and second, the design and administration costs included in these estimates may not be sufficient to fund environmental clearance studies. Finally, costs estimates are a moving target over time as construction costs escalate quickly, and as such, the costs presented should be considered as rough order of magnitude only. All the projects are recommended to be implemented over the next two to twenty years, or as funding is available. The more expensive projects may take longer to implement. In addition, many funding sources are highly competitive, and therefore impossible to determine exactly which projects will be funded by which funding sources. Timing of projects is also something difficult to pinpoint exactly, due to the dependence on competitive funding sources and, timing of roadway and development, and the overall economy.

Table 14. Proposed Network Improvement Costs

Type	Length	Total Cost
Class I*	3.0 mi	\$20,000,000
Class II	1.5mi	\$3,200,000
Class III	2.0mi	\$180,000
Other	N/A	\$500,000
Total*		\$23,880,000
*Excludes proposed multi-jurisdictional Class I projects listed.		

MAINTENANCE

Maintenance costs for the bikeway and pedestrian network are relatively low. As part of the normal roadway maintenance program, extra emphasis should be put on keeping the bike lanes and roadway shoulders clear of debris and keeping vegetation overgrowth from blocking visibility or creeping into the roadway, such as frequent sweeping schedules for roadways on the bikeway network. Intersection and crossing projects will also be treated as part of the normal roadway maintenance program.

CHAPTER 5 IMPLEMENTATION

This chapter identifies steps towards implementation of the proposed facilities and programs identified in this plan. The steps between the network improvements and concepts identified in this plan and the final completion of the improvements will vary from project to project, but typically include:

1. Adoption of the East Palo Alto's Bicycle and Pedestrian Plan by the East Palo Alto City Council
2. Conduct public outreach
3. Preparation of a feasibility study involving a conceptual design (with consideration of possible alternatives and environmental issues) and cost estimate for individual projects as needed
4. Integrate, as necessary, emerging technology that can contribute to plan implementation
5. Secure, as necessary, outside funding and any applicable environmental approvals
6. Consider the parking needs of businesses and residents in the development of new bicycle lanes through a thorough community engagement process
7. Approval of the project by the East Palo Alto City Council, including the commitment by the latter to provide for any unfunded portions of project costs
8. Include project in the East Palo Alto's Capital Improvement Plan
9. Completion of final plans, specifications and estimates, advertising for bids, receipt of bids and award of contract(s)
10. Construction of project
11. Monitor project performance (bicycle and pedestrian counts)

APPENDIX A

REQUIRED ELEMENTS OF THE BIKE PLAN

The California Transportation Commission (CTC) has adopted the 2017 Active Transportation Program (ATP) Guidelines. The ATP supplants the earlier Bicycle Transportation Account (BTA) as the primary state-funding source for biking and walking improvements, including Safe Routes to School funding. As compared to the 11 key elements required for bicycle master plans under the BTA, the ATP requires additional elements and is also inclusive of pedestrians. Per the 2017 Active Transportation Program (ATP) requirements, conforming plans needed to have 17 key elements shown in the table below. The 2017 East Palo Alto Bicycle Transportation Plan satisfies these requirements. The required elements are summarized below, and correspond with sections in this report.

An active transportation plan must include, but not be limited to, the following components or explain why the component is not applicable:		
Item	Requirement	Page Number
1	The estimated number of existing bicycle trips and pedestrian trips in the plan area, both in absolute numbers and as a percentage of all trips, and the estimated increase in the number of bicycle trips and pedestrian trips resulting from implementation of the plan.	34
2	The number and location of collisions, serious injuries, and fatalities suffered by bicyclists and pedestrians in the plan area, both in absolute numbers and as a percentage of all collisions and injuries, and a goal for collision, serious injury, and fatality reduction after implementation of the plan.	35-37
3	A map and description of existing and proposed land use and settlement patterns which must include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, major employment centers, and other destinations.	27
4	A map and description of existing and proposed bicycle transportation facilities, including a description of bicycle facilities that serve public and private schools and, if appropriate, a description of how the five Es (Education, Encouragement, Enforcement, Engineering, and Evaluation) will be used to increase rates of bicycling to school.	21
5	A map and description of existing and proposed end-of-trip bicycle parking facilities.	21
6	A description of existing and proposed policies related to bicycle parking in public locations, private parking garages and parking lots and in new commercial and residential developments.	9-13

7	A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These must include, but not be limited to, bicycle parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels.	22
8	A map and description of existing and proposed pedestrian facilities, including those at major transit hubs and those that serve public and private schools and, if appropriate, a description of how the five Es (Education, Encouragement, Enforcement, Engineering, and Evaluation) will be used to increase rates of walking to school. Major transit hubs must include, but are not limited to, rail and transit terminals, and ferry docks and landings.	28-31
9	A description of proposed signage providing wayfinding along bicycle and pedestrian networks to designated destinations.	22
10	A description of the policies and procedures for maintaining existing and proposed bicycle and pedestrian facilities, including, but not limited to, the maintenance of smooth pavement, ADA level surfaces, freedom from encroaching vegetation, maintenance of traffic control devices including striping and other pavement markings, and lighting.	35-37, 50
11	A description of bicycle and pedestrian safety, education, and encouragement programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the law impacting bicycle and pedestrian safety, and the resulting effect on collisions involving bicyclists and pedestrians.	28-31
12	A description of the extent of community involvement in development of the plan, including disadvantaged and underserved communities.	39-42
13	A description of how the active transportation plan has been coordinated with neighboring jurisdictions, including school districts within the plan area, and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, general plans and a Sustainable Community Strategy in a Regional Transportation Plan.	43
14	A description of the projects and programs proposed in the plan and a listing of their priorities for implementation, including the methodology for project prioritization and a proposed timeline for implementation.	44-47
15	A description of past expenditures for bicycle and pedestrian facilities and programs, and future financial needs for projects and programs that improve safety and convenience for bicyclists and pedestrians in the plan area. Include anticipated revenue sources and potential grant funding for bicycle and pedestrian uses.	48
16	A description of steps necessary to implement the plan and the reporting process that will be used to keep the adopting agency and community informed of the progress being made in implementing the plan.	50
17	A resolution showing adoption of the plan by the city, county or district. If the active transportation plan was prepared by a county transportation commission, regional transportation planning agency, MPO, school district or transit district, the plan should indicate the support via resolution of the city(s) or county(s) in which the proposed facilities would be located.	

APPENDIX B

GLOSSARY

The following are working definitions used during the process to develop the Loudoun County Bicycle and Pedestrian Mobility Master Plan. The working definitions were developed to prevent misunderstandings or misconceptions that can arise over the course of a public bicycle and pedestrian planning process.

Bicycle end of trip facilities:

All infrastructures related to bicycle parking. Includes bicycle supports (stands and racks) bicycle parking area enclosures (sheds, canopies, and cages). Also includes complementary infrastructure such as lockers, change rooms, showers and so on.

Short-term bicycle parking:

Simple outdoor stands or racks with no weather protection and limited security measures. Also called Class II or Class B bicycle parking.

Long-term bicycle parking:

Partially or fully enclosed or indoor bicycle parking offering weather protection and increased protection against vandalism and theft. Often includes complementary infrastructure such as equipment lockers, change rooms, and showers. Also called Class I or Class A bicycle parking.

Bicycle Boulevard:

A Bicycle Boulevard is a roadway intended to prioritize bicycle travel and provide a low stress experience for people on bikes of all ages and abilities. The goal of Bicycle Boulevards are to provide low stress bikeways on pleasant neighborhood streets that are both safe and convenient.

Bicycle station:

High capacity long-term bicycle parking facility open to the general public. Usually located in city centers near major public transit hubs, educational institutions, and dense employment areas. Often includes complementary infrastructure such as equipment lockers, change rooms, showers, bicycle part and accessory vending machines or kiosks, air pumps, bicycle maintenance service, maps and information, and food and beverage vending machines or kiosks.

Bicycle- transit trip chaining:

The use of bicycle for access to or from public transit.

Bicycle stand:

A single vertical unit which can support either one or two- bicycles.

Bicycle rack:

a unit with multiple vertical elements to support several bicycles. A bicycle rack can be created by mounting several bicycle stands on a metal rail or platform.

Bicycle shed:

a roof or partial enclosure over a bicycle parking area. Sheds can be freestanding structures or can be awnings or berths attached to a building.

Bicycle cage:

a fenced or walled full enclosure around a bicycle parking area. A key combination code is usually required to access the cage.

Bicycle locker:

a fully enclosed container large enough to fit a standard bicycle. Can also be used to store other belongings, such as helmets and bags.

Bicycling and Pathway-Oriented Terms

Bicycle: Every vehicle propelled solely by human power upon which any person may ride, having two tandem wheels, except scooters and similar devices. The term "bicycle" in this planning process also includes three and four-wheeled human-powered vehicles, but not tricycles for children.

Bicycle Facilities: A general term denoting a variety of improvements and provisions that are made by public agencies to accommodate or encourage bicycling, including bike lanes, shared use pathways, signed bike routes and bicycle parking and storage facilities.

Bicycle Network: A system of public bicycle facilities that can be mapped and used by bicyclists for transportation and recreational purposes.

Bike Lane: A portion of a roadway that has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicyclists.

Bikeway: A generic term for any road, street, path, trail or way, that in some manner, is specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

Shared Roadway: A roadway that is open to both bicycle and motor vehicle travel. Unless bicycle travel is explicitly prohibited, all highways, roads and streets are "Shared Roadways." Some Shared Roadways may have wide curb lanes (14' or greater) or paved shoulders, to increase comfort for bicyclists; however in most cases these roads do not have sufficient width to accommodate a Designated Bike Lane.

Shared Use Path (or Pathway): A bicycle and pedestrian path separated from motorized vehicular traffic by an open space, barrier or curb. Shared-Use Paths may be within the

highway right-of-way (often termed "side path") or within an independent right-of-way, such as on an abandoned railroad bed or along a stream valley park. Shared use paths typically accommodate two-way travel and are open to pedestrians, in-line skaters, wheelchair users, joggers and other non-motorized path users. They are typically surfaced in asphalt or concrete, but may have hard packed/all weather gravel or dirt surfaces as well. To safely accommodate a range of users, Shared Use Paths should be a minimum of 10' wide (or 8' in very constrained conditions)

Shoulder: Any portion of a roadway to the right of the right-most travel lane, but not including curbs, planting buffers and sidewalks. Shoulders can have a variety of surface treatments including pavement, gravel or grass. Depending on their width and surface, they serve a variety of purposes, including providing space for vehicles to slow and turn right, accommodation of stopped or broken-down vehicles, to allow emergency vehicles to pass, for structural support of the roadbed, or for bicycle and pedestrian travel.

Signed Shared Roadway (Signed Bike Route): A shared roadway that has been designated by signs as a preferred route for bicycle use.

Trail: The word "trail" has come to mean a wide variety of facilities types, including everything from a "marked or beaten path, as through woods or wilderness" to a paved "multi-use trail" such as the W&OD rail-trail. The same word "trail" is used to describe hiking trails, equestrian trails, Indian trails or even tourist-oriented driving routes such as Virginia's Civil War Trails. For this reason, this planning process will not use the word "trail" to reference a facility intended for bicycle transportation. We urge use of the term Shared Use Path in place of Multi-Use Trail.

Note: Several of these definitions are taken from the American Association of State Highway and Transportation Officials (AASHTO) "Guide for the Development of Bicycle Facilities," 1999 Edition.

Walking and Pedestrian-Oriented Terms

Accessible Pedestrian Signal (APS): A device that communicates information about pedestrian signal timing in non-visual format, through the use of audible tones (or verbal messages) and vibrating surfaces. Americans with Disabilities Act (ADA): 1990 Federal law establishing the civil rights of people with disabilities. Prohibits discrimination against people with disabilities and requires common places used by the public to provide an equal opportunity for access.

Buffer: That portion of a highway, road or street between the curb-face or edge of the pavement and the sidewalk that provides a spatial buffer between vehicular traffic and pedestrians on sidewalks. Buffers often include landscape plantings such as grass, trees or shrubs, or utility poles, and may also be referred to as the "planting strip," "landscape buffer," "tree buffer" or "tree boxes." Buffers can also include barriers such as highway guide rails (guardrails) or bollards. In rural or suburban areas the buffer may be a grassy

swale or drainage ditch. In urban areas, downtowns, or on "Main Streets" the buffer may also include street furniture, street signs, fire hydrants, vending boxes, lighting poles, etc.

Crosswalk: The horizontal portion of roadways, usually at intersections, reserved for pedestrian crossing; it may be marked or unmarked. Three marking patterns using white striping are most common: 1) Double Parallel lines, 2) "Zebra Stripes:" white cross hatches perpendicular to the pedestrian direction of travel, or 3) "Ladder:" perpendicular white cross hatches combined with double parallel lines on the outside edges.

Curb Ramp: A combined ramp and landing to provide access between street level and sidewalk level, usually at intersections or designated crosswalks. ADA accessible ramps must achieve particular design requirements including a running grade no steeper than 1:20. Curb ramps are intended to provide street/sidewalk access to all types of pedestrians, as well as bicyclists who may be legally using the sidewalk or crosswalk.

Detectable Warning: A standardized surface feature built in or applied to walking surfaces or other elements to warn people who are blind or visually impaired of specified hazards.

Median Refuge: An area within an island or median that is intended for pedestrians to wait safely away from travel lanes for an opportunity to continue crossing the roadway.
Midblock Crosswalk: A legally established crosswalk that is not at an intersection.

Pedestrian: A person walking or traveling by means of a wheelchair, electric scooter, crutches or other walking devices or mobility aids. Use of the term pedestrian is meant to include all disabled individuals regardless of which equipment they may use to assist their self-directed locomotion (unless they are using a bicycle). It also includes runners, joggers, those pulling or pushing strollers, carriages, carts and wagons, and those walking bicycles.

Pedestrian Access Route: A corridor of accessible travel through the public right-of-way that has, among other properties, a specified minimum width and cross slope.

Pedestrian Crossing Interval: The combined phases of a traffic signal cycle provided for a pedestrian crossing in a crosswalk, after leaving the top of a curb ramp or flush landing, to travel to the far side of the vehicular way or to a median, usually consisting of the WALK interval plus the pedestrian clearance interval.

Pedestrian Signal Indication: The illuminated WALK/DON'T WALK message (or walking person/hand symbols) that communicates the pedestrian phase of a traffic signal, and their audible and tactile equivalents.

Sidewalk: That portion of a highway, road or street specifically constructed for the use of pedestrians on the outside edge of the vehicular travel way. Sidewalks are typically, but not always, curb-separated from the roadway and made of concrete, brick, asphalt or another hard surface materials.

APPENDIX C

POLICY REVIEW

The EPA Bike Plan Update is influenced by existing plans, policies, and programs that support walking, biking, driving, and living. Some of these documents are specific to the City and others are regional. This Plan will be consistent with and support the following documents. Website : <http://www.cityofepa.org/bikeplan>

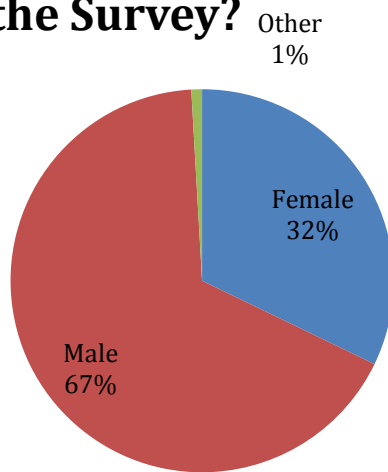
1. 2035 General Plan- Transportation Chapter -2016
2. Ravenswood/4 Corners Transit Oriented Development Specific Plan Circulation - 2012
3. Climate Action Plan-2011
4. Bicycle Transportation Master Plan-2011
5. Bay Access Master Plan-2007

APPENDIX D

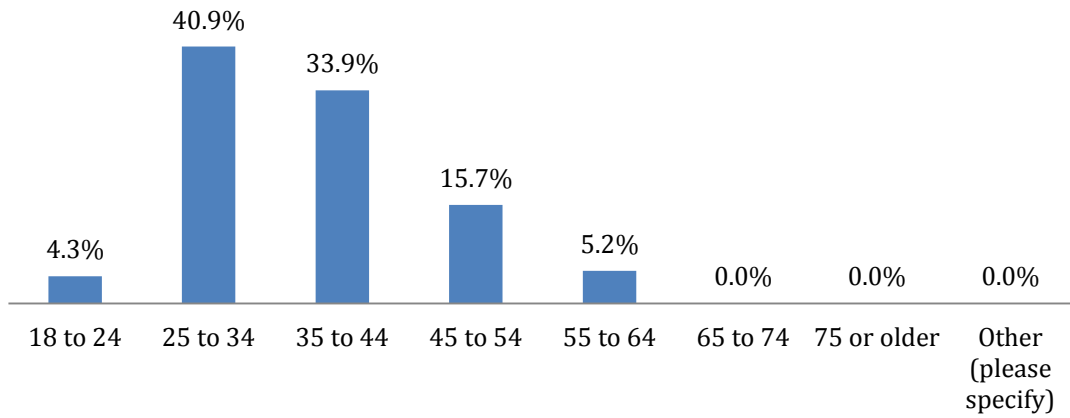
COMMUNITY SURVEY RESULTS

A total of ten questions were listed in the survey monkey survey. Seven of the ten questions are presented in illustrations below:

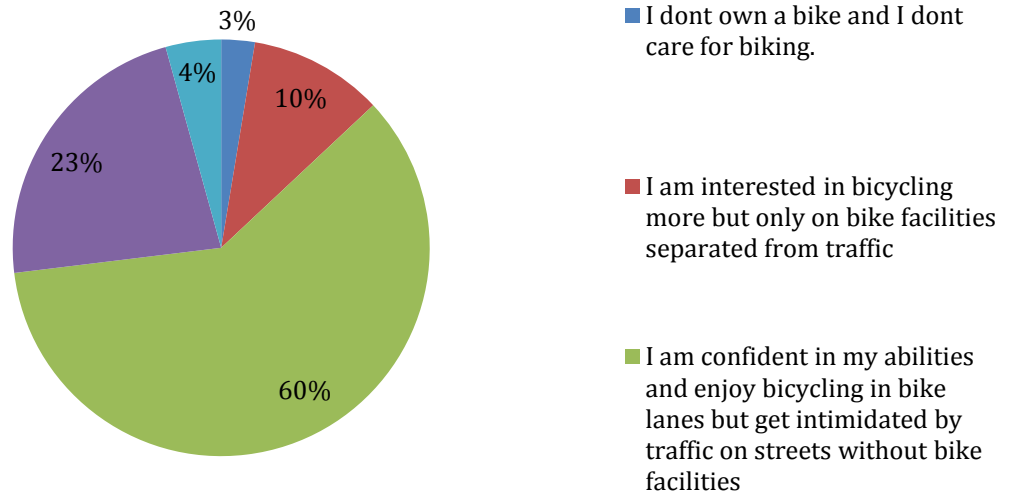
Who took the Survey?



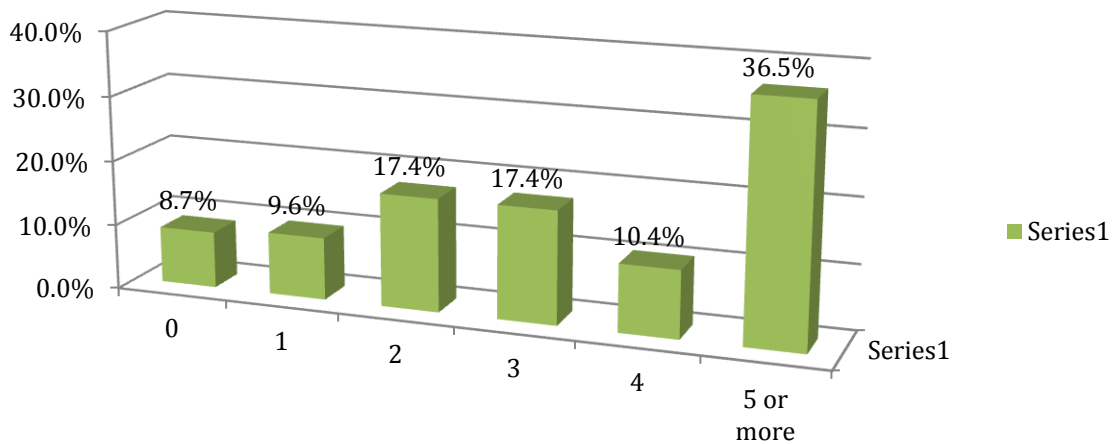
Age



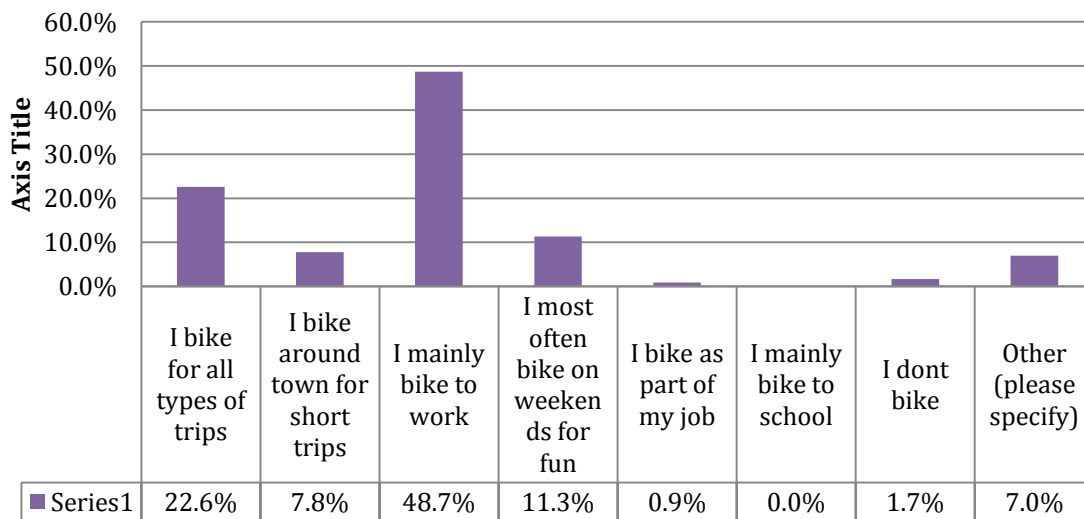
Please describe your confidence level bicycling on our city streets.



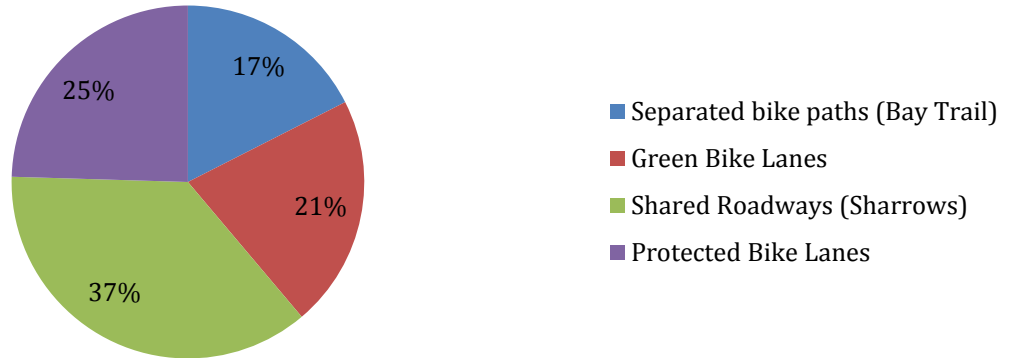
About how many times in the average week do you engage in bicycling?



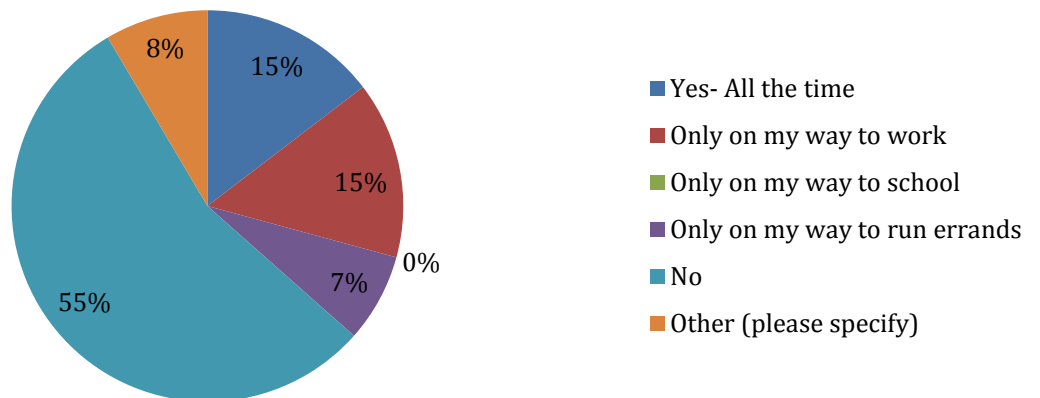
Please describe the type of bicycling you most often do



Rank the types of bike facilities you feel people in East Palo Alto are more likely to use?



Do you combine public transit (SamTrans, VTA, Busing, Caltrain, other public transportation) or private transit (Work Buses, Lyft, Uber) with your cycling or walking trips?



APPENDIX E

PRIORITIZATION OF PROJECTS

The following seven categories are designed to formulate a thoughtful discussion when the City is considering the prioritization of funding proposed bicycle infrastructure project.

- Continuity – Does the project provide new or significantly improved connectivity on established corridors or between major activity areas that does not currently exist or is not currently usable by the general public?
- Gap Closure – Does the project provide a new connection between major activity centers or on a major corridor that currently either does not exist or has convenience/safety issues?
- Demand Patterns – Does the project serve a significant existing or potential demand, as evidenced by (a) counts or observed activity, (b) comments from the public, (c) connectivity and proximity to major generators, and/or (d) projections from an acceptable demand model?
- Safety – Does the project address a significant safety concern in a community as evidenced by collision data, field observations, and/or public perception and comments?
- Project Readiness – Are the key feasibility issues of the project (right-of-way, environmental impacts, engineering issues, cost issues, neighborhood support) understood and not expected to negatively affect or delay the project? Has any formal feasibility study, engineering or design been conducted?
- Multi-Modal Integration – Does the project provide enhanced connectivity to existing transit services?
- Cost/Benefit analysis – Will the project provide the greatest benefit to cyclists and/or pedestrians for the amount of investment required to build it? It is important to remember that the lists of bikeway and pedestrian projects and programs are flexible concepts that serve as guidelines to those responsible for implementation. The priority projects list, and perhaps even the overall system and segments themselves, may change over time as a result of changing bicycling patterns and implementation constraints and opportunities. Project prioritization is not meant as an absolute value, rather as an indication of project's relative importance only. These priorities should be considered a living document.

APPENDIX F

POC- STATUS



APPENDIX G

BAY TRAIL PROJECT



FACT SHEET

Ravenswood Bay Trail Project

Location and Background

The Ravenswood Bay Trail easement is a 0.6 mile critical missing gap in the San Francisco Bay Trail on the San Francisco Peninsula, between the existing Bay Trail along University Avenue and the existing unpaved multi-purpose trail in the Midpeninsula Regional Open Space District's (MROSD) Ravenswood Open Space Preserve (Preserve) and the City of East Palo Alto's Cooley Landing. Completing this trail gap will open up 80 miles of continuous Bay Trail connecting to Menlo Park to the north, Mt. View/Sunnyvale/Santa Clara to the south and across the Dumbarton Bridge to the East Bay. The San Francisco Bay Trail is a planned 500-mile walking and cycling path around the entire San Francisco Bay through all nine Bay Area counties and 47 cities (see regional map).

The Ravenswood Bay Trail will provide easily accessible recreational opportunities for the East Palo Alto and Menlo Park communities, including outdoor enthusiasts, hikers, joggers and bicyclists. It offers a setting for wildlife viewing and environmental education, and increases public respect and appreciation for the Bay. It also has important transportation benefits, providing a commute alternative for cyclists, including a bicycle crossing at University Avenue and the Dumbarton Bridge.

The project site spans the city limits of East Palo Alto and Menlo Park and the surrounding areas contain a diverse array of existing land uses and infrastructure, including the residential neighborhood of University Village located to the south, the San Francisco Public Utilities Commission's (SFPUC) Ravenswood Valve Lot and the Don Edwards National Wildlife Refuge to the north, existing wetlands to the northeast, and the currently inactive Dumbarton rail line (Samtrans) to the north. Much of the area is owned by public agencies.

Project History

- In 2005, a Ravenswood Bay Trail feasibility study was prepared by the City of Menlo Park to evaluate trail alignment alternatives for the gap between University Avenue and the Preserve.
- In 2008, the SFPUC contacted MROSD requesting a pipeline tunnel easement for the Hetch Hetchy waterline underneath the Preserve.
- In 2010, MROSD granted SFPUC a pipeline tunnel easement in exchange for an open space easement on the southern portion of the SFPUC property where the preferred Bay Trail route was identified in the 2005 Bay Trail feasibility study.
- MROSD has consulted with the following public agencies and stakeholders on this project: Cities of East Palo Alto and Menlo Park, the Counties of San Mateo and Santa Clara, the San Francisco Bay Trail Committee and US Fish and Wildlife Service.
- In 2015, the SFPUC Ravenswood Valve Lot pipeline project was completed.
- In the summer of 2015, the SFPUC Project Review Committee agreed to the preferred alignment for the Ravenswood Bay Trail.
- MROSD has received a \$1 million dollar grant from the County of San Mateo's Measure A funds, \$400,000 from Santa Clara County, and \$40,000 from the Bay Trail Project through the Association of Bay Area Governments (ABAG).

Proposed Ravenswood Bay Trail Easement

The proposed Ravenswood Bay Trail traverses the 0.6-mile long, narrow corridor between the Dumbarton rail line and the University Village neighborhood connecting to the newly-built section of the Bay Trail along University Avenue to the west and MROSD's Ravenswood Open Space Preserve to the east. The trail will run along the north side of the SFPUC service road to provide a privacy buffer to the adjacent University Village neighborhood, with a bridge over a wetland area and a raised boardwalk trail at the easterly connection to the Preserve (see project map). The multi-use trail would be striped on the paved service road. The use and basic terms of the public trail easement are as follows:

- Uses of the trail will include hiking, jogging, bicycling, nature observation, and will be accessible for persons with mobility impairments.
- MROSD responsible for patrol, enforcement, trail construction, maintenance and repair.
- MROSD and SFPUC are considering extended trail hours to provide through access from the Bay Trail at University Avenue to the north to the Palo Alto Baylands to the south.
- Trail easement shall be 20 feet in width with actual trail width of approximately 10 feet in width.
- MROSD will notify SFPUC of scheduled or emergency repairs to trail and report emergency medical responses and enforcement incidents to the SFPUC.

Easement Exchange between MROSD and SFPUC

In 2010, MROSD and the SFPUC entered into an easement exchange agreement where MROSD granted the SFPUC a pipeline tunnel easement for the Hetch Hetchy waterline and the SFPUC granted MROSD an open space easement. Now that the Ravenswood Bay Trail alignment is agreed upon, the SFPUC will grant MROSD a public trail easement and in turn MROSD will quitclaim its interest in the open space easement to the SFPUC.

Funding

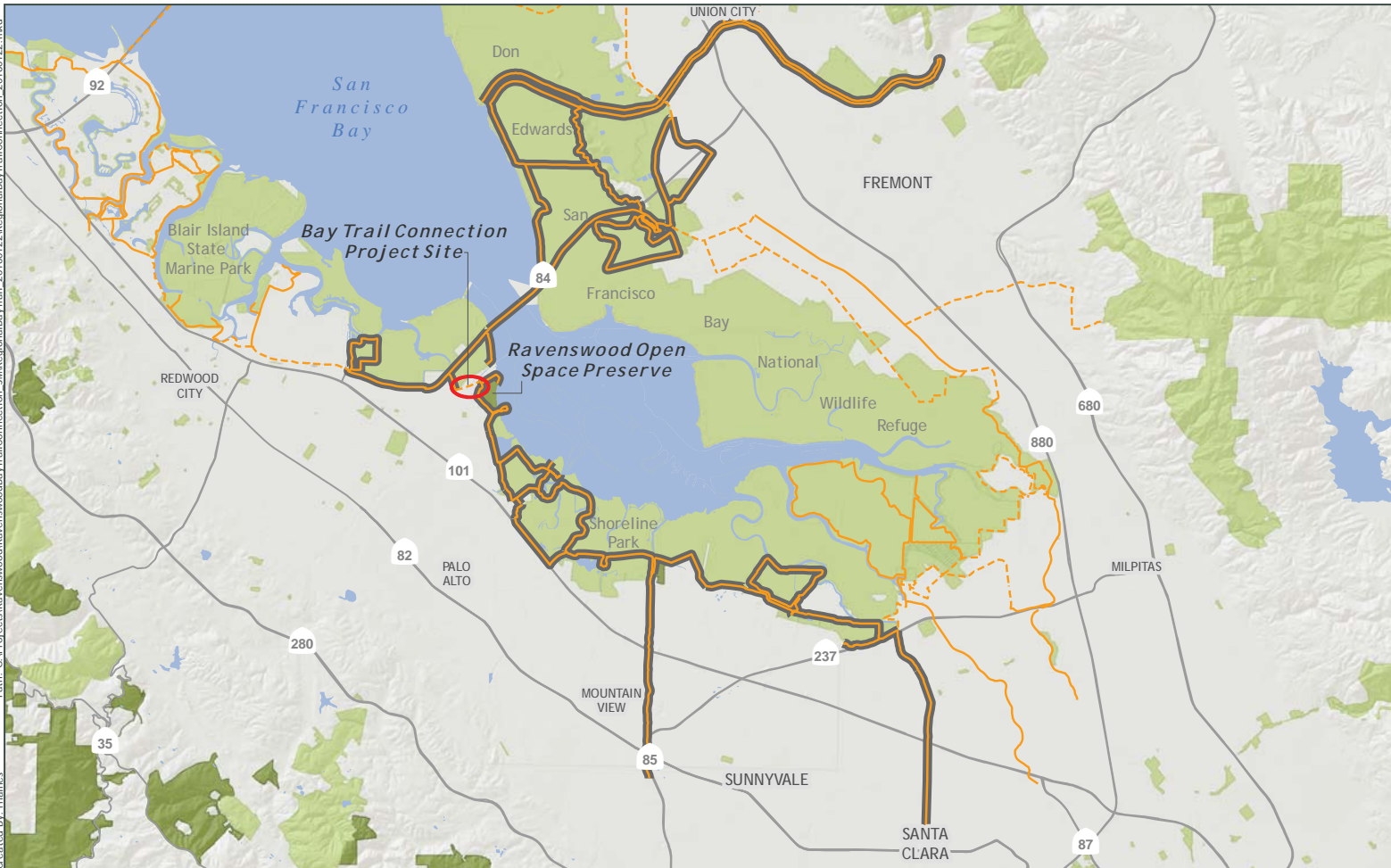
The trail easement is in exchange for the pipeline easement granted to the SFPUC, and no funds will change hands between the parties. The total project cost is estimated at \$2.4 million. Trail design and permitting will utilize San Mateo County (\$1 million) and Santa Clara County (\$400,000) grant funds. Trail construction will use grant funds and voter-approved MROSD Measure AA funds.

Next Steps

California Environmental Quality Act (CEQA) environmental review is underway and will be publicly circulated in the coming months. The District's Board of Directors will consider completing the proposed property exchange at a public meeting in 2016. Included for consideration at that time will be the acceptance of the Bay Trail gap easement and the quitclaim deed of the open space easement to the SFPUC. Upon approval by MROSD's Board of Directors, the City and County of San Francisco will consider approval of the trail easement and quitclaim deed.

Public Participation: Interested parties are encouraged to contact Lupe Hernandez, Real Property Administrative Assistant, at the District office (650) 691-1200 to request that their names be added to the public notification list for this proposed Ravenswood Bay Trail Easement project.

Path: G:\Projects\RavenswoodBayTrail\20160122\RegionalBayTrailConnection_20160122.mxd
Created By: rhaines



Regional Map for Ravenswood Bay Trail Connection Project

- MROSD Preserves
- Other Protected Open Space or Park Lands
- Ravenswood Bay Trail Connection Project Site
- Existing Bay Trail
- Proposed Bay Trail
- 80 Miles Continuous Bay Trail

Midpeninsula Regional Open Space District (MROSD)



February, 2016

While the District strives to use the best available digital data, this data does not represent a legal survey and is merely a graphic illustration of geographic features.



Ravenswood Bay Trail Connection Project

- | | | |
|---|---|--|
|  MROSD Preserves |  Non MROSD Easement Over Water |  Existing Bay Trail |
|  Other Protected Open Space or Park Lands |  Private Property |  Proposed Bay Trail |
|  Other Public Agency | | |

Midpeninsula Regional
Open Space District
(MROSD)



February, 2016



While the District strives to use the best available digital data, this data does not represent a legal survey and is merely a graphic illustration of geographic features.

APPENDIX H

COMMUNITY COMMENTS

April 19, 2017 PWTC Comments

Name	Comment	Response
Bernardo Huerta	<ul style="list-style-type: none"> • Bicycle cages at schools • Asphalt to cement transition all over the City • Kids being able to bike to school and not be dropped off by their parents it would alleviate traffic conditions. An educational component would be ideal. • The Bay trail needs to be maintained, there are a lot of thorns. The road is also not maintained and it needs to be repaved. • There needs to be more connectivity around the village. Rail, pedestrians and cyclist. • Have a concrete plan for the rail spur. • Consider a study for class II bike lanes. Make sure that parking is not eliminated. 	<p>Several types of bicycle parking was encouraged in page 23-25.</p> <p>The City has incorporated goals and policies that would allow for more education to be provided to the community, more infrastructure to be installed. Page 9-12.</p> <p>Continuous collaboration with other agencies is imperative and the City will continue to have a working relationship with regional agencies.</p> <p>The ownership of the rail spur is in question and it can not be determined at this time how or when that project would be developed.</p> <p>We will propose a study to be done before class II or class III is considered on any street. See page 48.</p>
Betsy Yanez	<ul style="list-style-type: none"> • Bike Share, maintenance • Safety for children 	<p>The City has incorporated goals and policies that would allow for bike share and bike education. See page 11.</p>
Richard Tatum	<ul style="list-style-type: none"> • Our kids don't know how to ride bicycles, some of them are dressed like a ninja. You cant even see them. Black on black on black. And then they ride their bicycles on the opposite direction and they have no lights. • More educational program should be done in our schools. Some events should also take 	<p>The City has incorporated goals and policies that would allow for bike education and wayfinding. See page 9 and page 11.</p>

	<p>place on the weekends.</p> <ul style="list-style-type: none"> • Wayfinding, share the road signs, mark the streets 	
Speaker 1	<ul style="list-style-type: none"> • Talking to palo alto schools because they recently installed some infrastructure near the schools. 	We will continue to collaborate with regional agencies.
Speaker 2	<ul style="list-style-type: none"> • Raffles and prizes and incentives to encourage ppl to participate • Green bike lanes • Sharrows • Allow for the bike path to be closer to the curb and push the vehicle parking closer out into the road to protect cyclist. 	The City will use the NACTO, General Plan, Specific Plan and any additional documents that provide guidance in developing our bike infrastructure.
Speaker 3	<ul style="list-style-type: none"> • Expanding the bike trail to connect to the Dumbarton and throughout the City. 	We will continue to collaborate with regional agencies.
Speaker 4	<ul style="list-style-type: none"> • With vehicles parked on the public right of way and so it is very difficult to walk on the sidewalk 	The engineering department will be conducting a mobility study for the entire City that will inform this concern.
Speaker 5	<ul style="list-style-type: none"> • Bay trail weeds are overgrown. More maintenance would be helpful to commuter and cyclist • University Avenue Bridge is difficult to use as a cyclist. There is traffic and no protection, there is also trash on the road. • Parking is an issue because it limits a pedestrian from walking on the street. 	<p>We will continue to collaborate with Palo Alto and ask for the Bay Trail to be landscaped when needed.</p> <p>A project might be proposed in the near future for Bay road, for the mean time the POC will begin construction.</p>

Community Comments on Final Bike Plan Document

Name	Date of Comment	Comments	Staff Comments
Kimberly	7/24/2017	<p>1. I live on Kavanagh St. and none of the corners near my house have ramps. This means that if I am walking with my baby in the stroller, which I often do to take my dog to the park, I have to either use nearby driveways, away from the cross walks, or force the stroller on and off the curbs, neither of which I feel safe doing. Honestly, it boggles my mind that we are in the 21st century and live in a community that is not handicap accessible. I understand that the sidewalks are "grandfathered" in as road improvements have not been done in tens of years but do not feel this is acceptable. It's shocking to me that there are crosswalks but no ramps, making the sidewalks to those cross walks. This is not a safe environment for the residents of the community and I will start working with my neighbors to demand that this be fixed ASAP.</p> <p>2. I like to bike to work to be environmentally friendly and also like to take my baby on bike rides in a baby carrier on the weekends. It's a very short commute to get from Kavanagh Dr. to Facebook, but cannot believe how incredibly unsafe I feel in such a short time. Most days I worry that I will not make it home safely to my baby at the end of the work day. You may think I am being dramatic but I would recommend you bring along University Avenue between 101 and the Dunbaron Bridge to see if you feel safe. The bike lane is so small, with one single line instead of the normal two that you would find in a safe community, that you end up being right next to the cars driving along the road. As you know this is a very busy road and often has large trucks driving up and down it as well. The bike lanes are not clean, they often have rocks, trash, etc. mixed across them which makes them even more dangerous to ride on. I request that these bike lanes be widened, repainted and cleaned ASAP.</p> <p>3. One day, I walked down Gratiot to La Esmeralda on Bay Rd. and then back up University to take my dog to the park with my baby in his stroller. I was shocked to find that there was no sidewalk on the East side of University, we after crossing Bay, and even worse, that there was a steep drop-off to connect the empty lot to the neighborhood. I honestly was so scared traversing down this with my dog and baby in stroller because I thought we might end up in the street! There's also another dangerous section of University between Purdie Ave and where the nice bike path to the Bay starts. This section again has a tiny bike lane and no sidewalk. Because the bike path is so nice just a block north of Purdie, and because the bike lane is so dangerous on the other side of University, bikers often use this side of the street to go north and south which could very easily cause traffic collisions, again right next to car traffic. I'd hate to see a fatality at this section of the road but feel it could happen very easily.</p> <p>I've included a map attached so that it is easy for you to see my concerns. With the growth and traffic in this section of the neighborhood, I think it is unacceptable that action has not been taken yet and feel that this city needs to catch up immediately. I've seen THREE accidents on Kavanagh and University since I moved to this neighborhood in August 2015 and could only imagine what would happen if anyone was walking or biking when these accidents happened. I've also seen hundreds of cars racing up and down Kavanagh adding to the safety hazards.</p> <p>I understand that you have a plan in place to lessen these risks but also heard that "I will take some time". Hearing that there is not an immediate mesh to provide a safe neighborhood to residents is a big concern for me. Please, please let me know what you can do to help. I want to be able to leave my house and feel safe. Also, as I work at Facebook, please for me know what I can do to ask them to assist with these improvements. There are lots of Facebook employees living in the area now and I think we could do something to help.</p>	<p>1. This item will be addressed by the Walkability Study that the City is spearheading. 2. University Ave is managed by Cal Trans, the City will be working with Cal Trans in the future to make the appropriate infrastructure changes for all modes of transportation. 3. This item will be addressed by the Bay Trail project that is currently ongoing.</p>
Bernardo Herrera	7/25/2017	<p>I did not want to step on your grant work for the City on the issues I raise at last night's Planning Commission meeting. It looks like the grant has a minimum to be acceptable. I am available to help your grant be processed. In the recent past the PW&TC has been asked to make Phlags Ave in class 2 bicycle lane. The issue has always come to road space. The solution is the details. The issue of Bay Rd. parking on one side, residents are in favor. I was on the first bicycle committee in the Planning Commission circa 2009. If we could meet Wednesday, or over emails to complete your grant? I am available. Thank you.</p>	<p>On Page 49 of the document, I added language that slightly encourages a study to be done so that Class III bike lanes can be added only if Class II bike lanes would eliminate on street parking.</p>
Aunt Lancel	9/7/2017	<p>I am a resident of East Palo Alto. I just reviewed the bike plan, and I think it is wonderful that the city is making steps to being more bike-friendly and safe! Thank you so much for all your efforts.</p> <p>I wanted to note that East Palo Alto Charter School (where my son attends) was not on your bike plan map. It is on Rumpynade and we go down Rumpynade starting at Cooley ave everyday by bike to take our son to school. In addition, you may have heard that the school district recently cut the school buses going to/from EPACS due to budget restrictions. This means many more children and families will be walking and riding their bikes to school. There is currently no sidewalk for most of Rumpynade leading up to the school. There is also no bike lane or bike route. I strongly recommend that the city consider adding sidewalks and bike lanes to Rumpynade for the safety of our children.</p>	<p>Staff made the changes to the map page 16 to include the school that was missing. Adding sidewalks to this area will be reviewed by the engineering department as they seek SRTS grants.</p>
Lesley Lowe	9/8/2017	<p>We're happy to come present the project concept to your planning commission on Monday. In flipping through the plan, it looks like the proposed project we are going to discuss did not make it on to the proposed map. I see reference to a potential project in a couple places, but just wanted to check in and see how you want us to present this relative to the bike plan?</p>	<p>This item will be discussed at PC meeting 9/11/17</p>
Hugh Louch	9/8/2017	<p>Our overall estimate was around \$450,000 for the project, including design. Several of the segments are sharrows only (the new ones that were added) and some are bike lanes. We can provide a more detailed estimate if needed.</p>	<p>Staff will propose the changes to the PC and Staff</p>
Gwen Buckley	9/8/2017	<p>I recently found out that the Final Draft of the EPA Bike Plan is available online. I'm not sure if you are still accepting public input but I have a few comments, specifically on the Bike and Ped Count data, pages 33 and 34.</p> <ol style="list-style-type: none"> 1) Would it make more sense to use 2016 data? (attached—EPA data is highlighted) 2) The counts in 2015 and 2016 were from 7am–9am and 5pm–7pm (not 7am to 8:45 and 5pm to 6:45) 3) For the graph, the x axis should be labeled so we can see what times and date the counts were. Also, I would recommend using 2016 counts instead of 2015. 4) There are also a few typos on page 33. "Bicycle" is spelled incorrectly in the header and in the first sentence. "bike counts" is listed twice. 	<p>The changes have been made to page 33 and 34</p>
Tim Keegan	9/8/2017	<p>My biggest concern is that there is a route on Weeks St but Rumpynade (one block over) has a school on it, and there is not a route there. The school is trying to increase the numbers of students cycling so this is of concern. Because I bike this route everyday to drop off my own kids, I am very aware of the safety concerns to a cyclist. I also think the passages from the west side to east side should be more considered. Willow Road overpass has not been addressed. The new pedestrian bridge will empty onto Clarke I think, and cyclists will likely use Clarke so if possible, you may want to make that a designated route. University looks much better.</p> <p>Lastly, education for cyclists and motorists is very important. Just yesterday, a woman was bypassing a traffic jam on Bell St. by driving on the wrong side of the street, as I was (legally) biking on the correct side towards her (with my kids in tow). She gestured for me to move out of the way so she could continue. These kinds of incidents are not isolated. Increased education and law enforcement would help. I will print out the bike plan document and make notes to bring to the meeting on Monday 9/11.</p> <p>Thanks for all you are doing!</p>	<p>A project is being proposed at Clarke Ave. I let her know that she should come to the meeting 9/11/2017</p>

