



Proposed Bikeway Implementation in Palo Alto on State Route 82 (El Camino Real)



COUNCIL MEETING

4/1/24

☒Received Before Meeting

11



City Council Meeting

April 1, 2024, at 8:30 PM in the city Hall

AGENDA

-Introduction

-Presentation

- ☐ Caltrans paving project on State Route (SR) 82 (ECR)
- ☐ Planning & Mobility
- ☐ Safety Discussion for the proposed bikeway
- ☐ Design Considerations & challenges
- ☐ Engagement & Outreach

-Q&A

Caltrans SR 82 Paving Project



High Visibility Crosswalk



Pedestrian Hybrid Beacon



Class IV Bike Way



APS

Scope:

- Pavement Rehabilitation
- Curb ramps, sidewalks, and driveways to comply with Americans with Disabilities Act (ADA) standard.
- High visibility crosswalk markings
- Electrical work
- New bikeways in Mountain View and Los Altos
- New bikeway proposal in Palo Alto



Caltrans SR 82 Paving Project

Funding:

- Total project cost : \$44.6 M
- Construction capital cost: 30.1 M
- SHOPP: \$40.9 M (SB 1:\$4.47 M)
- Local: \$3.7 M (City of Mountain View)
- Bikeway in Palo Alto: \$3.2 M (IIJA Safety)

Schedule:

Construction began in November 2023 and completion is in fall 2025(T)



Class II Bike Lane



Strategic Priorities and Policy

Director's Policy 37 Complete Streets

*It is “Caltrans’ organizational
priority to encourage and
maximize walking, biking, transit,
and passenger rail.”*

**Safety, Equity,
Climate Action
+ Prosperity**



El Camino Real in South San Francisco

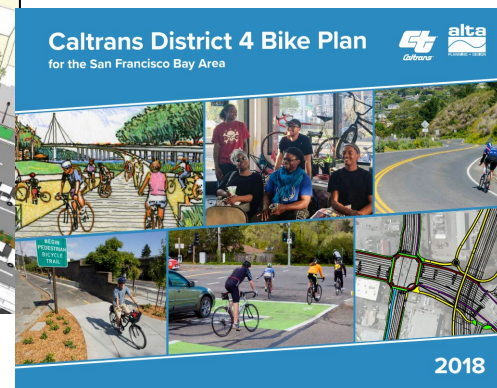
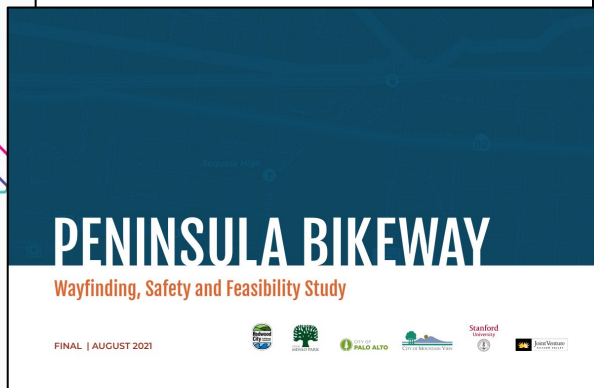


Caltrans®

Planning

The need for bikeway improvements on El Camino Real has been documented in numerous county, regional and city planning efforts:

- VTA Bicycle Superhighway Implementation Plan (2021)
- Peninsula Bikeway Wayfinding, Safety and Feasibility Study (2021)
- Grand Boulevard Initiative Palo Alto Safety Study (2019)
- Caltrans District 4 Bike Plan (2018)
- VTA Countywide Bike Plan (2018)





Improving Mobility for Bicyclists on El Camino Real

- Most direct connection to many downtowns and business districts between San Jose and San Francisco
- Connects to existing local bikeways within Palo Alto and complements parallel routes
- Aligns with FHWA and Caltrans contextual guidance





El Camino Real Bikeways In Development

Caltrans SHOPP projects proposing bikeways on El Camino Real (tentative construction years):

- Mountain View and Los Altos (2024)
- Redwood City and Atherton (2026)
- Daly City, Colma, South San Francisco (2026)
- Santa Clara (2026)
- South San Francisco (2028)
- Palo Alto (potential in 2024)

El Camino Real Bikeways

Proposed Bikeways projected to be installed as part of Caltrans SHOPP projects, with construction start anticipated between 2024- 2028 on SR-82





SAFETY DISCUSSION ON THE IMPLEMENTATION OF BIKEWAY IN PALO ALTO ON SR 82 (ECR)



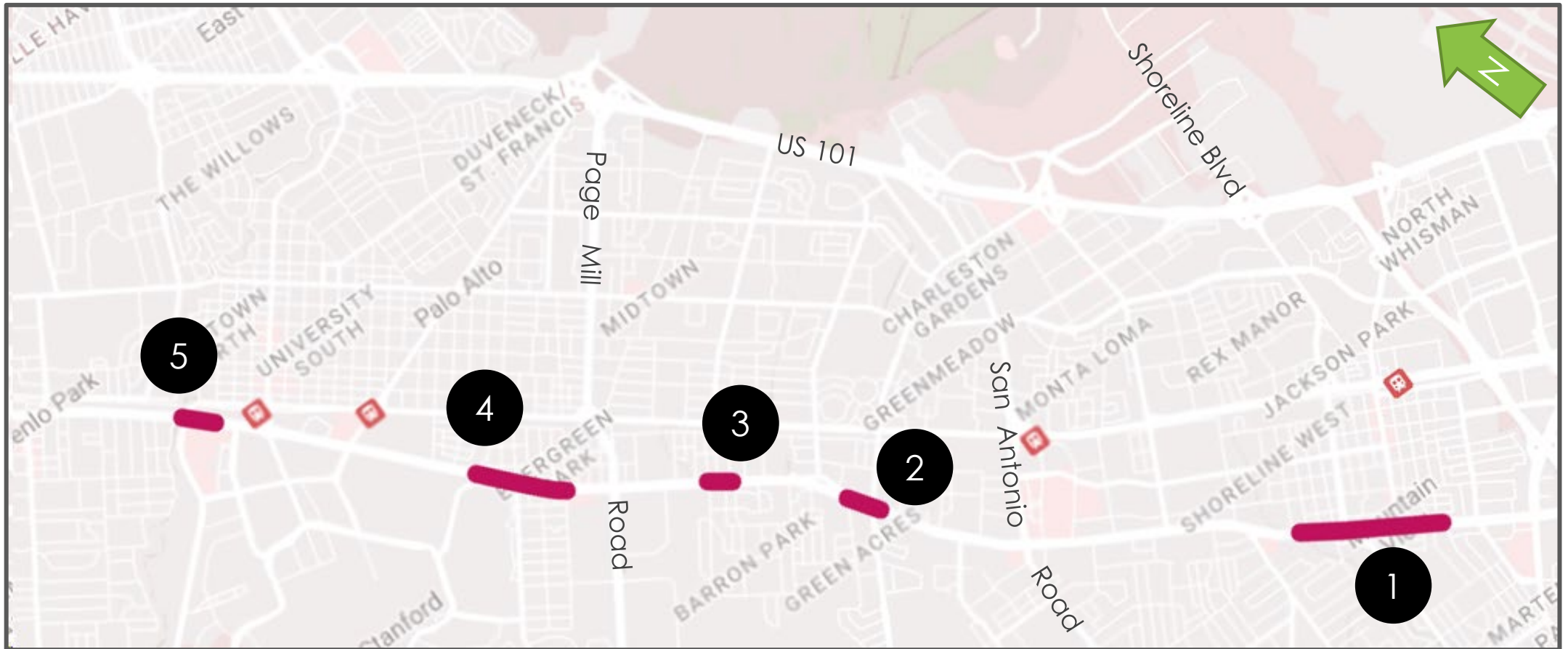
Bicyclist Safety Improvement Monitoring Program

Purpose: identify and investigate areas with high concentration of bicyclist-involved crashes

Date range covered by the Monitoring Program:
Jan 1, 2016 – Dec 31, 2020
(5-year period)

Bicyclist Safety Improvement Monitoring Program

1. Bonita Ave to Mariposa Ave (Mountain View)
2. West Charleston Rd to Maybell Ave (**Palo Alto**)
3. Wilton Ave to Matadero Ave (**Palo Alto**)
4. California to Park Blvd (**Palo Alto**)
5. Entrance to El Camino Park to Quarry Rd (**Palo Alto**)



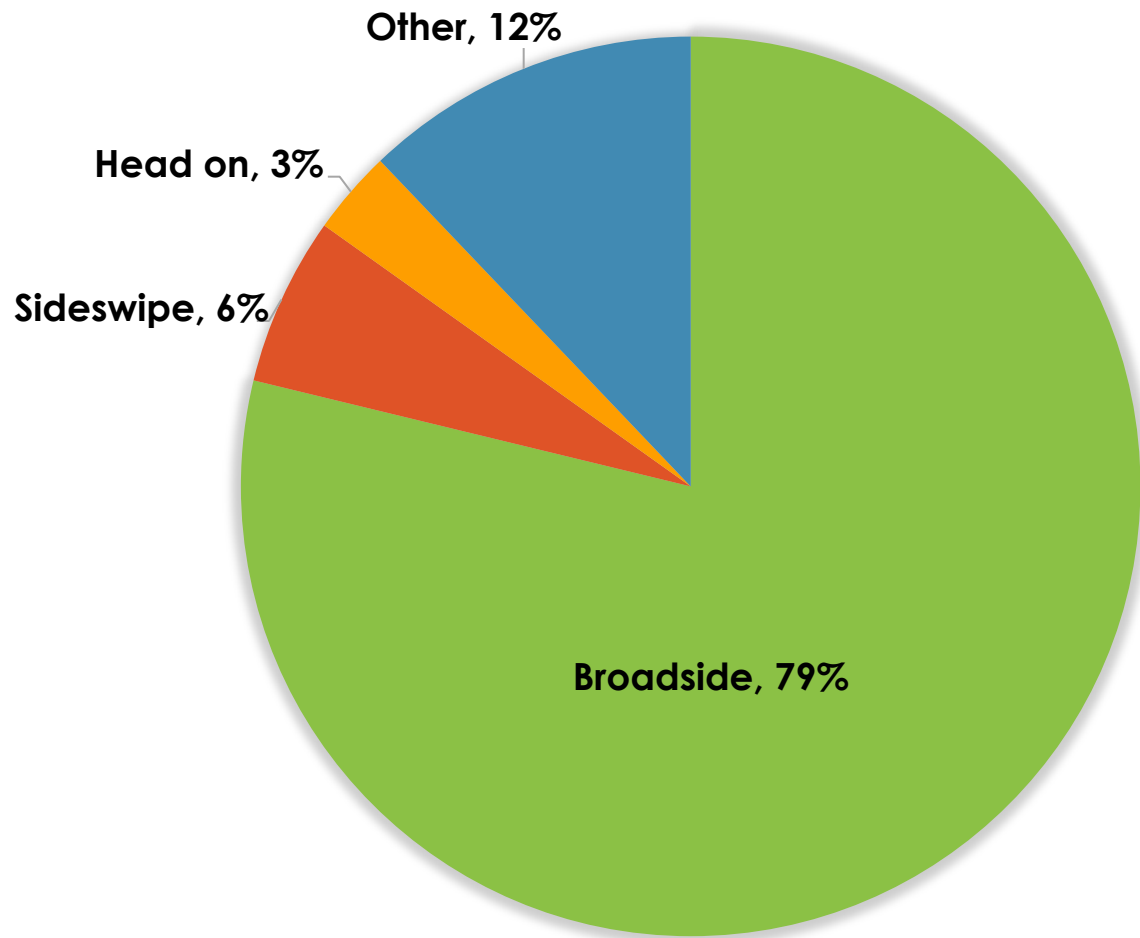


Bike Related Crash History Review

| Highway Segments Along El Camino Real | Number of Bicyclist-related Crashes (1/1/2016 – 12/31/2020) | |
|--|--|--------|
| | Fatality | Injury |
| 1. Bonita Ave to Mariposa Ave (MV) | 0 | 12 |
| 2. West Charleston Rd to Maybell Ave | 0 | 4 |
| 3. Wilton Ave to Matadero Ave | 0 | 4 |
| 4. California Ave to Park Blvd | 1 | 8 |
| 5. Entrance to El Camino Park to Quarry Rd | 0 | 4 |
| Total | 1 | 32 |
| | 33 | |



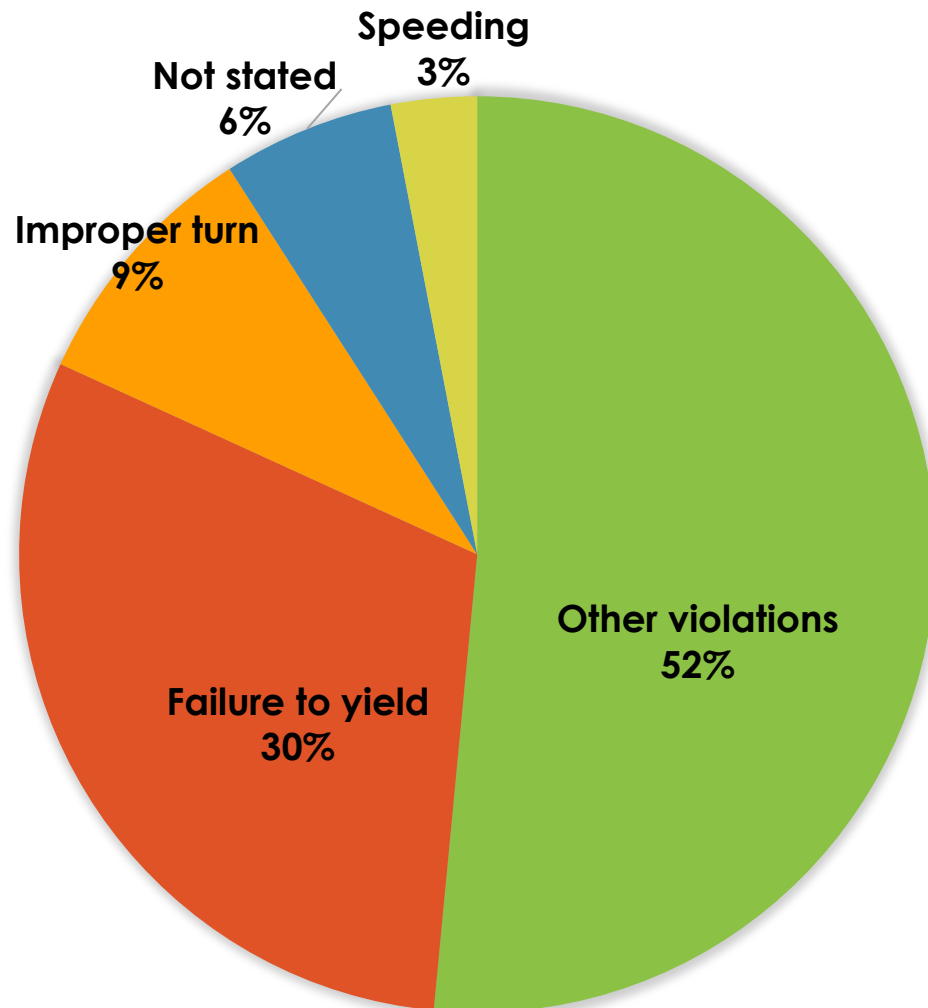
Bike Related Crash History Review (Crash Type)



| Collision Type | Number of Crashes | |
|----------------|-------------------|---------|
| Broadside | 26 | (78.8%) |
| Other | 4 | (12.1%) |
| Sideswipe | 2 | (6.1%) |
| Head on | 1 | (3%) |



Bike Related Crash History Review (Primary Collision Factor)

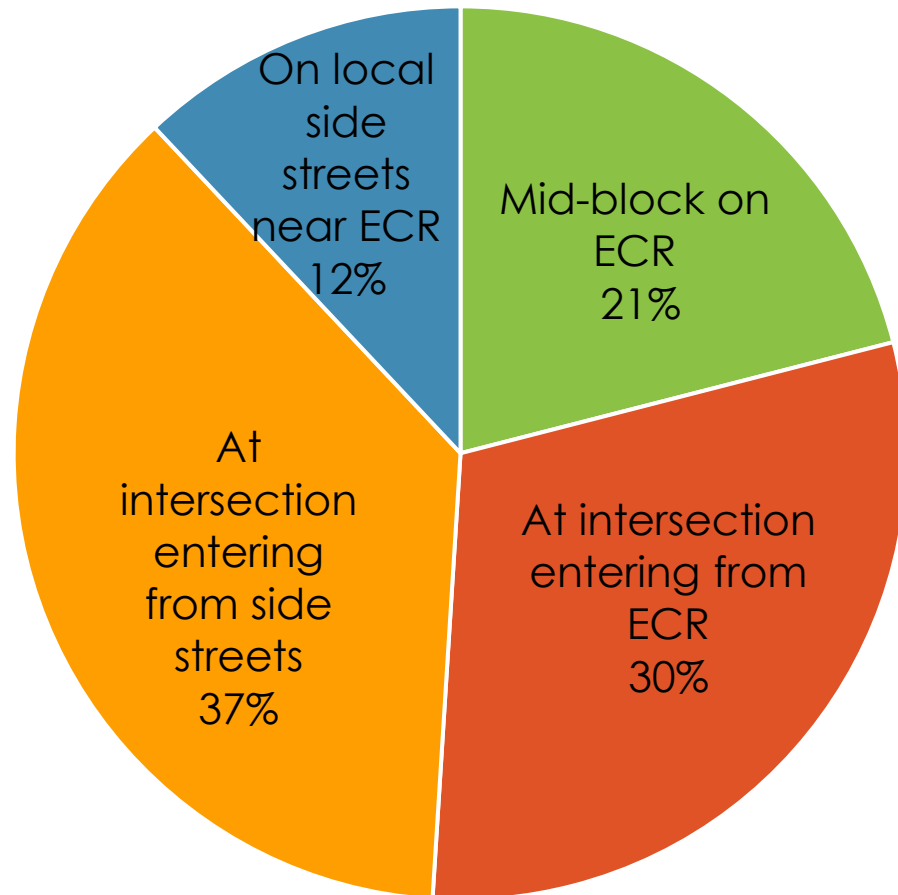


| Primary Collision Factor | Number of Crashes | |
|--------------------------|-------------------|---------|
| Other violations | 17 | (51.5%) |
| Failure to yield | 10 | (30.3%) |
| Improper turn | 3 | (9.1%) |
| Not stated | 2 | (6.1%) |
| Speeding | 1 | (3%) |



Bike Related Crash History Review

(Location of Collisions)



| Location | Number of Crashes |
|--|-------------------|
| Mid-block on El Camino Real | 7 (21%) |
| At intersection with bicyclists entering from El Camino Real | 10 (30%) |
| At intersection with bicyclists entering from side streets | 12 (37%) |
| On local side streets near the vicinity of El Camino Real | 4 (12%) |

Bike-Related Crash Pattern / Mitigation

1. Drivers' Failure to Yield
2. Bikes Going Against Flow of Traffic
3. Red Light Violation



Bike-Related Crash Pattern / Mitigation

1. Drivers' Failure to Yield

| Potential Underlying Issues | Potential Mitigations |
|--|--|
| <ul style="list-style-type: none">• Distraction• Visibility issue• Unclear right-of-way assignment | <ul style="list-style-type: none">• Upgrade / improve signs, markings• Ensure clear line of sight• Driver education• Provide bike boxes at select intersections |

Bike-Related Crash Pattern / Mitigation

2. Bikes Going Against Flow of Traffic

| Potential Underlying Issues | Potential Mitigations |
|---|--|
| <ul style="list-style-type: none">• Lack of designated area for bicycling• High-stress bike riding environment | <ul style="list-style-type: none">• Provide standard bike facility designating portion of roadway for bikes• Installing appropriate signs and markings to indicate direction of bike travel |

Bike-Related Crash Pattern / Mitigation

3. Red Light Violation

| Potential Underlying Issues | Potential Mitigations |
|---|---|
| <ul style="list-style-type: none">• Speeding• Not able to see signal equipment• Signal timing | <ul style="list-style-type: none">• Traffic enforcement• Education• Ensure signal visibility• Verify appropriate signal timing |



Proposed Bikeway Implementation on SR 82

Bikeway Design Considerations and Challenges

- Right of Way
- On-Street Parking
- Intersections, driveways, and transit Stops (VTA)



Proposed Bikeway & Right of Way along SR 82



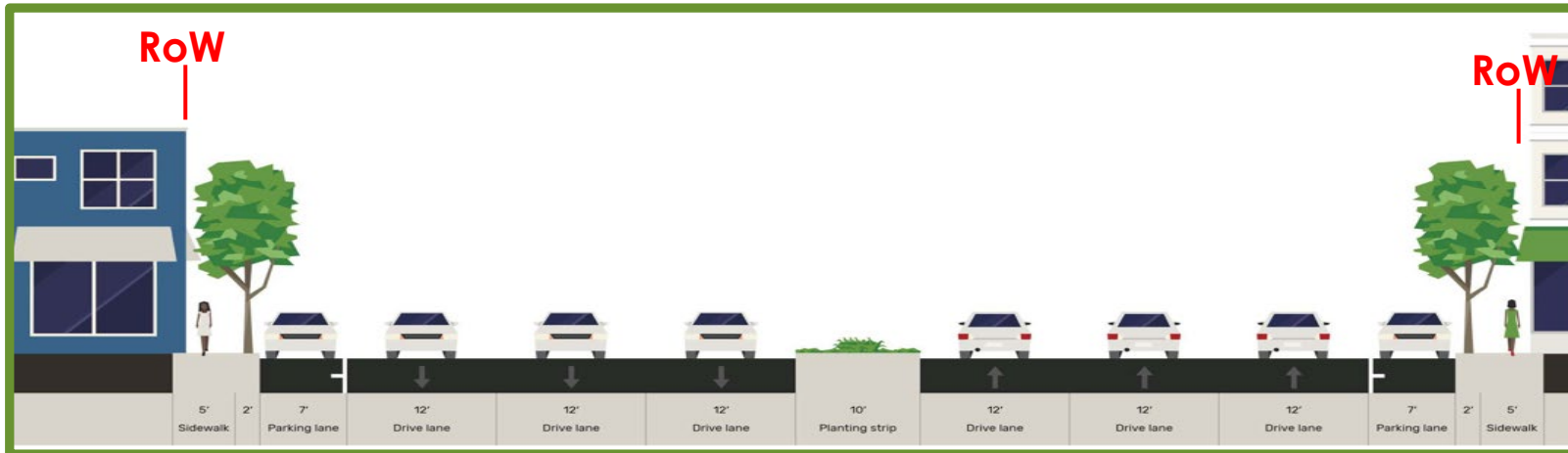
RoW = 130 ft



RoW = 121 ft



RoW = 100 ft



Right of Way Various:

- Back of sidewalk (TYPICAL)
- Face of curb
- Or Lip of Gutter



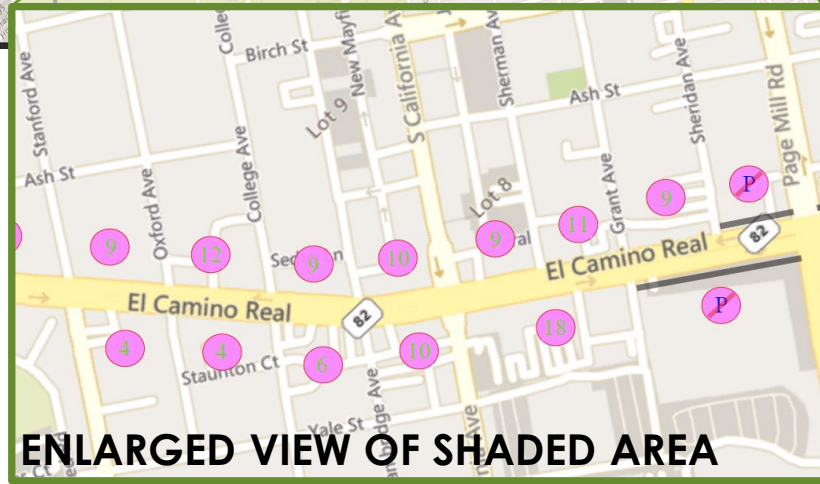
Proposed Bikeway & On-Street Parking along SR 82



NB near Los Robles Ave



SB near Churchill Dr



ENLARGED VIEW OF SHADED AREA



NB near Cambridge Ave

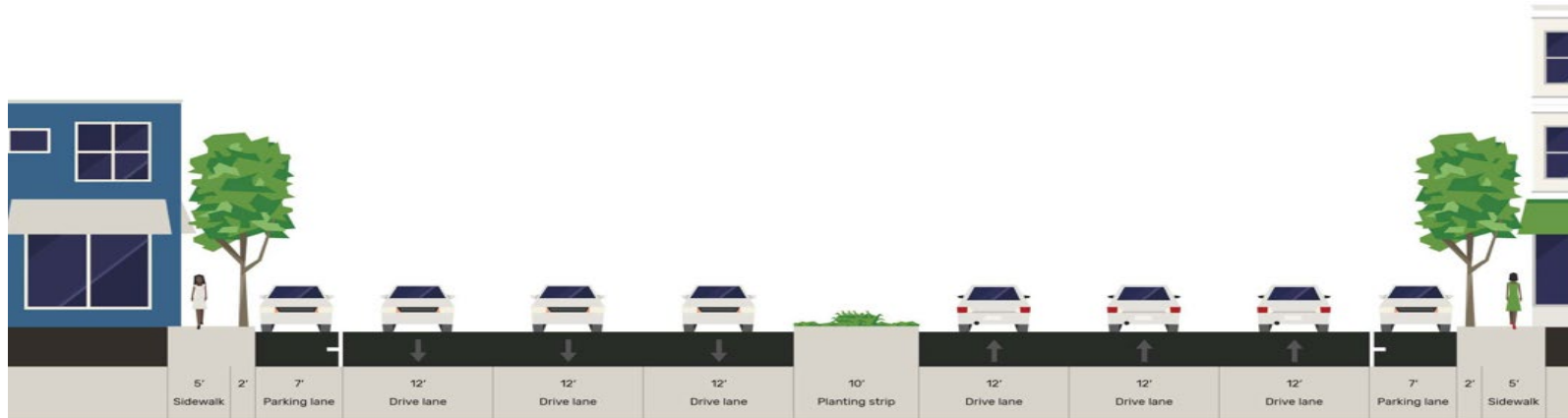


Proposed Bikeway & Conflict zones along SR 82

- Intersections & Driveways
- Transit Stops: Need space for buses to pull in and out



Proposed Bikeway Typical Cross-Section (Before and After)



Before



After

Class IV
(shown)





Proposed Bikeway implementation in Palo Alto

Engagement & Outreach



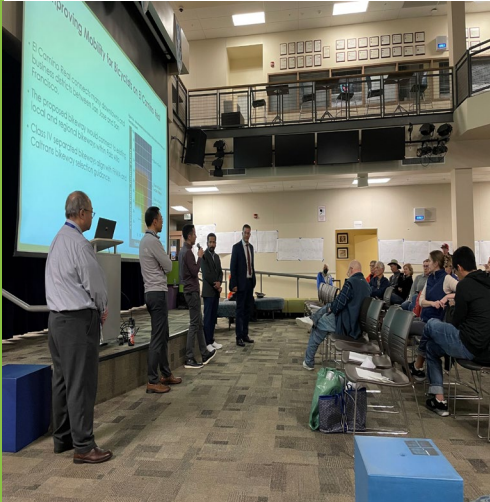
- Early 2019: Caltrans notified the SR 82 paving project and a complete street element(bike lanes) implementation opportunity to the city
- Feb 2021: Sent a letter inviting the city's participation in a Cooperative agreement for Caltrans to design and construct curb ramps upgrade part of SR 82 paving project; City did not participate
- Aug 2021: Received 65% plan review comments
- March 2022: Meeting with the city to coordinate the city's Arastradero plan and discussed the 95% plan review comments
- April 7, 2023: Shared the first draft bike plan with the city
- April 19, 2023: Meeting with the city to discuss the need and purpose for the bikeway in Palo Alto
- May 4, 2023: Meeting with SVBC to share the draft bikeway plan
- Aug 11, 2023: Meeting with the city to discuss a parking removal and outreach for the bikeway
- Nov 15, 2023: Meeting with the city to discuss the bikeway letter from Caltrans





Proposed Bikeway implementation in Palo Alto

Engagement and Outreach(continued)



- Nov 6, 2023: SR 82 Paving project Pre-construction meeting with local agencies
- Nov 14, 2023: SR 82 Community meeting with local agencies
- Feb 5, 2024: Started monthly stakeholder meeting for construction and encampment
- Feb 21, 2024: Meeting with the city to share the draft slides for the bikeway community engagement
- Feb 26, 2024: Meeting with the city to discuss the community engagement preparation
- Feb 29, 2024: Caltrans hosted community meeting for the bikeway in Palo Alto
- Mar 7, 2024: Joint Pedestrian and Bicycle Advisory Committee (PABAC)/City/School Transportation Safety Committee (CSTSC) Special Meeting
- Mar 13, 2024: Joint Planning and Transportation Commission/Human Relations Commission Meeting
- Mar 21, 2024: Meeting with the city and County for encampment removal
- Monthly: Construction Monthly Stakeholders meeting
- Apr 1, 2024: City Council Meeting



Proposed Bikeway

Additional considerations based on feedback



- Design Flexibility - DIB 94
- Intersection treatment: bike box, signs,.....
- Continuous bikeway
- No turn on red signs
- Incorporate best practices
- Speed management/enforcement
- Continue collaboration with the stakeholders throughout the design process
- Continue collaboration with the city and stakeholders on future Roadway Diet feasibility study.





Proposed Bikeway Implementation



-Safety enhancement: Safety monitoring report

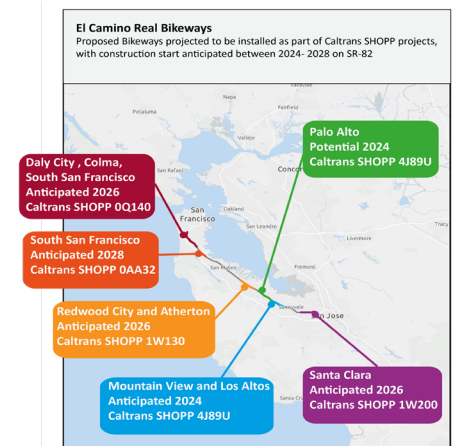
- Reduces the incidence of bicyclist riding against the flow of traffic
- Lessens potential for conflict between bikes and vehicles
- Improves traffic safety on El Camino Real
- FHWA information on safety benefits of bike lanes:
<https://highways.dot.gov/safety/proven-safety-countermeasures/bicycle-lanes>

-Funding and schedule opportunity

- Implement bikeway on El Camino Real with the on-going Caltrans pavement rehabilitation project

- Alignment with city and regional plans

- **Network & connectivity** between various communities along El Camino Real



THANK YOU!
QUESTIONS/COMMENTS?

