Caltrans Mission

*Provide a safe, sustainable, integrated and efficient transportation system to enhance California’s economy and livability*
- Caltrans mission, goals, and targets on safety, health, sustainability
  - 3x biking trips
  - 2x walking and transit trips

- Statewide plan with vision, goals, and objectives to support walking and biking
  - Recommends district-level Active Transportation Plans

- District-level plan
- Identifies bicycle needs and prioritizes improvements on the State network
- Guides future investments by Caltrans and partner agencies
Process

- Data collection
- Existing bicycle networks

- Where is there demand for bicycling?
- Where are there challenges?

- What projects can improve bicycling?

- Which projects will yield the greatest benefits relative to the cost of implementation?
Public and Stakeholder Outreach

- Technical Advisory Committee
- Online mapping survey
- Focus groups
- Community workshops
- Local bicycle advisory committees
- Stakeholder meetings
- Online project commenting tool
Needs Analysis

Bicycle demand and challenges

To improve bicycle travel

Greatest benefit relative to cost

Demand and Use

Challenges and Barriers
Demand

Identify desire lines based on MTC Model

California Household Travel Survey bicycle trip rates
Bicycle Collisions

• Factors
  o Historic crash data
  o Physical street and roadway characteristics

• Data Sources
  o SWITRS* collision data
  o TASAS** database for physical street and road characteristics

* SWITRS: Statewide Integrated Traffic Records System
** TASAS: Traffic Accident Surveillance and Analysis System
Level of Traffic Stress (LTS)

Measures quality of facility, based on user type:
- LTS 1 – appropriate for all ages and abilities
- LTS 2 – “interested but concerned”
- LTS 3 – “enthused and confident”
- LTS 4 – “strong and fearless”

Factors:
- Physical characteristics (shoulder width, # of lanes, etc.)
- Bikeway type (if any)
- Traffic volumes
- Traffic control type (intersections)

Jennifer Dill And Nathan Mcneil, Understanding Types of Cyclists Nationally, 2016 - adapted from Toward an Active California
Permeability

• Frequency and availability of low-stress crossings
• Observed at ¼-mile, ½-mile, and 1-mile segments
• Sources:
  • Level of Traffic Stress (LTS)
  • OpenStreetMap data

Case Study:
FHWA Guidebook for Measuring Multimodal Network Connectivity
Equity

- MTC Communities of Concern
- CalEnviroScreen 3.0
- Percent of project in a disadvantaged community

Railroad Avenue - State Route 4, Pittsburg
Project Identification

What is a Project?
- Conceptual proposal
- Locally planned improvement
- Requires further study and coordination with local partners and stakeholders

Project Types:
- Corridor improvements
- Interchange improvements
- Conventional highway crossings
- Separated crossings

Sources:
- Local plans and studies
- Meetings with local advisory committees, staff, and stakeholders
- Recommended based on needs analysis
Project Prioritization

Factors:
- demand
- supply
- safety
- public input
- project quality
- cost

Top Tier
- High Demand
- High Need
- Equity/Local Priority

Mid Tier
- Medium Demand
- Medium Need
- Equity/Local Priority

Low Tier
- Lower Demand
- Lower Need
- Equity/Local Priority

Equity/Local Priority
Final Products

• Plan Report
• Appendices
  o A. Project List
  o B. Vision, Goals, & Objectives
  o C. Public Engagement Summary
  o D. Needs Analysis
  o E. Prioritization Methodology
• Bikeway Classification Brochure
• Web Map
• Web page: [www.dot.ca.gov/d4/bikeplan](http://www.dot.ca.gov/d4/bikeplan)
<table>
<thead>
<tr>
<th>Location</th>
<th>Shoreline Hwy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference No.</td>
<td>Mar-101,131-X01</td>
</tr>
<tr>
<td>City</td>
<td>Strawberry, Alto (unincorporated)</td>
</tr>
<tr>
<td>Comment</td>
<td>Dedicated bikeway on Tiburon Blvd across US 101</td>
</tr>
<tr>
<td>Connection(s)</td>
<td>Mill Valley-Sausalito Path, Tiburon Blvd, Tiburon Linear Park (Bay Trail)</td>
</tr>
</tbody>
</table>

- **Location**: I-80 Central Avenue
- **Reference No.**: CC-80-X04
- **City**: Richmond
- **Comment**: Provide Class I path under I-80 freeway at Central Ave.
- **Connection(s)**: BART, Bay Trail

www.dot.ca.gov/d4/bikeplan
Location: El Camino Real
Reference No.: SM-82-C09
City: Redwood City
Comment: Class IV bikeways on El Camino Real – Grand Boulevard Initiative streetscape plan between Maple & Charter Streets
Connection(s): Various

Location: El Camino Real and Embarcadero Rd
Reference No.: SC-82-X04
City: Palo Alto
Comment: Protected intersection
Connection(s): Corridor improvements on Embarcadero Road

www.dot.ca.gov/d4/bikeplan
Implementation

Pathways for implementation:

• State Highway Operation and Protection Program (SHOPP)
  • Asset Management – complete streets elements
  • Identify bicycle improvements during project scoping

• Other programs
  • Active Transportation Program (ATP)
  • Senate Bill 1 programs
  • Locally-sponsored projects

www.dot.ca.gov/d4/bikeplan
Implementation

Next Steps:

• Track bike improvements in District 4
• Training for District and local staff
• Initiate bicycle count program
• Identify and promote best practices
• Update project list and web map as needs and opportunities are identified
• Continue stakeholder engagement

www.dot.ca.gov/d4/bikeplan
District 4 Pedestrian Plan

- Kicks off in late 2018
- Outreach in every Bay Area county
- Develop priority project list
Pedestrian Safety Monitoring (Pilot) Program 2016/2017

- Identify and investigate High Collision Concentration Locations (HCCLs)
- Implement pedestrian safety countermeasures:
  - Enhanced pavement marking and signing
  - Lighting
  - Accessible pedestrian signal (APS)
  - Rectangular Rapid Flashing Beacon (RRFB)
  - Pedestrian hybrid beacon (PHB)

http://www.dot.ca.gov/d4/pedestrianbeacons/
Bicycle Safety Improvement Monitoring (Pilot) Program 2018/2019

- Identify and address bicyclist-involved high collision concentration locations (HCCLs) and corridors
- Long-term goal of substantially reducing bicyclist fatalities and serious injuries on the California State Highway System
- Pilot Bicycle Road Safety Audit on El Camino Real, Redwood City
Web Page:
www.dot.ca.gov/d4/bikeplan

Contact:
sergio.ruiz@dot.ca.gov