



San Pablo Avenue Complete Streets Study

TWIC Meeting
May 8, 2017

Agenda

1. Study Overview

2. Developing Alternatives

3. Alternatives Overview

- Alternative 1: On-Street Bike Path
- Alternative 2: Shared Use Path
- Alternative 3: Widened Shared Use Path

4. Alternatives Evaluation

5. Recommended Alternative

6. Next Steps



Study Overview

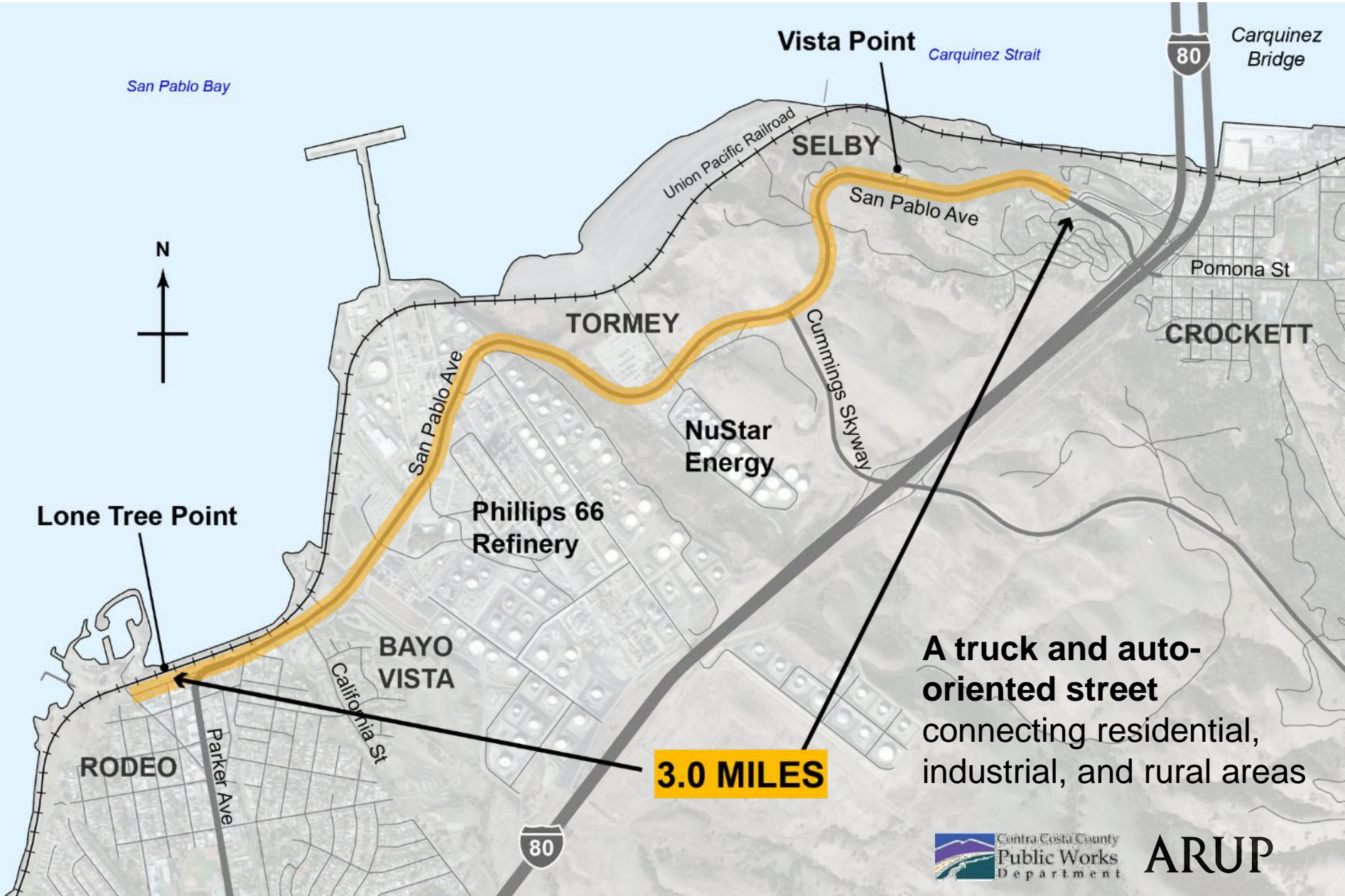
Study Objectives

- Incorporate a “**Complete Street**” with **bicycle, pedestrian, and transit facilities** on San Pablo Avenue between Rodeo and Crockett.
- Close an **existing gap** in the Bay Trail.
- Identify a **preferred alternative** and ultimate **set of improvements** for the roadway.



San Pablo Ave: looking south towards Refinery Rd

San Pablo Avenue Project Study Area



Study Schedule

May – September 2015

October 2015 – Ongoing

February 8, 2016

Spring 2016

Summer 2016

September 29, 2016

October 2016 – February 2017

March 2017 – April 4, 2017

May 8, 2017

TBD

Data Research/Traffic Analysis

Public Outreach

Community Workshop #1

Develop Alternatives

Alternative Analysis

Community Workshop #2

Prepare Feasibility Report

Draft Feasibility Report
available for review/comments

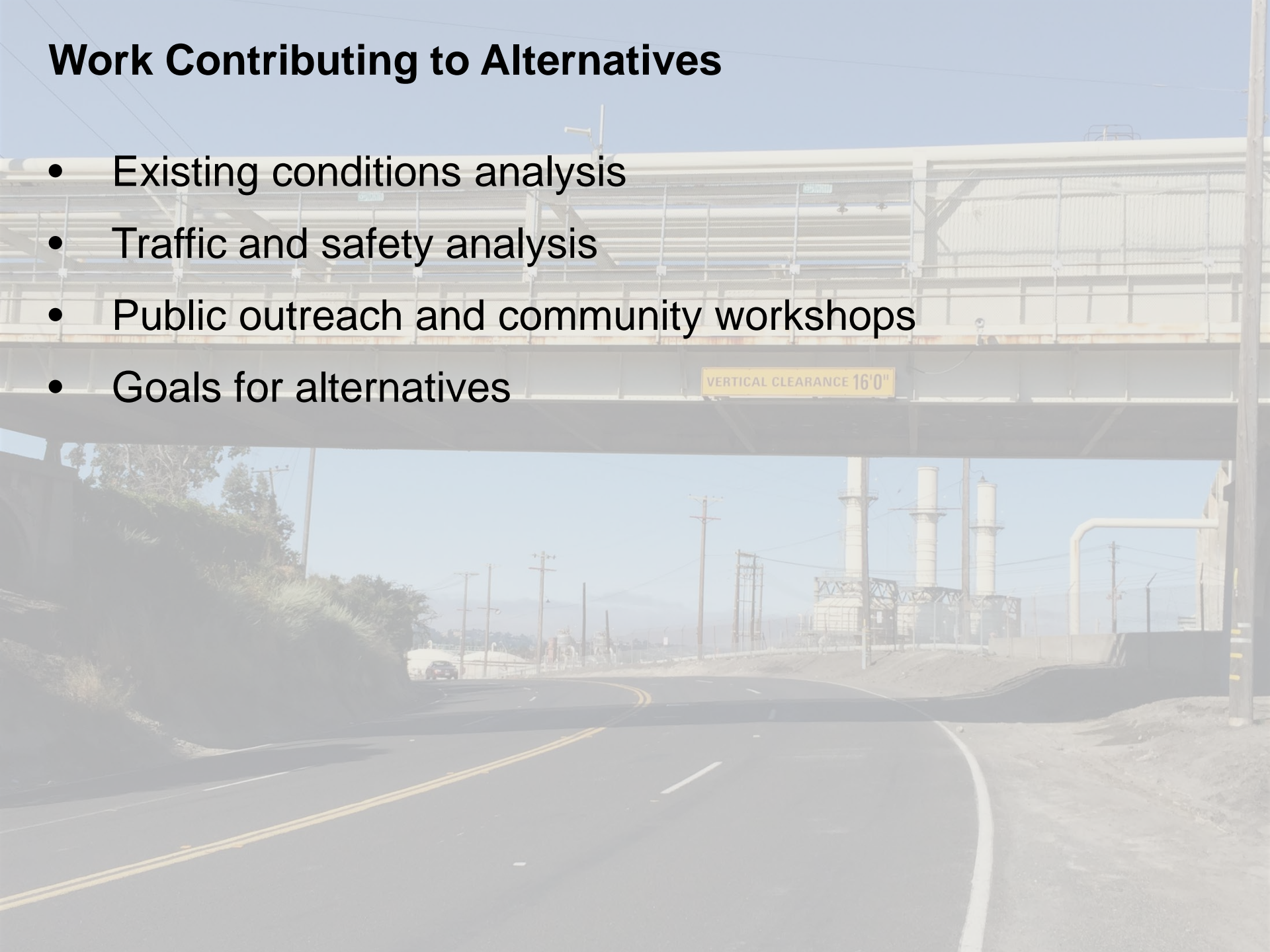
TWIC

**Present Final Report to
Board of Supervisors**

Developing Alternatives

Work Contributing to Alternatives

- Existing conditions analysis
- Traffic and safety analysis
- Public outreach and community workshops
- Goals for alternatives



Goals for Alternatives

1. Implement a Complete Street design
2. Qualify for the Bay Trail
3. Enhance pedestrian safety and experience
4. Enhance bicycle safety and experience
5. Enhance automobile safety and experience
6. Enhance truck safety and experience
7. Enhance transit safety and experience
8. Maintain acceptable traffic operations
9. Minimize physical and environmental impacts
10. Provide a cost effective solution

Goal #1. Implement a Complete Street Design

Provide continuous bicycling and pedestrian facilities

- Widen or convert road space by implementing a “road diet”
- Provide separation between vehicular traffic and cyclists/pedestrians

Improve access to transit facilities



Goal #2. Qualify for the Bay Trail

To qualify as a Bay Trail segment, the corridor must accommodate both pedestrians and cyclists



Goal #3. Enhance pedestrian safety and experience

Sidewalks only exist along 10% of the corridor

- Continuous pedestrian facilities provide safe walking paths for all users
- Promotes recreation between Lone Tree Point and the Carquinez Bridge



Goal #4. Enhance bicycle safety and experience

Bike lanes only exist along 10% of the corridor

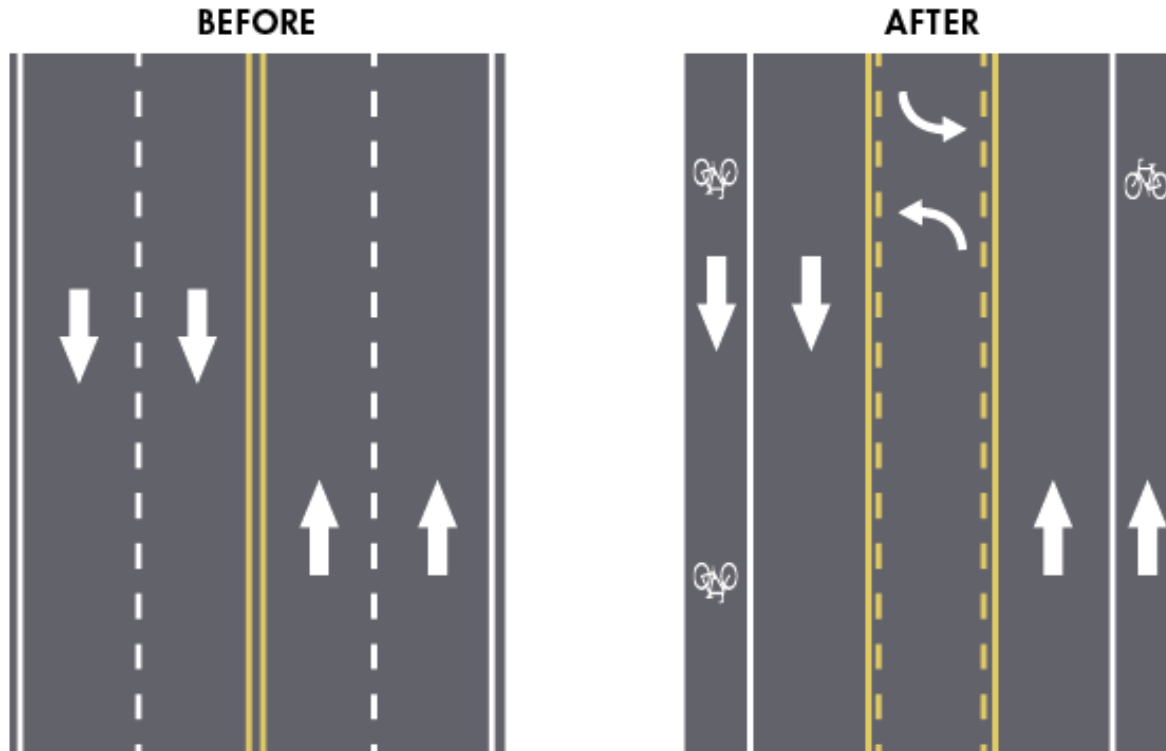
- Important for enhancing the safety and comfort of cyclists
- Narrow shoulders on existing roadway do not provide a sufficient buffer between cyclists and vehicles



Goal #5. Enhance auto safety and experience

“Road Diets” provide safety benefits for all users

- Four-lane undivided arterials have higher crash rates because of higher speeds
- Road diets help to slow speeds, which reduce collision severity
- Providing separated facilities reduces conflicts between autos and pedestrians/cyclists

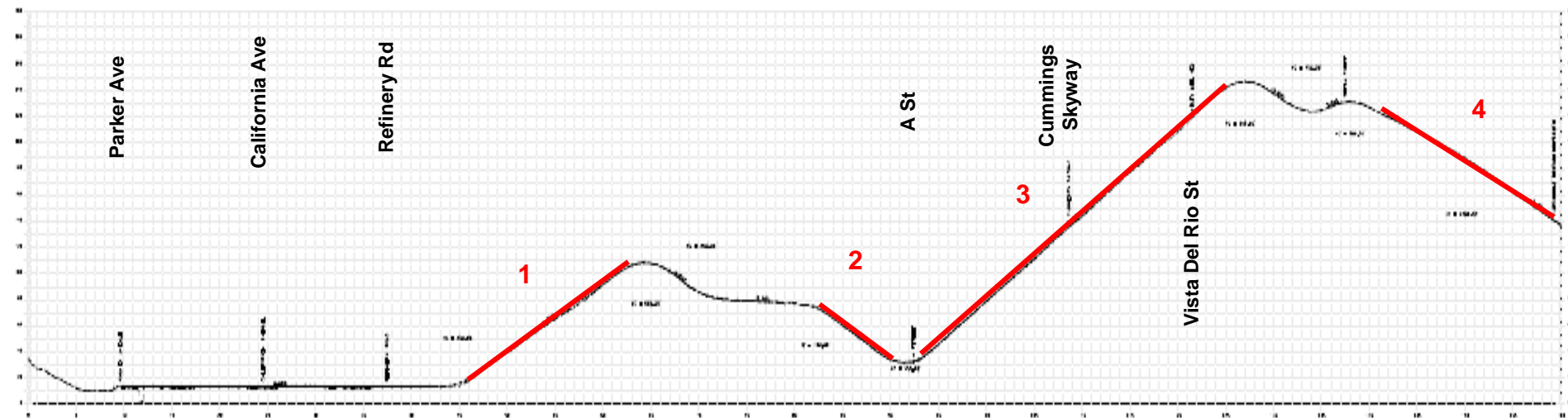


Goal #6. Enhance truck safety and experience

Provide safe access for trucks driving to and from the refineries

- Two-way left-turn lanes and dedicated left-turn pockets provide safe places for trucks to maneuver
- Truck climbing lanes are provided on two of the three key segments to allow safe passing of slow moving vehicles

Sections 1, 2, and 3 have a higher proportion of trucks
Section 4 has very low truck volumes



Goal #7. Enhance transit safety and experience

Provide safe and accessible bus stops

- Provide safe places for buses to stop and passengers to access the stop



Goal #8. Minimize traffic impacts

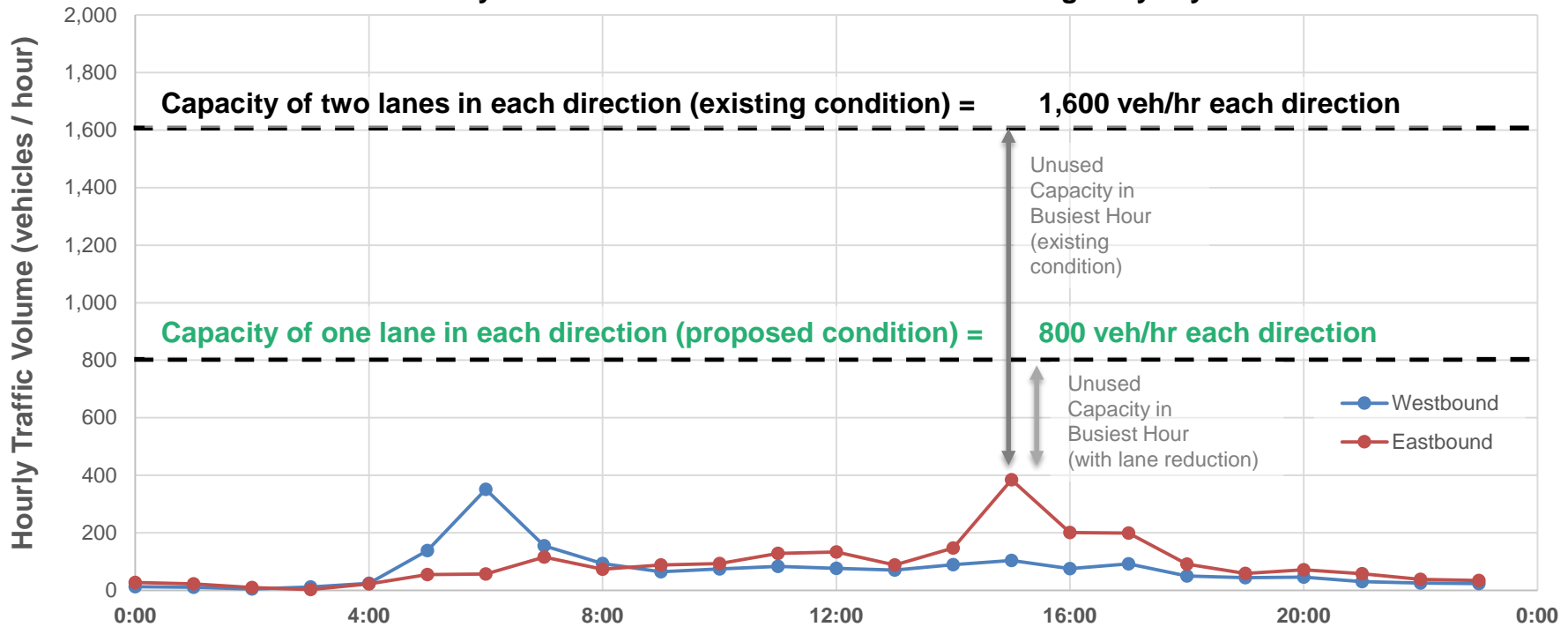
There is sufficient traffic capacity in the corridor to reconfigure the roadway

- Very low volumes for a four lane road (two-lanes each direction)
- During the peak hour, only 25% of the road capacity is being used
- Diversion from I-80 and emergency access should not be an issue

Corridor Average Daily Traffic

Segment	Average Daily Traffic (vehicles)
San Pablo Ave, West of Cummings Skyway	3,900
San Pablo Ave, East of Cummings Skyway	2,200
San Pablo Ave, Hercules	32,000

Hourly Traffic on San Pablo Ave West of Cummings Skyway



Goal #9. Minimize physical and environmental impacts

Minimize the impact of the design on property owners and utilities, as well as environmental factors such as air, water, noise, biological, etc.



Goal #10. Provide a cost effective solution

Implement a Complete Street concept that is cost effective and consistent with County and State standards



Alternatives and Evaluation

Alternatives

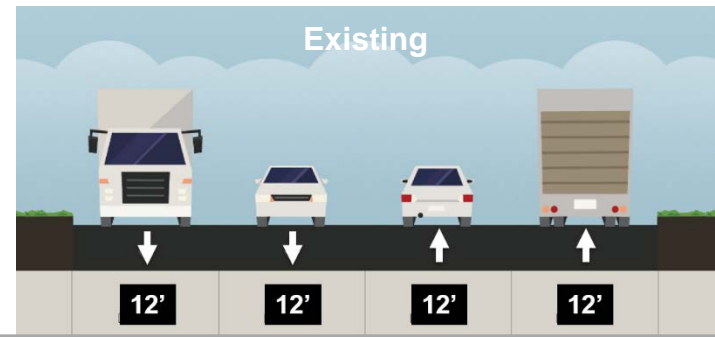
Develop **three** alternatives that meet as many of the goals as possible

Develop **conceptual designs** and **cost estimates**

Evaluate against a broad **range of criteria**

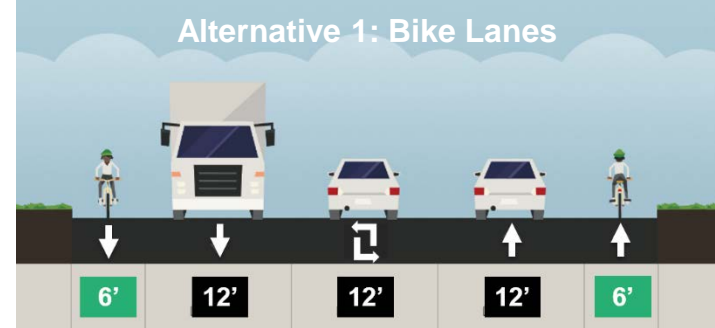
Existing

- No bicycle or pedestrian facilities
- No left-turn lanes



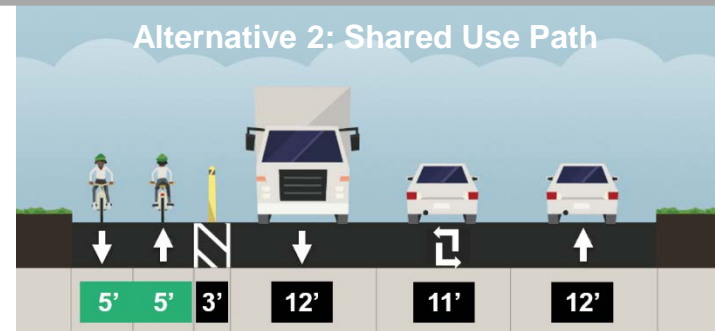
Alternative 1: Bike Lanes

- Build on-street bike lanes
- No sidewalks
- Remove one travel lane in each direction with center left-turn lanes and truck climbing lanes
- Minimal right-of-way / cost impact



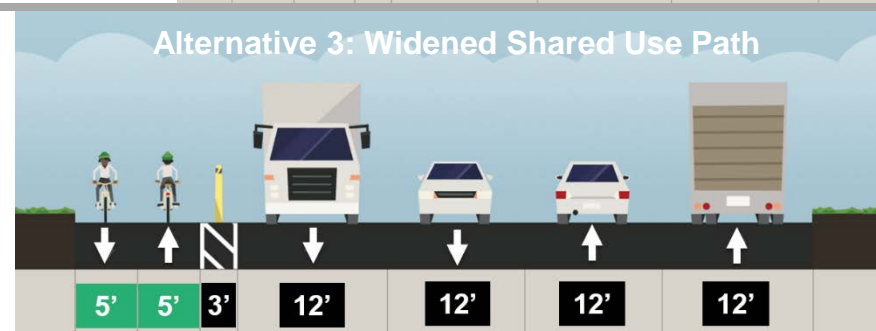
Alternative 2: Shared Use Path

- Build a two-way shared use path on the north side
- Remove one travel lane in each direction with center left-turn lanes and truck climbing lanes
- Minimal right-of-way / cost impact



Alternative 3: Widened Shared Use Path

- Build a two-way shared use path on the north side
- No removal of travel lanes
- Significant right-of-way / cost impact



Alternative Evaluation Matrix

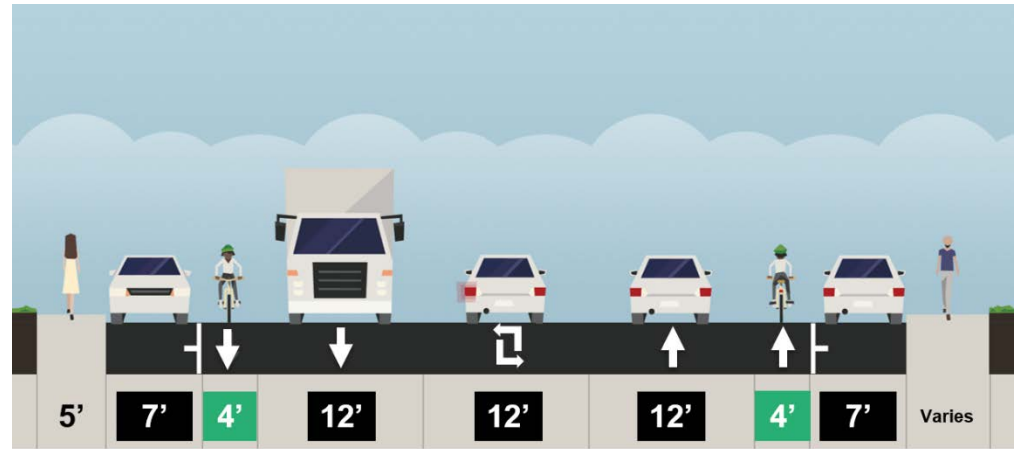
Metric	Existing (4 vehicle lanes)	Alternative 1: Bike Lanes (3 lanes+bike lanes)	Alternative 2: Shared Use Path (3 lanes+path)	Alternative 3: Widened Shared Use Path (4 lanes+path)
Overall Complete Streets Assessment	POOR	MODERATE	GOOD	GOOD
Bay Trail Qualification	NO	NO	YES	YES
Pedestrian Safety and Experience	POOR	POOR	GOOD	GOOD
Bicycle Safety and Experience	POOR	MODERATE	GOOD	GOOD
Automobile Safety and Experience	MODERATE	GOOD	GOOD	MODERATE
Truck Safety and Experience	MODERATE	GOOD	GOOD	MODERATE
Transit Safety and Experience	MODERATE	MODERATE	GOOD	GOOD
Traffic Level-of-Service (Future Conditions)	GOOD	GOOD	GOOD	GOOD
Right-of-Way Impacts	NONE	MINIMAL	MINIMAL	SIGNIFICANT
Utilities Impacts	NONE	MINIMAL	MINIMAL	SIGNIFICANT
Environmental Impact Likelihood	NONE	UNLIKELY	UNLIKELY	POSSIBLE
Cost	\$0	\$3.3 million	\$8.8 million	\$23.2 million

Recommended Alternative

Recommended Alternative: Hybrid

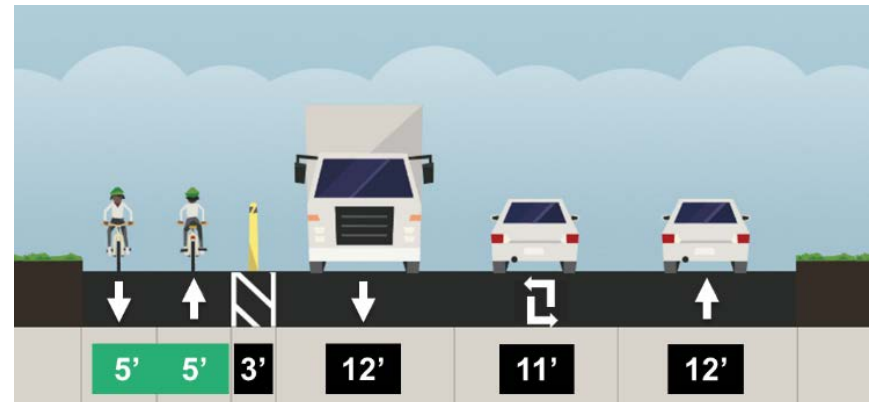
West of California Street: Bike Lanes

- Bike lanes (Alternative 1) through Lone Tree Point
- Add sidewalks to close gaps
- No change to the roadway or parking on San Pablo Avenue

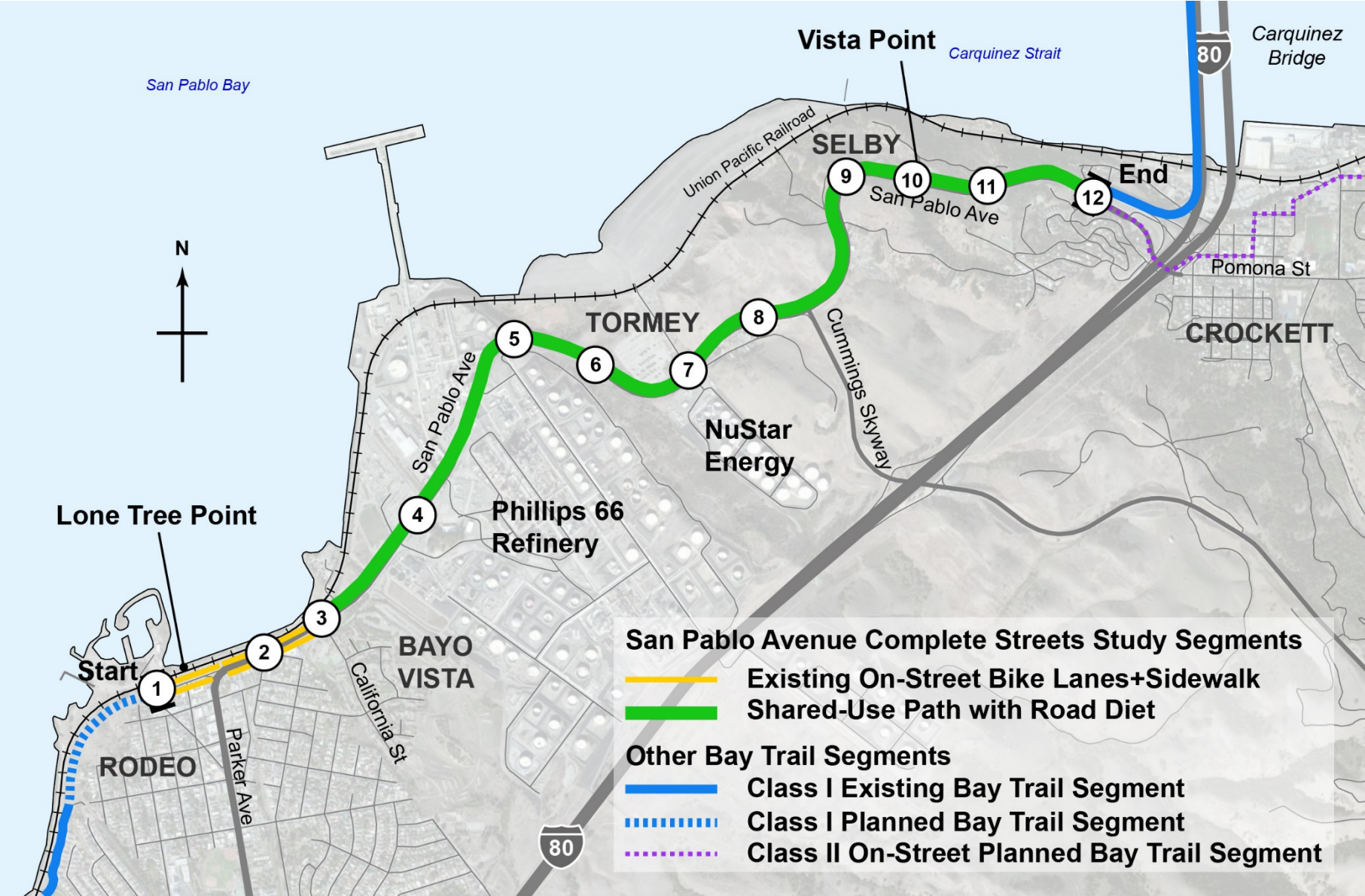


East of California Street: Shared Use Path

- “Shared Use Path” (Alternative 2)
- Remove one travel lane
- Add a 10’ two-way shared use path on north side
- Center lane: two-way left-turn lane, median, truck climbing lane



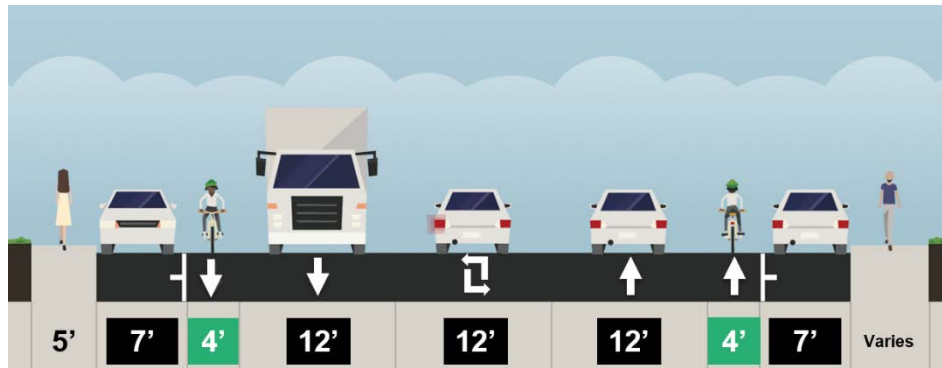
Recommended Alternative: Hybrid



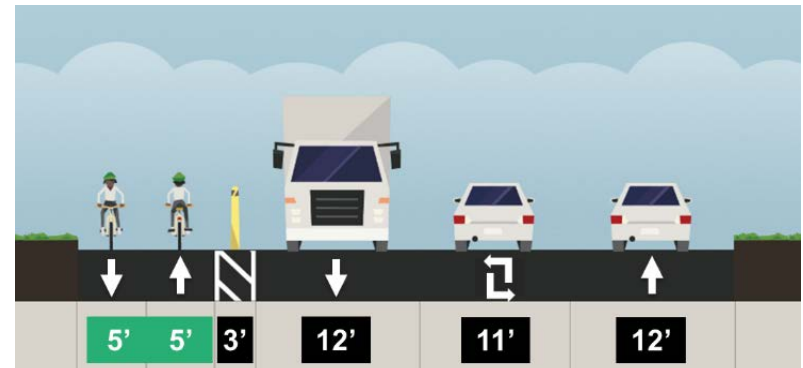
Recommended Alternative: Hybrid

- Creates continuous bicycle and pedestrian facilities
- Upgrades existing facilities west of California St by adding sidewalks, closing bicycle facility gaps, and preserving on-street parking
- Significantly improves safety for all users
- Provides truck climbing lanes, center turn lanes, and turn pockets for much of the corridor
- Minimal right-of-way, utilities, and environmental impacts expected
- \$8.2 million cost

West of California St: Bicycle Lanes



East of California St: Shared Use Path



Conclusions/Questions

Conclusions

- Recommend the Hybrid alternative
- Satisfies the majority of study objectives
- Meets the County's adopted Complete Streets policy

Questions?