

Bay Avenue Corridor Study

Public Meeting
October 28, 2025

Kimley»Horn



What is the Bay Avenue Corridor Study?

A planning study used to assess current and future needs of the corridor to improve mobility, safety, operations, and economic development for all users.



Bay Avenue Corridor Study Objectives

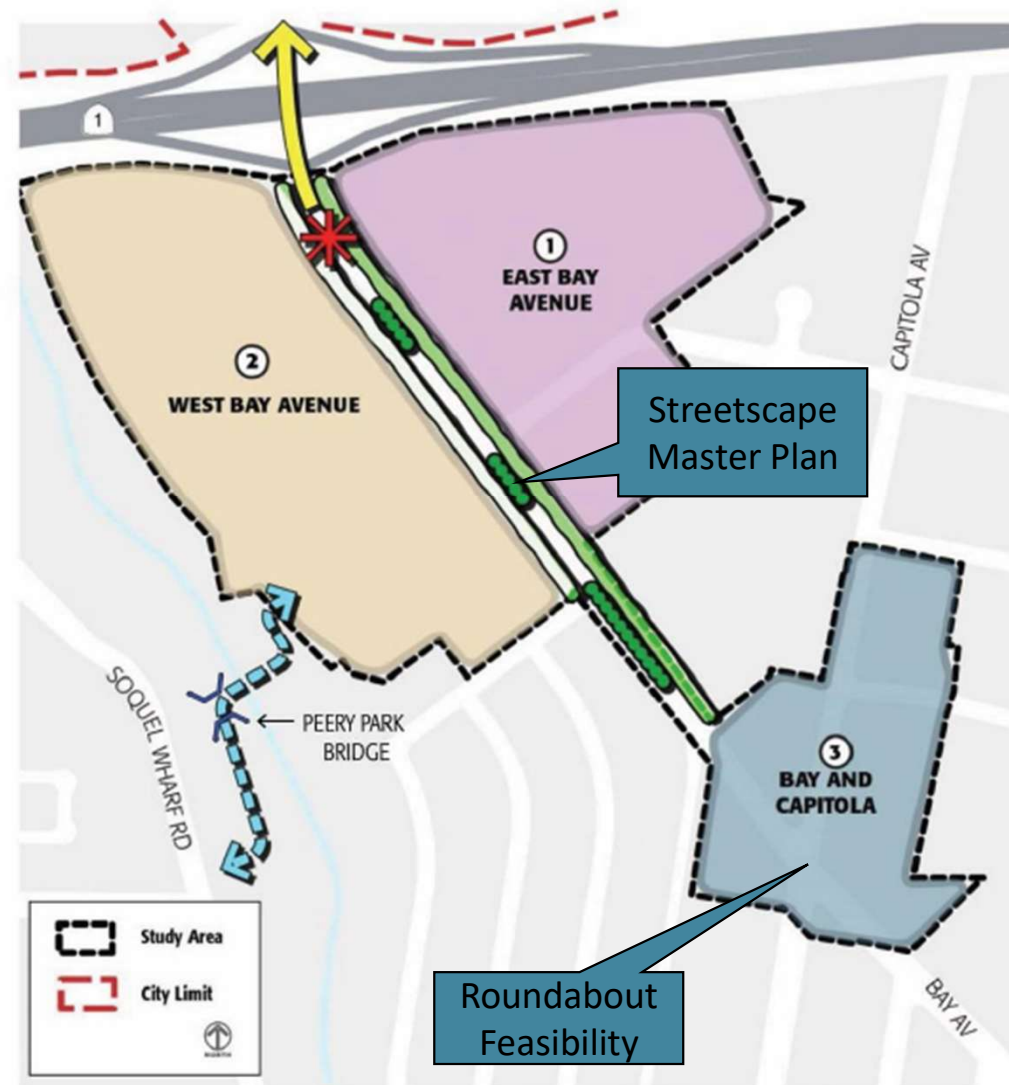
Determine feasible long-term improvements for the Bay Avenue corridor between Highway 1 and Park Avenue

1. Enhance access and safety for all users including vehicles, pedestrians, and cyclists
2. Maintain acceptable traffic operations along the corridor
3. Compliment the Bay Avenue Vision, mobility, and economic goals in the Capitola General Plan
4. Prepare a long-term plan to pursue grant funding opportunities

Capitola General Plan

- Goal LU-10:
 - Maintain and enhance Bay Avenue commercial district as a thriving destination with businesses that serve Capitola residents and visitors.
- Goal MO-4:
 - Provide a roadway system that enhances community aesthetics and promotes a high quality of life

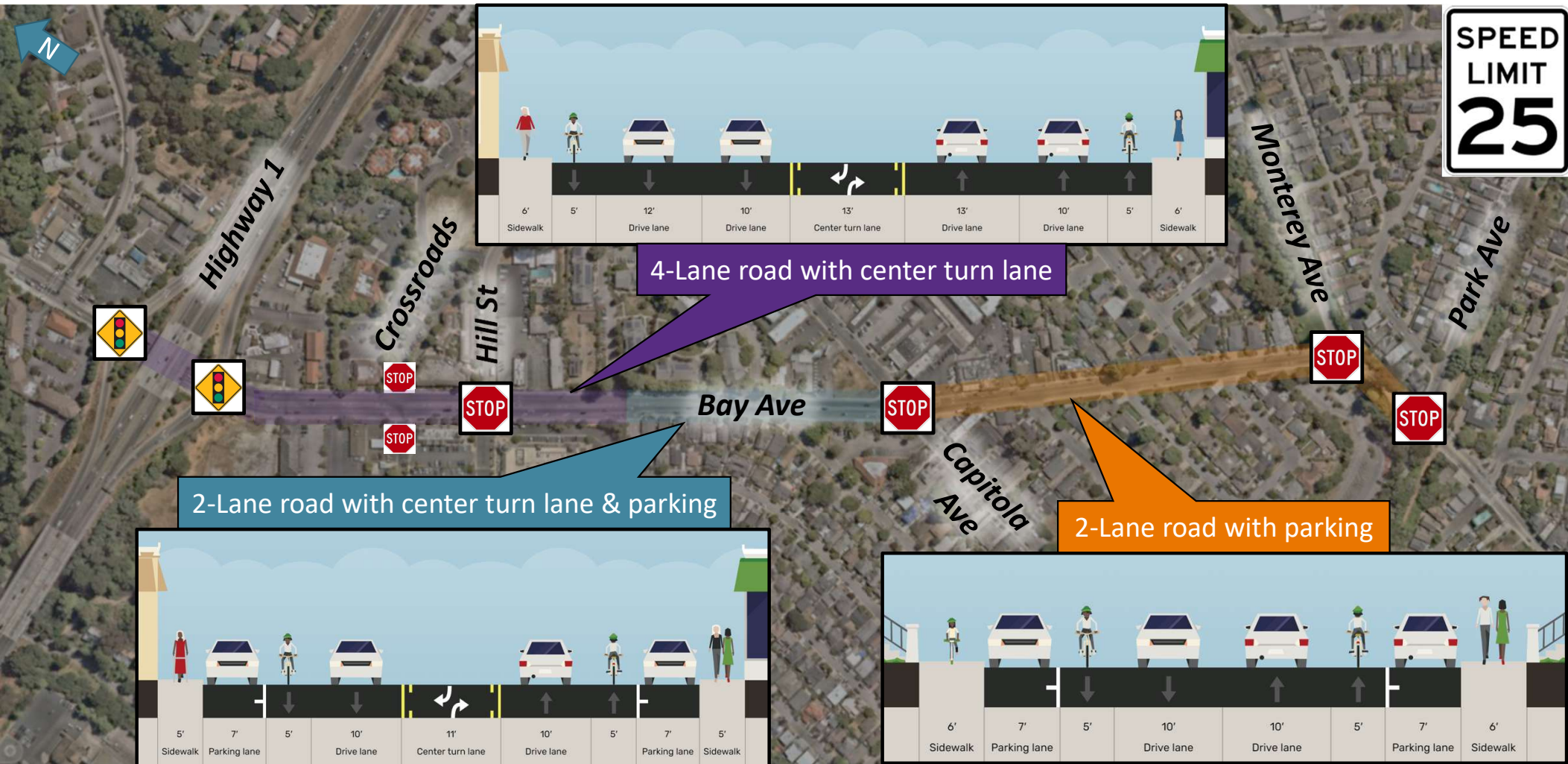
FIGURE LU-7 BAY AVENUE VISION



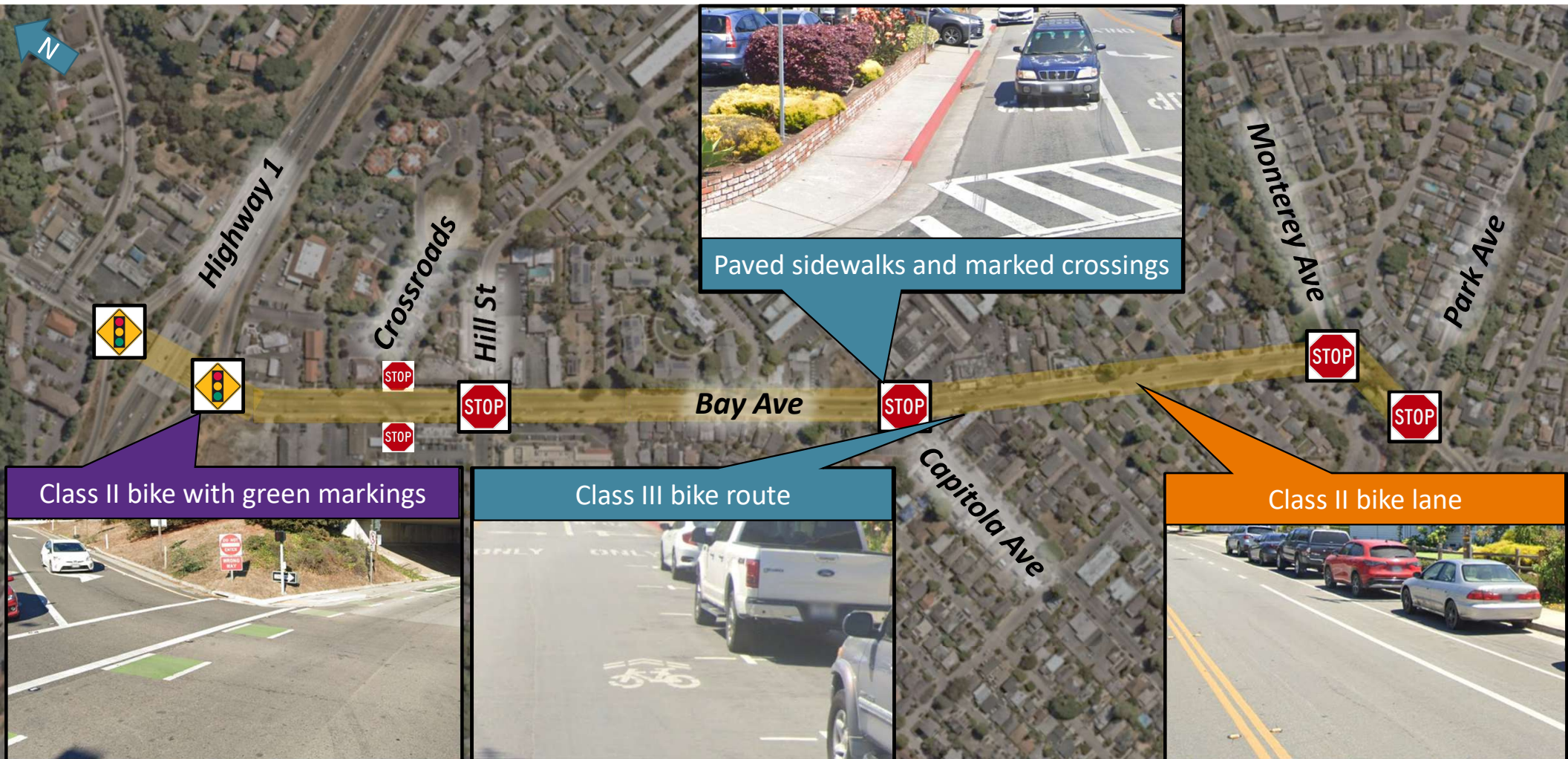
Bay Avenue from Highway 1 to Park Avenue



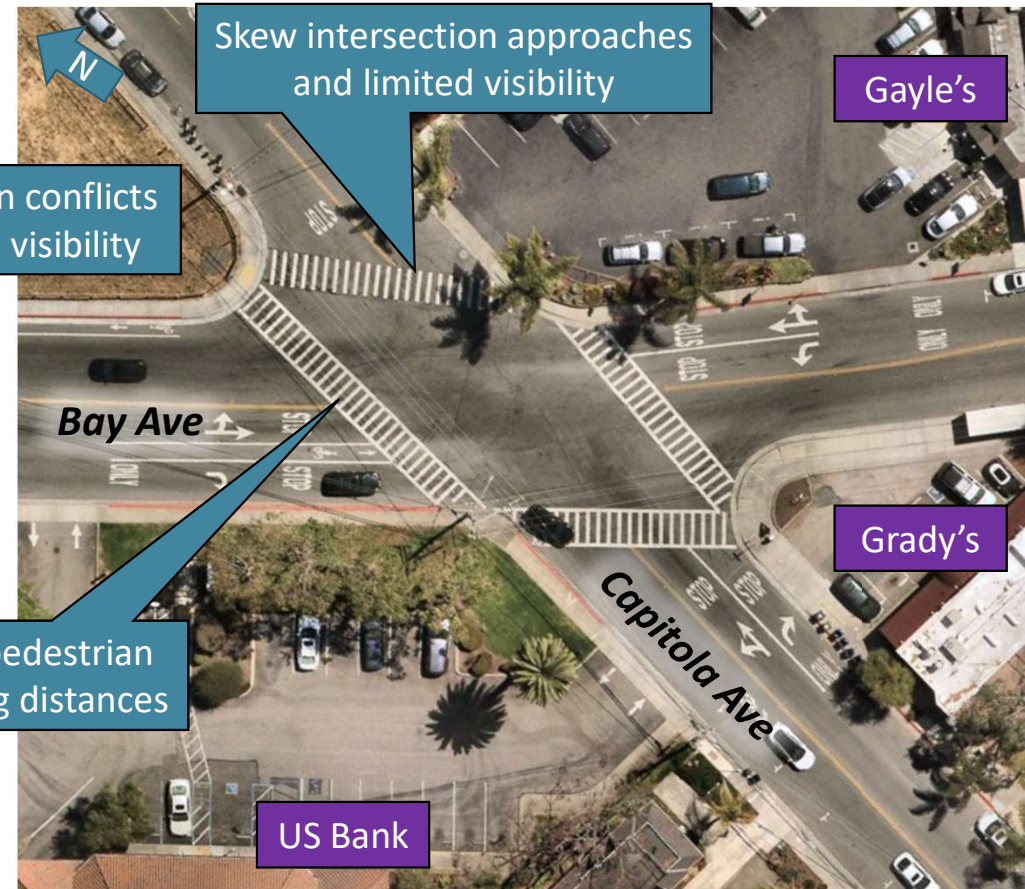
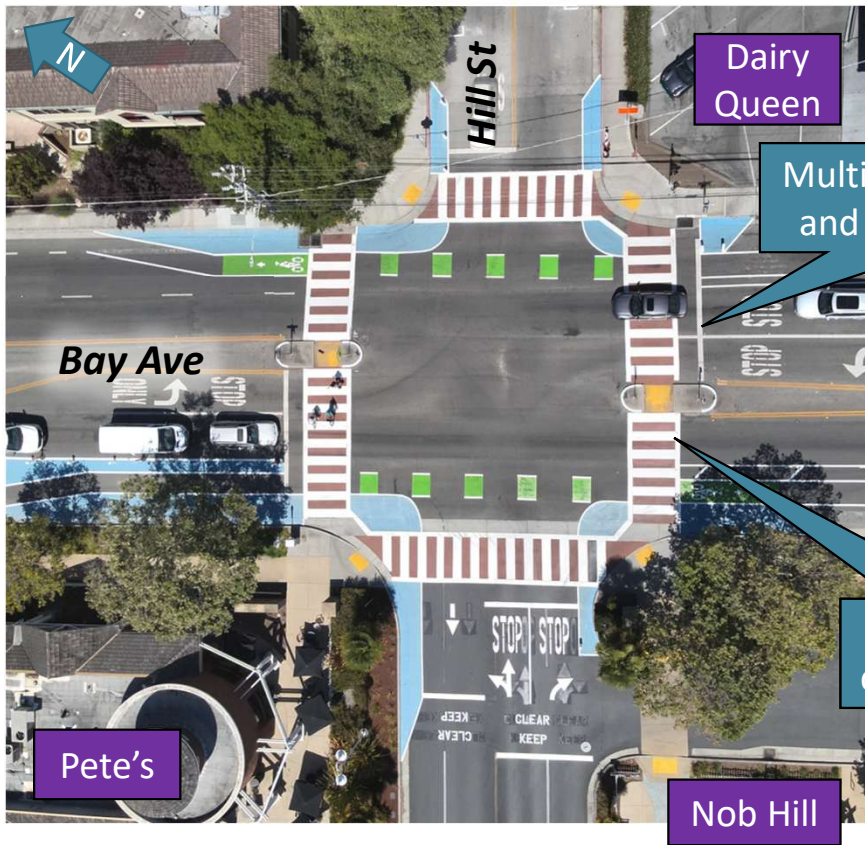
Existing Conditions



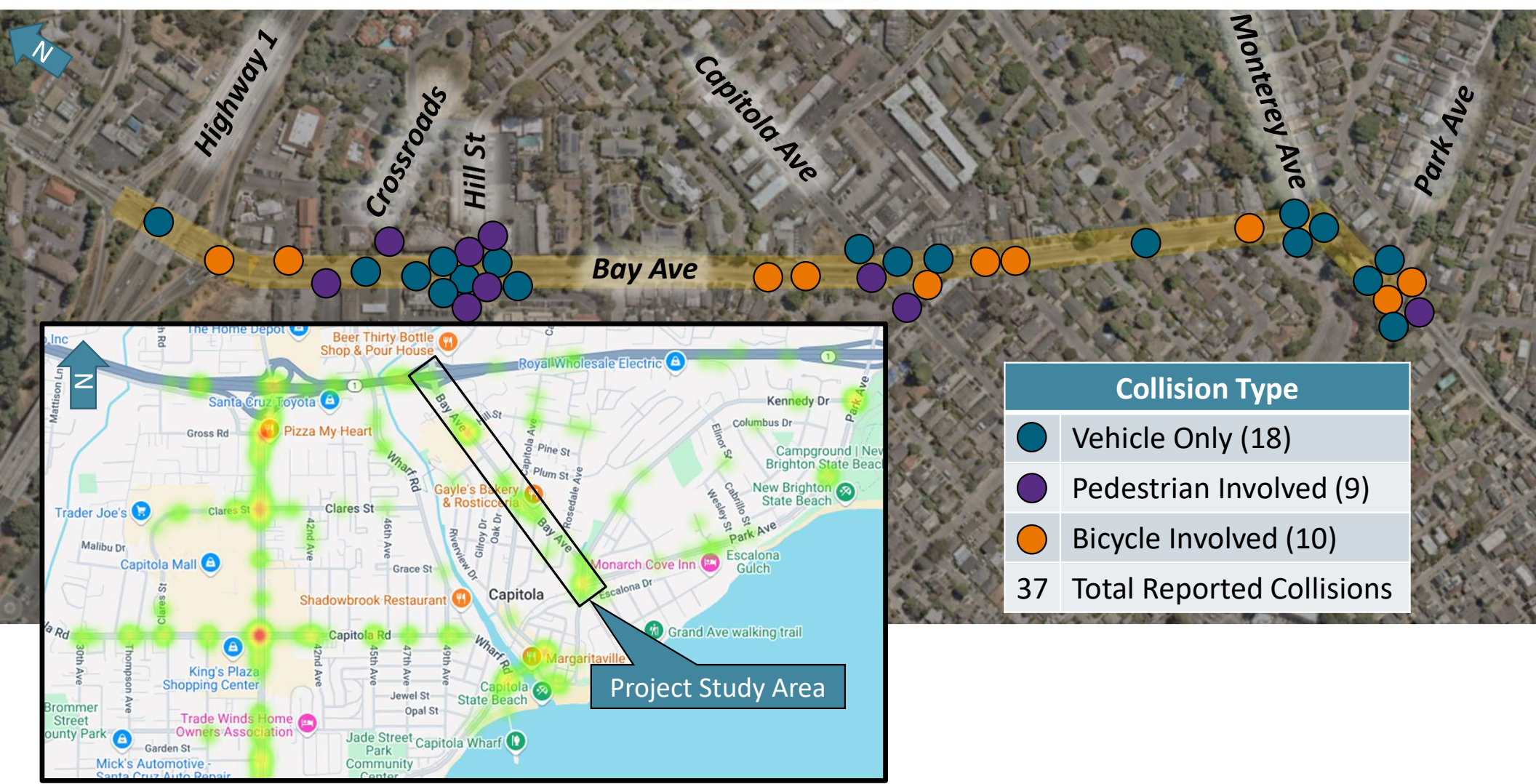
Existing Conditions – Bike & Pedestrian



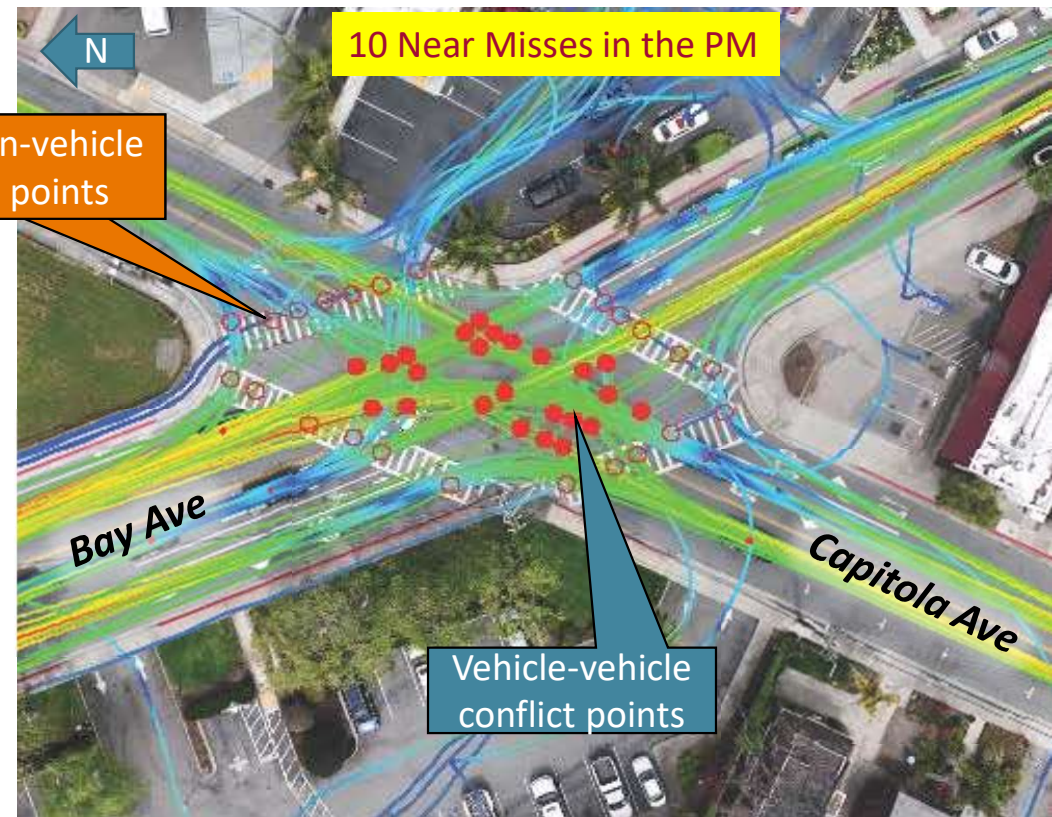
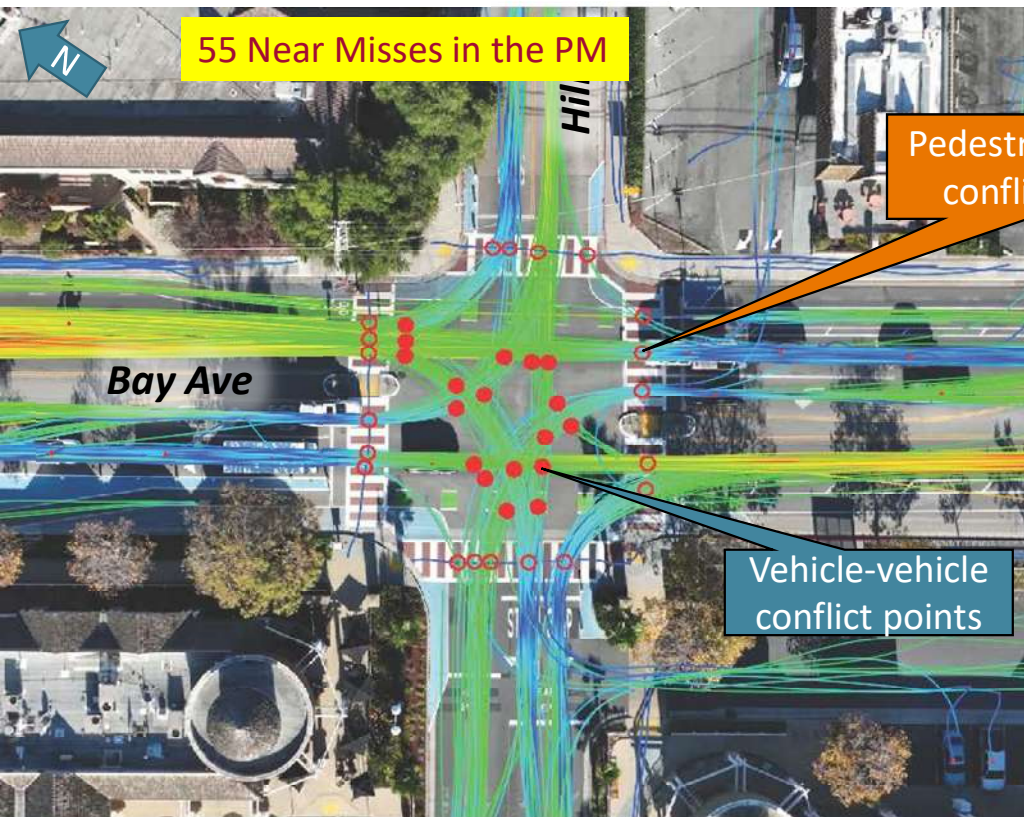
Road diet Conditions – Intersection



Crash Data – 2013 to 2024



Near Miss Analysis



Corridor Alternatives

1

Stop Control



2

Roundabout Control

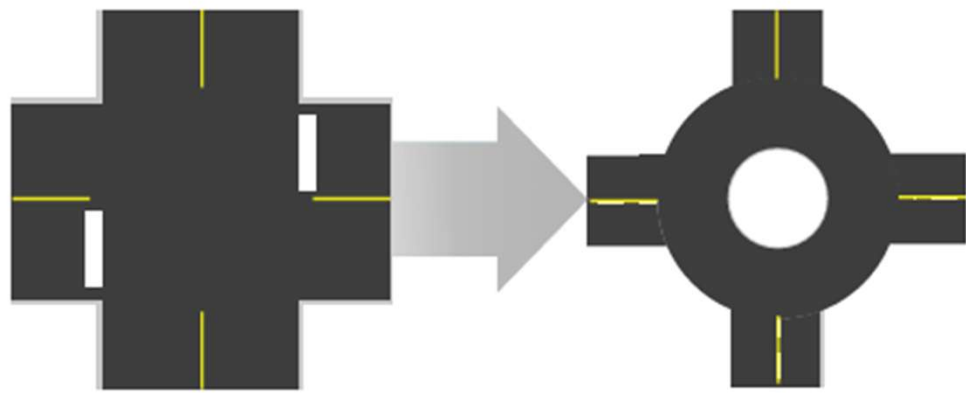


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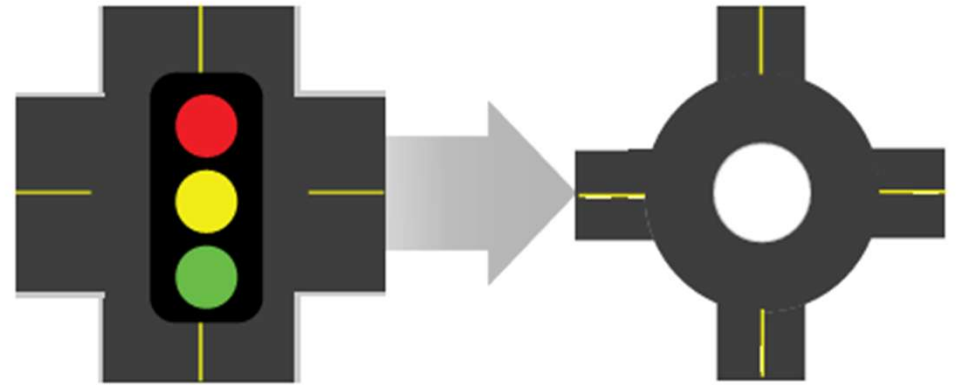
Signal Control



Roundabout Safety Improvement Factors



82%
reduction in fatal
and injury crashes.¹



78%
reduction in fatal
and injury crashes.¹

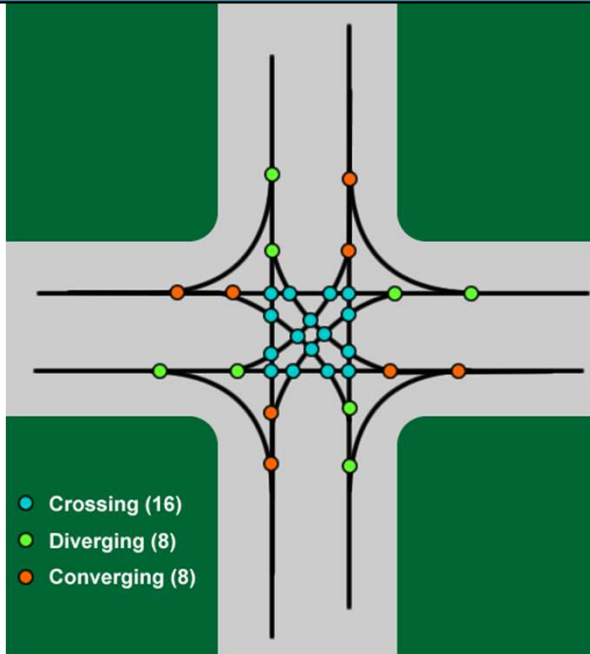
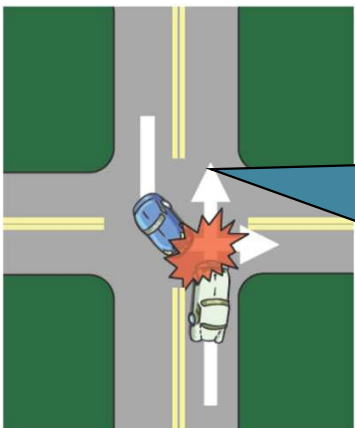
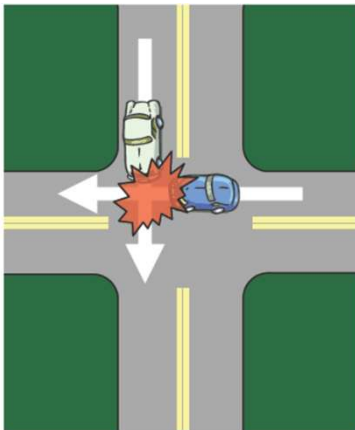
Source: FHWA

Roundabout Conflicts vs 4-leg Intersection

Typical 4-leg Intersection

Roundabout

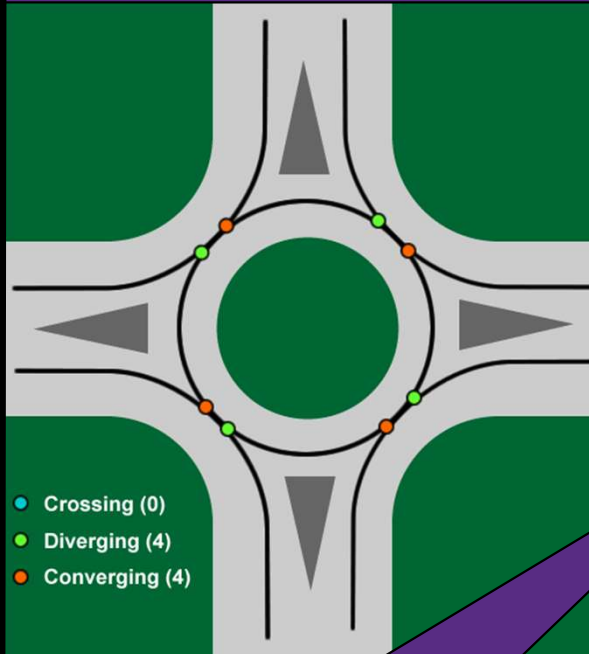
HIGH SPEED



- Crossing (16)
- Diverging (8)
- Converging (8)

32 Conflict Points

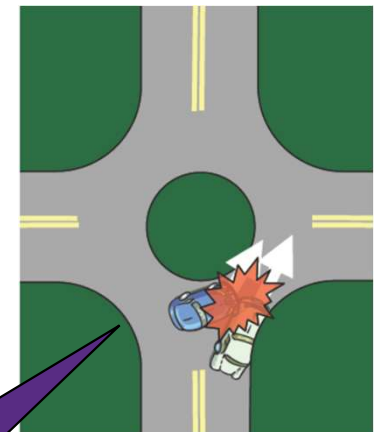
Potential collisions are high severity broadside or head-on impacts



- Crossing (0)
- Diverging (4)
- Converging (4)

8 Conflict Points

Potential collisions are low severity sideswipe or rear-end impacts

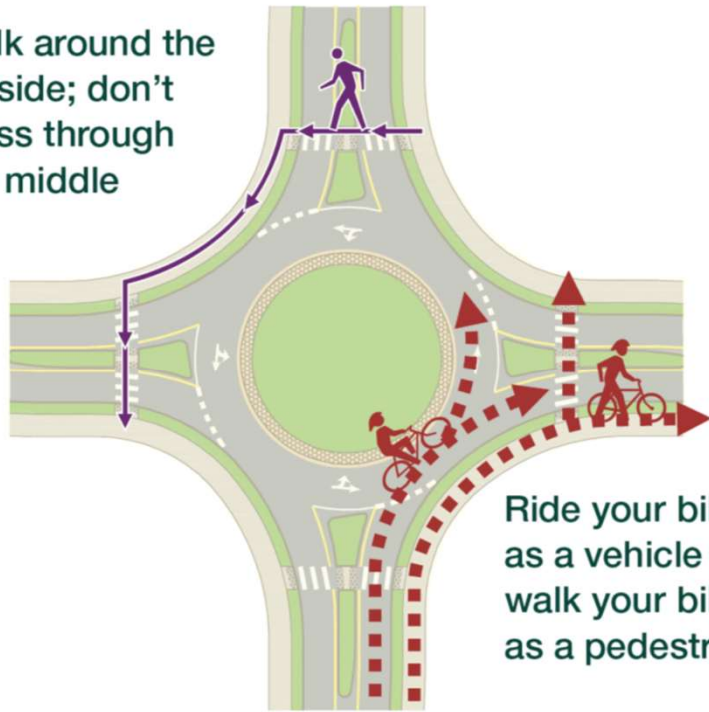


LOW SPEED

Pedestrian and Bicycle Circulation

Tips for safely walking and biking through a roundabout

Walk around the outside; don't cross through the middle



Ride your bike as a vehicle or walk your bike as a pedestrian

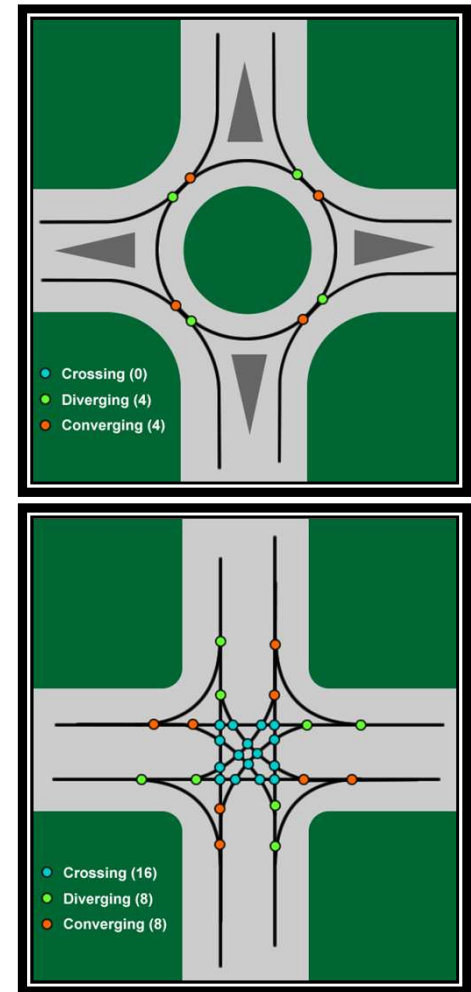
Research is ongoing on additional treatments and design considerations to address the needs of visually impaired pedestrians.



Roundabouts are Good for Older Drivers

- Lower Speeds through roundabout ~ 15 mph
- Forgiving, mistakes not lethal
- Longer decision-making time
- No demand to accurately judge closing speeds of fast traffic
- Low energy crashes
- No wide visual scans
- Simple decision-making
- By 2020, the 85-percentile design driver will be someone aged 65 or older

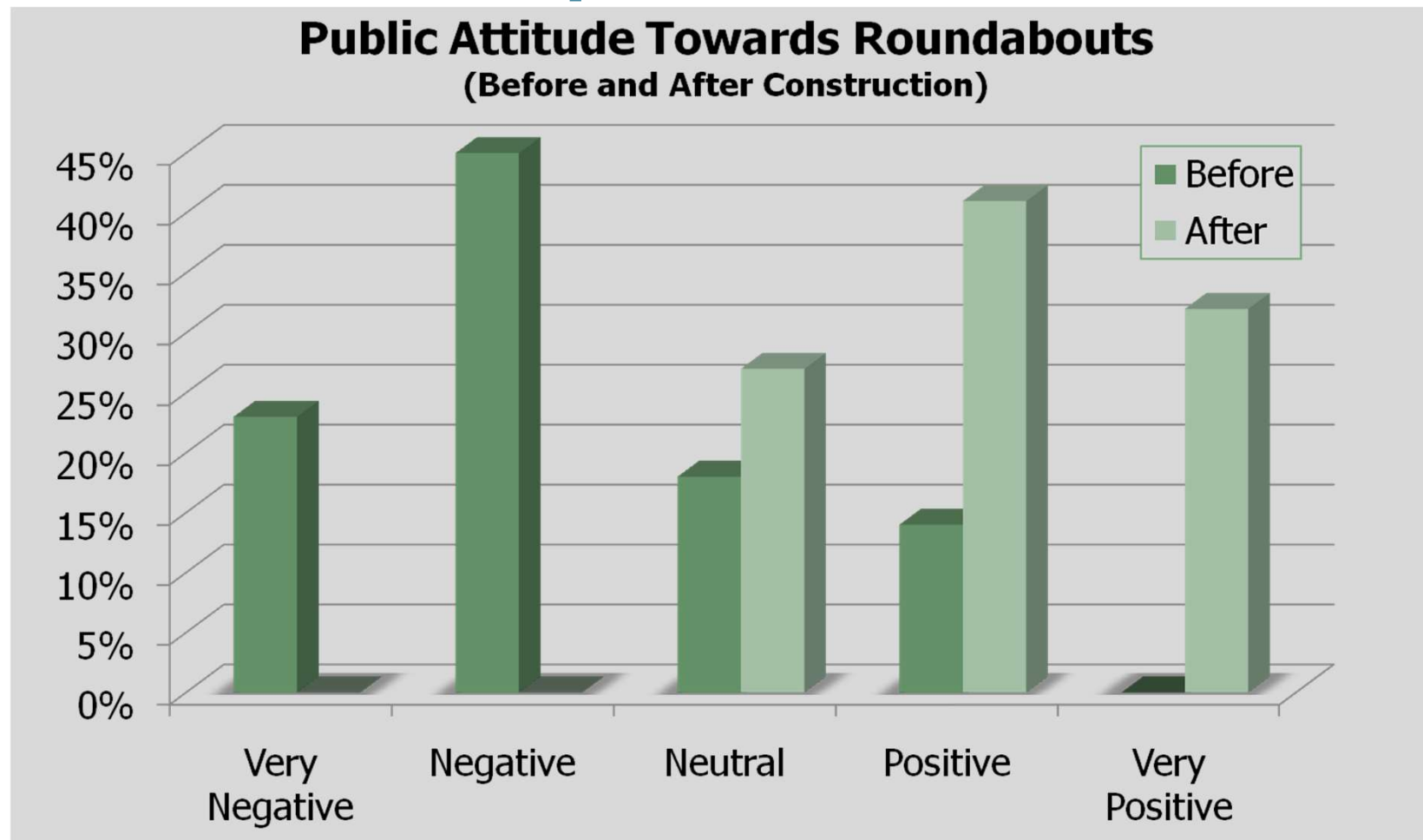
Source: Mark Doctor, P.E., FHWA Resource Center



Benefits Comparison

	Roundabout	Traffic Signals and/or Stop Signs
Vehicle and Driver Safety	Eliminates high-speed crashes and reduces fatalities and injuries by 70+%	Numerous vehicle and pedestrian conflict points on standard intersection (32 vehicle/24 pedestrian)
Pedestrian and Bicyclist Safety	Shorter one-directional crossings provide greater pedestrian focus and awareness	Vehicles are more focused on signal changes than on pedestrian movements
Space/ Development Footprint	Reduces additional right-of-way between links of intersections	May require additional turn lanes in future if traffic volumes or traffic patterns change
Cost and Sustainability	Less expensive than a signal for greenfield construction (new location)	Increase in fuel consumption and emissions due to stopped and delayed vehicles during red lights
Traffic Capacity	Creates equal priority for all approaches	Typically prioritizes mainline traffic allowing progression of high volumes approaches
Access Management	Provides equal priority of driveway/business access	Requires drivers to make additional left turns or right turns to access certain properties/businesses
Aesthetics	Provides attractive entries and gateways to communities	Various lighting and signing distractions can impact the overall aesthetic appeal for the user
Maintenance	Pavement markings, lighting, and some landscape maintenance may be more intensive than signals	Requires staff time required to maintain signals, provide retiming, and conduct repair

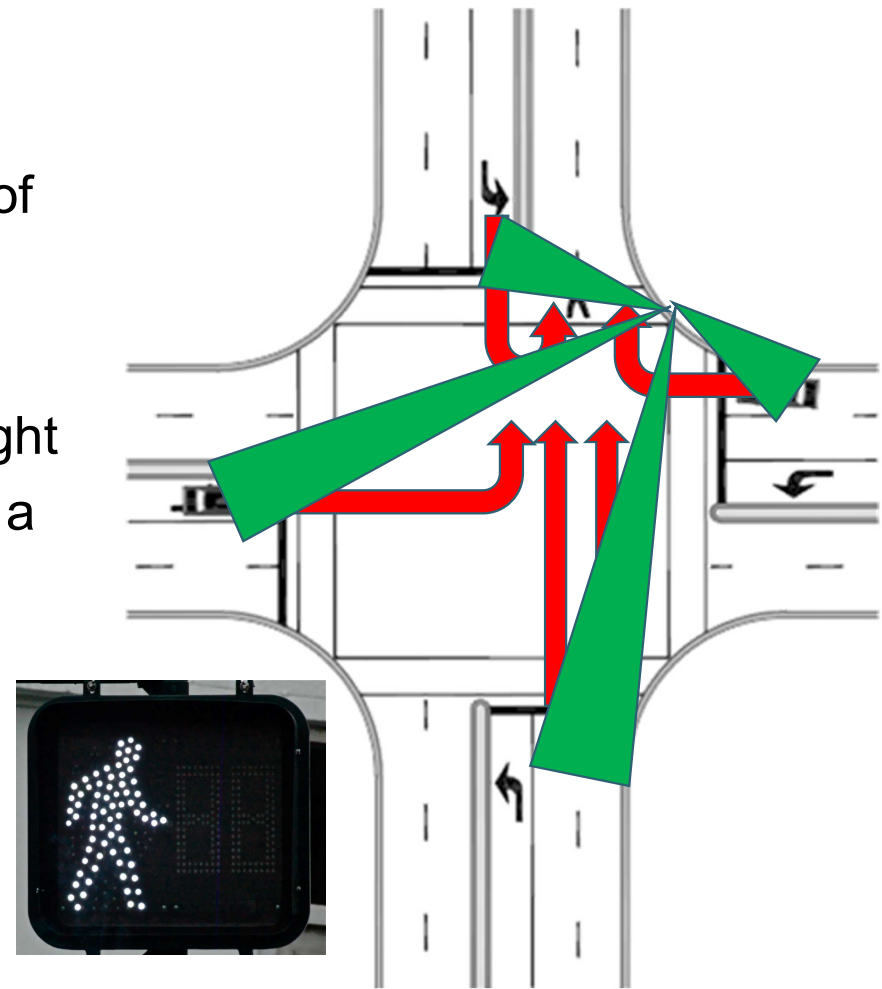
Roundabout Perception



Source: US Department of Transportation: Federal Highway Administration

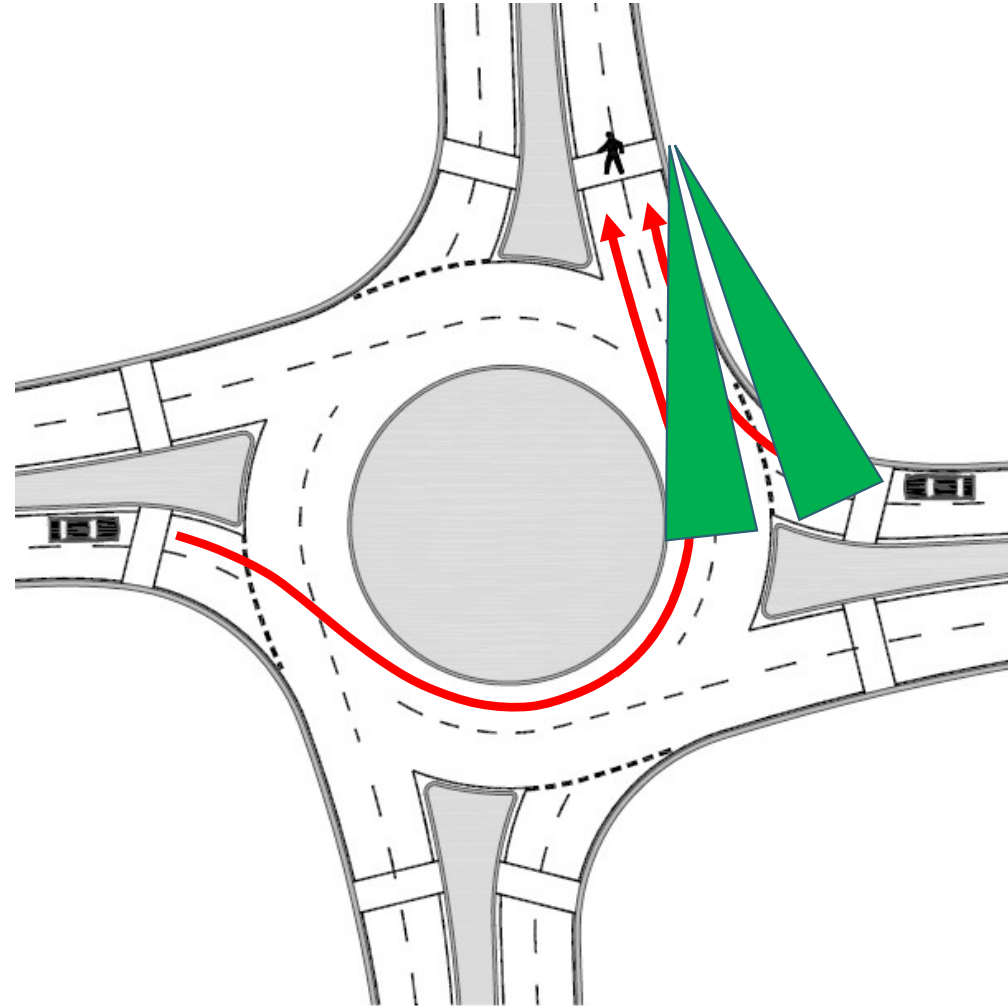
Safety vs. Security at Stop Intersections

- Pedestrian experiences an exaggerated level of security because the STOP signs tell them it's safe to cross, if cars do stop
- Most crashes occur when drivers turn left or right across the crosswalk while the pedestrian has a walk indication



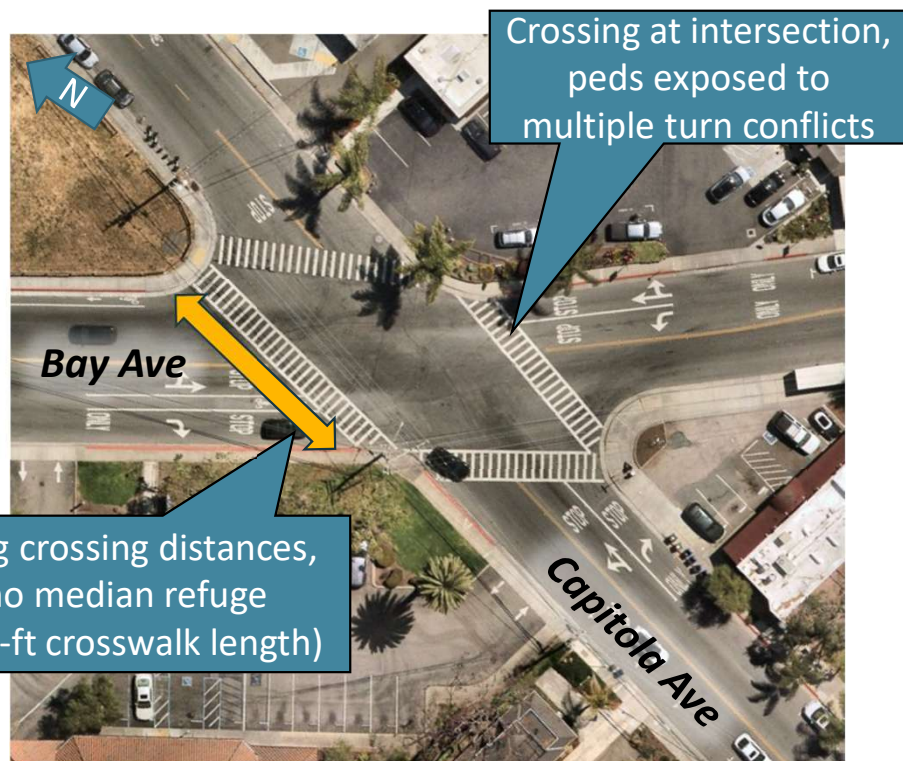
Safety vs. Security at Roundabouts

- Pedestrian feeling of security more closely matches their actual level of safety

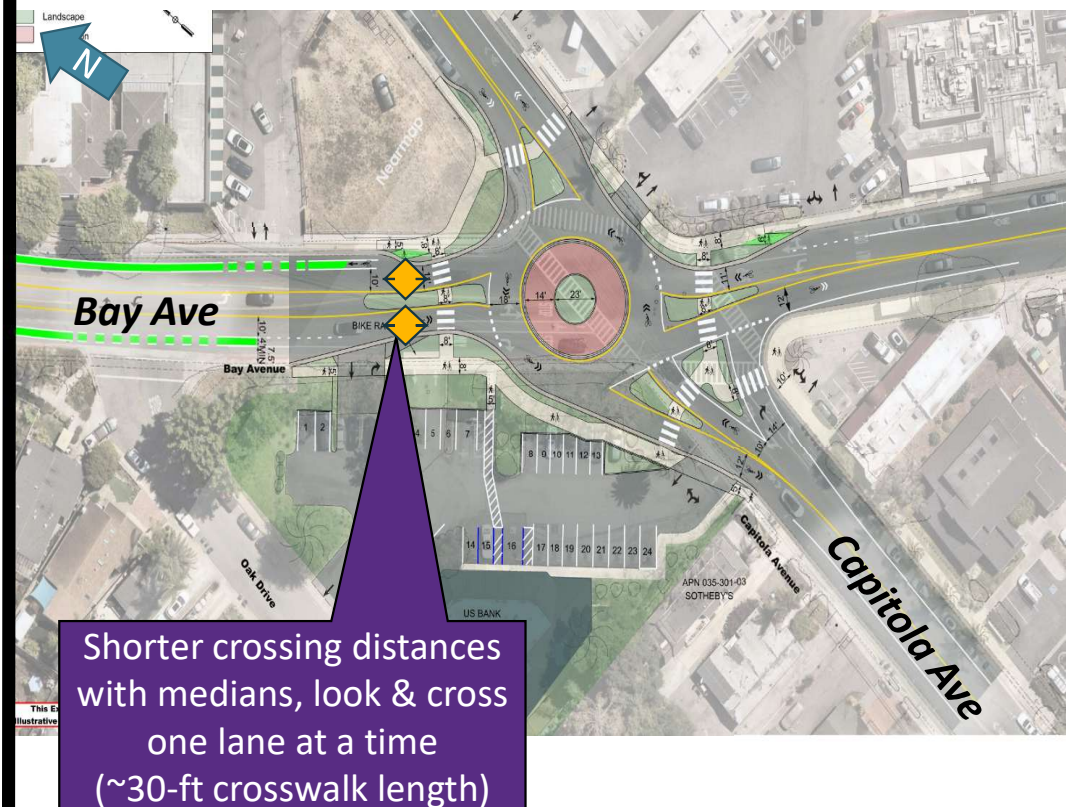


Pedestrian Safety Benefits at Bay/Cap Ave

Existing 4-leg Intersection



Roundabout



Bay/Capitola

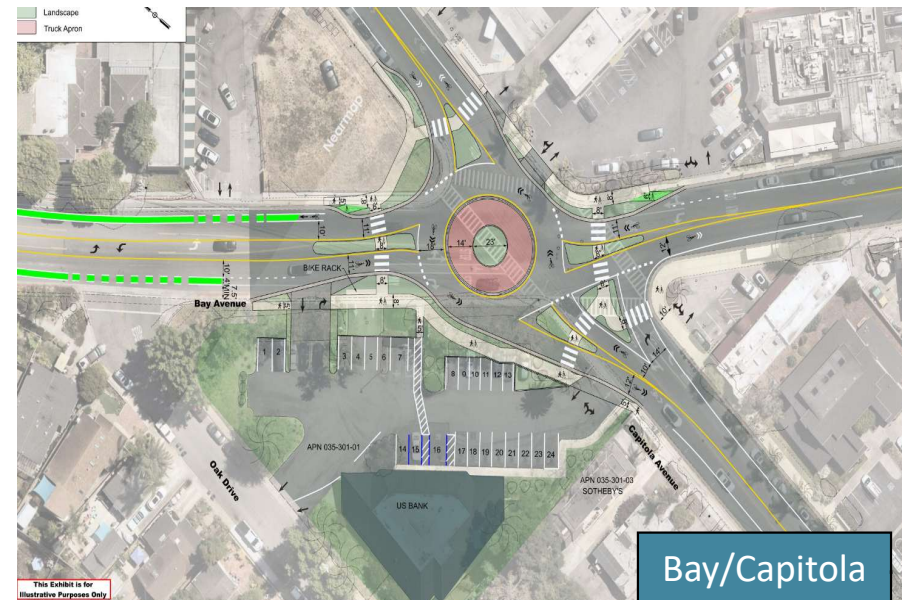
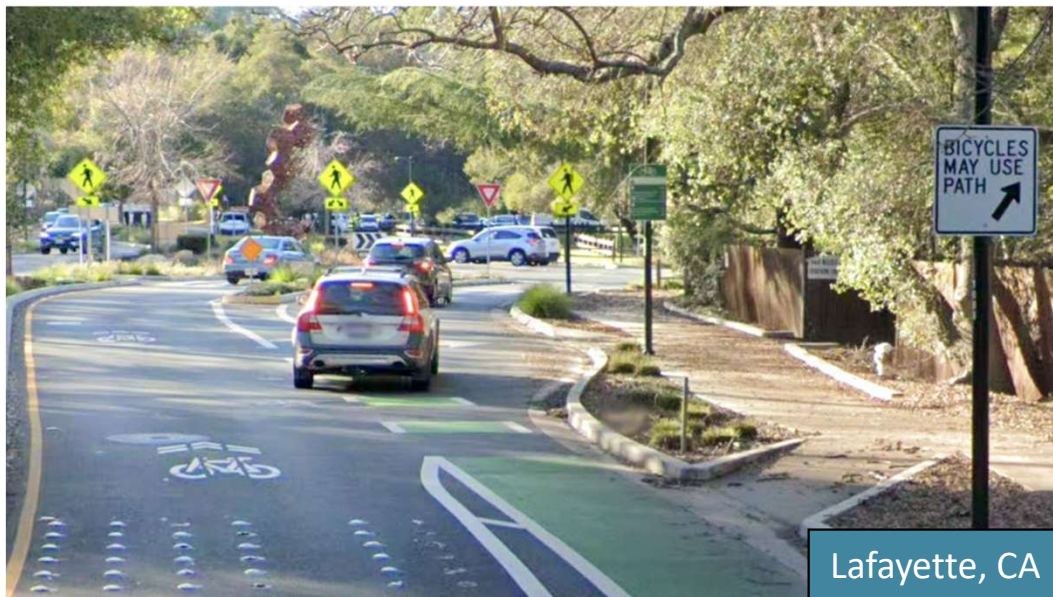
Pedestrian and Bike Improvements

- Maintain existing parking and driveway access
- Buffered class IV bikeways
 - Striping, bollards, or hardscape
- Protected mid-block crossings
 - Rectangular Rapid Flashing Beacons (RRFB)



Roundabout Control is Superior to Existing

- Reduced conflict points & collision severity
- Separated ped & bike facilities improve safety
- Improved operations & capacity
- Tradeoff - higher capital costs & right-of-way impacts



Operations

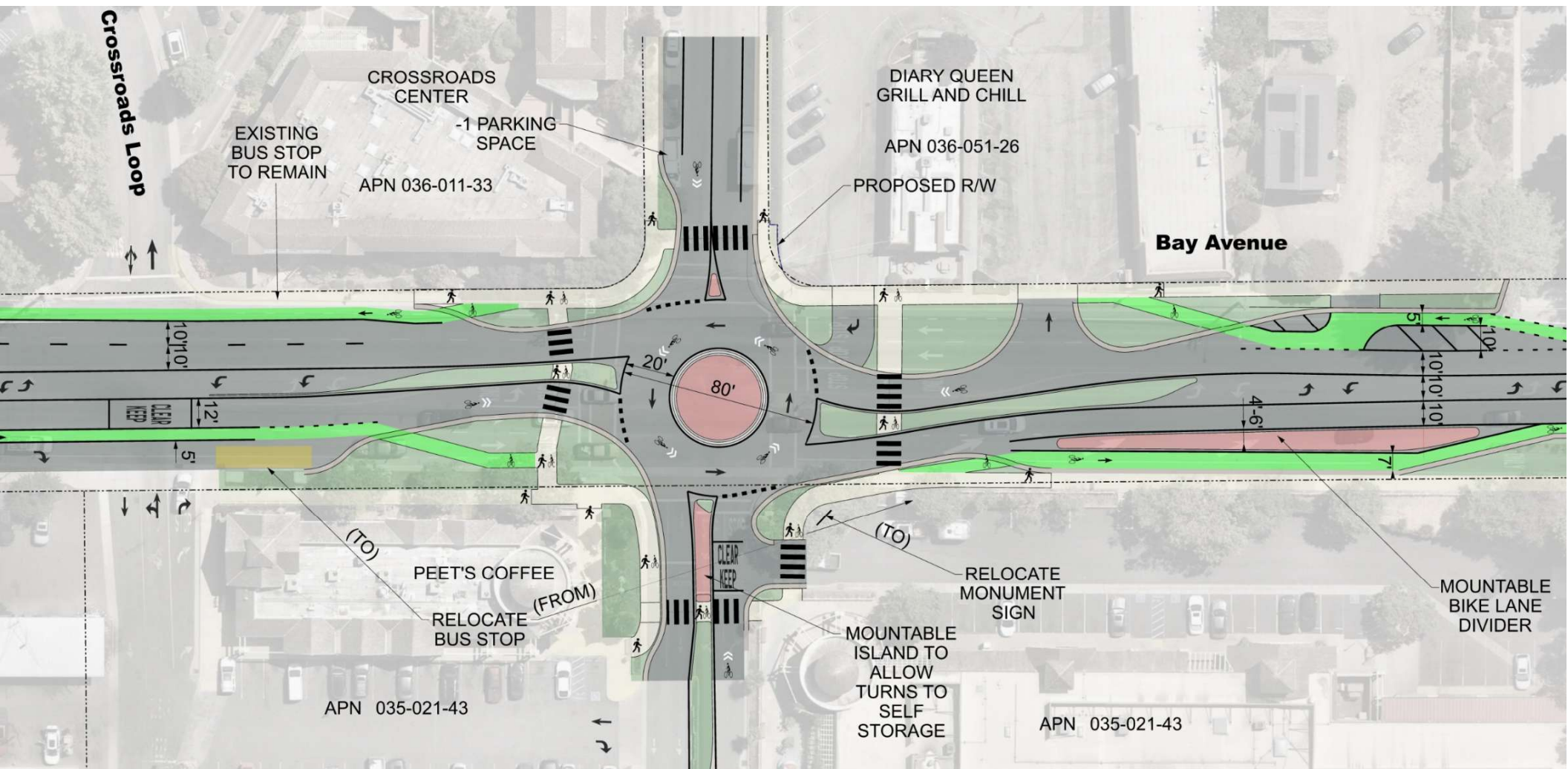
Existing – Bay Avenue and Capitola Avenue

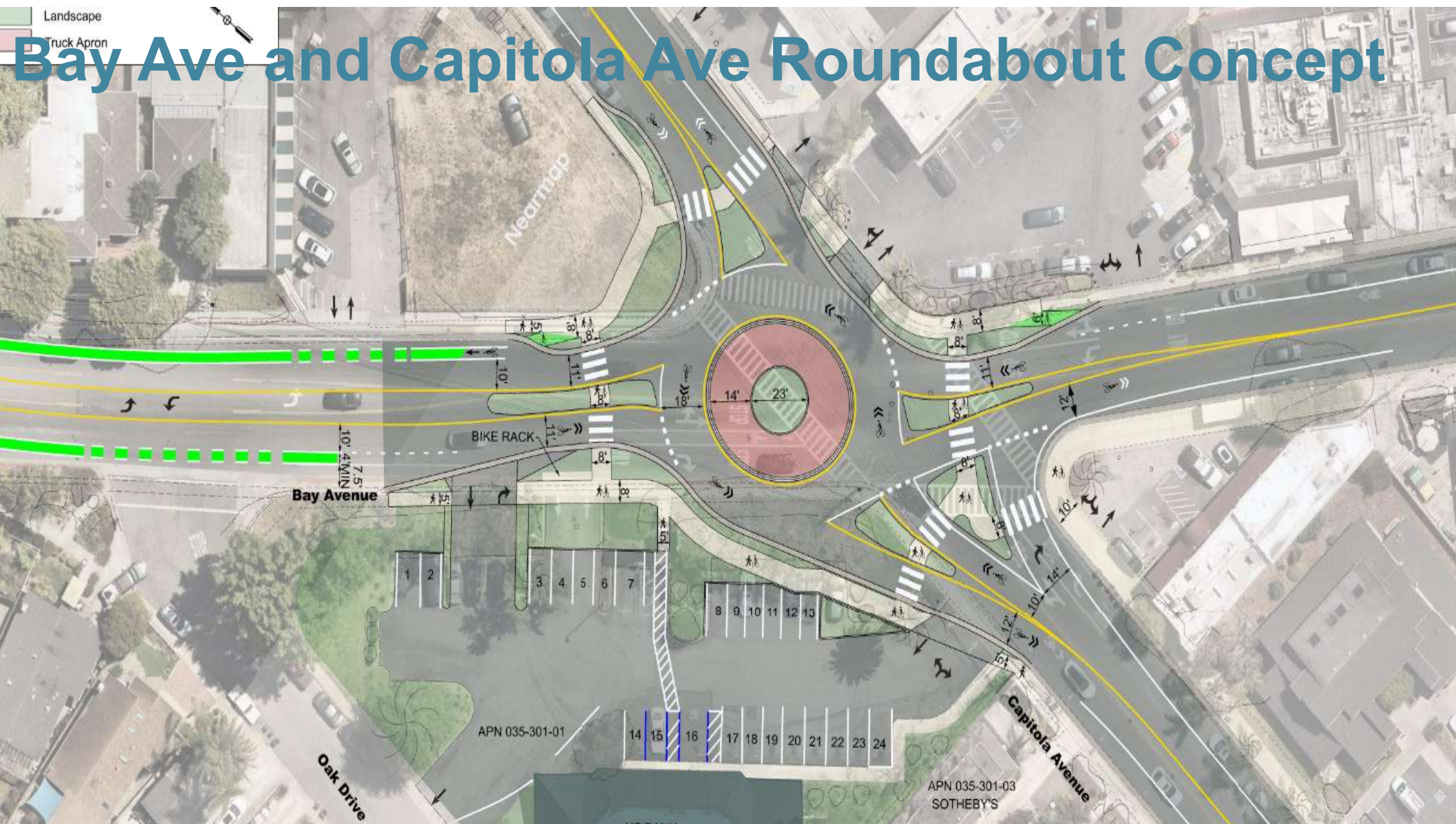
Intersection Control Type	AM			PM		
	Delay (s)	LOS	v/c	Delay (s)	LOS	v/c
Stop	27.7	D	-	20.5	C	-
Roundabout	7.4	A	0.407	7.5	A	0.505

Existing – Bay Avenue and Hill Street

Intersection Control Type	AM			PM		
	Delay (s)	LOS	v/c	Delay (s)	LOS	v/c
Stop (4-Lane)	15.1	C	-	18.7	C	-
Roundabout	7.8	A	0.482	10.1	B	0.634

Bay Ave and Hill St Roundabout Concept





Alternatives Summary – Economic

Criteria	Alternative 1 Stop	Alternative 2 Roundabout
Capital Construction Cost	Low	Higher
Right of Way Impact	Low	High
Operation & Maintenance Cost	Low	Moderate
Environmental Benefit	Moderate	High
Grant Funding Availability	Moderate	High

Alternatives Summary – Operations

Criteria	Alternative 1 Stop	Alternative 2 Roundabout
Vehicle Delay	High	Low
Transit & Emergency Vehicle Access Improvement	Poor	Moderate
Driver Adaptation Time	Low	High

Alternatives Summary – Safety

Criteria	Alternative 1 Stop & Road Diet	Alternative 2 Roundabout
Collision Severity Potential	Moderate	Low
Bicycle Access Improvement	Moderate	Good
Pedestrian Access Improvement	Moderate	Good

La Jolla Boulevard, Bird Rock, San Diego

- Reduced lanes from 5 to 2, added angled parking, widened sidewalks, landscaped medians, added 5 roundabouts at intersections
 - Lowered speeds from 40mph to 20mph
- Traffic volumes have stayed constant at 22,000 cars/day
- New investment in restaurants, coffee shops, offices, drugstore and nearby infill housing
 - 20% increase in sales tax revenue





5. Next Steps & Action Items

Provide comments

- Online
- Written
- Emails

Follow the project on the City website for next steps
<https://www.cityofcapitola.org/>