



Embarcadero Traffic Safety Update



SFMTA

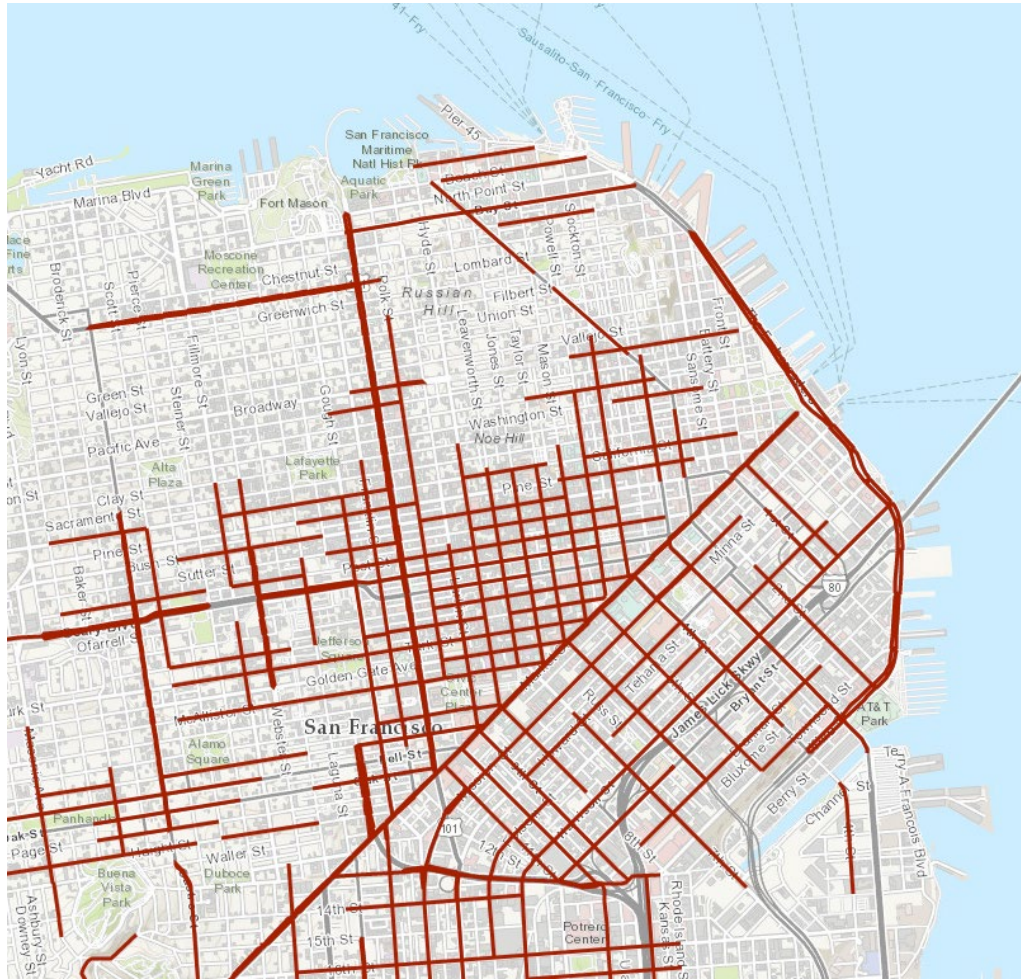


**VISION
ZERO
SF**

January 21, 2020

SFMTA Board of Directors

Vision Zero High-Injury Network



Most of The Embarcadero is on San Francisco's High Injury Network, representing the city's 13 percent of streets that account for 75 percent of severe and fatal traffic collisions.

Between 2014 and 2019, **242 people** were injured by traffic on The Embarcadero including two fatalities.

The vast majority of collisions occur at intersections. Nearly 40% of all victims (92) were people on a bicycle, despite being approx. 5% of all traffic.*

The drive behind Vision Zero is that these deaths and injuries are preventable and unacceptable.

**Remaining victims include 26 pedestrians, 122 drivers/passengers (including one fatality at Bryant Street), and 2 "other"*

Update Topics

1. Background / Public Outreach to Date
2. Recent Safety Improvements
3. 2020 'Quick-Build' Proposals
4. Enforcement & Education Planning
5. Embarcadero Enhancement PAED Phase
6. Fisherman's Wharf/Pier 39 Circulation Study
7. Schedule / Next Steps

The Experience Today



The Experience Today



The Experience Today

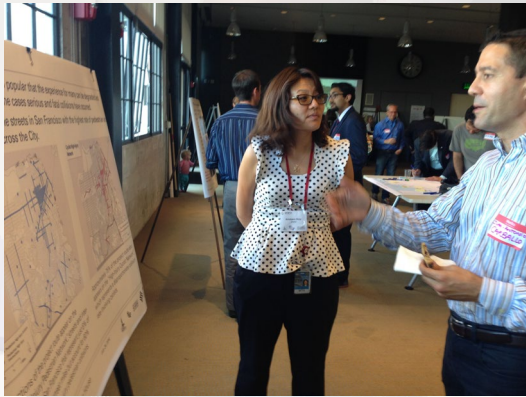


2014 Open House / Design Workshops (x3)

What We Heard

- Accommodate Loading/Unloading
- Wide and Welcoming Bikeway
- Think 'Big'
- Adapt to Best Uses of Curb (Right-of-Way)
- Details Matter
- Provide Flexibility
- Accommodate Larger Vehicles / Lane Widths
- Fisherman's Wharf/Pier 39 Area Needs Separate Planning

Detailed Summary Report available at sfmta.com/embarcadero



The Embarcadero Enhancement Project

Fall 2014 Workshop Series: Summary & Next Steps

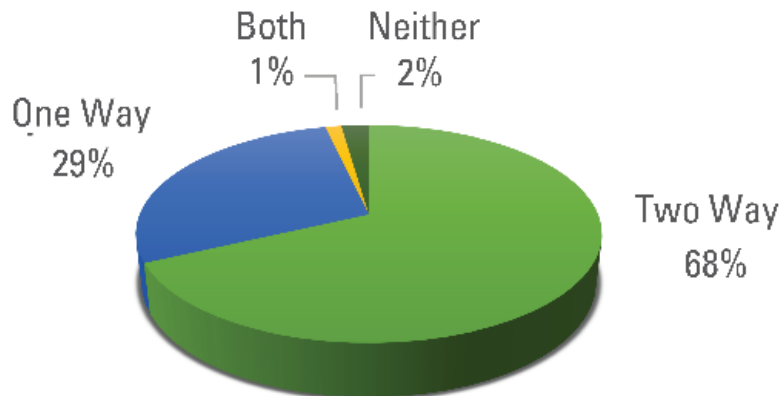
August 2015



2016 Open House

Assessing Trade-Offs of Bikeway

- One-Way vs. Two-Way Protected
- Preliminary Parking & Traffic Analysis
- 17,000+ mailers / 300+ attendees
- Public Survey (531 responses)



Bikeway Alignment Survey Results
(531 total respondents)

The Embarcadero Enhancement Project Bikeway Alignment Alternatives Impacts Summary

Two-Way Waterside	One-Way
<p>Traffic / Circulation</p> <p>The basic two-way alignment keeps two NB travel lanes and double-left turn lanes at Washington, Broadway, and Bay; prohibits NB left-turns at Folsom; and repurposes a third travel lane between Howard & Pier 5 (approximately 4 blocks). A modest increase in NB congestion during peak periods is anticipated for these blocks. Alignment options north of Bay Street, in front of Pier 27, and the "Big Move" concept at the Ferry Building require more study. Existing SB travel conditions largely would not be affected.</p>	<p>Traffic / Circulation</p> <p>The one-way alignment keeps two NB and SB travel lanes and NB double-left turn lanes; repurposes a NB travel lane between Howard & Pacific; and repurposes SB peak period lanes between Broadway and Don Chee Way. Due to required bike signal phases, SB congestion is forecast to substantially increase at Battery Street and at most intersections south of Ferry Building. SB right turns at Folsom and Harrison would be prohibited.</p>
<p>Parking / Loading</p> <p>The basic two-way alignment impacts approximately 89 parking spaces spread over the length of the water-side (approximately 3 miles), and up to 132 spaces depending on various alignment options. Parking mitigation / replacement options would be explored.</p> <p>Although some shifting of zones may be necessary, existing loading areas on the water-side would be retained and/or enhanced.</p>	<p>Parking / Loading</p> <p>The one-way alignment impacts approximately 314-330 parking spaces depending on final design. Mitigation/replacement efforts may reduce the number of parking spaces removed, but options are limited.</p> <p>Existing load zones on the water-side would be largely retained; City-side impacts include Chaya, Delancey Street restaurant load zones.</p>
<p>Pedestrian Facilities</p> <p>The basic two-way alignment has varied impacts to the Promenade: for most blocks it would be minimal (narrowing of 0-4 ft), at key pinch-points it may be narrowed by 11-14 ft, and in some cases it could be widened slightly. All alignment options would 'de-clutter' the Promenade where possible, improve marginal wharf areas, and upgrade curb ramps. Except for short sections including at Pier 38 and at Broadway, a minimum Promenade width of 20 ft is expected to be maintained.</p> <p>City-side sidewalks could be widened if the SB bike lane is removed.</p>	<p>Pedestrian Facilities</p> <p>Due to existing narrow sidewalks on the City-side, the one-way alignment would result in potentially unacceptable sidewalk widths (9 feet or less) from North Point to Battery, Howard to Harrison, and at Brannan Street if bikeway width assumptions are held. Existing bulbouts for midblock crossings would be removed.</p> <p>On the water-side, the one-way alignment would still impact the width of the Promenade but much less so than the two-way alignment. The Promenade, wharf areas, and curb ramps would be upgraded.</p>
<p>Trees / Landscape Design</p> <p>The basic two-way alignment impacts at least 6 palm trees at Folsom and Battery streets where center medians may be narrowed, and could impact approx. 20 Sycamore trees near Pier 39. Otherwise, the basic and optional alignments create opportunities for new/improved landscaping and urban design elements pending additional design.</p>	<p>Trees / Landscape Design</p> <p>The one-way alignment could impact up to 62 London Plane trees and 44 pedestrian light poles on the City-side, with limited options to replace or relocate on site (in addition to the 6 center median palm trees that would be removed). Opportunities for new / improved landscaping on the water-side are similar to the basic two-way alignment.</p>
<p>Transit / Bus Operations</p> <p>The basic two-way alignment should not significantly impact public transit or tour bus operations beyond increased levels of congestion. Impacts to trolley operations may be enhanced with stop consolidation at a few locations, although trolley impacts from the "big move" concept near the Ferry Building requires further study.</p>	<p>Transit / Bus Operations</p> <p>The one-way (vs. two-way) alignment impacts bus operations more due to further congestion from additional SB lane reductions and dedicated bike signal phasing. Trolley impacts are not expected. Consolidating or removing trolley stops is optional and may (or may not) be explored as part of this alignment.</p>
<p>Bikeway Quality</p> <p>The two-way alignment meets or exceeds the preferred minimum width in virtually all locations, provides ample opportunities to physically protect users from traffic, has fewer signalized intersections, and is directly adjacent to most waterfront destinations. If desirable, some or all portions of the existing SB bike lane could also be retained.</p>	<p>Bikeway Quality</p> <p>The one-way alignment would widen the existing SB bike lanes and improve intersection safety at most locations with dedicated signals or vehicle right-turn bans. Wider and physically-protected NB lanes are achievable, but opportunities for SB protection are more limited (in some locations a protected bikeway is not feasible), which may limit its attractiveness as an alternative to the Promenade pathway.</p>
<p>Cost</p> <p>While detailed cost estimates are not available, the one-way alignment is expected to be roughly double the cost of a two-way bikeway (all else being equal) due to its larger footprint and impacts to both sides of The Embarcadero.</p> <p>Cost: \$\$\$\$</p>	<p>Cost</p> <p>Cost: \$\$\$</p>

Colors denote overall impact to existing conditions



"SB" = Southbound or 'City-side'
"NB" = Northbound or 'water-side'



Public Outreach / Engagement

Project Briefings

- Port Commission (2014, 2018)
- Northeast Waterfront Advisory Group (NEWAG)
- Central Waterfront Advisory Group (CWAG)
- Maritime Commerce Advisory Committee (MCAC)
- Ballpark Mission Bay Transportation Committee
- San Francisco Hotel Council
- SF Travel, SF Tour Guide Guild
- South Beach/Rincon/Mission Bay Neighborhood Assoc.
- Barbary Coast Neighborhood Association
- District 3 SFMTA Working Group
- Fisherman's Wharf Community Benefits District
- Fisherman's Wharf Restaurant Association
- Fisherman's Wharf Merchants Association
- MTC Bay Trail Steering Committee
- Individual stakeholders incl. Ferry Building, Exploratorium, Pier 39, and many others...

Changes are coming to the Embarcadero, San Francisco's waterfront



Media



Vendor Ride-Alongs

October 2018 Design Showcase

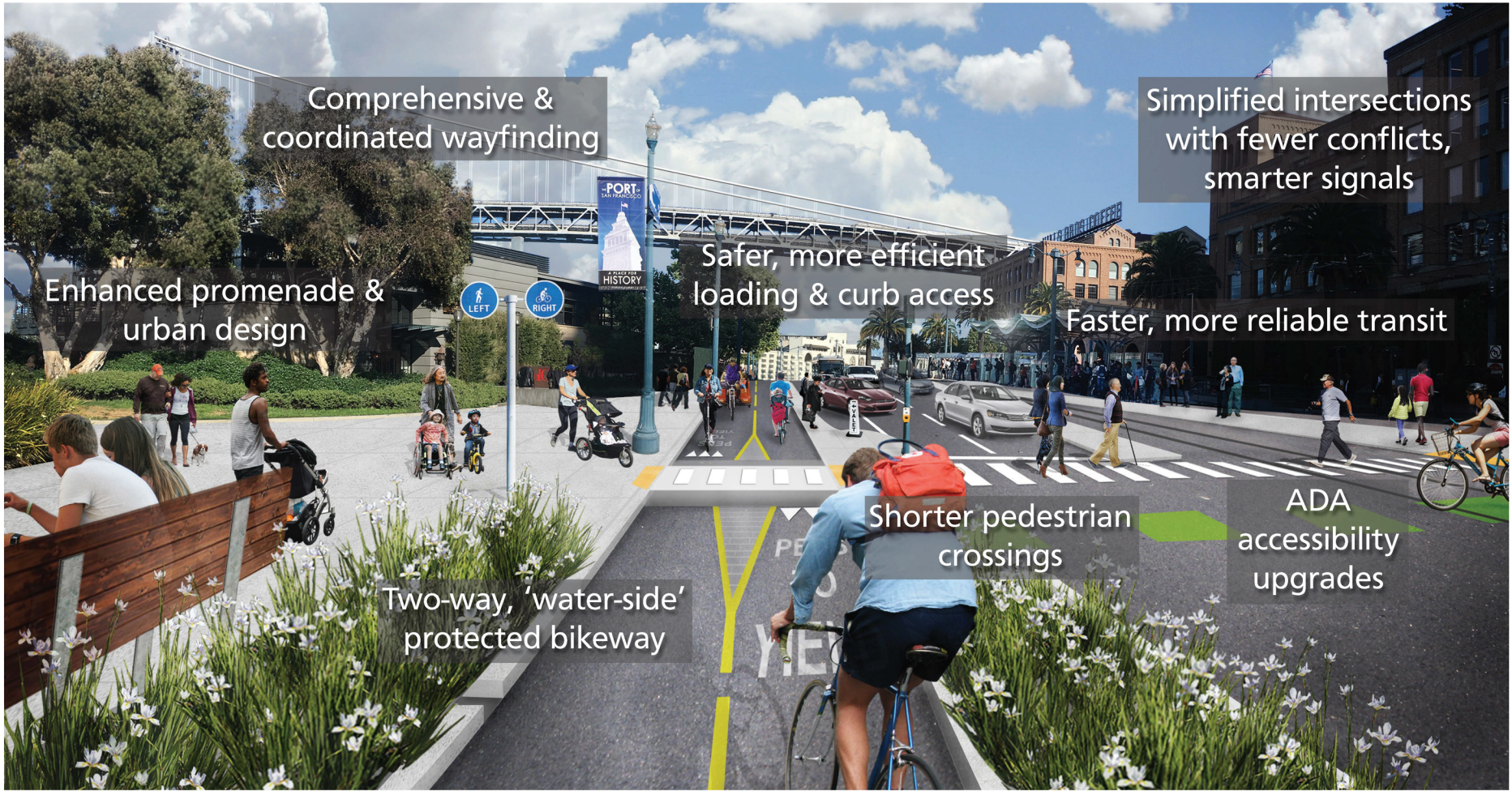


SAN FRANCISCO TRANSPORTATION

Embarcadero showcase reveals plans for safety-focused redesign

By **JEROLD CHINN** :: SFBay 🕒 October 26, 2018

VISION FOR A BETTER EMBARCADERO



Comprehensive & coordinated wayfinding

Simplified intersections with fewer conflicts, smarter signals

Safer, more efficient loading & curb access

Faster, more reliable transit

Enhanced promenade & urban design

Shorter pedestrian crossings

ADA accessibility upgrades

Two-way, 'water-side' protected bikeway



Embarcadero Enhancement Design Showcase - October 25, 2018

www.sfmta.com/embarcadero

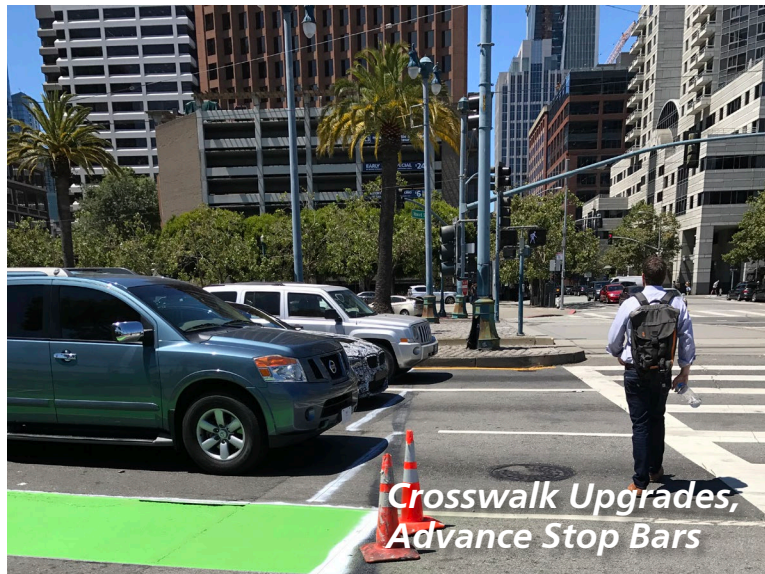
Recent Safety Improvements



Promenade Messaging



Green Bike Lanes



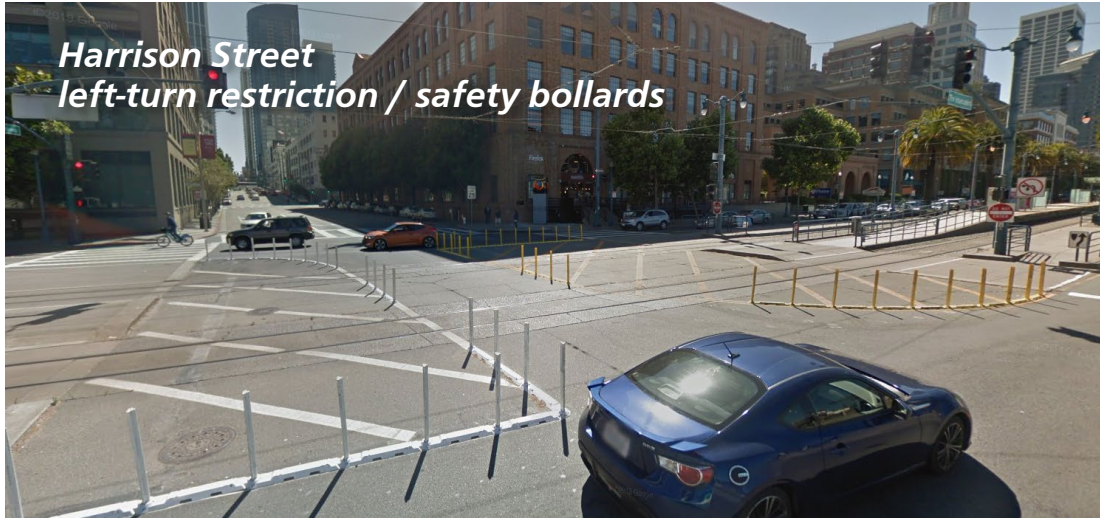
*Crosswalk Upgrades,
Advance Stop Bars*



North Point Bike Signal/Turn Box

Recent Safety Improvements

*Harrison Street
left-turn restriction / safety bollards*



*King Street
SB Bike Lane Removal*



**2018
Southbound
Embarcadero
Peak Period
'Road Diet'**



Before

Southbound, Broadway to Mission

After

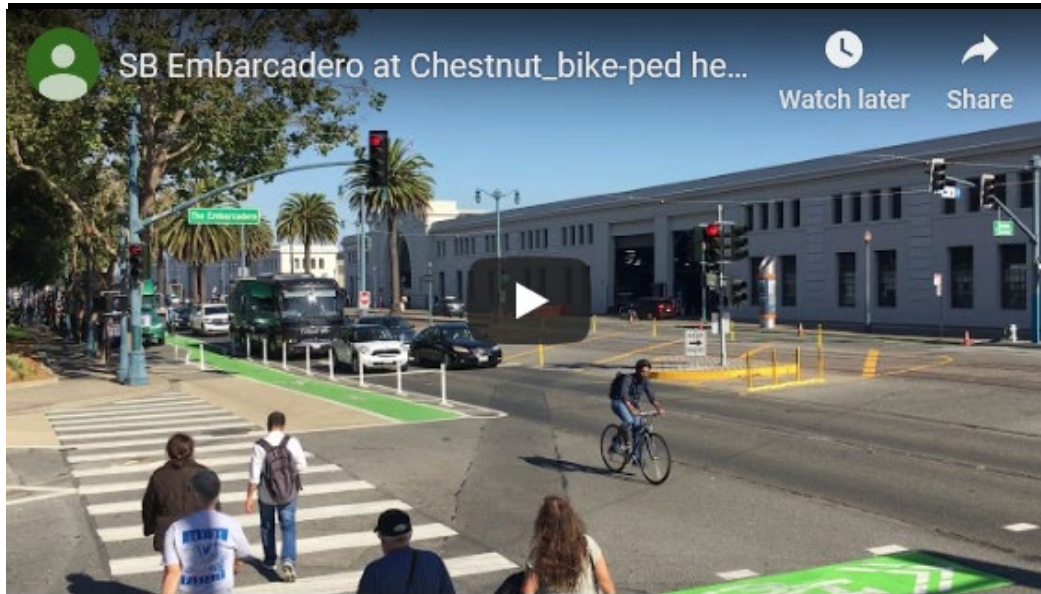


Washington Street approach

Sansome & Battery Connections Project



- Substantially completed in July 2019
- Dedicated bike lanes off The Embarcadero, Jackson to Chestnut streets
- Major safety upgrades to Chestnut/Sansome intersection, including:



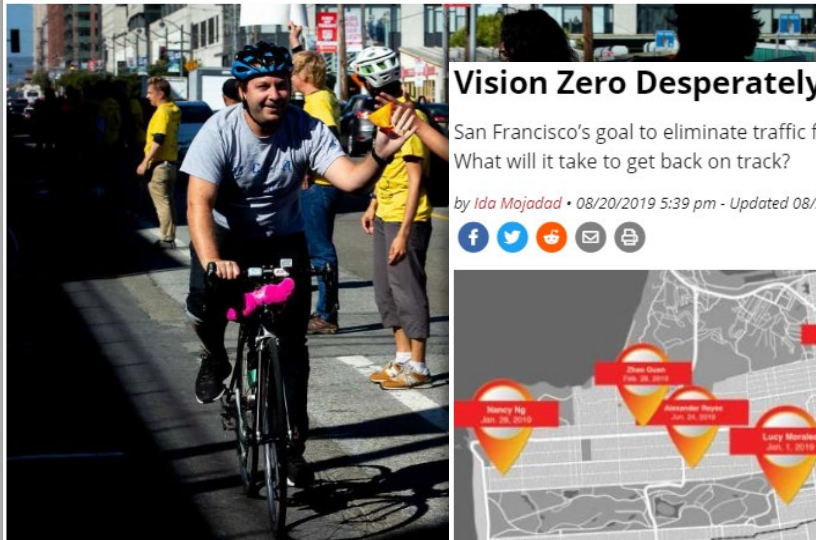
- ✓ Simplified intersection (SB turn restrictions)
- ✓ New marked crosswalk & painted safety zones
- ✓ Reconfigured Sansome turn lane(s)
- ✓ Bike/ped 'head start'

SFMTA Quick-Build Initiative

LOCAL // BAY AREA & STATE

Breed calls for 20 miles of new protected bike lanes in SF in two years

Rachel Swan | May 9, 2019 | Updated: May 9, 2019 4:15 p.m.



Activists with the People Protected Bike Lane group form a human barrier to separate streets in San Francisco.

LOCAL // BAY AREA & STATE

City speeds up approval process for new bike lanes, road safety improvements

Rachel Swan | June 5, 2019 | Updated: June 5, 2019 4:49 p.m.



... killed earlier this year after being struck by a vehicle.

Vision Zero Desperately Needs Help

San Francisco's goal to eliminate traffic fatalities by 2024 seems farther away than ever. What will it take to get back on track?

by Ida Mojaddad • 08/20/2019 5:39 pm - Updated 08/22/2019 12:08 pm



By SF Weekly's count, 23 people have died in traffic fatalities on city streets this year. (Art by Sophia Valdes)

Folsom to Mission 'Quick-Build' Proposal



Protected Bikeway:

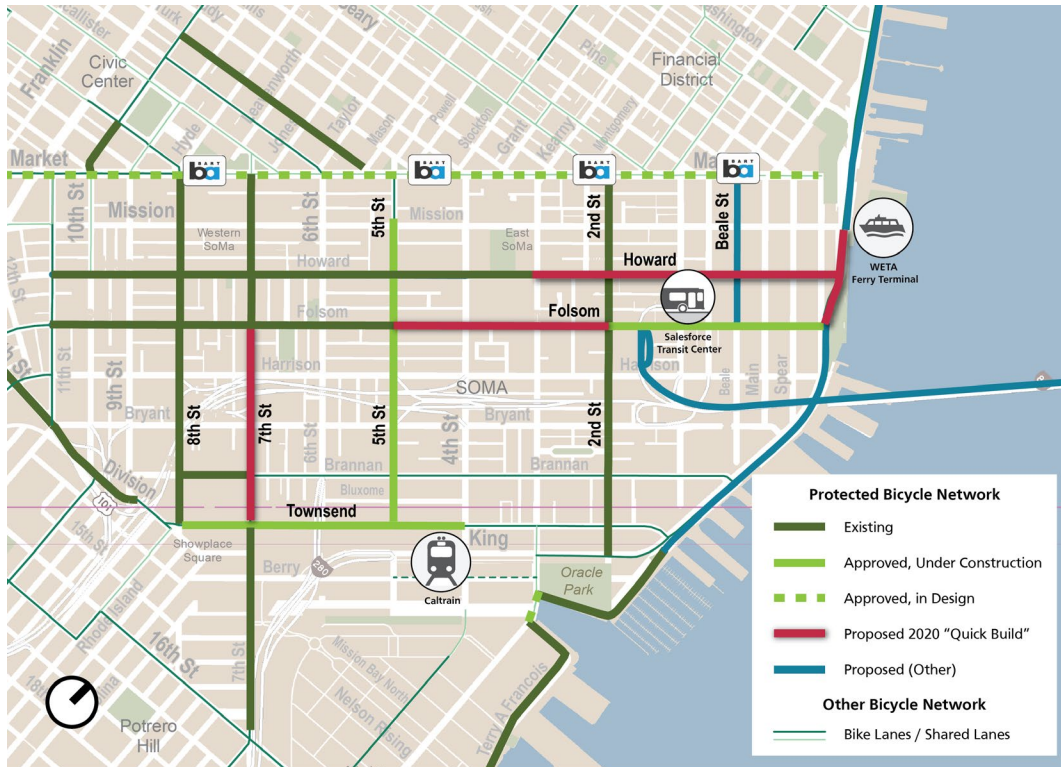
Short segment of two-way, water-side bikeway helps connect Ferry Terminal users with rapidly expanding SOMA protected bicycle network; also allows preview/testing of new bikeway concept, including bike signals

Safer Pedestrian Crossings:

Right-turn on red restrictions, 'painted safety zones,' one block of vehicle lane reduction to calm busy intersections; calmer promenade with reduced bicycle/scooter traffic

Spot Pavement Repair:

Smoother, safer rides for everyone



SFMTA SOMA/South of Downtown Bicycle Network - Current Status Nov 2019

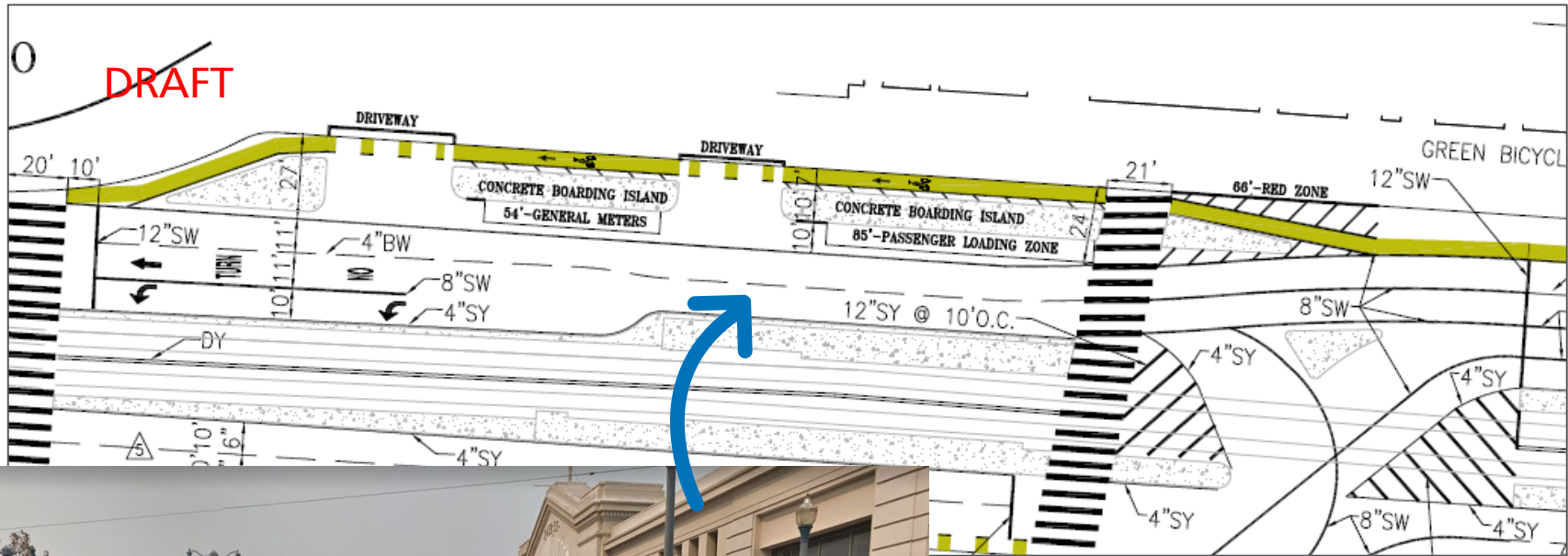
Folsom to Mission 'Quick-Build' Proposal



Potential design at Mission w/ painted safety zones, planters or other physical barrier



Quick-Build Proposal: Bay St at Pier 35



- Expanded, formalized passenger loading zone
- Physical protection for existing northbound bike lane
- Enhanced visibility, protection for pedestrians

Enforcement Planning

What

- Documentation of existing enforcement efforts
- 311 complaint review
- Updated collision analysis

Why

- Support PCO, SFPD enforcement where it's most needed for safety
- Support Port review of existing, potential enforcement funding levels and performance targets
- Support Port plans for promenade motorized vehicle ban
- Promote better, safer behaviors in conjunction with engineering changes



Draft Recommendations

Bundle quick-build(s), promenade restrictions, enforcement 'bump'

Provide safety improvements in conjunction with promenade restrictions; leverage media attention

Consider seasonal 'bumps' to reinforce positive behavior

Work with SFPD and potentially redeploy existing PCO resources on periodic enforcement campaigns

Collaborate and involve the Vision Zero Safe Speeds Campaign

Take better advantage of existing Vision Zero resources

Uber/Lyft 'Geofencing' Requests

Collaborate with TNC's to 'self enforce' good behavior & focus loading locations within their apps



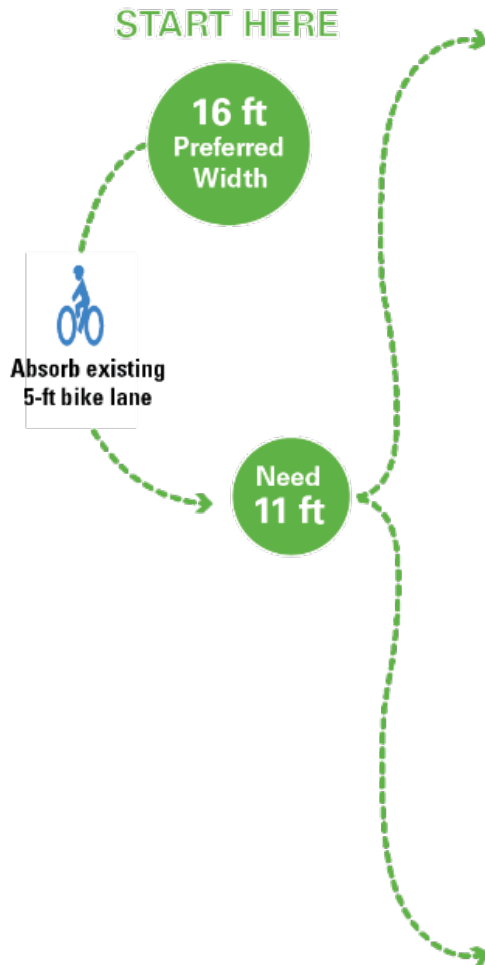
Embarcadero Enhancement Project

Project Approvals / Environmental Determination (PAED) Phase

- \$875,000 for preliminary engineering, traffic analysis, and public outreach
- CEQA categorical exemption assumed after historic resources evaluation
- Ongoing coordination with Port Resiliency Program, RFP's for pier redevelopment
- \$12m-\$15m assumed for initial project segment (tentatively the 'southern segment')
- Consultant assistance includes 3D animation(s) of two-way bikeway for public engagement



Design Strategies



TIER 1 STRATEGIES

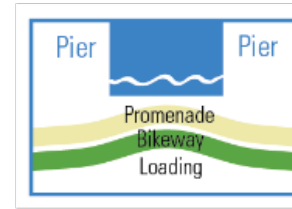
Remove General Metered Parking
8 feet

Narrow Promenade
width varies

Narrow Center Median
width varies

Remove 3rd Northbound Travel Lane
11 feet

TIER 2 STRATEGIES



Utilize 'Marginal Wharf' Areas
~8 feet



Remove Northbound Left-Turn Lane
~11 feet

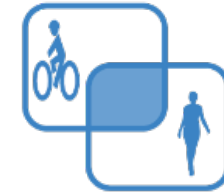


Consider Streetcar Stop Removal / Relocation
width varies

TIER 3 STRATEGIES

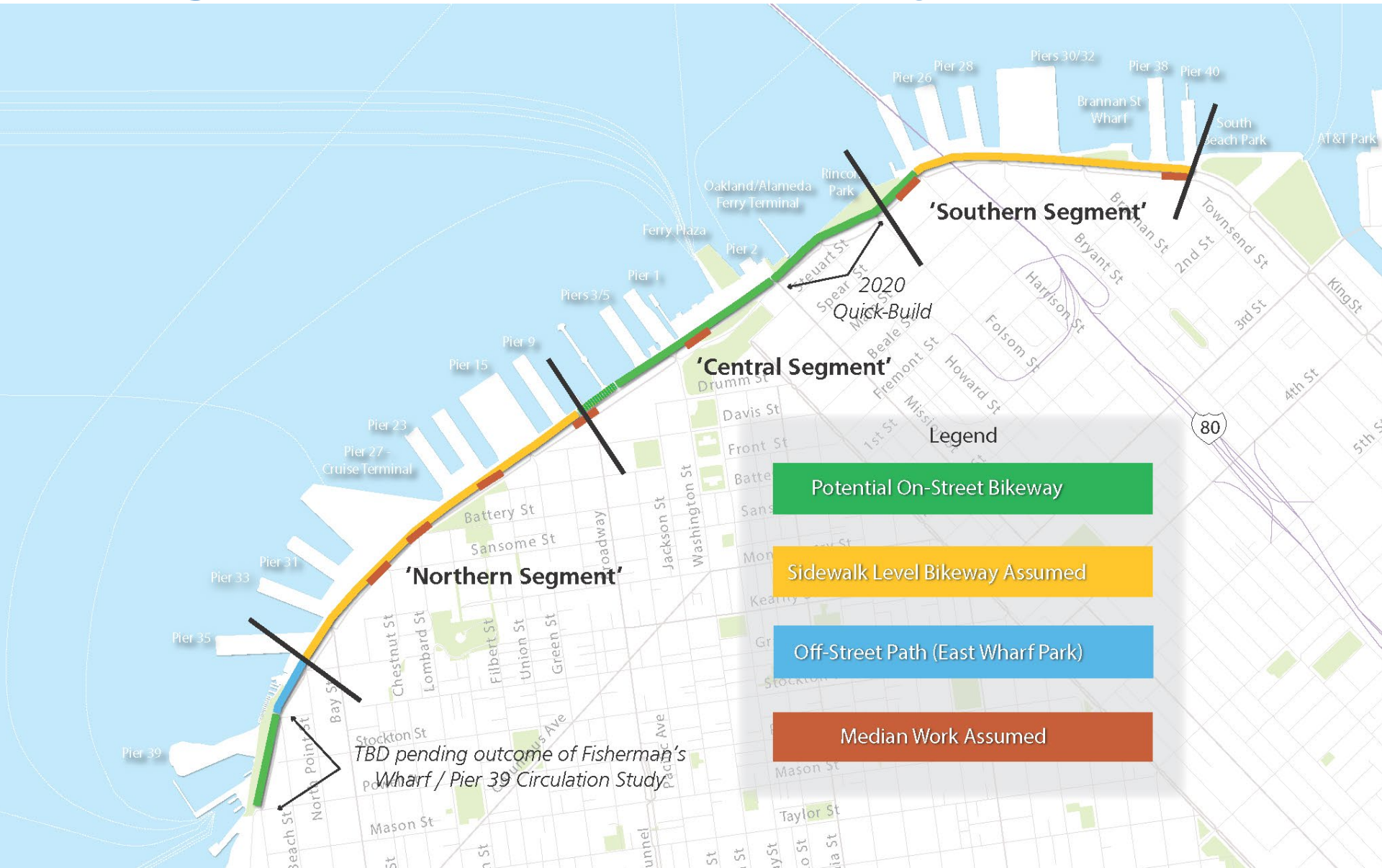


Consider 'Flex Zone' & Time Restrictions for Loading Access
width varies

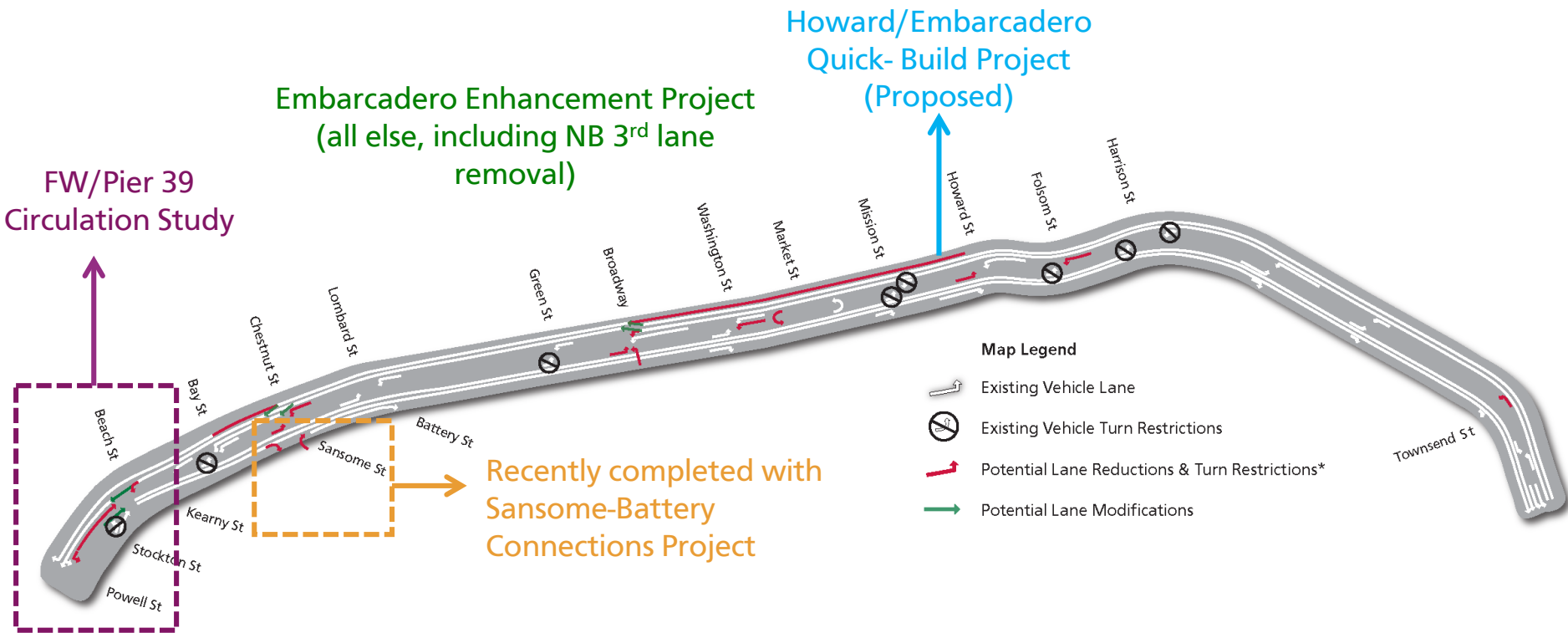


Consider 'Mixing Zone' for Shared Pedestrian/Bicycle Access
width varies

Design Direction - Bikeway



Design Direction - Circulation



Assumptions

- Maintain two vehicle through lanes (except potentially NB at Bay Street)
- Seek to remove double-turn lanes if feasible (except at Bay Street)
- Simplify select intersections for safety, bikeway design, and/or for efficiency/transit travel time

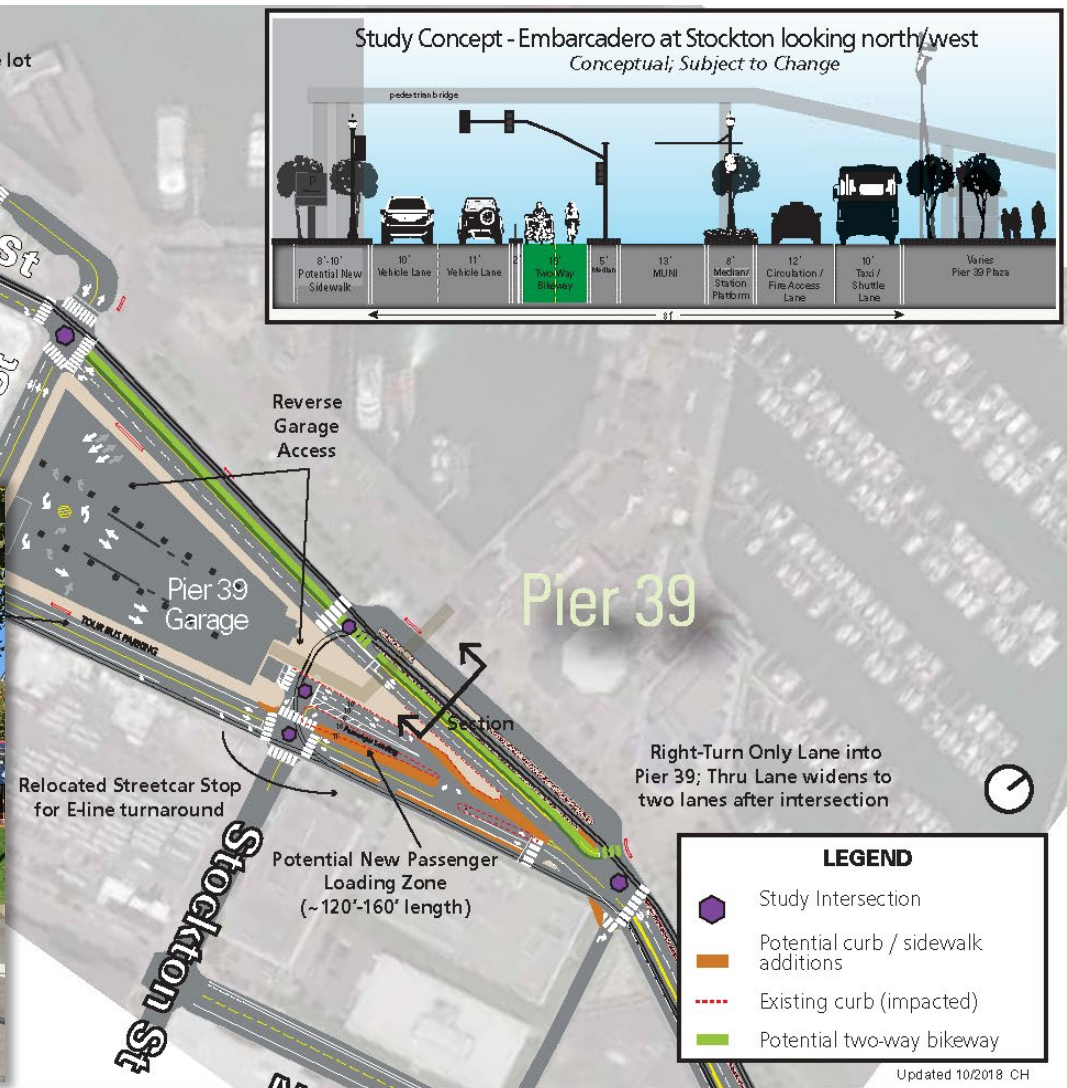
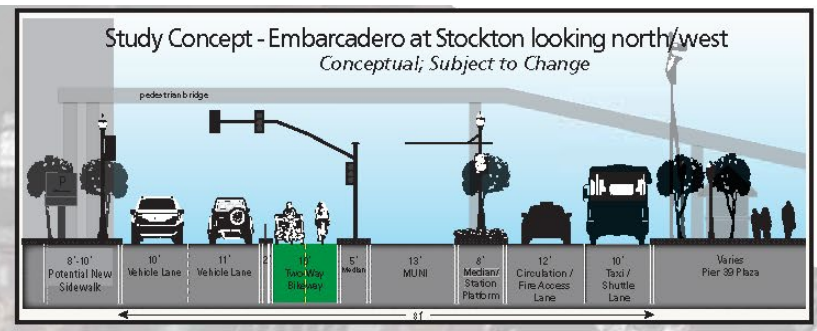
Fisherman's Wharf / Pier 39

Complete Streets Study

- \$175k secured from SFCTA for traffic consultant study
- Goals of better circulation into/out of parking areas, improved transit operations and curb access, and room for Embarcadero bikeway to Jefferson/Powell to improve safety
- Anticipates Jefferson Street Phase 2 improvements
- Plan to form stakeholder 'steering committee' to finalize recommendations



Fisherman's Wharf / Pier 39 Complete Streets Study

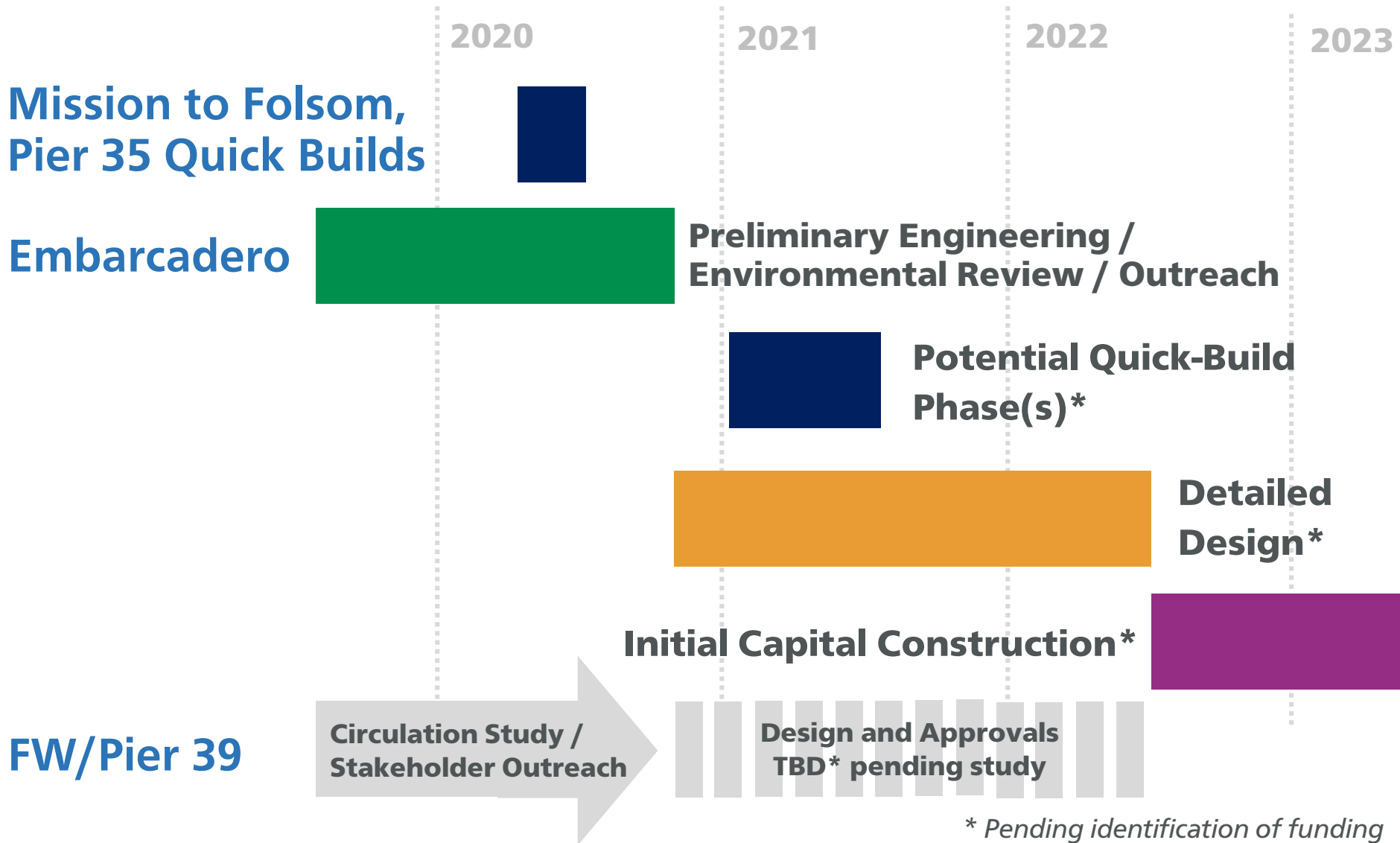


LEGEND

- Study Intersection
- Potential curb / sidewalk additions
- Existing curb (impacted)
- Potential two-way bikeway

Updated 10/2018 CH

Project Timelines (subject to change)



* Pending identification of funding

Thank You!

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