

Richmond-San Rafael (RSR) Bridge Pilot Project Recommendation

BATA Oversight Committee Meeting

May 08, 2024



Agenda



PHOTO COUTESEY CALTRANS

**Recap:
Pilot Timeline &
Purpose**

**Findings to Date &
Proposal**

**Recommended
Action**

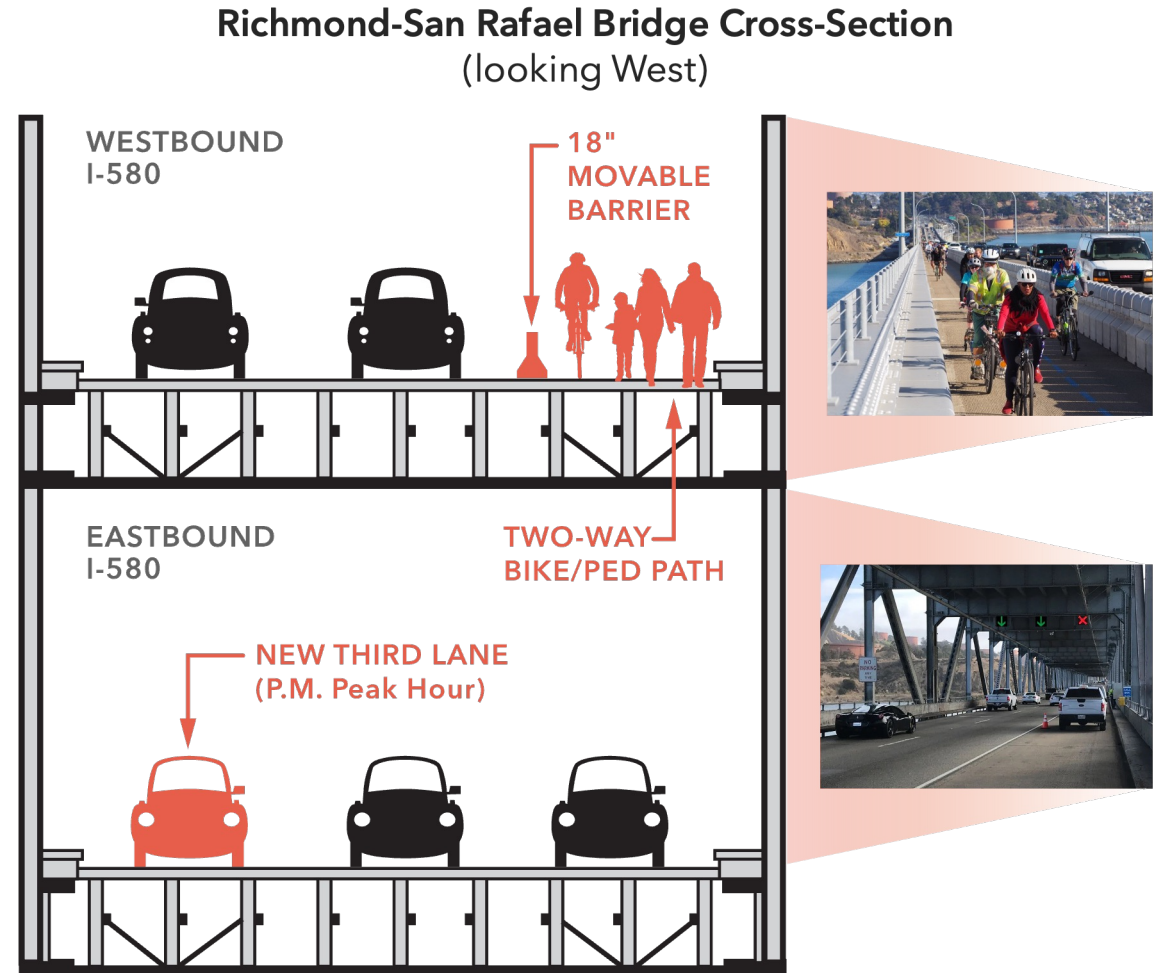
Pilot Designed for Two Purposes

Bicycle & Pedestrian Access:

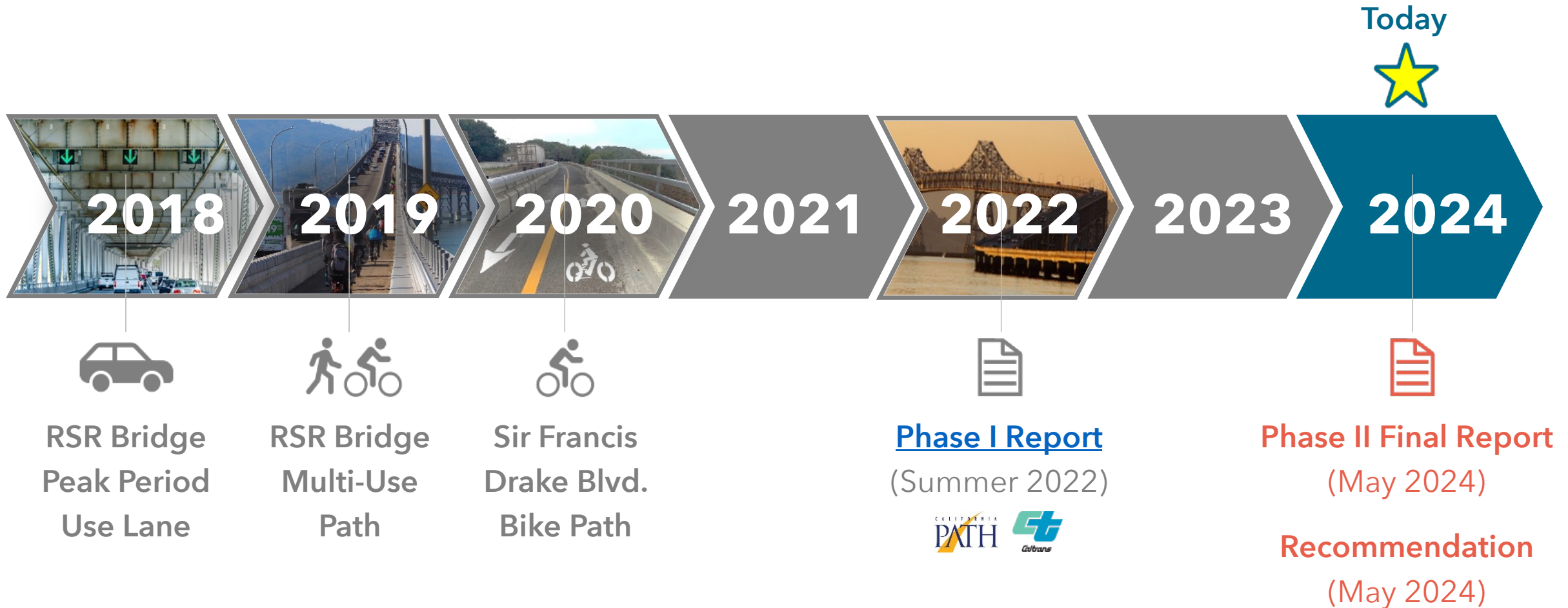
- Bay Trail connection between East Bay and Marin
- Permanent Connections for Richmond and San Rafael

Traffic Congestion and Delay:

- Eastbound Peak-Period Use Lane



Timeline



Lower Deck Results are Clear

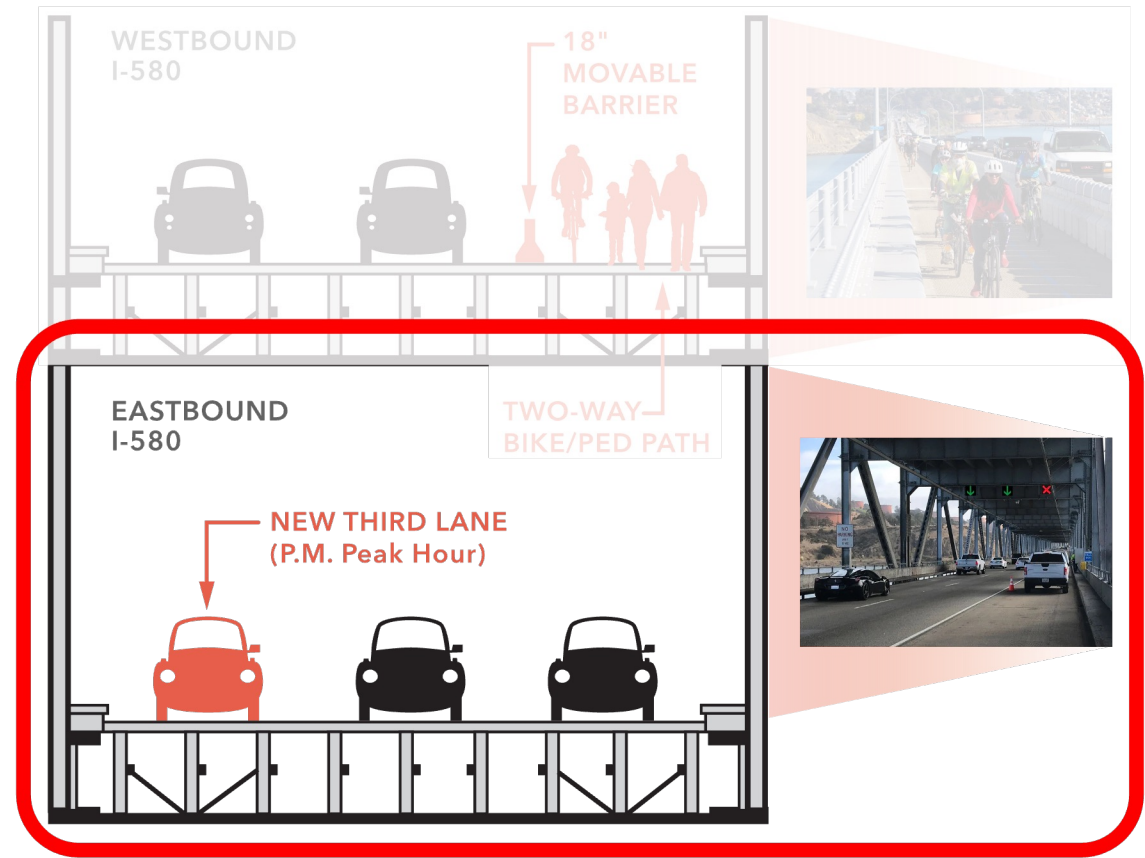
Findings:

- Peak-Period use lane eliminated afternoon eastbound congestion (freeway and local streets).
Up to 14 to 17 mins. travel time savings.
- High compliance.
- No major impacts to bridge maintenance, vehicular incidents or response.

Proposal:

- Make improvements permanent, as-is.

Richmond-San Rafael Bridge Cross-Section
(looking West)

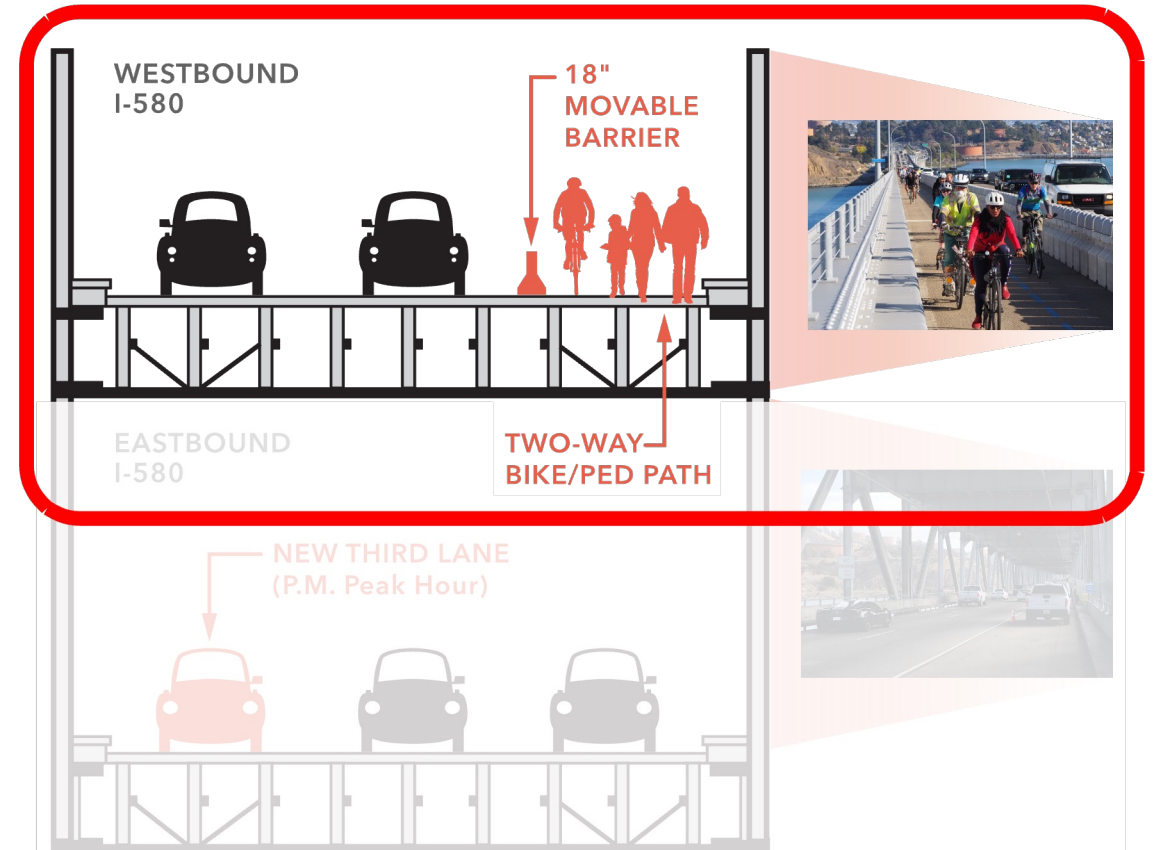


Upper Deck Multi-Use Path Results are Less Clear

Findings:

- **Access:** Demonstrated importance of bike/ped access but usage higher on weekends
- **Traffic:** No increase in typical AM congestion with traffic at 90% of pre-COVID levels *but* impacts on incident rates, incident response times and incident-related congestion are not clear

Richmond-San Rafael Bridge Cross-Section
(looking West)

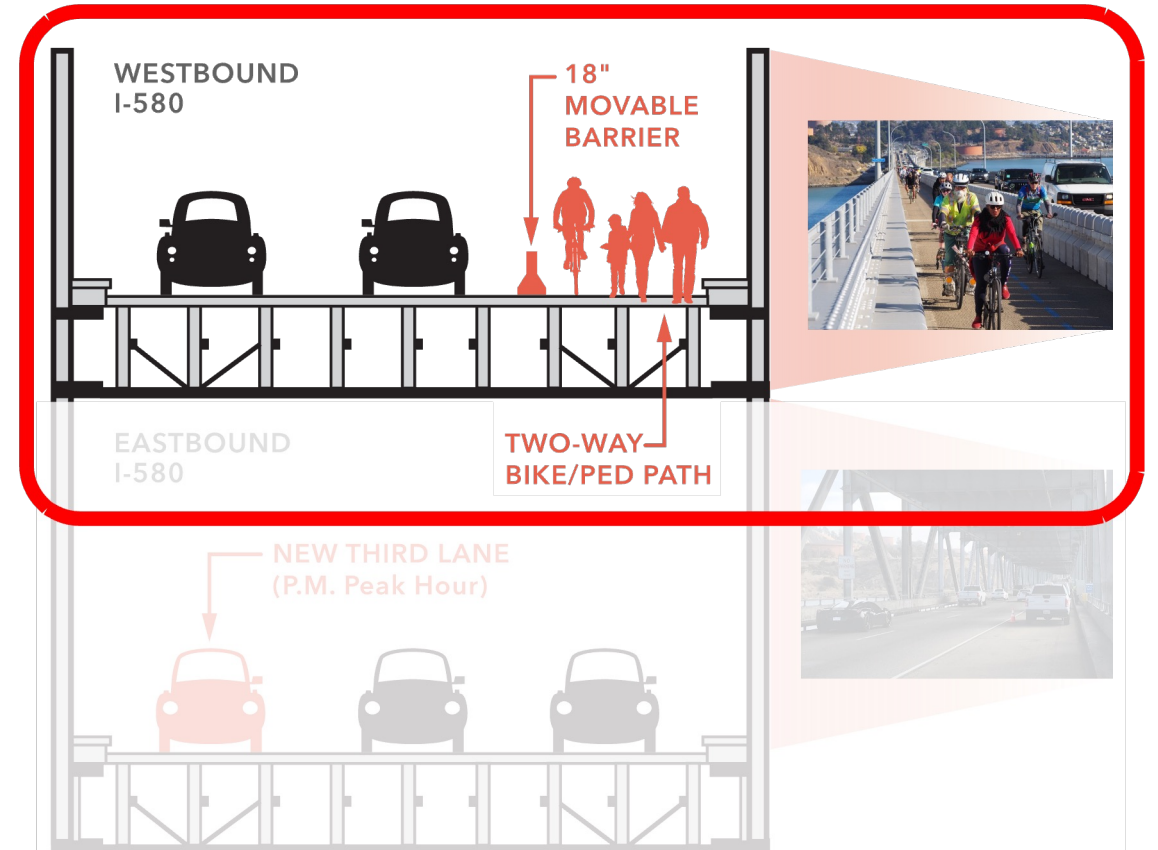


Upper Deck Multi-Use Path Results are Less Clear (Cont.)

Considerations:

- Concerns raised about impact of incident-related congestion on equity communities
- Related work needs more time:
 - Bridge strengthening assessment
 - Multi-modal milestones in 2025:
Open Forward projects and complete shoulder study

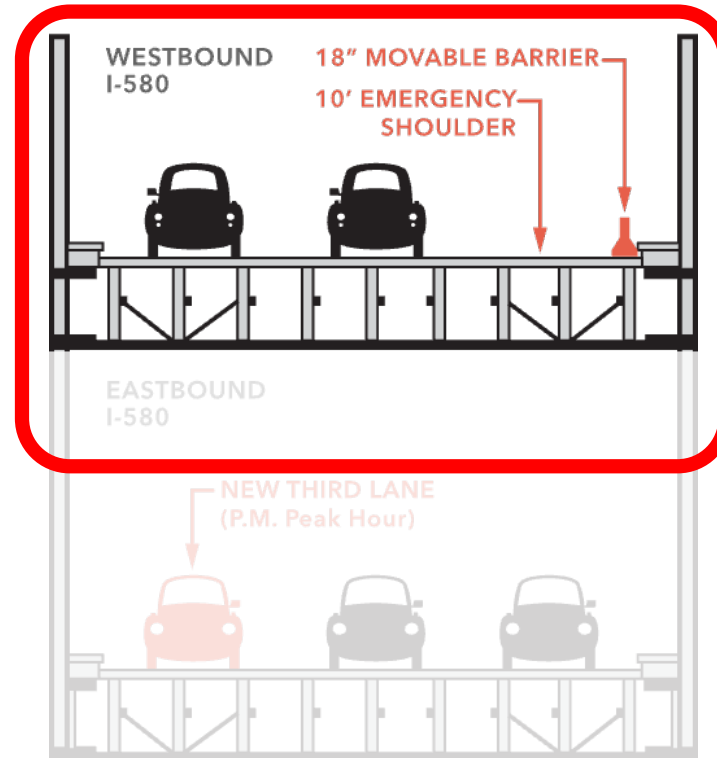
Richmond-San Rafael Bridge Cross-Section
(looking West)



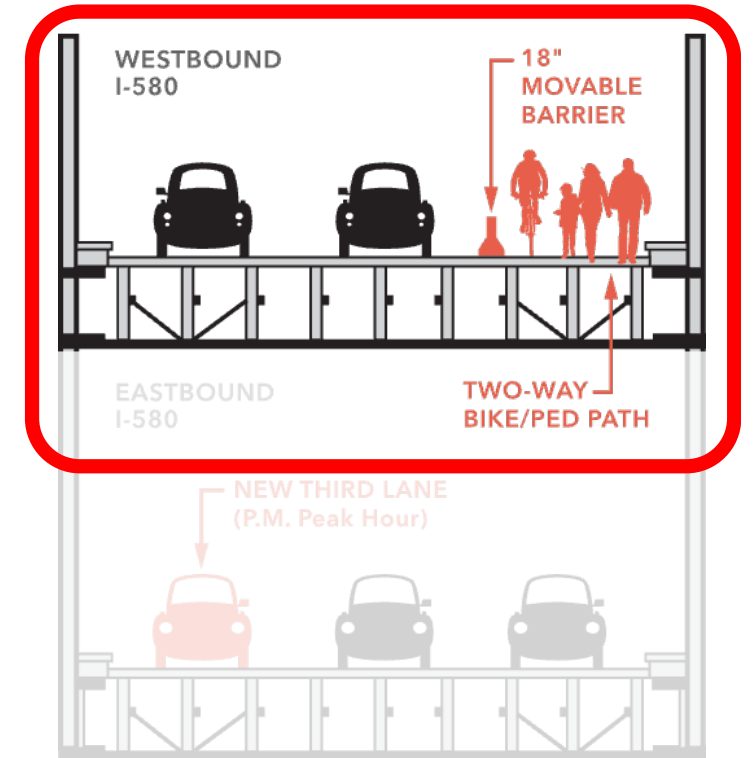
Upper Deck Multi-Use Path Proposal

Extend Pilot with
Modifications to end of
2025 (at minimum)

Heavier commute days
(e.g., Mon-Thurs):
Emergency Shoulder + Bike Shuttle



Lighter commute days
(e.g., Fri/Weekends/Holidays):
Multi-Use Path



What Does Extension Achieve?

- Maintains access on Bay Trail segment when it is most used
- Provides emergency shoulder when commute traffic is heaviest
- Allows better understanding of:
 - Access and Non-Motorized Trips
 - Incident Response & Role of Emergency Shoulder
 - Equity Considerations
 - Bridge Strengthening Needs for the Barrier
- Shoulder study and RSR Forward can advance in parallel

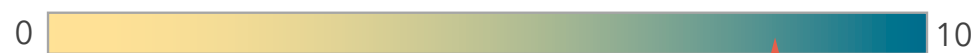


Path Usage is Higher on Weekends

Multi-Use Path Used More Heavily on Weekends

- Average Daily Trips: 140 cyclists on weekdays and 360 on weekends, with seasonal variability
- Compared to other BATA bridges with multi-use paths, usage is second to the Bay Bridge
- 85% use it for recreation/exercise
- 15% use it for commute/other

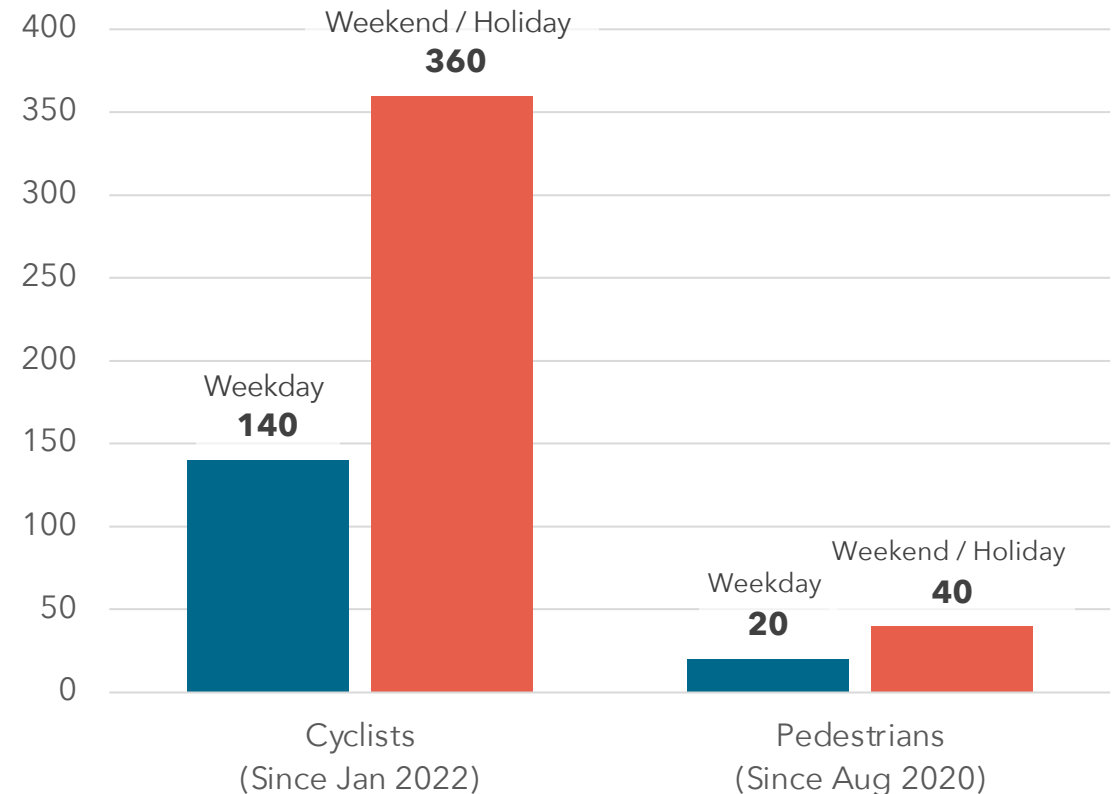
High Ranking on Multi-Use Path Safety



Source: Pilot Study User Survey 2021

8.2 (Avg. Perceived Safety)

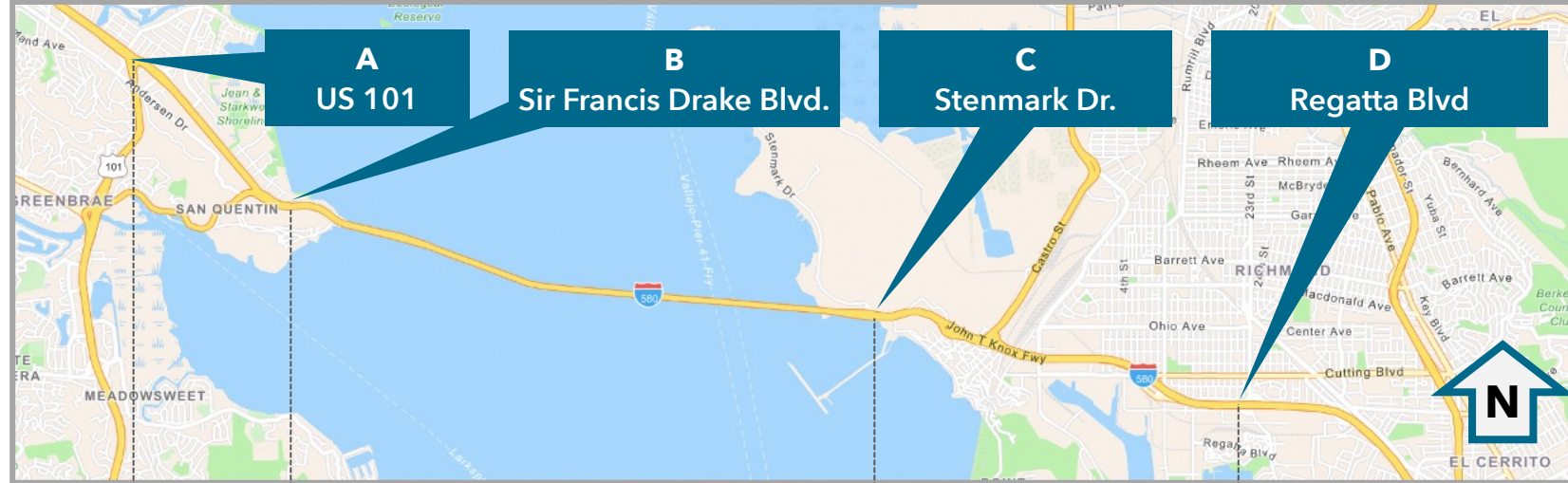
Average Daily Trips



Note: Summer Saturdays up to 480 average daily trips

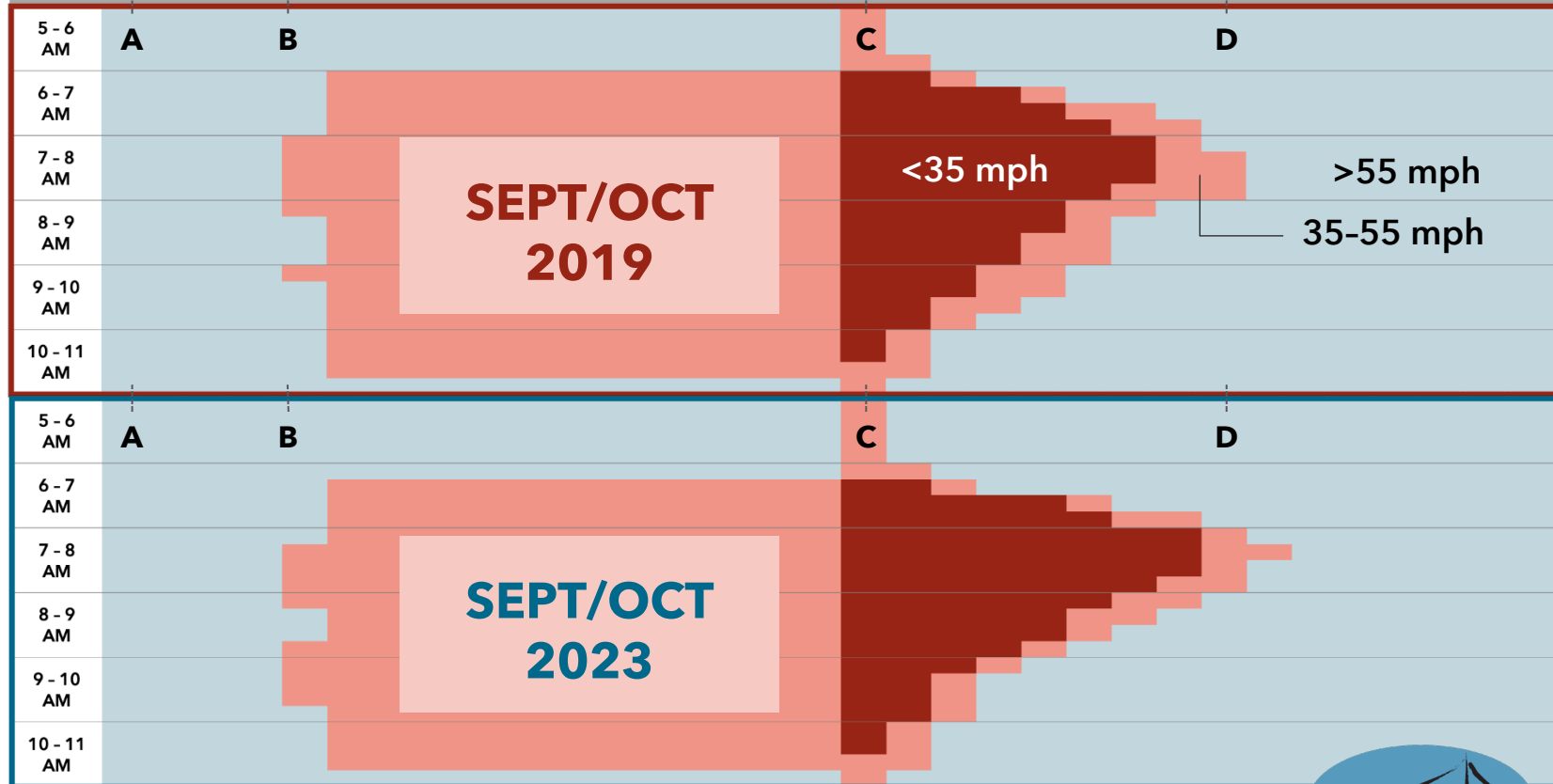
Source: Eco-Counter

Typical Mid-Week Congestion Largely Unchanged



Compared to Fall 2019:

- Morning congestion dissipates 15 minutes earlier
- Back up is 0.2 miles longer
- Does not fully capture incident-related congestion



Note: Fall 2023 traffic volume was 90% of fall 2019 levels.
 Source: BATA analysis of INRIX data (Tues-Thurs)

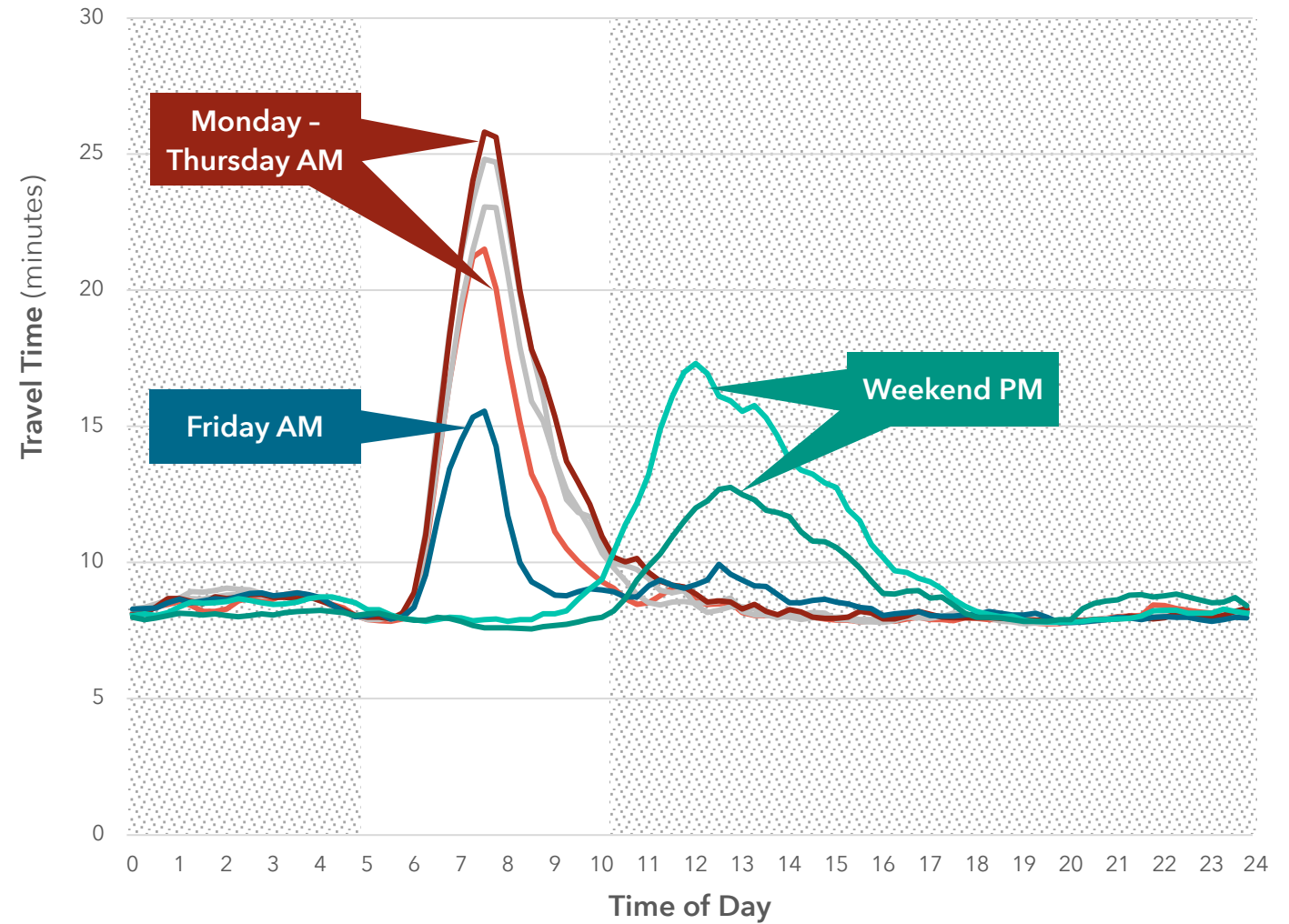


Less Traffic Congestion on Fridays & Weekends than Weekdays

Review traffic patterns, operational factors and other data to recommend days for Multi-Use Path operation

Source: INRIX

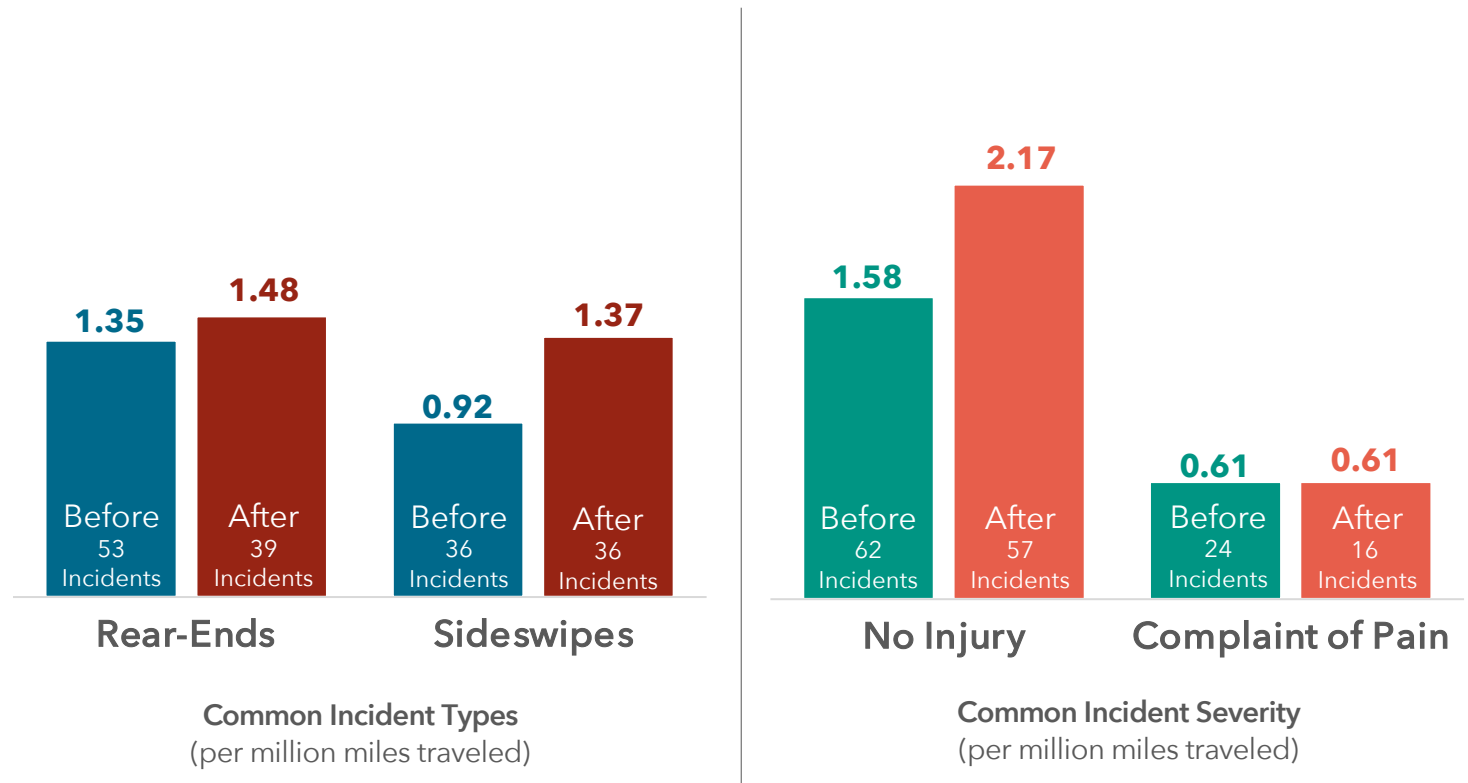
2023 Travel Time on RSR/580
from Marina Bay Pkwy to Bridge West End



Increases in Incident Rates During AM Peak

- **Rear-Ends and Sideswipes** have increased. Together these are 90% of total incidents by type.
- **“No injury” and “Complaint of Pain”** incidents have increased. Together these are 90% of total incidents by severity.

Before vs. After Rates of Most Common Incident Types & Severity
Weekdays Only (6am - 9am)



Note:

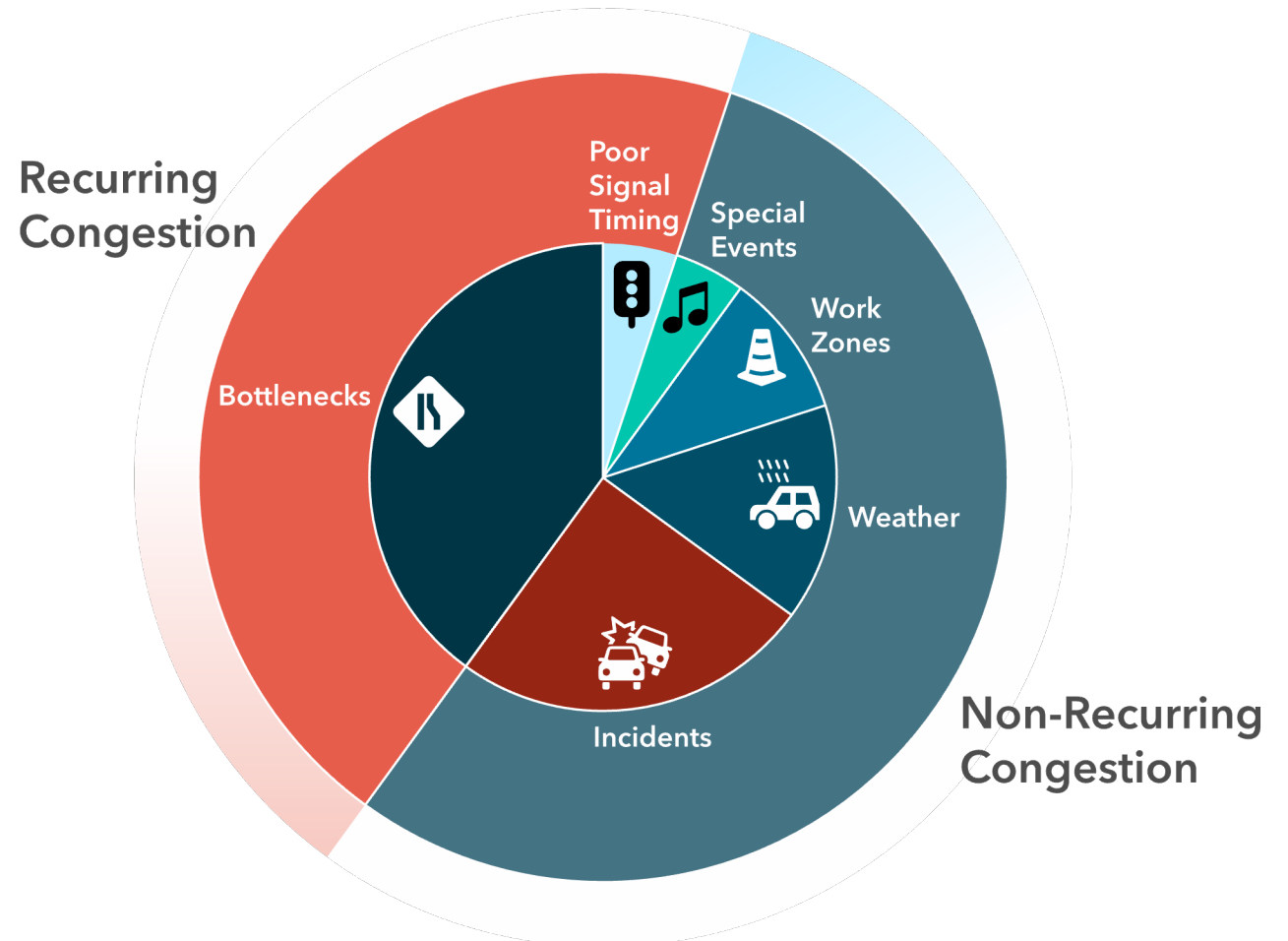
- Before = 01/2016 - 09/2019 (15 quarters)
- After = 07/2021 - 03/2020 and 07/2020 - 12/2023 (11 quarters, No-COVID)

Source: TASAS



Uncertain Impacts on Travel Time Variability

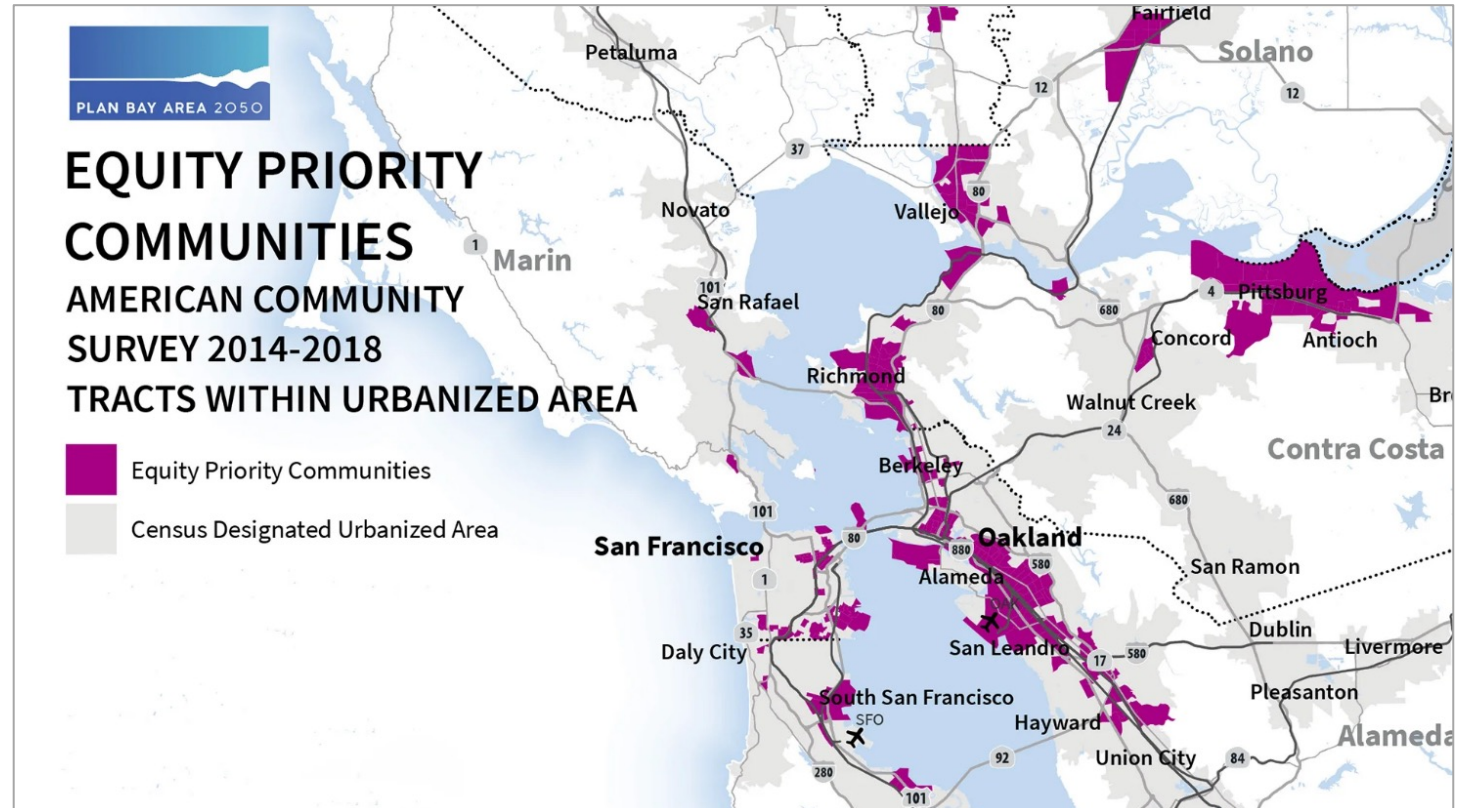
- Peak weekday travel times on the bridge's approach are now more variable than before, mainly due to the barrier preventing disabled vehicles from pulling out of a traffic lane.



Source: *Travel Time Reliability: Making It There On Time, All The Time*; Federal Highway Administration. FHWA-HOP-06-070

Seek Better Understanding of Equity Considerations

- What are demographics of travelers?
- If incident-related congestion is worse, who is impacted?
- Pilot Study did not include equity data.
- 2024 MTC Travel Survey will provide detailed profile of corridor travelers.



RSR Forward



**Open Road Tolling
+
HOV Lane Extension**
(End of 2025)



**Cutting Blvd. Transit
Improvement**
(Winter 2025)



**Richmond Parkway
Improvements**
(Spring 2026)

Recommendation

Authorize staff to pursue:

1. Making the lower deck part-time use lane permanent.
2. Extending the upper deck pilot with modifications to better understand the role of the emergency shoulder.
 - Modify to restore emergency shoulder and provide bicycle shuttle service on weekdays.
 - Retain path on weekends.
 - Evaluation by UC Berkeley PATH.

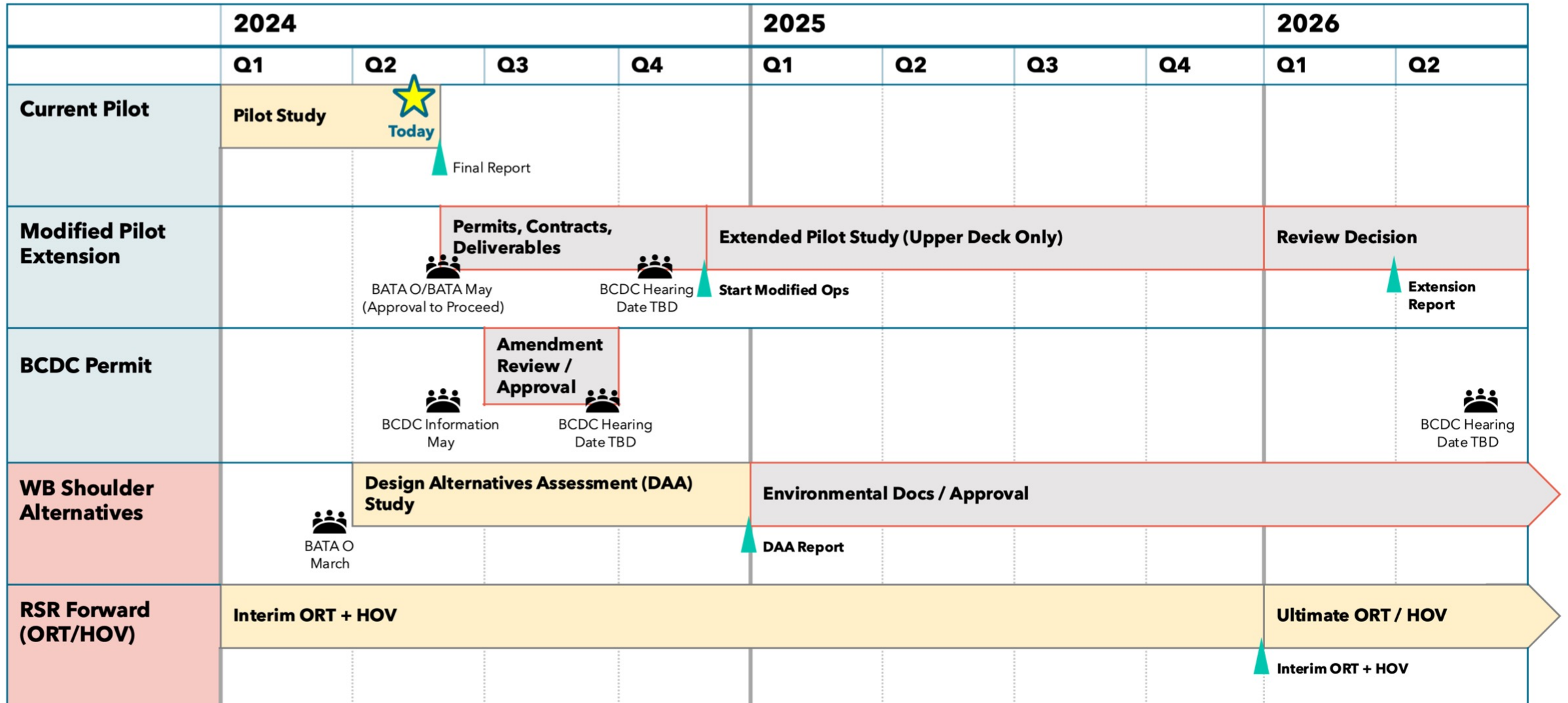
This allows staff to:

- Work with partners and stakeholders to define days of path operation and scope shuttle operations.
- Complete documentation (environmental revalidation, Caltrans project approval, decision document).
- Seek BCDC permit amendment.

Timeline by Quarter

Legend

- In Progress
- Subject to Approval



Thank You

PHOTO: TOM PAIVA

BAY AREA TOLL AUTHORITY

