

# Richmond-San Rafael Bridge Updates

Bay Area Toll Authority Oversight Committee

November 9, 2022





# Agenda

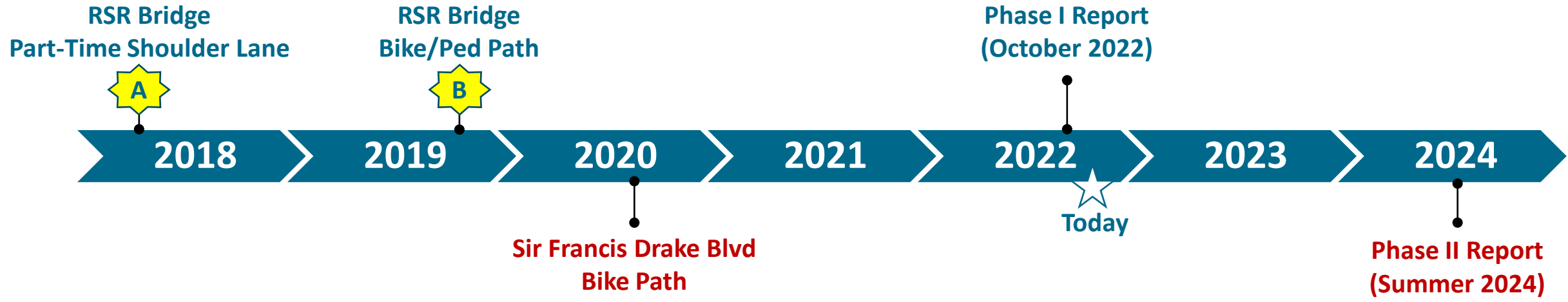
- Introduction
- Richmond-San Rafael Bridge Pilot After Study (Phase I)
- Richmond-San Rafael Forward



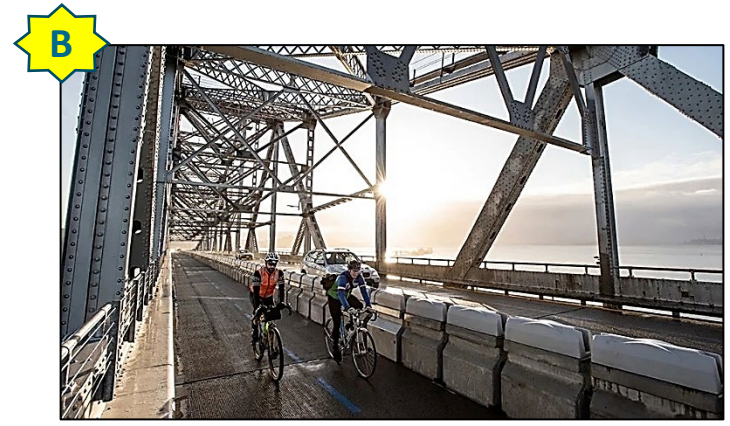
# RSR Bridge - Pilot After Study (Phase I)



# Pilot Timeline



- Opened April 20, 2018
- Conversion of eastbound (lower deck) shoulder to part-time lane between 2 PM and 7 PM



- Opened November 16, 2019
- Conversion of westbound (upper deck) shoulder to a bicycle/pedestrian path with moveable concrete barrier


# Phase I Pilot Report Overview

- **Impacts of new part-time shoulder traffic lane on lower deck eastbound (EB)**
  - EB approach and bridge traffic conditions
  - EB traffic safety
  - Maintenance activities
  
- **Impacts of new bike/ped path on upper deck westbound (WB)**
  - Bicycle and pedestrian use
  - WB Approach and bridge traffic conditions
  - Path and WB traffic safety
  - Maintenance activities

PARTNERS FOR ADVANCED TRANSPORTATION TECHNOLOGY  
INSTITUTE OF TRANSPORTATION STUDIES  
UNIVERSITY OF CALIFORNIA, BERKELEY


**After Study for the  
Richmond-San Rafael Bridge  
(Phase I)**


June 30, 2022



*(Photo credit: Flickr / User: Don McCullough)*

CALIFORNIA





California Partners for Advanced Transportation Technology works with researchers, practitioners, and industry to implement transportation research and innovation, including products and services that improve the efficiency, safety, and security of the transportation system.

# Part-Time Shoulder Lane – Traffic/Safety Impacts

- **Higher peak flow rate across bridge**
  - 13-25% increase across bridge (3,300-3,600 → 3,750-4,500)
- **Reduced peak travel times from US-101 to Toll Plaza**
  - Weekdays: 13-14-minutes
  - Saturdays: 10-14 minutes
  - Sundays: 6-8 minutes
- **Improved conditions on local streets**
  - Less traffic using local arterials to bypass I-580
  - Improved travel times (-4 min) and higher flows (+300 veh/hr) along Sir Francis Drake Blvd
- **High compliance with lane open/close period**
- **Safety impacts**
  - Approach: 72% reduction in frequency of incidents
  - Bridge: 33% reduction in rear-ends, but 22% increase in sideswipes due to more opportunities for lane changes

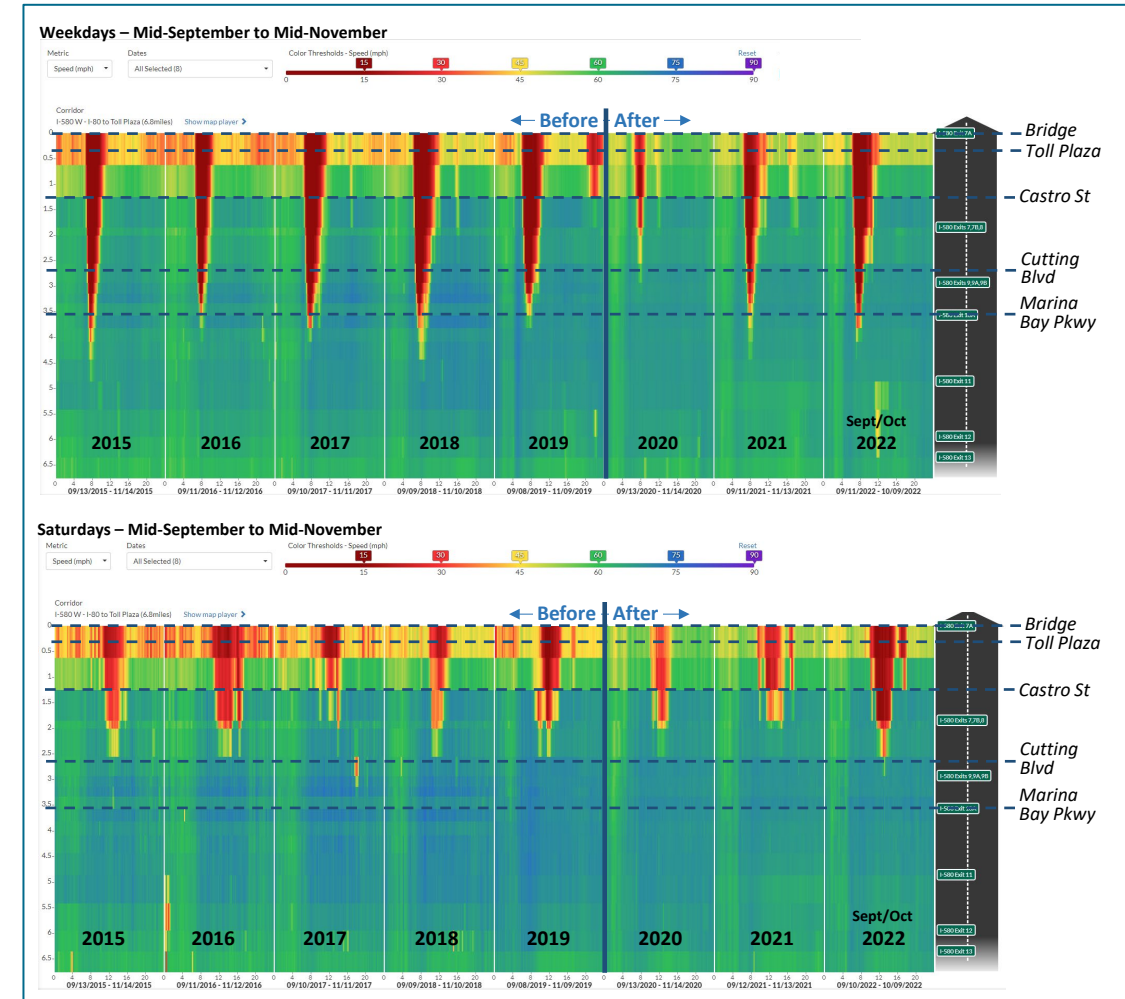
# Multiuse Path – Use Patterns

- **New Cyclist Access**
  - Weekdays: 50-75 cyclists/direction/day
  - Saturdays/Sundays: 100-300 cyclists/direction/day
- **New Pedestrian Access**
  - Weekdays: 8-11 cyclists/direction/day
  - Saturdays/Sundays: 14-24 cyclists/direction/day
- **Reasons for use**
  - (63%) recreation | (22%) exercise | (14%) commuting to work/other
- **Round trips across the bridge by cyclists**
  - 84% crossed both ways, either fully (76%) or turned back midway ( 6%)
  - Rest use different route or vehicle



# Multiuse Path – Traffic/Safety Impacts

- **Slight reduction in bridge capacity**
  - Weekdays: -7% (3,675 → 3,425 veh/hr)
  - Weekends: -4% (3,325 → 3,200 veh/hr)
- **Congestion (before/after)**
  - Similar peak weekday congestion than before
  - Slight Increase in Saturday PM peak congestion
  - No apparent impacts on local arterials
- **Unclear impacts on safety and no evidence of longer incident durations**
  - Waiting for 2022-2023 data to determine more definitive trends



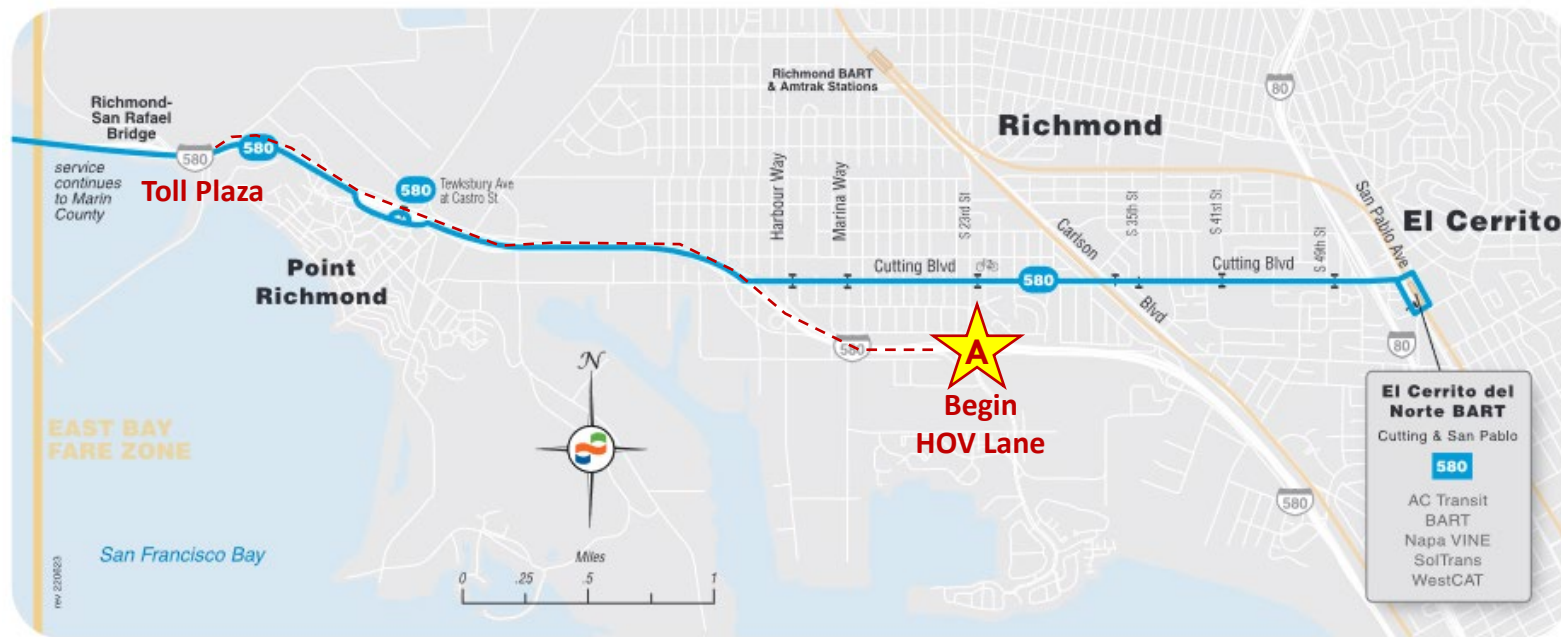


# Richmond-San Rafael Forward



# HOV Lane Extension

- Extend HOV 2+/3+ lane from Toll Plaza to Regatta Blvd.
- Provide transit priority for Golden Gate Transit Route 580 (former Route 40)



## HOV 2+/3+ Lane Begins Between Regatta Off- and On-Ramps

- Avoids potential bottleneck at Regatta Blvd. Exit

# Open Road Tolling

- Remove Existing Toll Plaza Booths and Install Toll Gantries
- HOV 2+/3+ Lane at Bridge Approach continues under Toll Gantries
  - HOV 3+ stays in the left lane to obtain HOV 3+ discount
  - FasTrak Flex® required for HOV 3+ discount
- Stenmark Dr. on-ramp realignment to merge/enter freeway





# Richmond Parkway

## Design Alternatives Assessment

- **Project Schedule**

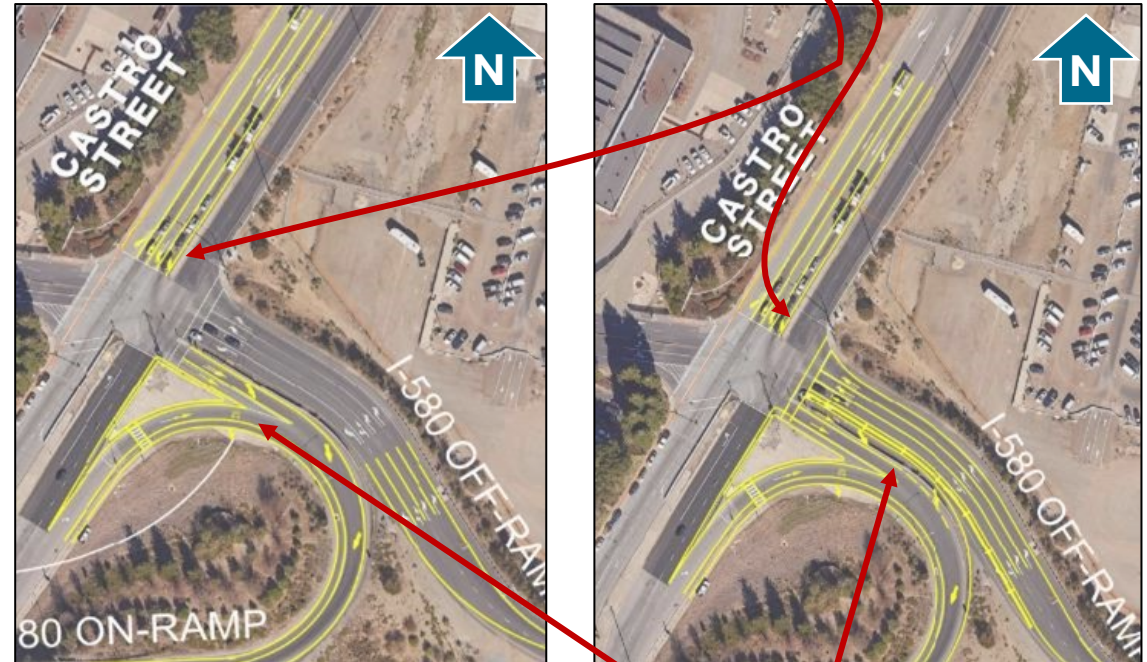
- Finalize DAA Memo – Fall 2022
- Seek Funding Opportunity – Winter 2022/2023
- Caltrans Project Delivery – Spring 2023 to Spring 2024
- Start Construction - Summer 2024
- Operations – Spring 2025

- **Cost Summary**

- Support (all phases): \$800,000
- Construction: \$1,500,000
- **Total Cost: \$2,300,000**

*Note: Funding not yet identified*

Adding Dual Left Turns  
with Operational Variations



Alternatives at Westbound Loop On-Ramp

# Encouraging Bike Commutes Across The Bridge



## RSR E-Bike Commute Program

- Provide discounts on e-bike purchases and a rewards program for rides across the bridge
- Income-qualifying
- Qualifying home & work/school zip codes
- Anticipated launch early 2023

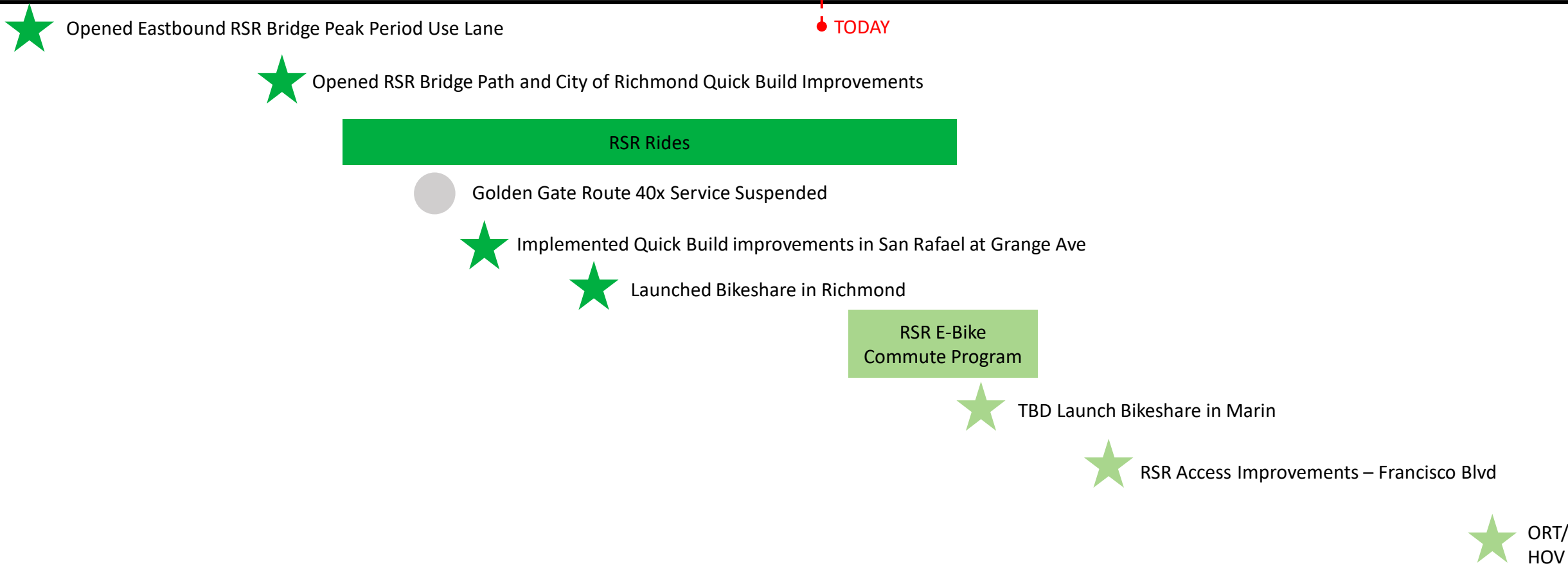


## RSR Rides

- Partner with local organizations for guided group rides across RSR Bridge
- Offers option to try e-bike
- Includes bike education and safety

# RSR Corridor Activities

2018 2019 2020 2021 2022 2023 2024 2025 2026





# Thank You!

