



Caltrain Grade Separation Feasibility Study – Mary Avenue

Bicycle and Pedestrian Advisory Commission
Special Meeting
August 1, 2022





Project Background

Project Locations



Project Background

- ◆ Initiated Feasibility Study in 2017
- ◆ Evaluated Grade Separation Types
- ◆ Screened and Narrowed Alternatives
- ◆ Performed Extensive Public and Stakeholder Outreach
- ◆ Received City Council Direction
- ◆ Delays due to COVID-19
- ◆ Complete Study in 2022
- ◆ Identify Alternatives for Environmental Phase and Secure Funding



Project Purpose



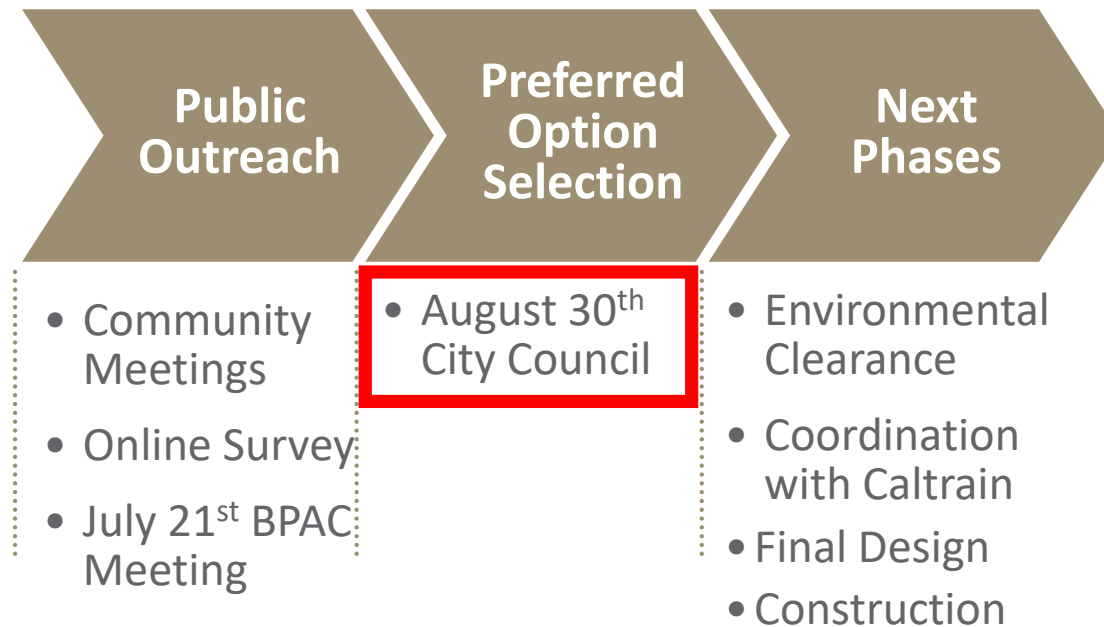
Why is Grade Separation Needed?

HOW MANY TRAINS PER DAY?



Source: Caltrain Business Plan, City of Sunnyvale Booklet, May 2019

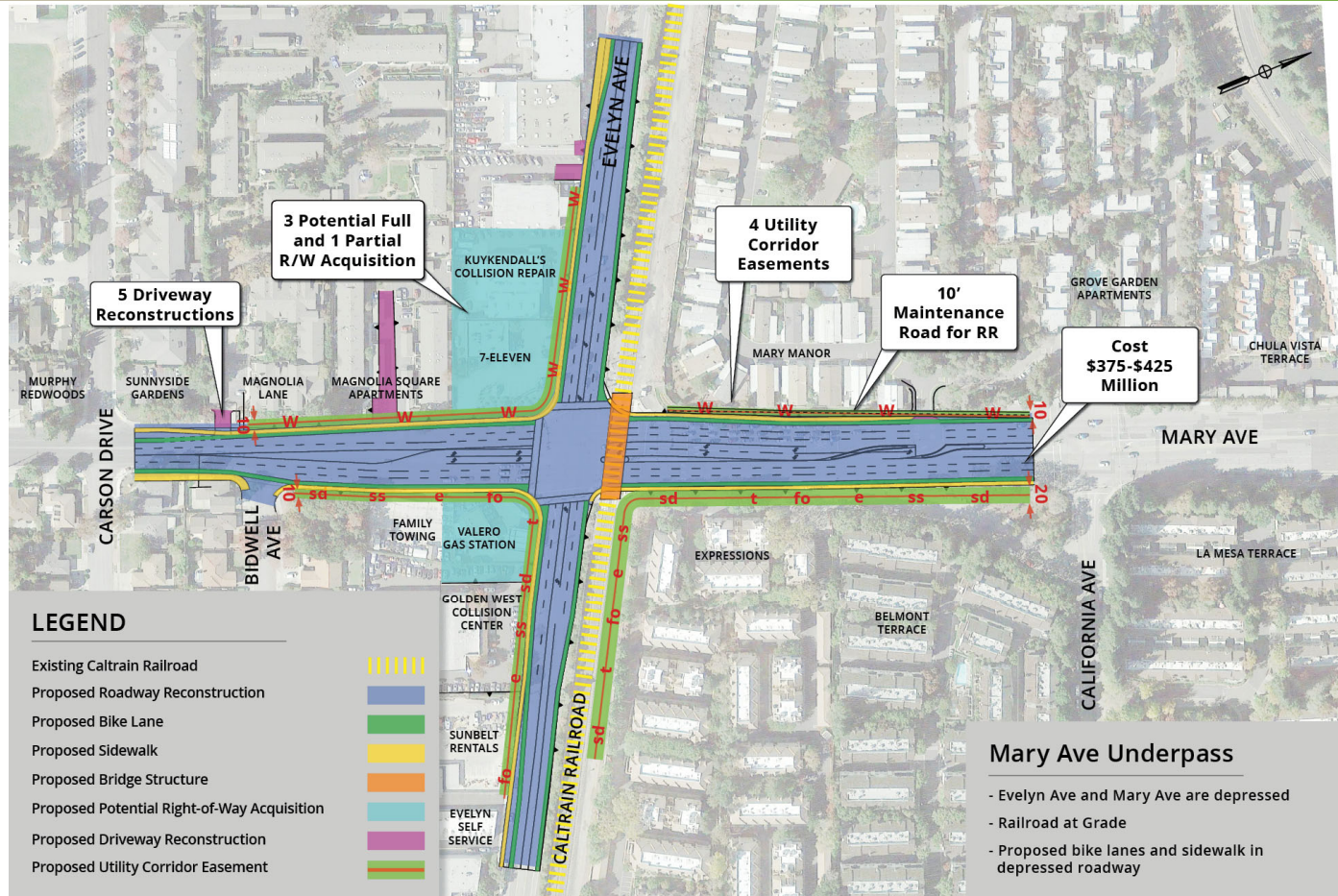
Next Steps






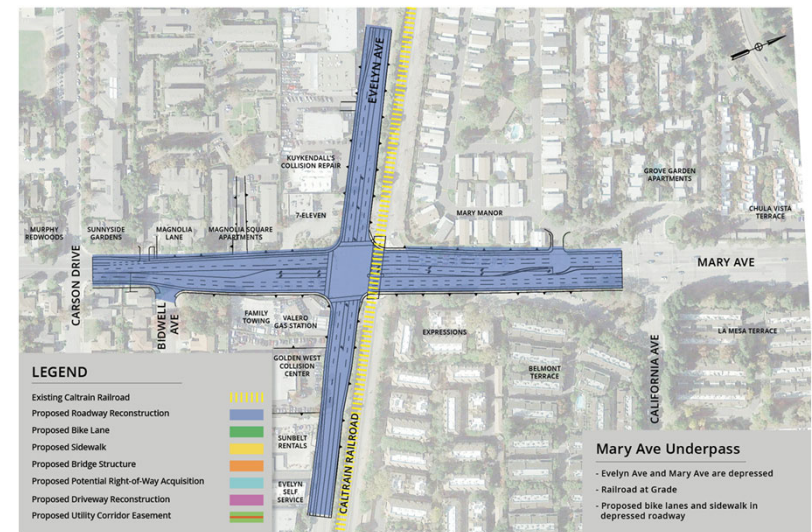
Current Alternatives Mary Avenue

Mary Avenue Underpass

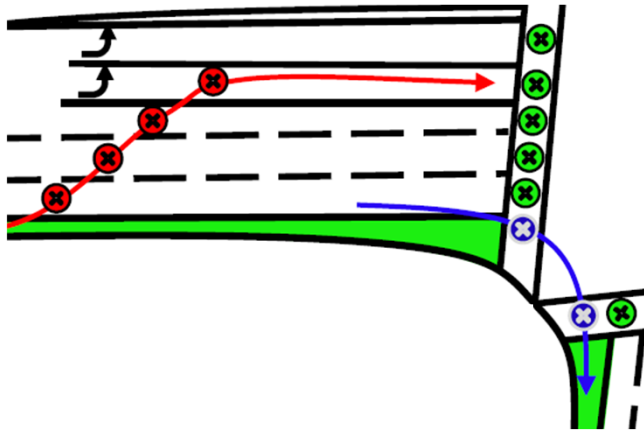


Mary Avenue Underpass Traffic Study Summary

- ◆ Vehicular circulation same as “no build”
 - ◆ Average vehicular delays
 - Less than “no build”
 - One exception: Evelyn Avenue through movements
 - Greater than Jughandle
 - ◆ Average vehicular travel times
 - Less than “no build”
 - Similar to Jughandle in AM peak
 - Greater than Jughandle in PM peak
- 
- An aerial photograph of a residential neighborhood. Carson Drive runs vertically on the left side. Bidwell Ave runs vertically on the right side. Sunnyside Lane runs horizontally across the middle. Other streets visible include Murphy, Magnolia, and Magnolia Ave. The map shows houses, trees, and parking lots.



Mary Avenue Underpass Traffic Study Summary - continued



- ◆ Bicycle circulation patterns same as “no build”
 - Left turning bicycles crossing lanes in downslope
- ◆ 14 Bicycle-Vehicle Conflict Points
 - Same as “no build” (14)
 - More than Jughandle (12)
- ◆ Pedestrian circulation same as “no build”
 - Elevation changes
- ◆ Eight Pedestrian-Right Turning Vehicle Conflict Points
 - Same as “no build” (8)
 - Same as Jughandle (8)

Roadway Underpass

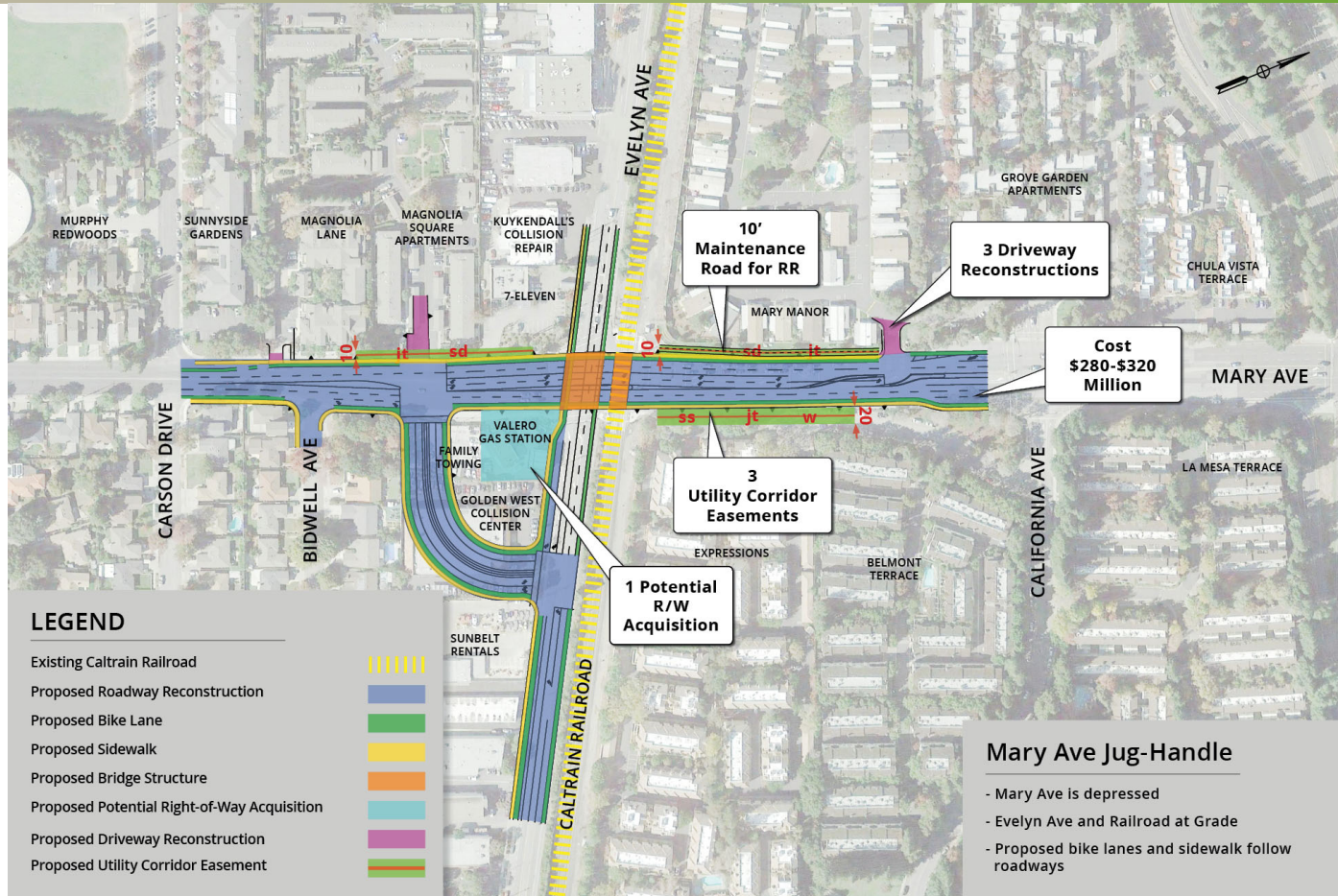


Jefferson Avenue, Redwood City (Google Maps)



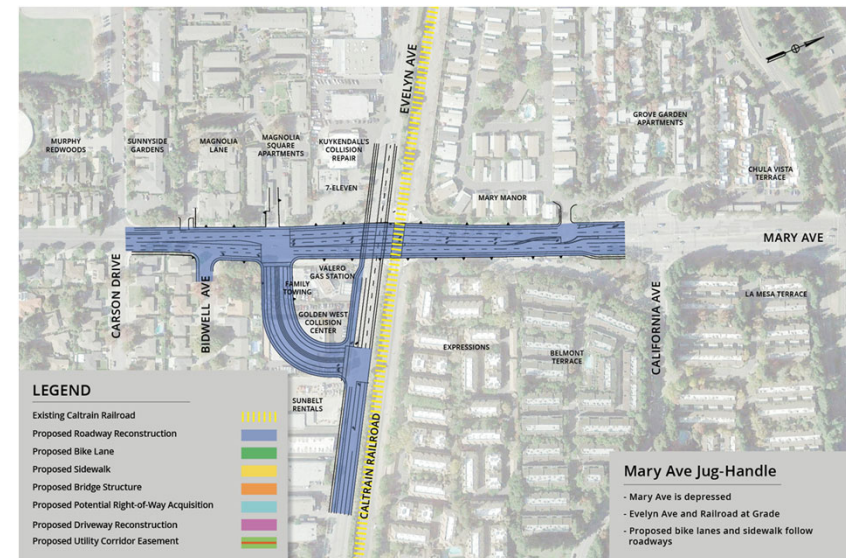
Marina Bay Parkway, Richmond (BKF)

Mary Avenue Underpass Tunnel with Jughandle

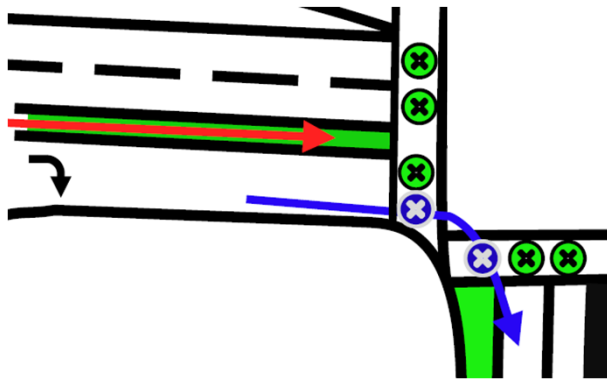


Mary Avenue Underpass with Jughandle Traffic Study Summary

- ◆ Vehicular circulation changed from “no build”
 - Changed turning movements
 - Two signalized intersections, smaller than “no build”
- ◆ Average vehicular delays
 - Less than “no build”
 - Less than Underpass
- ◆ Average vehicular travel times
 - Less than “no build”
 - Similar to Underpass in AM peak
 - Less than Underpass in PM peak



Mary Avenue Underpass with Jughandle Traffic Study Summary - continued



- ◆ Bicycle circulation changed from “no build”
 - Changed turning movements
 - Two signalized intersections, smaller than “no build”
- ◆ 12 Bicycle-Vehicle Conflict Points
 - Less than “no build” (14)
 - Less than Underpass (14)
- ◆ Pedestrian circulation changed from “no build”
- ◆ Eight Pedestrian-Right Turning Vehicle Conflict Points
 - Same as “no build” (8)
 - Same as Underpass (8)

Mary Avenue Underpass Tunnel with Jughandle



Mary Avenue Alternative Comparison



Underpass

- Safety** • Improved over “no build”
- Noise** • Decreased from “no build”
- Circulation - Vehicular** • Same pattern as “no build”
 - Greater delay than Jughandle
 - Longer or similar travel times
- Circulation – Bicycle and Pedestrian** • Same pattern as “no build”
 - Same conflict points as “no build”
- Potential Private Property Impacts** • More complex property impacts
- Construction Impacts** • Impacts on both Mary and Evelyn
 - More driveway impacts
 - More utility impacts
 - Similar railroad maintenance road
 - More roadway reconstruction
 - More construction time

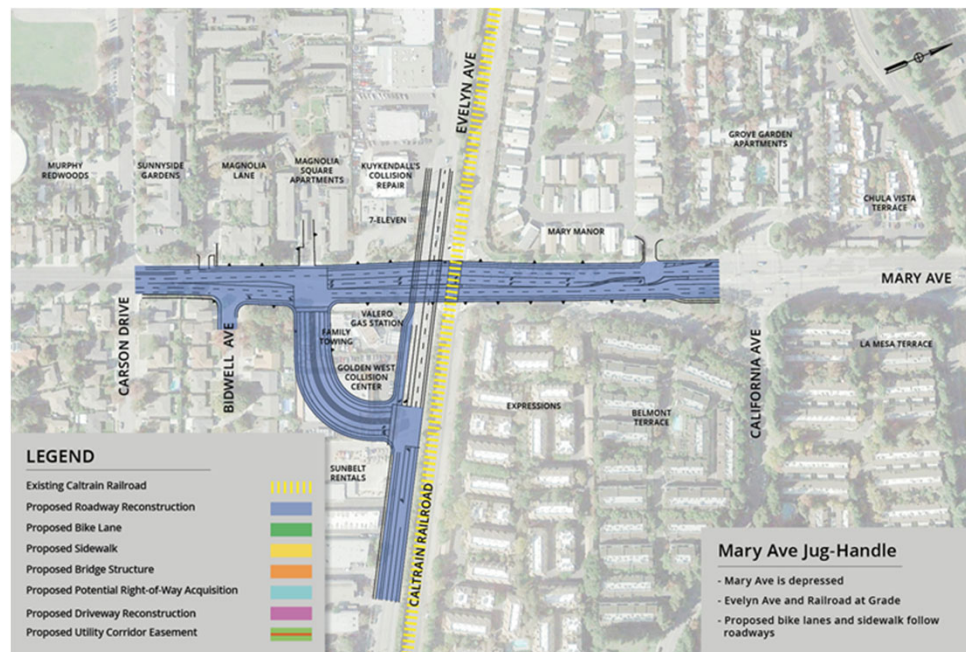
Construction Cost Estimate • Higher cost: \$375M - \$425M

Underpass with Jughandle

- Improved over “no build”
- Decreased from “no build”
- Altered pattern
- **Reduced delay**
- **Shorter or similar travel times**
- Altered pattern
- **Decreased conflict points**
- **Less complex property impacts**
- **Construction impacts only on Mary**
- **Less driveway impacts**
- **Less utility impacts**
- Similar railroad maintenance road
- **Less roadway reconstruction**
- **Less construction time**
- **Lower cost: \$280M - \$320M**

Staff Recommendation

- Recommend to City Council the selection of the Mary Avenue Underpass with Jughandle option to be defined as the Proposed Project for the grade separation of the Mary Avenue crossing of the Caltrain railroad tracks for the Environmental Review





Mary Avenue Crossing Discussion



Thank you