

# I-280 Northbound Geneva Avenue Off-Ramp Safety Improvement Study



San Francisco  
County Transportation  
Authority

Community Advisory Committee - Agenda Item 6  
March 27, 2024

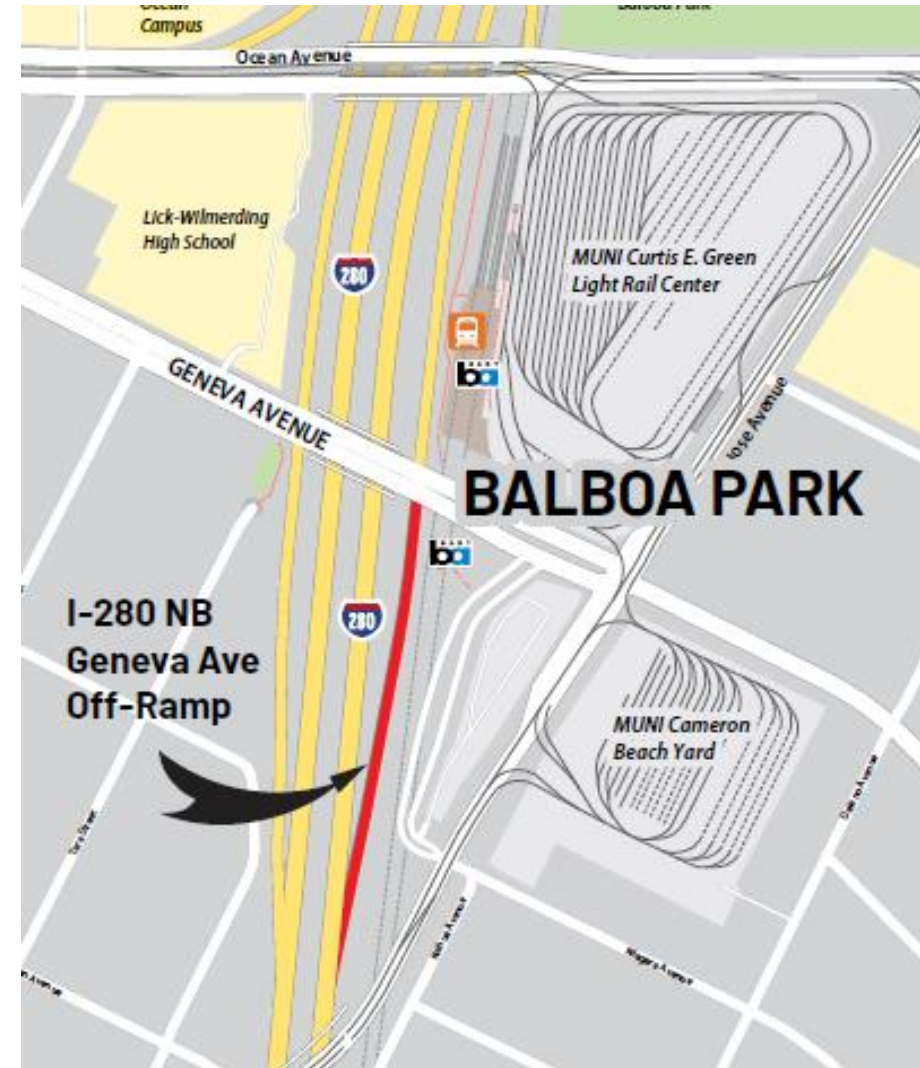
# Purpose of I-280 Northbound Geneva Ave Off-Ramp Study

- Chronic traffic queues on ramp spill back to the I-280 mainline freeway resulting in collisions
- Safety issues including vehicle-pedestrian conflicts and use of ramp as drop-off area
- 5-year period (2016 - 2021) - 89 crashes within quarter mile south of Geneva bridge and 31 crashes associated with the off-ramp directly



# Background

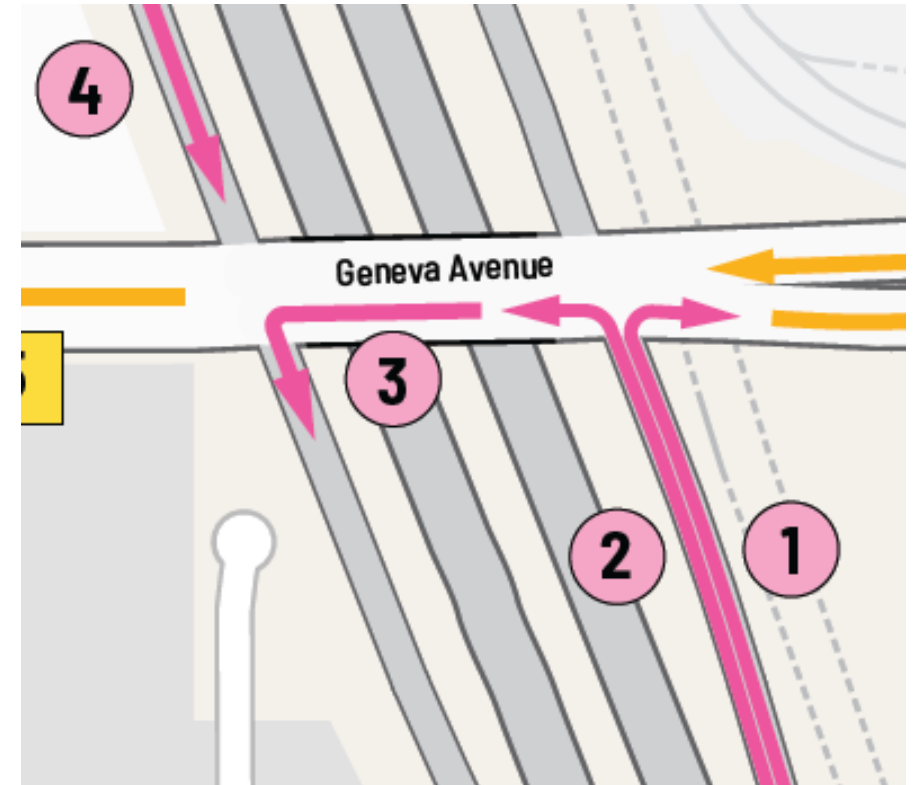
- Located next to Balboa Park BART and Muni Station. Major transfer point for rail and bus lines with a light rail train intersection nearby
- Compact diamond interchange does not meet modern safety standards such as adequate shoulder width, ramp storage capacity, and bridge storage capacity
- Close proximity to City College SF, high schools, and nearby business corridors
- Constraints from I-280 freeway mainline, San Jose Avenue bridge, BART station wall, and hilly terrain



Project Area Map

# Existing Off-Ramp Traffic Circulation

- Northbound off-ramp right lane queue (1) due to train crossing at San Jose Avenue and limited storage capacity along this block
- NB right lane queue (1) also affected by pedestrian crossing at off-ramp intersection
- NB off-ramp left lane queue (2) occasionally blocked at intersection by westbound Geneva traffic, particularly to southbound on-ramp
- Westbound Geneva left turn to southbound on-ramp traffic queue (3) causes pedestrian conflict



Vehicle/pedestrian conflict at SB on-ramp 4

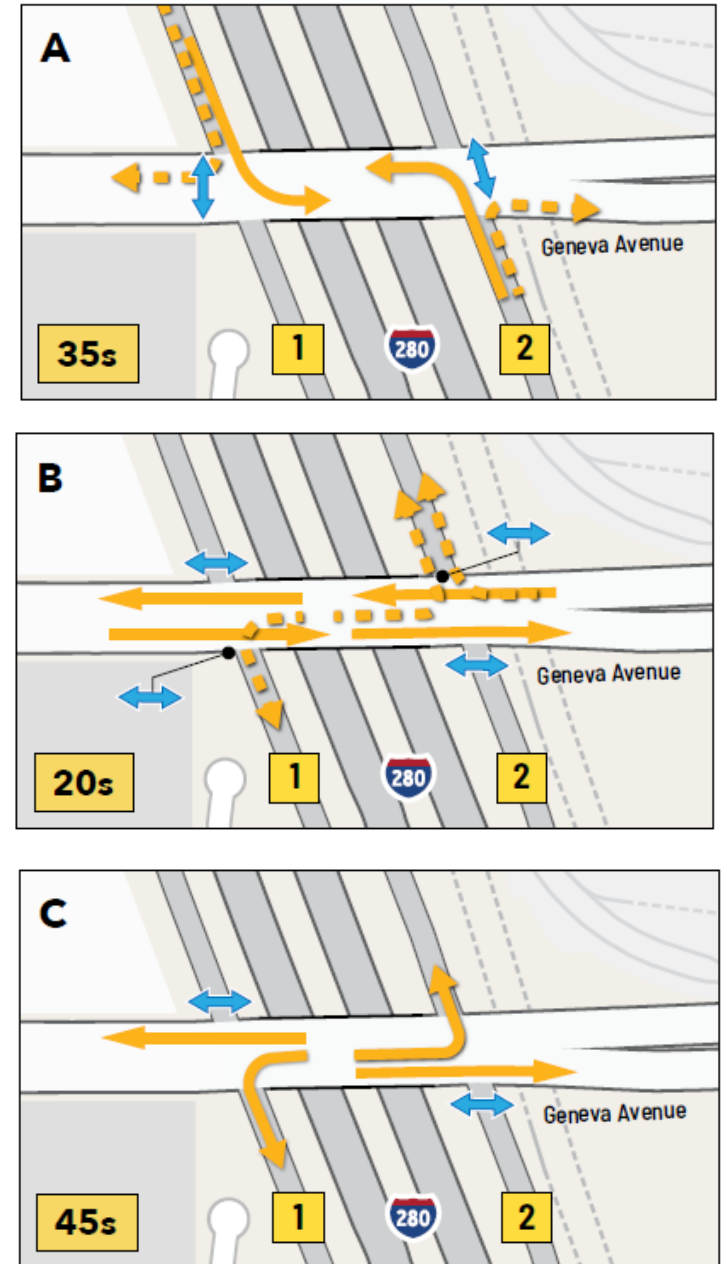
# Safety Study Recommendations

- Near Term
  - Implement near-term signal changes with Caltrans and SFMTA - **performed already but still evaluating**
- Mid-Term (coordinate w/ funding partners)
  - Pursue traffic signal modernization to replace aging signal system including street light improvements, pending funding
  - Off-ramp lengthening study, pending funding



# Near-Term: Traffic Signal Modification

- Objectives:
  - Project team, including Caltrans and SFMTA, implemented near-term signal timing and phasing improvements in August 2023
  - Improve coordination between Caltrans and SFMTA
  - Increase northbound off-ramp traffic flow
  - Improve overall ramp intersection circulation with less vehicles blocking intersections
  - Fix vehicle/pedestrian conflict at SB I-280 on-ramp crosswalk



Traffic signal timing and phases

# Results of Near-Term Modification

- Reduce off-ramp queue and collisions at I-280 mainline
- Reduce traffic blocking intersections
- Improve pedestrian safety and fixed pedestrian crossing conflict at SB I-280 on-ramp crosswalk
- Increase in westbound Geneva vehicle flow but decrease in eastbound Geneva vehicle flow



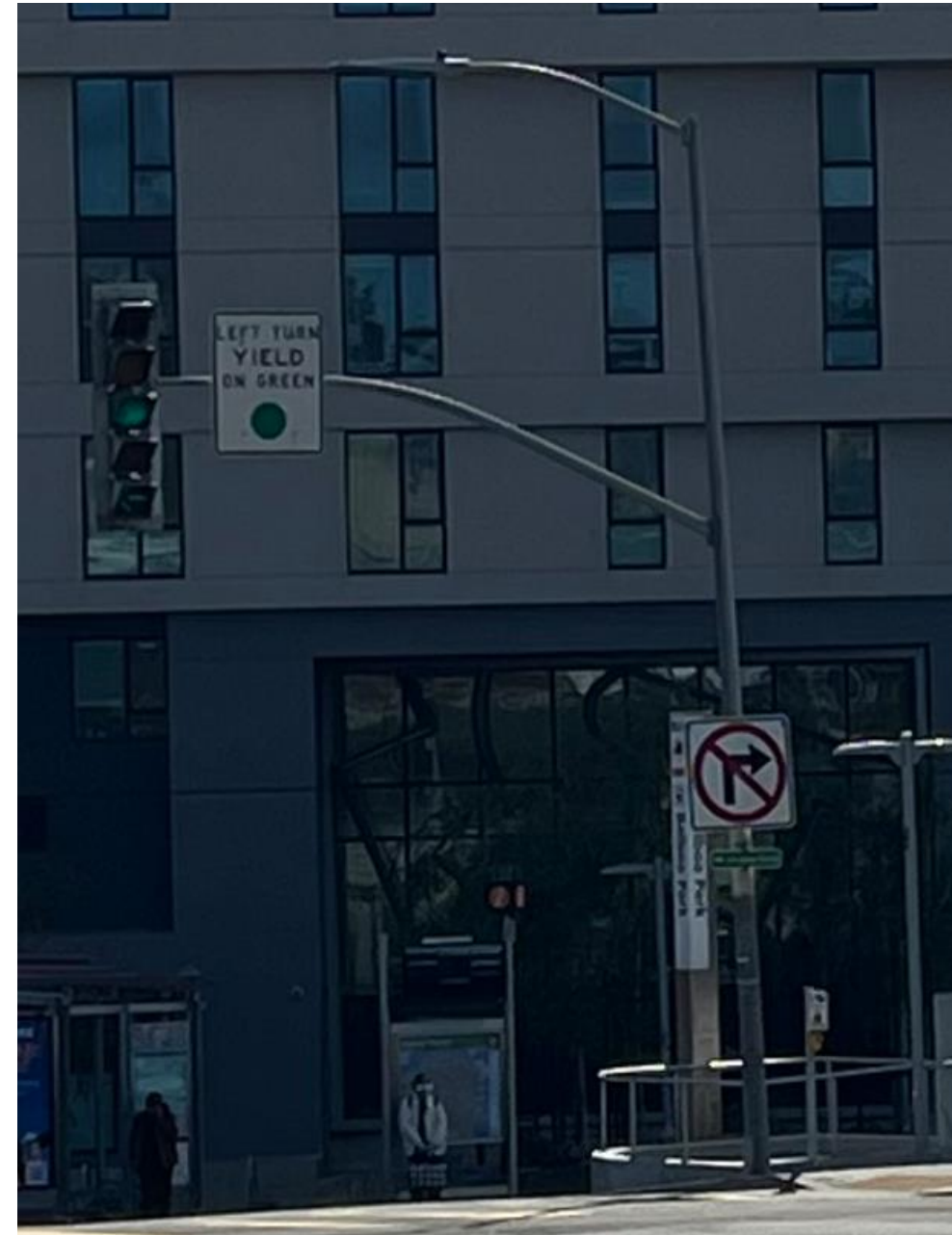
Geneva Ave NB off-ramp Before - Start of off-ramp traffic



Geneva Ave NB off-ramp After - Start of NB off-ramp traffic

# Mid-Term: Potential Traffic Signal Upgrades

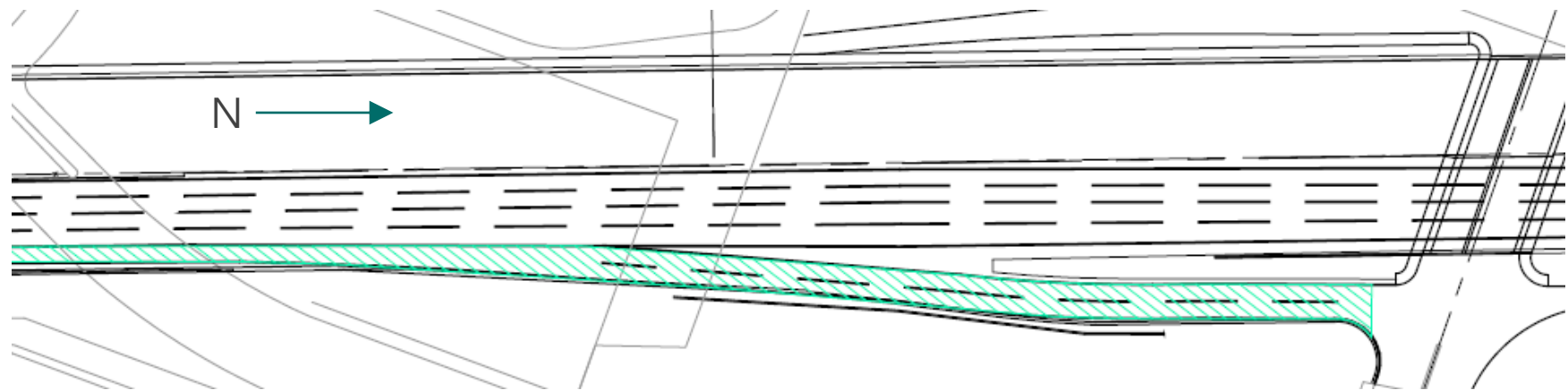
- Upgrade overhead signal heads to modern equipment and mounted on longer mast arms
- Vehicle detection equipment for traffic demand response
- Improve street lighting
- Requires Caltrans Project Study Report
- Requires funding and Caltrans coordination





# Mid-Term: Potential Off-Ramp Lengthening Study

- Lengthen existing two-lane exit ramp to increase storage capacity, reduce rear-end and sideswipe collision, and improve freeway traffic
- Requires Caltrans approval including Preliminary Engineering, Design, and Construction. Requires Caltrans design exceptions
- Requires funding and Caltrans coordination
- Potential Right-of-Way issues such as BART station and tunnel



I-280 Northbound Geneva Ave Off-Ramp

# Next Steps

- Continue coordination between Caltrans and SFMTA to evaluate/monitor the recently completed near-term traffic signal modifications
- Pursue coordination with Caltrans for technical feasibility and funding of Mid-Term recommendations. Funding sources may include: State Highway Operation and Program (SHOPP), Prop L, and SB 1 Local Partnership Program (LPP)
- Pursue other funding options to start advance study of mid-term recommendations. Funding sources may include: SHOPP, Prop L, and SB 1 LPP

# Thank you.



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